GCX Series 22mm Plastic Pilot Devices

Features

Any combination of contact blocks is allowed, up to a total of six (two blocks wide and three blocks deep)

Secure mounting method eliminates twisting in mounting hole

Operators are protected to IP40 or IP65 (see specifications below)

Support base mounts into panels up to 6 mm thick

Fiberglass reinforced thermoplastic bezel

Easy installation

1)

2)

3) **CLICK**

4) Turn 1st screw to just touch the panel

5) Tighten 2nd screw

6) Tighten 1st screw

Max torque: 4.5 lb-in

All indicators offer side wire entry with back screw terminals for easy wiring

Self-cleaning silver contacts provide reliable, low-energy switching

Pressure plate wiring terminals for easy, secure wiring, accepting up to 14 AWG wire

Contacts rated A300 (Refer to E22 Series mounting/contact rating section for details)

Clear contact block for illustration purposes. Clear contact blocks are not available for sale from www.AutomationDirect.com

GCX/ECX Series 22mm Plastic Pilot Devices Selection Guide

Flush

- Momentary 30 mm operators
- Available in six colors: black, red, yellow, blue, white and green
- One contact block included
- ON/OFF models also available

Extended

- Momentary 30 mm operators
- Available in six colors: black, red, yellow, blue, white and green
- One contact block included

Two way

- Two way on/off control
- With or without illuminated indicators
- One N.O. and one N.C. contact block included

Illuminated

- Available in clear, red, yellow, blue, white and green
- Momentary and push-push styles
- Flush or extended operators available
- 24 and 120-volt models
- Incandescent and LED models
- One contact block included

Mushroom

- Available in momentary, twist-to-release, and key release models
- One contact block included
- Also available in incandescent and LED illuminated models

Selector switches

- Two and three-position in spring return and maintained, non-illuminated and illuminated
- Incandescent and LED models
- Contact block included

Key switches

- Two and three-position
- Contact blocks included

Joysticks

- Two and four-position, maintained and momentary
- Contact blocks included

Indicator lights

- Available in popular colors
- 24 and 120-volt models
- Frosted diffuser for even lighting
- Incandescent or LED indicators

Accessories

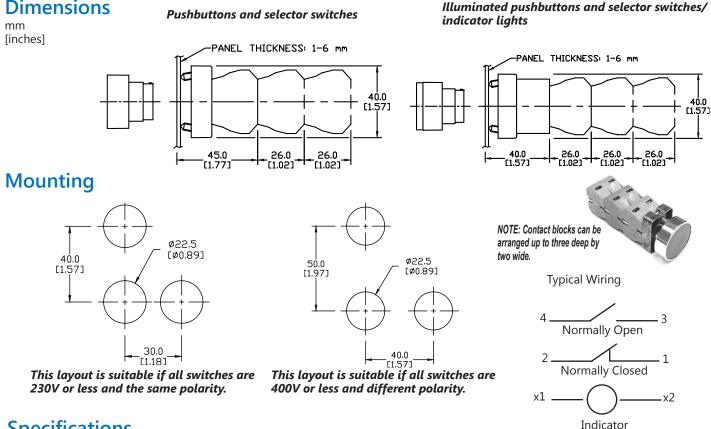- One through six-hole enclosures
- Bulbs and LEDs
- Protective actuator caps

GCX Series 22mm Plastic Pilot Devices Specifications

Assembly information

These pushbuttons and indicator lights are supplied with the appropriate contact blocks, unless otherwise indicated.
Use these drawings as a guide to make sure there is adequate clearance behind the panel.

Dimensions

mm
[inches]

Pushbuttons and selector switches

Illuminated pushbuttons and selector switches/indicator lights

Mounting

This layout is suitable if all switches are 230V or less and the same polarity.

This layout is suitable if all switches are 400V or less and different polarity.

NOTE: Contact blocks can be arranged up to three deep by two wide.

Typical Wiring

Normally Open

Normally Closed

Indicator

Specifications

These specifications apply to all the GCX and ECX 22mm plastic pushbuttons and switches.

Physical Specifications	
Standards Reference	CEI EN 60947-5-1, CSA C22-2 n.14
Approvals	UL File E189258, IMQ (where specified)
Enclosure Material	Fiberglass reinforced thermoplastic
Contacts Material	Silver
Protection Degree	IP40 for GCX3151-24, GCX3151-120, GCX3153-24 and GCX3153-120. IP65 for all others.(See Appendix of this catalog for explanation of IP ratings according to IEC 144 CEI 70-1.)
Electric Shock Protection	IEC 536, Class II
Temperature Ratings	Storage: -40 -to 80ºC (-40 to 176º F) Operating: -25º to +70ºC (-13º to 158º F)
Working Positions	All working positions are allowed
Mechanical Life	Pushbuttons, selector switches, joy stick switches: 1,000,000 operations Emergency mushrooms and push-push pushbuttons: 300,000 operations
Positive Opening Operation	(according to IEC 947-5-1) All functions incorporating an NC contact are positive opening operation

Electrical Specifications	
Rated Thermal Current (contact block)	A300, Q300 (Refer to E22 Series mounting/contact rating section for details)
Rated Insulation Voltage	Ui 660V according to CEI EN 60947-5-1, 300V according to CSA C22-2 n.14 and UL 508
Dielectric Strength	3kV (1 second)
Insulation Resistance	2MΩ min. (500VDC)
Initial Contact Resistance	≤ 25mΩ
Short-Circuit Protection*	Cartridge fuses gl 10 A-500V 10, 3x38l1 100 KA
Terminal Markings	According to CENELEC EN 50013
Connections	Single screw with non-loosening plate clamp,14AWG max.,Tighten to 0.8Nm max
Contacts Operation	Self-cleaning types EN01 (N.C.) EN 10 (N.O.) slow-action, positive opening
Operation Frequency	3600 operations per hour max.
Utilization Category	AC15 (Control of AC electromagnetic loads) 24 volts AC at 10 amps 130 volts AC at 6.5 amps DC13 (Control of DC electromagnetic loads) 24 volts DC at 1.5 amps 110 volts DC at 0.5 amps

*Note: Recommended, not supplied

GCX Series 22mm Plastic Pushbuttons

Momentary Flush Pushbuttons
with protective plastic ring
(30mm dia. actuator)

GCX3102

Momentary Flush Pushbuttons				
Part Number	*Color*	*Price*	*Drawing Link*	*Description*
GCX3100	Black	$d3p:	PDF	One N.O. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX3101	Red	$d3s:	PDF	One N.C. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX3102	Green	$d3u:	PDF	One N.O. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX3103	Yellow	$d3x:	PDF	
GCX3104	Blue	$d3y:	PDF	
GCX3105	White	$d3z:	PDF	

Momentary Flush ON/OFF Pushbuttons
with protective plastic ring
(30mm dia. actuator)

GCX3106　　　**GCX3107**

Momentary Flush ON/OFF Pushbuttons				
Part Number	*Color*	*Price*	*Drawing Link*	*Description*
GCX3106	Red with OFF symbol (O) on actuator	$;d3]:	PDF	One N.C. contact block,30mm dia. actuator, mounts in 22mm hole
GCX3107	Green with ON symbol (I) on actuator	$;d3[:	PDF	One N.O. contact block, 30mm dia. actuator, mounts in 22mm hole

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Pushbuttons

Momentary Extended Pushbuttons

GCX3113

Momentary Extended Pushbuttons				
Part Number	*Color*	*Price*	*Drawing Link*	*Description*
GCX3110	Black	$d3_:	PDF	One N.O. contact block, extended 30mm dia. actuator, mounts in 22mm hole
GCX3111	Red	$;d3!:	PDF	One N.C. contact block, extended 30mm dia. actuator, mounts in 22mm hole
GCX3112	Green	$;d3,:	PDF	One N.O. contact block, extended 30mm dia. actuator, mounts in 22mm hole
GCX3113	Yellow	$d41:	PDF	
GCX3114	Blue	$d42:	PDF	
GCX3115	White	$d43:	PDF	

Double-Headed Momentary Pushbuttons

GCX3152 (with on/off symbols)

GCX3151-24

Double-headed Momentary Pushbuttons Description			
Part Number	*Price*	*Drawing Link*	*Description*
GCX3150	$;0c,0:	PDF	Double-headed for on/off control, One N.O. and one N.C. contact block, fits in 22mm dia. hole, without symbols
GCX3151-24	$;0c,2:	PDF	24VDC/VAC double-headed with indicator, faces without symbols. One N.O. and one N.C. contact block, fits in 22mm dia. hole
GCX3151-120	$;0c,1:	PDF	120VDC/VAC double-headed with indicator, faces without symbols. One N.O. and one N.C. contact block, fits in 22mm dia. hole
GCX3152	$;0c,3:	PDF	Double-headed for on/off control. One N.O. and one N.C. contact block, fits in 22mm dia. hole. With "ON" (I) and "OFF" (0) symbols
GCX3153-24	$;0c,5:	PDF	24VDC/VAC double-headed with indicator, with ON (1) and OFF (0) symbols. One N.O. and one N.C. contact block
GCX3153-120	$;0c,4:	PDF	120VDC/AC double-headed with indicator, with ON (1) and OFF (0) symbols. One N.O. and one N.C. contact block

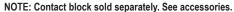*** Note: Lamp data in 22mm Plastic Pilot Device Accessories in this section.**

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Pushbuttons without Contact Block

Momentary Flush Pushbutton Operator (without contact block) (30mm dia. actuator)

Momentary Flush Pushbutton Operators				
Part Number	Color	Price	Drawing Link	Description
GCX3100-SC	Black	$d3q:	PDF	22mm plastic pushbutton operator, flush, includes 30mm diameter operator and support base ONLY. Contact blocks sold separately. Mounts in 22mm hole.
GCX3101-SC	Red	$;d3t:	PDF	22mm plastic pushbutton operator, flush, includes 30mm diameter operator and support base ONLY. Contact blocks sold separately. Mounts in 22mm hole.
GCX3102-SC	Green	$d3v:	PDF	22mm plastic pushbutton operator, flush, includes 30mm diameter operator and support base ONLY. Contact blocks sold separately. Mounts in 22mm hole.

NOTE: Contact block sold separately. See accessories.

GCX3100-SC

GCX3101-SC

Momentary Extended Pushbutton Operator (without contact block)(30mm dia. actuator)

Momentary Extended Pushbutton Operators				
Part Number	Color	Price	Drawing Link	Description
GCX3110-SC	Black	$d3#:	PDF	22mm plastic pushbutton operator, extended, includes 30mm diameter operator and support base ONLY. Contact block sold separately. Mounts in 22mm hole.
GCX3111-SC	Red	$d3?:	PDF	22mm plastic pushbutton operator, extended, includes 30mm diameter operator and support base ONLY. Contact block sold separately. Mounts in 22mm hole.
GCX3112-SC	Green	$d40:	PDF	22mm plastic pushbutton operator, extended, includes 30mm diameter operator and support base ONLY. Contact block sold separately. Mounts in 22mm hole.

NOTE: Contact block sold separately. See accessories.

GCX3111-SC

Contact Blocks

Contact blocks are available for all these products. See accessories.

ECX1040-2   **ECX1030-2**

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Pushbuttons

Momentary Pushbuttons with protective plastic ring

All pushbuttons include operator, support base, indicating bulb, and contact block. They are shipped unassembled. Legend plate is not included and must be ordered separately. All switches in this series use replacement contact block ECX1030 (Red, N.C.) or ECX1040 (Green, N.O.), sold separately in packages of two or five.

24 models available:

• Protective plastic ring for flush mount pushbutton functionality
• Includes incandescent bulb or LED lamp
• 24V and 120V models
• Available in six colors

GCX3202-24

Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Momentary Pushbuttons with Protective Plastic Ring						
Incandescent						
GCX3201-24	Red	$;0d1]:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3201-120	Red	$0d1z:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3202-24	Green	$0d1_:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3202-120	Green	$;0d1[:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3203-24	Yellow	$;0d1!:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3203-120	Yellow	$0d1#:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3204-24	Blue	$;0d1,:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3204-120	Blue	$0d1?:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3205-24	Clear	$0d21:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3205-120	Clear	$0d20:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX3206-24	White	$0d23:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3206-120	White	$0d22:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3201-24L	Red	$0d2g:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3201-120L	Red	$;0d2f:	PDF	22mm plastic LED illuminated pushbutton,120 VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3202-24L	Green	$-0d2i:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3202-120L	Green	$0d2h:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3203-24L	Yellow	$0d2k:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3203-120L	Yellow	$-0d2j:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3204-24L	Blue	$0d2n:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3204-120L	Blue	$-0d2l:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3205-24L	Clear	$0d2p:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3205-120L	Clear	$0d2o:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX3206-24L	White	$0d2s:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3206-120L	White	$0d2q:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Pushbuttons

Momentary Pushbuttons with extended actuator

All pushbuttons include operator, support base, indicating bulb, and contact block. They are shipped unassembled. Legend plate is not included and must be ordered separately. All switches in this series use replacement contact block ECX1030 (Red, N.C.) or ECX1040 (Green, N.O.), sold separately in packages of two or five.

24 models available:

- Illuminated pushbuttons and indicators come complete with bulbs
- Includes incandescent bulb or LED lamp
- 24V and 120V models
- Available in six colors

GCX3214-120

	Momentary Pushbuttons with Extended Actuator					
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Incandescent						
GCX3211-24	Red	$0d25:	PDF	22mm plastic extended incandescent illuminated pushbutton, 24VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3211-120	Red	$0d24:	PDF	22mm plastic extended incandescent illuminated pushbutton, 120VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3212-24	Green	$0d27:	PDF	22mm plastic extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3212-120	Green	$0d26:	PDF	22mm plastic extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3213-24	Yellow	$0d29:	PDF	22mm plastic extended incandescent illuminated pushbutton,24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3213-120	Yellow	$0d28:	PDF	22mm plastic extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3214-24	Blue	$0d2b:	PDF	22mm plastic extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3214-120	Blue	$0d2a:	PDF	22mm plastic extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3215-24	Clear	$0d2d:	PDF	22mm plastic extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3215-120	Clear	$0d2c:	PDF	22mm plastic extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX3216-24	White	$0d3o:	PDF	22mm plastic extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3216-120	White	$0d2e:	PDF	22mm plastic extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3211-24L	Red	$0d2u:	PDF	22mm plastic extended LED illuminated pushbutton, 24VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3211-120L	Red	$;0d2t:	PDF	22mm plastic extended LED illuminated pushbutton, 120VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3212-24L	Green	$0d2x:	PDF	22mm plastic extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3212-120L	Green	$0d2v:	PDF	22mm plastic extended LED illuminated pushbutton,120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3213-24L	Yellow	$0d2z:	PDF	22mm plastic extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3213-120L	Yellow	$0d2y:	PDF	22mm plastic extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3214-24L	Blue	$;0d2[:	PDF	22mm plastic extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3214-120L	Blue	$;0d2]:	PDF	22mm plastic extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3215-24L	Clear	$0d2#:	PDF	22mm plastic extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3215-120L	Clear	$0d2_:	PDF	22mm plastic extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX3216-24L	White	$0d2?:	PDF	22mm plastic extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3216-120L	White	$;0d2!:	PDF	22mm plastic extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Pushbuttons

Push-Push Style Pushbuttons with protective plastic ring

All switches in this series use replacement contact block ECX1042-2 (Brown, N.O.) or ECX1030-5 or ECX1030-2 (Red, N.C.), sold separately.

24 models available:

• Latching Push-ON, Push-OFF actuator
• Includes incandescent bulb or LED lamp
• 24V and 120V models
• Available in six colors
• These switches are supplied with a special N.O. contact block designed for use with this actuator, but they also work with standard N.C. contacts.

GCX3194-24

Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Incandescent						
GCX3191-24	Red	$0d30:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3191-120	Red	$;0d2,:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3192-24	Green	$0d32:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3192-120	Green	$0d31:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3193-24	Yellow	$0d34:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3193-120	Yellow	$0d33:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3194-24	Blue	$0d36:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3194-120	Blue	$0d35:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3195-24	Clear	$0d38:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3195-120	Clear	$0d37:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX3196-24	White	$0d3a:	PDF	22mm plastic incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3196-120	White	$0d39:	PDF	22mm plastic incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3191-24L	Red	$0d3c:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3191-120L	Red	$0d3b:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3192-24L	Green	$0d3e:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3192-120L	Green	$0d3d:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3193-24L	Yellow	$0d3g:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3193-120L	Yellow	$;0d3f:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3194-24L	Blue	$-0d3i:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3194-120L	Blue	$0d3h:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3195-24L	Clear	$0d3k:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3195-120L	Clear	$-0d3j:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX3196-24L	White	$0d3n:	PDF	22mm plastic LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3196-120L	White	$-0d3l:	PDF	22mm plastic LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1925-2, 5mA

Push-Push Style Pushbuttons with Protective Plastic Ring

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Pushbuttons

Mushroom-Style Illuminated Pushbuttons

All pushbuttons include operator, support base, indicating bulb (if applicable) and contact block. They are shipped unassembled. Legend plate is not included and must be ordered separately. All switches in this series use replacement contact block ECX1030 (Red, N.C.) or ECX1040 (Green, N.O.), sold separately in packages of two or five.

GCX3221-24

Mushroom-Style Illuminated Pushbuttons						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Incandescent						
GCX3221-24	Red	$0d1o:	PDF	22mm plastic momentary pushbutton with incandescent illuminated 40mm mushroom actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3221-120	Red	$-0d1l:	PDF	22mm plastic momentary pushbutton with incandescent illuminated 40mm mushroom actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3226-24	Red	$0d1x:	PDF	22mm plastic pushbutton with incandescent illuminated 40mm mushroom twist-to-release actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3226-120	Red	$0d1u:	PDF	22mm plastic pushbutton with incandescent illuminated 40mm mushroom twist-to-release actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
LED						
GCX3221-24L	Red	$0d1p:	PDF	22mm plastic momentary pushbutton with LED illuminated 40mm mushroom actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3221-120L	Red	$0d1n:	PDF	22mm plastic momentary pushbutton with LED illuminated 40mm mushroom actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3226-24L	Red	$0d1y:	PDF	22mm plastic pushbutton with LED illuminated 40mm mushroom twist-to-release actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3226-120L	Red	$0d1v:	PDF	22mm plastic pushbutton with LED illuminated 40mm mushroom twist-to-release actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA

Non-Illuminated Mushroom Pushbuttons

Feature large 60mm dia. actuator and mount in standard 22mm hole.

Non-illuminated Mushroom Pushbuttons				
Part Number	Color	Price	Drawing Link	Description
GCX3131	Red	$0d1q:	PDF	Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.
GCX3134	Black	$d1h:	PDF	Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.
GCX3135	Red	$-d1i:	PDF	Momentary action with one N.C. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. EMERGENCY legend plate available (see Accessories).
GCX3136	Red	$0d1s:	PDF	Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole. 60mm dia. mushroom-style actuator.
GCX3137	Red	$-0d1j:	PDF	Momentary action with one N.C. contact block, fits in 22mm dia. hole, has large 60mm dia. mushroom-style. EMERGENCY legend plate available (see Accessories).
GCX3139	Yellow	$d1k:	PDF	Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.
GCX3141	Red	$;0d1t:	PDF	Key operated release with one N.C. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. EMERGENCY legend plate available (see Accessories).

GCX3137

GCX3141
(key operated)

Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed alike. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2).

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Key Switches and Selector Switches

Key-Operated Selector Switches

GCX3420

Part Number	Price	Drawing Link	Description
GCX3420	$0d1e:	PDF	AutomationDirect selector switch, 22mm, 2-position, maintained, key removable in all positions, (1) N.O. contact(s), plastic base, plastic bezel, Operator: black, key, 30mm, round, plastic.
GCX3430	$;0d1f:	PDF	AutomationDirect selector switch, IP65, 22mm, 2-position, spring return from right, key removable left position, (1) N.O. contact(s), plastic base, plastic bezel, Operator: black, key, 30mm, round, plastic.
GCX3470-22	$0d1g:	PDF	AutomationDirect selector switch, 22mm, 3-position, maintained, key removable in all positions, (2) N.O./(2) N.C. contact(s), plastic base, plastic bezel, Operator: black, key, 30mm, round, plastic.

Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed the same. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2). Keys for plastic 22mm keyed switches are not compatible with Cutler-Hammer key switches.

Note: When using switches having two-deep contact blocks (such as, Model GCX3470-22) with the 22mm plastic enclosures, be sure to use enclosures that are 74mm deep. 51 mm-deep enclosures are too shallow and the switch body will not fit.

Two-Position Selector Switches

**GCX3300
Knob version**

Part Number	Price	Drawing Link	Description
GCX3300	$d16:	PDF	AutomationDirect selector switch, 22mm, 2-position, maintained, (1) N.O. contact(s), plastic base, plastic bezel, Operator: black, knob, 30mm, round, plastic.
GCX3310	$0d17:	PDF	AutomationDirect selector switch, 22mm, 2-position, spring return from right, (1) N.O. contact(s), plastic base, plastic bezel, Operator: black, knob, 30mm, round, plastic.
GCX3350	$0d1a:	PDF	AutomationDirect selector switch, 22mm, 2-position, maintained, (1) N.O. contact(s), plastic base, plastic bezel, Operator: black, lever, 30mm, round, plastic.
GCX3360	$0d1b:	PDF	AutomationDirect selector switch, 22mm, 2-position, spring return from right, (1) N.O. contact(s), plastic base, plastic bezel, Operator: black, lever, 30mm, round, plastic.

**GCX3350
Lever version**

Contact Closure Sequence - 2-Position Switch

Contact Blocks	Contact Arrangement (viewed from front)		Switch Position (viewed from front)	
	Left	Right	Left (Note 1)	Right (Note 2)
1 x N.C.	N.C.		X	
		N.C.	X	
1 x N.O.	N.O.			X
		N.O.		X
2 x N.C.	N.C.	N.C.	XX	
2 x N.O.	N.O.	N.O.		XX

Note 1: Left switch position deactivates all contacts.
Note 2: Right switch position activates all contacts.

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Selector Switches

Three-Position Selector Switches

GCX3330-22 Knob version

GCX3370-22 Lever version

Three-Position Selector Switches			
Part Number	*Price*	*Drawing Link*	*Description*
GCX3320-22	$0d18:	PDF	AutomationDirect selector switch, 22mm, 3-position, maintained, (2) N.O./(2) N.C. contact(s), plastic base, plastic bezel, Operator: black, knob, 30mm, round, plastic.
GCX3330-22	$0d19:	PDF	AutomationDirect selector switch, 22mm, 3-position, spring return to center, (2) N.O./(2) N.C. contact(s), plastic base, plastic bezel, Operator: black, knob, 30mm, round, plastic.
GCX3370-22	$0d1c:	PDF	AutomationDirect selector switch, 22mm, 3-position, maintained, (2) N.O./(2) N.C. contact(s), plastic base, plastic bezel, Operator: black, lever, 30mm, round, plastic.
GCX3380-22	$0d1d:	PDF	AutomationDirect selector switch, 22mm, 3-position, spring return to center, (2) N.O./(2) N.C. contact(s), plastic base, plastic bezel, Operator: black, lever, 30mm, round, plastic.

Note: When using switches having two-deep contact blocks with the 22mm plastic enclosures, be sure to use enclosures that are 74 mm deep; 51 mm-deep enclosures are too shallow and the switch body will not fit.

Contact Closure Sequence for Three-Position Switches

Contact Closure Sequence - 3-Position Switches					
Contact Blocks	*Contact Arrangement (viewed from front)*		*Switch Position (viewed from front)*		
	Left	*Right*	*Left (Note 1)*	*Center (Note 2)*	*Right (Note 3)*
1 x N.C.	N.C.			X ———— X	
		N.C.	X ———— X		
1 x N.O.	N.O.		X		
		N.O.			X
2 x N.C.	N.C.	N.C.	X ——— X ——— X		
2 x N.O.	N.O.	N.O.	X		X

Note 1: Left switch position activates left side contacts (viewed from front).
Note 2: Center switch position deactivates all contacts.
Note 2: Right switch position activates right side contacts (viewed from front).

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Selector Switches

Illuminated Two-Position Selector Switches

20 models available:
- Available in five colors
- 24V and 120V models
- Available in spring-return and maintained styles
- Replacement knobs are available

GCX3245-24

Illuminated Spring Return Two-Position Selector Switches						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Incandescent						
GCX3241-24	Red	$;0c,7:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3241-120	Red	$;0c,6:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3242-24	Green	$;0c,9:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3242-120	Green	$;0c,8:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3243-24	Yellow	$;0c,b:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3243-120	Yellow	$;0c,a:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3244-24	Blue	$;0c,d:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3244-120	Blue	$;0c,c:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3245-24	Clear	$;;0c,f:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3245-120	Clear	$;0c,e:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3241-24L	Red	$0d07:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3241-120L	Red	$0d06:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3242-24L	Green	$0d09:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3242-120L	Green	$0d08:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3243-24L	Yellow	$0d0b:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3243-120L	Yellow	$0d0a:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3244-24L	Blue	$0d0d:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3244-120L	Blue	$0d0c:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3245-24L	Clear	$;0d0f:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3245-120L	Clear	$0d0e:	PDF	22mm plastic LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Selector Switches

Illuminated Two-Position Selector Switches

20 models available:
- Available in five colors
- 24V and 120V models
- Available in spring-return and maintained styles
- Replacement knobs are available

GCX3251-24

Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Illuminated Maintained Two-Position Selector Switches						
Incandescent						
GCX3251-24	Red	$;0c,h:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3251-120	Red	$;0c,g:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3252-24	Green	$;-0c,j:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3252-120	Green	$;-0c,i:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3253-24	Yellow	$;-0c,l:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3253-120	Yellow	$;0c,k:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3254-24	Blue	$;0c,o:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3254-120	Blue	$;0c,n:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3255-24	Clear	$;0c,q:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3255-120	Clear	$;0c,p:	PDF	22mm plastic incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3251-24L	Red	$0d0h:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3251-120L	Red	$0d0g:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3252-24L	Green	$-0d0j:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3252-120L	Green	$-0d0i:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3253-24L	Yellow	$-0d0l:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3253-120L	Yellow	$0d0k:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3254-24L	Blue	$0d0o:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3254-120L	Blue	$0d0n:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3255-24L	Clear	$0d0q:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3255-120L	Clear	$0d0p:	PDF	22mm plastic LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Selector Switches

Illuminated Three-Position Selector Switches

20 models available:
- Available in five colors
- 24V and 120V models
- Available in spring-return and maintained styles
- Replacement knobs are available

GCX3263-24

				Illuminated Maintained Three-Position Selector Switches		
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Bulb [2 per pack]
Incandescent						
GCX3261-24	Red	$;;0c,t:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3261-120	Red	$;0c,s:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3262-24	Green	$;0c,v:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3262-120	Green	$;0c,u:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3263-24	Yellow	$;0c,y:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3263-120	Yellow	$;0c,x:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3264-24	Blue	$;;0c,]:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3264-120	Blue	$;0c,z:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3265-24	Clear	$;0c,_:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3265-120	Clear	$;;0c,[:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3261-24L	Red	$;0d0t:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3261-120L	Red	$0d0s:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3262-24L	Green	$0d0v:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3262-120L	Green	$0d0u:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3263-24L	Yellow	$0d0y:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3263-120L	Yellow	$0d0x:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3264-24L	Blue	$;0d0]:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3264-120L	Blue	$0d0z:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3265-24L	Clear	$0d0_:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3265-120L	Clear	$;0d0[:	PDF	22mm plastic LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

GCX Series 22mm Plastic Illuminated Selector Switches

Illuminated Three-Position Selector Switches

20 models available:
- Available in five colors
- 24V and 120V models
- Available in spring-return and maintained styles
- Replacement knobs are available

GCX3283-120

				Illuminated Spring Return to Center Three-Position Selector Switches		
Part Number	Lamp Color	Price	Drawing Link	Description	Standard Incandescent Bulb [5 per pack]	Standard LED Bulb [2 per pack]
Incandescent						
GCX3281-24	Red	$;;0c,!:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3281-120	Red	$;0c,#:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3282-24	Green	$;;0c,,:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3282-120	Green	$;0c,?:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3283-24	Yellow	$0d01:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3283-120	Yellow	$0d00:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3284-24	Blue	$0d03:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3284-120	Blue	$0d02:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3285-24	Clear	$0d05:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3285-120	Clear	$0d04:	PDF	22mm plastic incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX3281-24L	Red	$;0d0!:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX3281-120L	Red	$0d0#:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX3282-24L	Green	$;0d0,:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX3282-120L	Green	$0d0?:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX3283-24L	Yellow	$0d11:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX3283-120L	Yellow	$0d10:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX3284-24L	Blue	$0d13:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX3284-120L	Blue	$0d12:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX3285-24L	Clear	$0d15:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX3285-120L	Clear	$0d14:	PDF	22mm plastic LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

ECX Series 22mm Plastic Joystick Selector Switches

Joystick Selector Switches

Four models available

22mm Joystick Selector Switches			
Part Number	Price	Drawing Link	Description
ECX3510	$0c?#:	PDF	22mm plastic joystick-style selector switch, two-position momentary, two N.O. contact blocks
ECX3512	$;0c?!:	PDF	22mm plastic joystick-style selector switch, two-position maintained, two N.O. contact blocks
ECX3520	$0c??:	PDF	22mm plastic joystick-style selector switch, four-position momentary, four N.O. contact blocks
ECX3524	$;0c?,:	PDF	22mm plastic joystick-style selector switch, four-position maintained, four N.O. contact blocks

ECX3510, ECX3512

Moving the joystick UP will close contact on one side. Moving it DOWN will close contact on other side.

Note: Four-position switches use two special contact blocks which are not replaceable.

Note: When using switches having two-deep contact blocks (4-position joysticks) with the 22mm plastic enclosures, use enclosures that are 74mm deep; 51mm-deep enclosures are too shallow.

ECX3520, ECX3524

• Moving the joystick UP will close Green contact on one side and moving it DOWN will close Gray contact located behind it.

• Moving the joystick RIGHT will close Green contact on other side and moving it LEFT will close Gray contact located behind it.

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

ECX Series 22mm Plastic Indicator Lights

Plastic Incandescent Indicator Lights

These indicators have a key to prevent rotation when mounted.

12 models available:

- Available in six colors
- 24V and 120V models
- Incandescent bulbs included
- Accepts LED replacement lamps
- Monoblock design for easy mounting

- Side wire entry with back screw terminals for easy wiring and maintenance
- IP20 rated before installation
- IP65 rated after installation

Note: When using LED replacement lamps with these indicators, it may be necessary to remove the frosted diffuser for enhanced illumination.

ECX1051-24

Plastic Incandescent Indicator Lights						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement Lamp [2 per pack]
ECX1051-24	Red	$c?e:	PDF	22mm monoblock incandescent indicator light, 24VDC/VAC	ECX1902-5, 80mA	ECX1911-2, 26mA
ECX1051-120	Red	$c?d:	PDF	22mm monoblock incandescent indicator light, 120VDC/VAC	ECX1904-5, 20mA	ECX1921-2, 5mA
ECX1052-24	Green	$c?g:	PDF	22mm monoblock incandescent indicator light, 24VDC/VAC	ECX1902-5, 80mA	ECX1912-2, 26mA
ECX1052-120	Green	$;c?f:	PDF	22mm monoblock incandescent indicator light, 120VDC/VAC	ECX1904-5, 20mA	ECX1922-2, 5mA
ECX1053-24	Yellow	$-c?i:	PDF	22mm monoblock incandescent indicator light, 24VDC/VAC	ECX1902-5, 80mA	ECX1913-2, 26mA
ECX1053-120	Yellow	$c?h:	PDF	22mm monoblock incandescent indicator light, 120VDC/VAC	ECX1904-5, 20mA	ECX1923-2, 5mA
ECX1054-24	Blue	$c?k:	PDF	22mm monoblock incandescent indicator light, 24VDC/VAC	ECX1902-5, 80mA	ECX1914-2, 26mA
ECX1054-120	Blue	$-c?j:	PDF	22mm monoblock incandescent indicator light, 120VDC/VAC	ECX1904-5, 20mA	ECX1924-2, 5mA
ECX1055-24	Clear	$c?n:	PDF	22mm monoblock incandescent indicator light, 24VDC/VAC	ECX1902-5, 80mA	ECX1915-2, 26mA
ECX1055-120	Clear	$-c?l:	PDF	22mm monoblock incandescent indicator light, 120VDC/VAC	ECX1904-5, 20mA	ECX1925-2, 5mA
ECX1056-24	White	$c?_:	PDF	22mm monoblock incandescent indicator light, 24VDC/VAC	ECX1902-5, 80mA	ECX1915-2, 26mA
ECX1056-120	White	$;c?[:	PDF	22mm monoblock incandescent indicator light, 120VDC/VAC	ECX1904-5, 20mA	ECX1925-2, 5mA

Plastic LED indicator lights

10 models available:

- Available in five colors
- 24V and 120V models
- Non-replaceable LEDs
- Side wire entry with back screw terminals for easy wiring and maintenance
- IP20 rated before installation
- IP65 rated after installation
- 16mA @ 127V, 18mA @ 24V

Plastic LED Indicator Lights				
Part Number	Lamp Color	Price	Drawing Link	Description
ECX2051-24L	Red	$c?p:	PDF	22mm non-metal monoblock LED indicator light, 24VDC/VAC
ECX2051-127L	Red	$c?o:	PDF	22mm non-metal monoblock LED indicator light, 120VDC/VAC
ECX2052-24L	Green	$c?s:	PDF	22mm non-metal monoblock LED indicator light, 24VDC/VAC
ECX2052-127L	Green	$c?q:	PDF	22mm non-metal monoblock LED indicator light, 120VDC/VAC
ECX2053-24L	Yellow	$c?u:	PDF	22mm non-metal monoblock LED indicator light, 24VDC/VAC
ECX2053-127L	Yellow	$;c?t:	PDF	22mm non-metal monoblock LED indicator light, 120VDC/VAC
ECX2054-24L	Blue	$0c?x:	PDF	22mm non-metal monoblock LED indicator light, 24VDC/VAC
ECX2054-127L	Blue	$0c?v:	PDF	22mm non-metal monoblock LED indicator light, 120VDC/VAC
ECX2055-24L	Clear	$0c?z:	PDF	22mm non-metal monoblock LED indicator light, 24VDC/VAC
ECX2055-127L	Clear	$0c?y:	PDF	22mm non-metal monoblock LED indicator light, 120VDC/VAC

For accessories, see 22mm Plastic Pilot Device Accessories in this section.

22mm Plastic Pilot Device Accessories

Replacement Incandescent Bulbs

ECX1902-5

Replacement LED Lamps

ECX1915-2

Hole Plug

ECX1490

Protective Covers for Pushbuttons

ECX1703-5

Knockout Punches

109225

Replacement Keys

ECX1067-2

Replacement Incandescent Bulbs				
Part Number	*Quantity*	*Price*	*Rating*	*Description*
ECX1900-5	5	$0ec1:	6V@ 200mA 1.2 watts	6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
ECX1902-5	5	$0ec2:	24V@ 80mA 2 watts	24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
ECX1904-5	5	$0ec3:	130V@20mA 2.6 watts	120V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4

Note: Bulb removal tool available. Order part number HT8LAMPTOOL.

Replacement LED Lamps					
Part Number	*Color*	*Quantity*	*Price*	*Rating*	*Description*
ECX1911-2	Red	2	$0e9c:	24V@26mA 0.6 watts	LED replacement lamp for miniature bayonet bases Works with 22mm switches and indicators, but illumination will not be as even when used with the ECX 22mm indicators Note: Will not replace sealed Cutler-Hammer monoblock LED indicators.
ECX1912-2	Green		$0e9d:		
ECX1913-2	Yellow		$0e9e:		
ECX1914-2	Blue		$;0e9f:		
ECX1915-2	White		$0e9g:		
ECX1921-2	Red		$0e9h:	120V@5mA 0.6 watts	
ECX1922-2	Green		$-0e9i:		
ECX1923-2	Yellow		$-0e9j:		
ECX1924-2	Blue		$0e9k:		
ECX1925-2	White		$-0e9l:		

Note: LED modules have very low current draw and should not be used with triac output devices like PLC triac output modules. It is recommended that dry contact outputs be used to switch 120 volt AC LED modules.

Hole Plug			
Part Number	*Color*	*Price*	*Description*
ECX1490	Black	$;6b!:	Plastic hole plug for 22.5 mm openings in panels and enclosures; supplied with O-ring and mounting screw. Two plugs per package.

Protective Covers for Pushbuttons				
Part Number	*Color*	*Quantity*	*Price*	*Description*
ECX1700-5	Black	5	$-4j9:	Silicone protective covers for use with 22mm standard-size flush pushbuttons. Will not work with Cutler-Hammer pushbuttons, 22mm plastic illuminated or extended pushbuttons, or 22mm plastic pushbuttons with 40mm actuator face.
ECX1701-5	Red		$-4ja:	
ECX1702-5	Green		$-4jb:	
ECX1703-5	Yellow		$-4jc:	
ECX1704-5	Blue		$-4jd:	
ECX1705-5	Clear		$-4je:	
ECX1706-5	Clear		$;-04jf:	Clear silicone protective covers for use with 22mm illuminated and extended pushbuttons only. Will not work with Cutler-Hammer pushbuttons or 22mm mushroom pushbuttons.

Ruko's knockout punch hole-cutting tool includes punch, die and draw bolt (without ball bearing). Use for sheet steel, stainless-steel sheets, non-ferrous and light metals, and plastics up to 0.16" (8 ga.) thick. Replacement bolts are offered in three of the most popular sizes. See the Tools section of the catalog for details.

Note: Part number 109225 is recommended when punching holes for 22mm pilot devices.

Replacement Keys			
Part Number	*Quantity*	*Price*	*Description*
ECX1067-2	2	$;6u]:	Replacement key for GCX series key-actuated selector switches, pack of 2 sets (2 keys each). NOTE: Will not work with Cutler-Hammer 22mm switches.

Note: All key-actuated 22mm plastic selector switches are keyed alike.

22mm Plastic Pilot Device Accessories

Replacement 22mm Support Base

Replacement 22mm Support Base				
Part Number	**Quantity**	**Price**	**Drawing Link**	**Description**
ECX3029-2	1	$;c?]:	PDF	22mm plastic support base Note: This item is supplied as a replacement part and is not required with any switch assembly. Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect

ECX3029-2

Replacement Contact Blocks

Replacement Contact Blocks					
Part Number	**Quantity**	**Price**	**Drawing Link**	**Contacts**	**Description**
ECX1030-2	2	$dg3:	PDF	Red, normally-closed (N.C.)	Replacement contact block for 22mm pushbuttons and selector switches. Tightening Torque, terminal screw: 0.8 N·m max mounting screw: 0.5 N·m max Note: Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect
ECX1030-5	5	$0dg4:	PDF		
ECX1040-2	2	$dg5:	PDF	Green, normally-open (N.O.)	
ECX1040-5	5	$0dg6:	PDF		
ECX1042-2	2	$dg7:	PDF	Brown, normally-open (N.O.), push-push	Use on lighted Push-push button only

Note: See electrical specifications on GCX Series 22mm Plastic Pilot Devices

ECX1030-2

EMERGENCY STOP Legend Plate

EMERGENCY STOP Legend Plate				
Part Number	**Quantity**	**Price**	**Drawing Link**	**Description**
ECX1651	1	$-6bl:	PDF	Oversize yellow circular EMERGENCY STOP legend plate for 22mm E-stop type mushroom pushbuttons, 60mm outside diameter.

ECX1651

Two-Position Short Lever Pperator

Short Lever Replacement Operator				
Part Number	**Lamp Color**	**Price**	**2-Position**	**Use with**
GR1172PR-5	Red	$;0df0:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX124, GCX125 GCX324, GCX325
GR1172PV-5	Green	$;0df1:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
GR1172PG-5	Yellow	$0de?:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
GR1172PB-5	Blue	$;0de!:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
GR1172PN-5	Clear	$;0de,:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	

GR1172PR-5

22mm Plastic Pilot Device Accessories

Three-Position Short Lever Operator

Short Lever Replacement Operator
Part Number	Lamp Color	Price	3-Position	Use with
GR1288PR-5	Red	$;0df5:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX126, GCX128 GCX326, GVX328
GR1288PV-5	Green	$;0dfv:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PG-5	Yellow	$;0df3:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PB-5	Blue	$;0df2:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PN-5	Clear	$;0df4:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	

GR1288PR-5

Mushroom Switch Replacement Operator

Mushroom Switch Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
PL1171PR-5	Red	$;-dfl:	22mm, illuminated momentary Mushroom switch replacement operator, red, 5/pk	Part numbers starting with GCX1221, GCX3221 mushroom-style illuminated pushbuttons
PL1298P-5	Red	$;dfn:	22mm illuminated twist-to-release mushroom switch replacement operator, red, 5/pk	Part numbers starting with GCX1226, GCX3226 mushroom-style illuminated pushbuttons

PL1298P-5

Flush Pushbutton Replacement Operator

Flush Pushbutton Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
GR1168PR-5	Red	$;0de[:	22mm illuminated flush pushbutton replacement operator, 5/pk	Part numbers starting with GCX119, GCX120 GCX319, GCX320
GR1168PV-5	Green	$0de_:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PG-5	Yellow	$0dez:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PB-5	Blue	$0dey:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PN-5	Clear	$;0de]:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PW-5	White	$0de#:	22mm illuminated flush pushbutton replacement operator, 5/pk	

GR1168PR-5

Extended Pushbutton Replacement Operator

Extended Pushbutton Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
PL1308PR-5	Red	$;dfs:	22mm illuminated extended pushbutton, replacement operator, 5/pk	Part numbers starting with GCX121, GCX321
PL1308PV-5	Green	$;;dft:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PG-5	Yellow	$;dfp:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PB-5	Blue	$;dfo:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PN-5	Clear	$;dfq:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PW-5	White	$;dfu:	22mm illuminated extended pushbutton, replacement operator, 5/pk	

PL1308PR-5

22mm Plastic Pilot Device Accessories

Legend Plates

Plastic legend plates for use with 22mm pilot devices. White engraved text on colored background. O-ring included.

ECX1670-B07

ECX1670-R03

Plastic Legend Plates				
Legend	Color of Field	Part Number	Price	Drawing Link
AUTO OFF HAND	Black	ECX1670-B46	$;3,37:	PDF
Blank Plate	Black	ECX1670-B	$;3,22:	PDF
Blank Plate	Red	ECX1670-R	$;3,3g:	PDF
CLAMP	Black	ECX1670-B24	$;3,2q:	PDF
CLOSE	Black	ECX1670-B01	$;3,23:	PDF
DOWN	Black	ECX1670-B02	$;3,24:	PDF
EMERG. STOP	Red	ECX1670-R03	$;3,3h:	PDF
EXTEND	Black	ECX1670-B51	$;3,3c:	PDF
FEEDER OFF	Black	ECX1670-B26	$;;3,2t:	PDF
FEEDER ON	Black	ECX1670-B25	$;3,2s:	PDF
FOR OFF REV	Black	ECX1670-B19	$;3,2k:	PDF
FOR-REV	Black	ECX1670-B13	$;3,2e:	PDF
FORWARD	Black	ECX1670-B04	$;3,25:	PDF
GRIP	Black	ECX1670-B53	$;3,3e:	PDF
HAND-AUTO	Black	ECX1670-B14	$;;3,2f:	PDF
HAND OFF AUTO	Black	ECX1670-B20	$;-3,2l:	PDF
HIGH	Black	ECX1670-B27	$;3,2u:	PDF
HIGH LOW	Black	ECX1670-B43	$;3,34:	PDF
IN	Black	ECX1670-B28	$;3,2v:	PDF
INCH	Black	ECX1670-B29	$;3,2x:	PDF
JOG	Black	ECX1670-B05	$;3,26:	PDF
JOG FOR	Black	ECX1670-B30	$;3,2y:	PDF
JOG REV	Black	ECX1670-B31	$;3,2z:	PDF
JOG-RUN	Black	ECX1670-B15	$;3,2g:	PDF
LOW	Black	ECX1670-B32	$;;3,2]:	PDF
LOWER	Black	ECX1670-B33	$;;3,2[:	PDF

Note: Legend plate text is 3mm in height

Plastic Legend Plates				
Legend	Color of Field	Part Number	Price	Drawing Link
MAN AUTO	Black	ECX1670-B44	$;3,35:	PDF
MAN OFF AUTO	Black	ECX1670-B47	$;3,38:	PDF
MOTOR RUN	Black	ECX1670-B22	$;3,2o:	PDF
MOTOR STOP	Black	ECX1670-B23	$;3,2p:	PDF
OFF	Black	ECX1670-B34	$;3,2_:	PDF
OFF-ON	Black	ECX1670-B16	$;3,2h:	PDF
ON	Black	ECX1670-B06	$;3,27:	PDF
OPEN	Black	ECX1670-B07	$;3,28:	PDF
OPEN OFF CLOSE	Black	ECX1670-B48	$;3,39:	PDF
OPEN-CLOSE	Black	ECX1670-B17	$;-3,2i:	PDF
OUT	Black	ECX1670-B35	$;3,2#:	PDF
POWER ON	Black	ECX1670-B21	$;3,2n:	PDF
PULL ON PUSH OFF	Black	ECX1670-B50	$;3,3b:	PDF
RAISE	Black	ECX1670-B36	$;;3,2!:	PDF
READY	Black	ECX1670-B37	$;3,2?:	PDF
RELEASE	Black	ECX1670-B54	$;;3,3f:	PDF
RESET	Black	ECX1670-B38	$;;3,2,:	PDF
RETRACT	Black	ECX1670-B52	$;3,3d:	PDF
REVERSE	Black	ECX1670-B08	$;3,29:	PDF
RUN	Black	ECX1670-B09	$;3,2a:	PDF
SAFE RUN	Black	ECX1670-B45	$;3,36:	PDF
START	Black	ECX1670-B10	$;3,2b:	PDF
STOP	Black	ECX1670-B11	$;3,2c:	PDF
STOP	Red	ECX1670-R11	$;-3,3i:	PDF
TEST	Black	ECX1670-B39	$;3,30:	PDF
TRANSFER	Black	ECX1670-B40	$;3,31:	PDF
TRIP	Black	ECX1670-B41	$;3,32:	PDF
UNCLAMP	Black	ECX1670-B42	$;3,33:	PDF
UP	Black	ECX1670-B12	$;3,2d:	PDF
UP OFF DOWN	Black	ECX1670-B49	$;3,3a:	PDF
UP-DOWN	Black	ECX1670-B18	$;-3,2j:	PDF

22mm Plastic Pilot Device Accessories

ECX1690-B16

ECX1690-R11
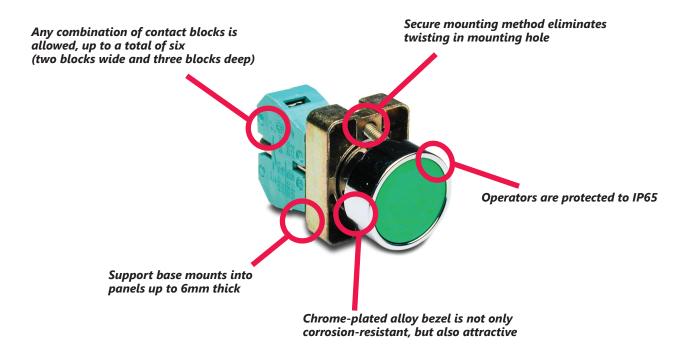
Jumbo Plastic Legend Plates				
Legend	**Color of Field**	**Part Number**	**Price**	**Drawing Link**
Blank Plate	Black	ECX1690-B	$;3,3v:	PDF
Blank Plate	Red	ECX1690-R	$;3,3#:	PDF
EMERG. STOP	Red	ECX1690-R03	$;;3,3!:	PDF
HAND-OFF-AUTO	Black	ECX1690-B20	$;;3,3[:	PDF
JOG	Black	ECX1690-B05	$;3,3x:	PDF
OFF-ON	Black	ECX1690-B16	$;3,3z:	PDF
OPEN-CLOSE	Black	ECX1690-B17	$;;3,3]:	PDF
POWER ON	Black	ECX1690-B21	$;3,3_:	PDF
START	Black	ECX1690-B10	$;3,3y:	PDF
STOP	Red	ECX1690-R11	$;3,3?:	PDF

Note: Legend plate text is 3mm in height

GCX Series 22mm Metal Pilot Devices

Features

Any combination of contact blocks is allowed, up to a total of six (two blocks wide and three blocks deep)

Secure mounting method eliminates twisting in mounting hole

Operators are protected to IP65

Support base mounts into panels up to 6mm thick

Chrome-plated alloy bezel is not only corrosion-resistant, but also attractive
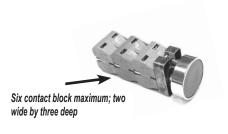
Easy installation
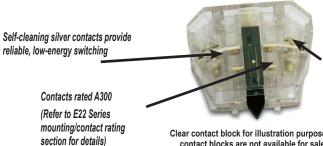
To remove operator, press toward support base and twist counterclockwise.

Six contact block maximum; two wide by three deep

To install switch, place support base against rear of panel (not shown here), insert the operator and twist clockwise until it clicks into place. Carefully tighten the securing screws. Do not over-tighten.

Self-cleaning silver contacts provide reliable, low-energy switching

Contacts rated A300 (Refer to E22 Series mounting/contact rating section for details)

Pressure plate wiring terminals for easy, secure wiring, accepting up to 14 AWG wire

Minimum current rating 15mA @ 24vdc

Clear contact block for illustration purposes. Clear contact blocks are not available for sale from AutomationDirect.

All indicators offer side wire entry with back screw terminals for easy wiring

GCX/ECX Series 22mm Metal Pilot Devices Selection Guide

Flush

- Momentary 30 or 40mm operators
- Available in six colors: black, red, yellow, blue, white and green
- One contact block included
- ON/OFF models also available

Extended

- Momentary 30mm operators
- Available in six colors: black, red, yellow, blue, white and green
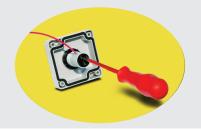- One contact block included

Two way

- Two way on/off control
- With or without illuminated indicators
- One N.O. and one N.C. contact block included

Illuminated

- Available in clear, red, yellow, blue, white and green; 24 and 120-volt models
- Momentary and push-push styles
- Flush or extended operators available
- Incandescent and LED models
- One contact block included

Mushroom

- Available in momentary, twist-to-release, and key release models
- One contact block included
- Also available in incandescent and LED illuminated models

Audible annunciators and potentiometers

- Audible annunciators with or without LED indicator
- 5 and 10 KΩ potentiometers

Selector switches

- Two and three-position in spring return and maintained, non-illuminated and illuminated; incandescent and LED models
- Contact block included

Key switches

- Two and three-position
- Contact blocks included

Joysticks

- Two and four-position, maintained and momentary
- Contact blocks included

Pilot lights

- Available in six colors: red, green, white, clear, yellow and blue
- 24 and 120-volt models with LED
- Frosted diffuser for even lighting
- Incandescent or LED indicators

Accessories

- One to six-hole enclosures
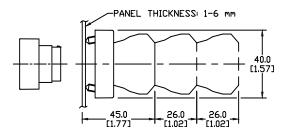- Bulbs and LEDs
- Protective actuator caps

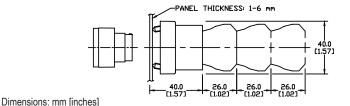# GCX Series 22mm Metal Pilot Devices Specifications

Assembly information

These pushbuttons and indicator lights are supplied with the appropriate contact blocks, unless otherwise indicated. Use these drawings as a guide to make sure there is adequate clearance behind the panel.
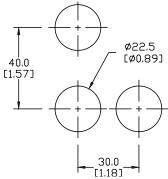
Pushbuttons and selector switches
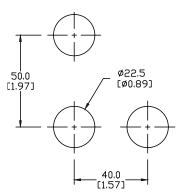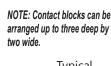
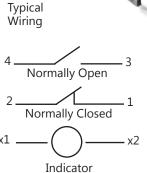**Illuminated pushbuttons and selector switches/pilot lights**

PANEL THICKNESS: 1-6 mm

40.0 [1.57]

45.0 [1.77]   26.0 [1.02]   26.0 [1.02]

Dimensions: mm [inches]

PANEL THICKNESS: 1-6 mm

40.0 [1.57]

40.0 [1.57]   26.0 [1.02]   26.0 [1.02]   26.0 [1.02]

Mounting

40.0 [1.57]

Ø22.5 [Ø0.89]

30.0 [1.18]

This layout is suitable if all switches are 230V or less and the same polarity.

50.0 [1.97]

Ø22.5 [Ø0.89]

40.0 [1.57]

This layout is suitable if all switches are 400V or less and different polarity.

NOTE: Contact blocks can be arranged up to three deep by two wide.

Typical Wiring

4 —— Normally Open —— 3

2 —— Normally Closed —— 1

x1 —— ◯ —— x2

Indicator

Specifications

These specifications apply to all GCX and ECX 22 mm metal pushbuttons and switches.

Physical Specifications	
Standards Reference	CEI EN 60947-5-1, CSA C22-2 n.14
Approvals	CSA, IMQ (where specified), UL File E189258
Enclosure Material	Zn + Al + Mg alloy, chromium plated
Contacts Material	Silver
Protection Degree	IP40 for GCX3151-24,GCX3151-120, GCX3153-24 and GCX3153-120. IP65 for all others. (See Appendix of this catalog for explanation of IP ratings according to IEC 144 CEI 70-1.)
Temperature Ratings	Storage: -40 -to 80ºC (-40 to 176º F) Operating: -25 to +70ºC (-13 to 158º F)
Working Positions	All working positions are allowed
Mechanical Life	Pushbuttons, selector switches: Joy stick switches: 1,000,000 operations Mushroom pushbuttons: 300,000 operations

Electrical Specifications	
Rated Thermal Current (contact block)	A300, Q300 (Refer to E22 Series mounting/ contact rating section for details)
Rated Insulation Voltage	Ui 660V according to CEI EN 60947-5-1, 300V according to CSA C22-2 n.14
Dielectric Strength	3kV (1 second)
Insulation Resistance	2MΩ min. (500VDC)
Initial Contact Resistance	≤ 25mΩ
Short-Circuit Protection*	Cartridge fuses gl 10A - 500V 10,3x38l1 100kA
Terminal Markings	According to CENELEC EN 50013
Connections	Single screw with non-loosening plate clamp,14AWG max.
Contacts Operation	Self-cleaning types EN01 (N.C.) EN 10 (N.O.) slow-action, positive opening
Operation Frequency	3600 operations per hour max.
Utilization Category	AC15 (Control of AC electromagnetic loads) 24 volts AC at 10 amps 130 volts AC at 6.5 amps DC13 (Control of DC electromagnetic loads) 24 volts DC at 1.5 amps 110 volts DC at 0.5 amps

*Note: Recommended, not supplied

GCX Series 22mm Metal Pushbuttons

Momentary Flush Pushbuttons with protective metal ring (30mm dia. actuator)

GCX1102

Momentary Pushbuttons Flush with Protective Metal Ring				
Part Number	**Color**	**Price**	**Drawing Link**	**Description**
GCX1100	Black	$;-dl[:	PDF	One N.O. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX1101	Red	$-dl#:	PDF	One N.C. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX1102	Green	$-dl?:	PDF	One N.O. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX1103	Yellow	$dn0:	PDF	
GCX1104	Blue	$dn1:	PDF	
GCX1105	White	$dn2:	PDF	

Momentary Flush ON/OFF Pushbuttons with protective metal ring (30mm dia. actuator)

GCX1106   **GCX1107**

Momentary Pushbuttons Flush ON/OFF				
Part Number	**Color**	**Price**	**Drawing Link**	**Description**
GCX1106	Red with "Off" symbol (O) on actuator	$dn3:	PDF	One N.C. contact block, 30mm dia. actuator, mounts in 22mm hole
GCX1107	Green with "On" symbol (I) on actuator	$dn4:	PDF	One N.O. contact block, 30mm dia. actuator, mounts in 22mm hole

Momentary Pushbuttons with protective metal ring (40mm dia. actuator)

GCX1121

Momentary Pushbuttons with Protective Metal Ring				
Part Number	**Color**	**Price**	**Drawing Link**	**Description**
GCX1120	Black	$dne:	PDF	One N.O. contact block, 40mm dia. actuator, mounts in 22mm hole
GCX1121	Red	$;dnf:	PDF	One N.C. contact block, 40mm dia. actuator, mounts in 22mm hole
GCX1122	Green	$dng:	PDF	One N.O. contact block, 40mm dia. actuator, mounts in 22mm hole
GCX1123	Yellow	$dnh:	PDF	
GCX1124	Blue	$-dni:	PDF	
GCX1125	White	$-dnj:	PDF	

Note: Protective silicone covers are not available for this pushbutton.

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Pushbuttons

Momentary Extended Pushbuttons
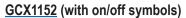
GCX1113

	Momentary Extended Pushbuttons			
Part Number	Color	Price	Drawing Link	Description
GCX1110	Black	$dn5:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O. contact(s), metal base, metal bezel, Operator: black, extended, 30mm, round, plastic.
GCX1111	Red	$dn7:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.C. contact(s), metal base, metal bezel, Operator: red, extended, 30mm, round, plastic.
GCX1112	Green	$dn9:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O. contact(s), metal base, metal bezel, Operator: green, extended, 30mm, round, plastic.
GCX1113	Yellow	$dnb:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O. contact(s), metal base, metal bezel, Operator: yellow, extended, 30mm, round, plastic.
GCX1114	Blue	$dnc:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O. contact(s), metal base, metal bezel, Operator: blue, extended, 30mm, round, plastic.
GCX1115	White	$dnd:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O. contact(s), metal base, metal bezel, Operator: white, extended, 30mm, round, plastic.

Double-Headed Momentary Pushbuttons

GCX1152 (with on/off symbols)

GCX1151-24

	Double-Headed Momentary Pushbuttons		
Part Number	Price	Drawing Link	Description
GCX1150	$;;0df!:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O./(1) N.C. contact(s), metal base, metal bezel, Operator: red/green, double headed, 50mm, rectangular, plastic.
GCX1151-24	$;;0df,:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, incandescent illuminated, (1) N.O./(1) N.C. contact(s), metal base, metal bezel, Operator: red/green, double headed, 60mm, rectangular, plastic, 24 VAC/VDC, full voltage.
GCX1151-120	$;0df?:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, incandescent illuminated, (1) N.O./(1) N.C. contact(s), metal base, metal bezel, Operator: red/green, double headed, 60mm, rectangular, plastic, 120 VAC/VDC, full voltage.
GCX1152	$0dg0:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, (1) N.O./(1) N.C. contact(s), metal base, metal bezel, Operator: red/green, double headed, 50mm, rectangular, plastic, operator text "(I) and (0)".
GCX1153-24*	$0dg2:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, incandescent illuminated, (1) N.O./(1) N.C. contact(s), metal base, metal bezel, Operator: red/green, double headed, 50mm, rectangular, plastic, operator text "(I) and (0)", 24 VAC/VDC, full voltage.
GCX1153-120*	$0dg1:	PDF	AutomationDirect pushbutton, IP65, 22mm, momentary, incandescent illuminated, (1) N.O./(1) N.C. contact(s), metal base, metal bezel, Operator: red/green, double headed, 50mm, rectangular, plastic, operator text "(I) and (0)", 120 VAC/VDC, full voltage.

* Note: Lamp data in **22 mm Metal Pilot Accessories** in this section.

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Pushbuttons without Contact Block

Momentary Flush Pushbutton Operator (without contact block) (30mm dia. actuator)

Momentary Flush Pushbuttons Operators (without contact block)				
Part Number	**Color**	**Price**	**Drawing Link**	**Description**
GCX1100-SC	Black	$-dl_:	PDF	22mm metal pushbutton operator, flush, includes 30mm dia. operator and support base ONLY. Contact blocks sold separately, mounts in 22mm hole.
GCX1101-SC	Red	$;-dl!:	PDF	22mm metal pushbutton operator, flush, includes 30mm dia. operator and support base ONLY. Contact blocks sold separately, mounts in 22mm hole.
GCX1102-SC	Green	$;-dl,:	PDF	22mm metal pushbutton operator, flush, includes 30mm dia. operator and support base ONLY. Contact blocks sold separately, mounts in 22mm hole.

GCX1101-SC

Momentary Extended Pushbutton Operator (without contact block) (30mm dia. actuator)

Momentary Extended Pushbutton Operators (without contact block)				
Part Number	**Color**	**Price**	**Drawing Link**	**Description**
GCX1110-SC	Black	$dn6:	PDF	22mm metal pushbutton operator, extended, includes 30mm dia. operator and support base ONLY. Contact block sold separately, mounts in 22mm hole
GCX1111-SC	Red	$dn8:	PDF	22mm metal pushbutton operator, extended, includes 30mm dia. operator and support base ONLY. Contact block sold separately, mounts in 22mm hole
GCX1112-SC	Green	$dna:	PDF	22mm metal pushbutton operator, extended, includes 30mm dia. operator and support base ONLY. Contact block sold separately, mounts in 22mm hole

GCX1112-SC

Contact blocks are available for these products.

ECX1042-2   **ECX1030-2**

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Illuminated Pushbuttons

Momentary Pushbuttons with protective plastic ring

All pushbuttons include operator, mounting adapter, chrome plated alloy bezel, indicating bulb (if applicable), and contact block. They are shipped unassembled. Legend plate is not included and must be ordered separately. All switches in this series use replacement contact block ECX1030 (Red, N.C.) or ECX1040 (Green, N.O.), sold separately in packages of two or five.

24 models available:
- Protective plastic ring for flush mount pushbutton functionality
- Includes incandescent bulb or LED lamp
- 24V and 120V models
- Available in six colors

GCX1202-24

Momentary Pushbuttons with Protective Plastic Ring						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [5 per pack]
Incandescent						
GCX1201-24	Red	$-0dik:	PDF	22mm metal incandescent illuminated pushbutton 24VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1201-120	Red	$--0dij:	PDF	22mm metal incandescent illuminated pushbutton 120VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1202-24	Green	$0dk6:	PDF	22mm metal incandescent illuminated pushbutton 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1202-120	Green	$--0dil:	PDF	22mm metal incandescent illuminated pushbutton 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX1203-24	Yellow	$0dk8:	PDF	22mm metal incandescent illuminated pushbutton 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1203-120	Yellow	$0dk7:	PDF	22mm metal incandescent illuminated pushbutton 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1204-24	Blue	$0dka:	PDF	22mm metal incandescent illuminated pushbutton 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1204-120	Blue	$0dk9:	PDF	22mm metal incandescent illuminated pushbutton 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1205-24	Clear	$0dkc:	PDF	22mm metal incandescent illuminated pushbutton 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1205-120	Clear	$0dkb:	PDF	22mm metal incandescent illuminated pushbutton 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX1206-24	White	$0dke:	PDF	22mm metal incandescent illuminated pushbutton 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1206-120	White	$0dkd:	PDF	22mm metal incandescent illuminated pushbutton 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX1201-24L	Red	$-0dio:	PDF	22mm metal LED illuminated pushbutton 24 VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1201-120L	Red	$-0din:	PDF	22mm metal LED illuminated pushbutton120 VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1202-24L	Green	$-0diq:	PDF	22mm metal LED illuminated pushbutton 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1202-120L	Green	$-0dip:	PDF	22mm metal LED illuminated pushbutton120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX1203-24L	Yellow	$;-0dit:	PDF	22mm metal LED illuminated pushbutton 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1203-120L	Yellow	$-0dis:	PDF	22mm metal LED illuminated pushbutton120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1204-24L	Blue	$-0div:	PDF	22mm metal LED illuminated pushbutton 24 VDC/VAC. One N.O. contact block	ECX1902-5,80mA	ECX1914-2, 26mA
GCX1204-120L	Blue	$-0diu:	PDF	22mm metal LED illuminated pushbutton120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1205-24L	Clear	$-0diy:	PDF	22mm metal LED illuminated pushbutton 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1205-120L	Clear	$-0dix:	PDF	22mm metal LED illuminated pushbutton120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX1206-24L	White	$;-0di]:	PDF	22mm metal LED illuminated pushbutton 24 VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1206-120L	White	$-0diz:	PDF	22mm metal LED illuminated pushbutton120 VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Illuminated Pushbuttons

Momentary Pushbuttons with extended actuator
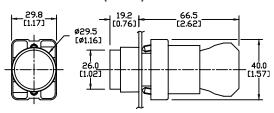
25 models available:

- Protective plastic ring for flush mount pushbutton functionality
- Includes incandescent bulb or LED lamp
- 24V and 120V models
- Available in six colors

All pushbuttons include operator, mounting adapter, chrome plated alloy bezel, indicating bulb (if applicable), and contact block. They are shipped unassembled. Legend plate is not included and must be ordered separately. All switches in this series use replacement contact block ECX1030 (Red, N.C.) or ECX1040 (Green, N.O.), sold separately in packages of two or five.

GCX1214-24

Dimensions: mm [inches]

29.8 [1.17] Ø29.5 [Ø1.16] 19.2 [0.76] 66.5 [2.62] 26.0 [1.02] 40.0 [1.57]

Momentary Pushbuttons with Extended Actuator					
Part Number	*Lamp Color*	*Price*	*Description*	*Replacement Incandescent Bulb [5 per pack]*	*Replacement LED Lamp [5 per pack]*
Incandescent					
GCX1211-24	Red	$0dkg:	22mm metal extended incandescent illuminated pushbutton, 24VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1211-120	Red	$;0dkf:	22mm metal extended incandescent illuminated pushbutton, 120VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1212-24	Green	$-0dki:	22mm metal extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1212-120	Green	$0dkh:	22mm metal extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX1213-24	Yellow	$0dkk:	22mm metal extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1213-120	Yellow	$-0dkj:	22mm metal extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1214-24	Blue	$0dkn:	22mm metal extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1214-120	Blue	$-0dkl:	22mm metal extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1215-24	Clear	$0dkp:	22mm metal extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1215-120	Clear	$0dko:	22mm metal extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX1216-24	White	$0dks:	22mm metal extended incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1216-120	White	$0dkq:	22mm metal extended incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
LED					
GCX1211-24L	Red	$-0di#:	22mm metal extended LED illuminated pushbutton, 24VDC/VAC. One N.C. contact block	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1211-120L	Red	$;-0di[:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.C. contact block	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1211-120LA	Red	$-0di_:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1912-2, 5mA
GCX1212-24L	Green	$-0di?:	22mm metal extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1212-120L	Green	$;-0di!:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX1213-24L	Yellow	$-0dj0:	22mm metal extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1213-120L	Yellow	$;-0di,:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1214-24L	Blue	$-0dj2:	22mm metal extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1214-120L	Blue	$-0dj1:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1215-24L	Clear	$-0dj4:	22mm metal extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1215-120L	Clear	$-0dj3:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX1216-24L	White	$-0dj6:	22mm metal extended LED illuminated pushbutton, 24VDC/VAC. One N.O. contact block	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1216-120L	White	$-0dj5:	22mm metal extended LED illuminated pushbutton, 120VDC/VAC. One N.O. contact block	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Metal Pilot Device Accessories in this section.

Pilot Devices

GCX Series 22mm Metal Illuminated Pushbuttons

Push-Push Style Pushbuttons with protective plastic ring

24 models available:

- Protective plastic ring for flush mount pushbutton functionality
- Includes incandescent bulb or LED lamp
- 24V and 120V models
- Available in six colors
- These switches are supplied with a special N.O. contact block designed for use with this actuator, but they also work with standard N.C. contacts

GCX1194-24

Push-Push Style Pushbuttons with Protective Plastic Ring						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [5 per pack]
Incandescent						
GCX1191-24	Red	$-0djc:	PDF	22mm metal incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5 , 80mA	ECX1911-2, 26mA
GCX1191-120	Red	$-0djb:	PDF	22mm metal incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1192-24	Green	$-0dje:	PDF	22mm metal incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5 , 80mA	ECX1912-2, 26mA
GCX1192-120	Green	$-0djd:	PDF	22mm metal incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1193-24	Yellow	$-0djg:	PDF	22mm metal incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5 , 80mA	ECX1913-2, 26mA
GCX1193-120	Yellow	$;-0djf:	PDF	22mm metal incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1194-24	Blue	$--0dji:	PDF	22mm metal incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5 , 80mA	ECX1914-2, 26mA
GCX1194-120	Blue	$-0djh:	PDF	22mm metal incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1195-24	Clear	$-0djk:	PDF	22mm metal incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5 , 80mA	ECX1915-2, 26mA
GCX1195-120	Clear	$--0djj:	PDF	22mm metal incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1925-2,5mA
GCX1196-24	White	$-0djn:	PDF	22mm metal incandescent illuminated pushbutton, 24VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1902-5 , 80mA	ECX1915-2, 26mA
GCX1196-120	White	$--0djl:	PDF	22mm metal incandescent illuminated pushbutton, 120VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring.	ECX1904-5, 20mA	ECX1925-2, 5mA

All switches in this series use replacement contact block ECX1042-2 (Brown, N.O.) or ECX1030-5 or ECX1030-2 (Red, N.C.), sold separately. LED on the following page.

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Illuminated Pushbuttons

Push-Push Style Pushbuttons with Protective Plastic Ring						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [5 per pack]
LED						
GCX1191-24L	Red	$-0djp:	PDF	22mm metal LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1191-120L	Red	$-0djo:	PDF	22mm metal LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block.Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1192-24L	Green	$-0djs:	PDF	22mm metal LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1192-120L	Green	$-0djq:	PDF	22mm metal LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block.Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1193-24L	Yellow	$-0dju:	PDF	22mm metal LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1193-120L	Yellow	$;-0djt:	PDF	22mm metal LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block.Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1194-24L	Blue	$-0djx:	PDF	22mm metal LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1194-120L	Blue	$-0djv:	PDF	22mm metal LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block.Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1195-24L	Clear	$-0djz:	PDF	22mm metal LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1195-120L	Clear	$-0djy:	PDF	22mm metal LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block.Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1925-2,5mA
GCX1196-24L	White	$;-0dj[:	PDF	22mm metal LED illuminated pushbutton, 24 VDC/VAC. One N.O. contact block. Flush Push ON - Push OFF operator with colored plastic ring	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1196-120L	White	$;-0dj]:	PDF	22mm metal LED illuminated pushbutton, 120 VDC/VAC. One N.O. contact block.Flush Push ON - Push OFF operator with colored plastic ring	ECX1904-5, 20mA	ECX1925-2, 5mA

All switches in this series use replacement contact block ECX1042-2 (Brown, N.O.) or ECX1030-5 or ECX1030-2 (Red, N.C.), sold separately.

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Selector Switches

Two-Position Selector Switches

Two-Position Selector Switches			
Part Number	Price	Drawing Link	Description
GCX1300	$-0dj_:	PDF	22mm metal selector switch, two-position maintained, black knob. One N.O. contact block
GCX1310	$-0dj#:	PDF	22mm metal selector switch, two-position spring-return from right, black knob .One N.O. contact block
GCX1350	$;-0dj,:	PDF	22mm metal selector switch, two-position maintained, black lever. One N.O. contact block
GCX1360	$0dk0:	PDF	22mm metal selector switch, two-position spring-return from right, black lever. One N.O. contact block

GCX1300 Knob version

GCX1350 Lever version

Contact Closure Sequence - 2-Position Switch				
Contact Blocks	Contact Arrangement (viewed from front)		Switch Position (viewed from front)	
	Left	Right	Left (Note 1)	Right (Note 2)
1 x N.C.	N.C.		X	
		N.C.	X	
1 x N.O.	N.O.			X
		N.O.		X
2 x N.C.	N.C.	N.C.	XX	
2 x N.O.	N.O.	N.O.		XX

Note 1: Left switch position deactivates all contacts.
Note 2: Right switch position activates all contacts.

Three-Position Selector Switches

Three-position Selector Switches			
Part Number	Price	Drawing Link	Description
GCX1320-22	$;-0dj!:	PDF	22mm metal selector switch, three-position maintained, black knob. Two N.O. and two N.C. contact blocks
GCX1330-22	$-0dj?:	PDF	22mm metal selector switch, three-position spring-return to center, black knob. Two N.O. and two N.C. contact blocks
GCX1370-22	$0dk1:	PDF	22mm metal selector switch, three-position maintained. black lever. Two N.O. and two N.C. contact blocks
GCX1380-22	$0dk2:	PDF	22mm metal selector switch, three-position spring-return to center, black lever. Two N.O. and two N.C. contact blocks

GCX1320-22 Knob version

GCX1370-22 Lever version

Contact Closure Sequence - 3-Position Switch					
Contact Blocks	Contact Arrangement (viewed from front)		Switch Position (viewed from front)		
	Left	Right	Left (Note 1)	Center (Note 2)	Right (Note 3)
1 x N.C.	N.C.			X	X
		N.C.	X	X	
1 x N.O.	N.O.		X		
		N.O.			X
2 x N.C.	N.C.	N.C.	X	XX	X
2 x N.O.	N.O.	N.O.	X		X

Note 1: Left switch position activates left side contacts (viewed from front).
Note 2: Center switch position deactivates all contacts.
Note 2: Right switch position activates right side contacts (viewed from front).

Note: When using switches having two-deep contact blocks with the 22mm plastic enclosures, be sure to use enclosures that are 74mm deep; 51mm-deep enclosures are too shallow and the switch body will not fit.

GCX Series 22mm Metal Illuminated Selector Switches

Illuminated Two-Position Selector Switches

20 models available:

• Available in five colors
• 24V and 120V models
• Available in spring-return and maintained styles
• Replacement knobs are available

GCX1245-24

Illuminated Two-position Spring-Return Selector Switches						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb 5 per pack	Replacement LED Lamp 2 per pack
Incandescent						
GCX1241-24	Red	$0dg9:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1241-120	Red	$0dg8:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1242-24	Green	$0dgb:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1242-120	Green	$0dga:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1243-24	Yellow	$0dgd:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1243-120	Yellow	$0dgc:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1244-24	Blue	$;0dgf:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1244-120	Blue	$0dge:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1245-24	Clear	$0dgh:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1245-120	Clear	$0dgg:	PDF	22mm metal incandescent illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX1241-24L	Red	$0dh9:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1241-120L	Red	$0dh8:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1242-24L	Green	$0dhb:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1242-120L	Green	$0dha:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1243-24L	Yellow	$0dhd:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1243-120L	Yellow	$0dhc:	PDF	22mm meta LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1244-24L	Blue	$;0dhf:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1244-120L	Blue	$0dhe:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1245-24L	Clear	$0dhh:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1245-120L	Clear	$0dhg:	PDF	22mm metal LED illuminated 2-position selector switch. Spring-return from right. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Illuminated Selector Switches

Illuminated Two-Position Maintained Selector Switches

20 models available:

• Available in five colors
• 24V and 120V models
• Available in spring-return and maintained styles
• Replacement knobs are available

GCX1251-24

Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb 5 per pack	Replacement LED Lamp 2 per pack
Illuminated Two-Position Maintained Selector Switches						
Incandescent						
GCX1251-24	Red	$-0dgj:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1251-120	Red	$-0dgi:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1252-24	Green	$-0dgl:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1252-120	Green	$0dgk:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1253-24	Yellow	$0dgo:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1253-120	Yellow	$0dgn:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1254-24	Blue	$0dgq:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1254-120	Blue	$0dgp:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1255-24	Clear	$;0dgt:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1255-120	Clear	$0dgs:	PDF	22mm metal incandescent illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX1251-24L	Red	$-0dhj:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1251-120L	Red	$-0dhi:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1252-24L	Green	$-0dhl:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1252-120L	Green	$0dhk:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1253-24L	Yellow	$0dho:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1253-120L	Yellow	$0dhn:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1254-24L	Blue	$0dhq:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1254-120L	Blue	$0dhp:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1255-24L	Clear	$;0dht:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 24VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1255-120L	Clear	$0dhs:	PDF	22mm metal LED illuminated 2-position selector switch. Maintained. 120VDC/VAC. One N.O. contact block. Illuminated colored knob.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Illuminated Selector Switches

Illuminated Three-Position Maintained Selector Switch

20 models available:

- Available in five colors
- 24V and 120V models
- Available in spring-return and maintained styles
- Replacement knobs are available

GCX1263-24

Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb 5 per pack	Replacement LED Lamp 2 per pack
Illuminated Three-Position Maintained Selector Switches						
Incandescent						
GCX1261-24	Red	$0dgv:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1261-120	Red	$0dgu:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1262-24	Green	$0dgy:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1262-120	Green	$0dgx:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1263-24	Yellow	$;0dg]:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1263-120	Yellow	$0dgz:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1264-24	Blue	$0dg_:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1264-120	Blue	$;0dg[:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1265-24	Clear	$;0dg!:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1265-120	Clear	$0dg#:	PDF	22mm metal incandescent illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX1261-24L	Red	$0dhv:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1261-120L	Red	$0dhu:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1262-24L	Green	$0dhy:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1262-120L	Green	$0dhx:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1263-24L	Yellow	$;0dh]:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1263-120L	Yellow	$0dhz:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1264-24L	Blue	$0dh_:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1264-120L	Blue	$;0dh[:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1265-24L	Clear	$;0dh!:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1265-120L	Clear	$0dh#:	PDF	22mm metal LED illuminated 3-position selector switch. Maintained. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Metal Pilot Device Accessories in this section.

For the latest prices, please check AutomationDirect.com.

GCX Series 22mm Metal Illuminated Selector Switches

Illuminated Three-Position Spring Return Selector Wwitches

20 models available:
- Available in five colors
- 24V and 120V models
- Available in spring-return and maintained styles
- Replacement knobs are available

GCX1283-24

Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb 5 per pack	Replacement LED Lamp 2 per pack
Illuminated Three-Position Spring-Return Selector Switches						
Incandescent						
GCX1281-24	Red	$;0dg,:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1281-120	Red	$0dg?:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1282-24	Green	$0dh1:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1282-120	Green	$0dh0:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX1283-24	Yellow	$0dh3:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1283-120	Yellow	$0dh2:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1284-24	Blue	$0dh5:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1284-120	Blue	$0dh4:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1285-24	Clear	$0dh7:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1285-120	Clear	$0dh6:	PDF	22mm metal incandescent illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA
LED						
GCX1281-24L	Red	$;0dh,:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1281-120L	Red	$0dh?:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1282-24L	Green	$-0di1:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1282-120L	Green	$-0di0:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1922-2, 5mA
GCX1283-24L	Yellow	$-0di3:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1283-120L	Yellow	$-0di2:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1284-24L	Blue	$-0di5:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1284-120L	Blue	$-0di4:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1285-24L	Clear	$-0di7:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 24VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1285-120L	Clear	$-0di6:	PDF	22mm metal LED illuminated 3-position selector switch. Spring-return to Center. 120VDC/VAC. Two N.O. and Two N.C. contact blocks.	ECX1904-5, 20mA	ECX1925-2, 5mA

For accessories, see 22mm Metal Pilot Device Accessories in this section.

ECX Series 22mm Metal Joystick Selector Switches

Joystick Selector Switches

• Four models available

			Joystick Selector Switches
Part Number	**Price**	**Drawing Link**	**Description**
ECX1510	$;;0df]:	PDF	22mm metal joystick-style selector switch, two-position momentary, two N.O. contact blocks
ECX1512	$;;0df[:	PDF	22mm metal joystick-style selector switch, two-position maintained, two N.O. contact blocks
ECX1520	$;0df_:	PDF	22mm metal joystick-style selector switch, four-position momentary, four N.O. contact blocks
ECX1524	$;0df#:	PDF	22mm metal joystick-style selector switch, four-position maintained, four N.O. contact blocks
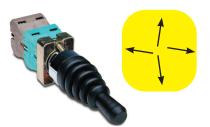
Note: Four-position switches use two special contact blocks which are not replaceable.
Note: When using switches having two-deep contact blocks (4-position joysticks) with the 22mm plastic enclosures, use
        enclosures that are 74mm deep; 51mm-deep enclosures are too shallow.

ECX1510 (Two-position momentary)
ECX1512 (Two-position maintained)
• Moving the joystick UP will close contact on one side.
• Moving the joystick DOWN will close contact on other side.

ECX1520 (Four-position momentary)
ECX1524 (Four-position maintained)
• Moving the joystick UP will close Green contact on one side and moving it DOWN will close Gray contact located behind it.
• Moving the joystick RIGHT will close Green contact on other side and moving it LEFT will close Gray contact located behind it.

Important Installation Note

It is very important that the joystick be assembled correctly to ensure proper operation.

Insert operator into support base (panel is not shown).

Twist clockwise until it clicks into place. Carefully tighten the securing screws. Do not over-tighten. (4.5 lb·in) If the operator is not "clicked" into position before the screws are tightened, the switch will not work properly.

Pilot Devices

GCX Series 22mm Metal Pilot Lights and Key Switches

LED Pilot Light

12 models available

- Available in six colors
- 24V and 120V models
- LED lamps are included
- Accepts incandescent replacement bulbs

GCX1231-24L

22mm LED Pilot Lights						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb 5 per pack	Replacement LED Lamp 2 per pack
LED						
GCX1231-24L	Red	$;0df7:	PDF	22mm metal LED illuminated pilot light. 24VDC/VAC	ECX1902-5, 80mA	ECX1911-2, 26mA
GCX1231-120L	Red	$;0df6:	PDF	22mm metal LED illuminated pilot light. 120VDC/VAC	ECX1904-5, 20mA	ECX1921-2, 5mA
GCX1232-24L	Green	$;0df9:	PDF	22mm metal LED illuminated pilot light. 24VDC/VAC	ECX1902-5, 80mA	ECX1912-2, 26mA
GCX1232-120L	Green	$;0df8:	PDF	22mm metal LED illuminated pilot light. 120VDC/VAC	ECX1904-5, 20mA	ECX1922-22, 5mA
GCX1233-24L	Yellow	$;0dfb:	PDF	22mm metal LED illuminated pilot light. 24VDC/VAC	ECX1902-5, 80mA	ECX1913-2, 26mA
GCX1233-120L	Yellow	$;0dfa:	PDF	22mm metal LED illuminated pilot light. 120VDC/VAC	ECX1904-5, 20mA	ECX1923-2, 5mA
GCX1234-24L	Blue	$;0dfd:	PDF	22mm metal LED illuminated pilot light. 24VDC/VAC	ECX1902-5, 80mA	ECX1914-2, 26mA
GCX1234-120L	Blue	$;0dfc:	PDF	22mm metal LED illuminated pilot light. 120VDC/VAC	ECX1904-5, 20mA	ECX1924-2, 5mA
GCX1235-24L	Clear	$;:0dff:	PDF	22mm metal LED illuminated pilot light. 24VDC/VAC	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1235-120L	Clear	$;0dfe:	PDF	22mm metal LED illuminated pilot light. 120VDC/VAC	ECX1904-5, 20mA	ECX1925-2, 5mA
GCX1236-24L	White	$;0dfh:	PDF	22mm metal LED illuminated pilot light. 24VDC/VAC	ECX1902-5, 80mA	ECX1915-2, 26mA
GCX1236-120L	White	$;0dfg:	PDF	22mm metal LED illuminated pilot light. 120VDC/VAC	ECX1904-5, 20mA	ECX1925-2, 5mA

Key-Operated Selector Switches

22mm Key-operated Selector Switches			
Part Number	Price	Drawing Link	Description
GCX1420	$0dk3:	PDF	22mm metal selector switch, key-operated, two-position maintained, key can be removed in all positions. One N.O. contact block. Replacement keys available
GCX1430	$0dk4:	PDF	22mm metal selector switch, key-operated, two-position spring-return from right. One N.O. contact block. Replacement keys available
GCX1470-22	$0dk5:	PDF	22mm metal selector switch, key-operated, three-position maintained, key can be removed in all positions. Two N.O. and two N.C. contact blocks. Replacement keys available

GCX1420

Note: Keyed switches come with two keys. All metal 22mm keyed switches are keyed the same. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2). Keys for metal 22mm keyed switches are not compatible with Cutler-Hammer key switches.

Note: When using switches having two-deep contact blocks (such as, Model GCX1470-22) with the 22mm plastic enclosures, be sure to use enclosures that are 74mm deep. 51mm-deep enclosures are too shallow and the switch body will not fit.

Note: For contact closure sequence, refer to beginning of selector switches in this section.

For accessories, see 22mm Metal Pilot Device Accessories in this section.

ECX Series 22mm Metal Pilot Devices

Audible Annunciator

• 80dB @ 10cm
• 25mA @ 24V
• Intermittent sound when energized
• IP20 before installation
• IP65 after installation

22mm Audible Annunciators				
Part Number	Color	Price	Drawing Link	Description
ECX2070-24	Black	$c#v:	PDF	AutomationDirect audible alarm buzzer, 80 dB at 10cm, 2.4 kHz tone frequency, pulse tone(s), 24 VAC/VDC, 22mm, panel mount, plastic housing, black, IP65.
ECX2070-127	Black	$c#u:	PDF	AutomationDirect audible alarm buzzer, 80 dB at 10cm, 2.4 kHz tone frequency, pulse tone(s), 120 VAC/VDC, 22mm, panel mount, plastic housing, black, IP65.
ECX2071-24R	Red	$0c?2:	PDF	AutomationDirect audible alarm buzzer, 80 dB at 10cm, 2.8 kHz tone frequency, pulse tone(s), 24 VAC/VDC, permanent LED indicator(s), red, 22mm, panel mount, plastic housing, red, IP65.
ECX2071-127R	Red	$0c?1:	PDF	AutomationDirect audible alarm buzzer, 80 dB at 10cm, 2.8 kHz tone frequency, pulse tone(s), 120 VAC/VDC, permanent LED indicator(s), red, 22mm, panel mount, plastic housing, red, IP65.
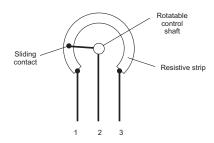
22mm Potentiometer

• IP65

22mm Potentiometers				
Part Number	Quantity	Price	Drawing Link	Description
ECX2300-5K	1	$0665:	PDF	22mm potentiometer with 5kΩ resistance, ±10%. Nominal voltage: 250V. Rated dissipation: 2W at 25°C. Temperature range -40 to 70°C. Black handle. Connection type is screw terminal, 3-pole, 22-14 AWG.
ECX2300-10K	1	$0664:	PDF	22mm potentiometer with 10kΩ resistance, ±10%.Nominal voltage: 250V. Rated dissipation: 2W at 25°C. Temperature range -40 to 70°C. Black handle. Connection type is screw terminal, 3-pole, 22-14 AWG.
ECX2640	1	$6bn:	NA	22mm legend plate for potentiometer with 0% to 100% marking, 50mm square. 50 x 50 x 1mm with 24.5 mm cutout.

For accessories, see 22mm Metal Pilot Device Accessories in this section.

22mm Metal Pilot Device Accessories

Replacement Incandescent Bulbs

Replacement Incandescent Bulbs				
Part Number	*Quantity*	*Price*	*Rating*	*Description*
ECX1900-5	5	$0ec1:	6V@ 200mA , 1.2 watts	6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
ECX1902-5	5	$0ec2:	24V@ 80mA 2 watts	24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
ECX1904-5	5	$0ec3:	130V@20mA 2.6 watts	120V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4

Note: Bulb removal tool available. Order part number HT8LAMPTOOL.

ECX1902-5

Replacement LED Lamps

Replacement LED Lamps					
Part Number	*Color*	*Quantity*	*Price*	*Rating*	*Description*
ECX1911-2	Red		$0e9c:		
ECX1912-2	Green		$0e9d:		
ECX1913-2	Yellow		$0e9e:	24V@26mA 0.6 watts	
ECX1914-2	Blue		$;0e9f:		LED replacement lamp for miniature bayonet bases Works with 22mm switches and indicators, but illumination will not be as even when used with the ECX 22mm indicators Note: Will not replace sealed Cutler-Hammer monoblock LED indicators.
ECX1915-2	White	2	$0e9g:		
ECX1921-2	Red		$0e9h:		
ECX1922-2	Green		$-0e9i:	120V@5mA 0.6 watts	
ECX1923-2	Yellow		$-0e9j:		
ECX1924-2	Blue		$0e9k:		
ECX1925-2	White		$-0e9l:		

ECX1915-2

Hole plug

Hole Plug			
Part Number	*Color*	*Price*	*Description*
ECX1490	Black	$;6b!:	Plastic hole plug for 22.5 mm openings in panels and enclosures; supplied with O-ring and mounting screw. Two plugs per package.

ECX1490

Pilot Light Replacement Lens

Pilot Light Replacement Lens				
Part Number	*Lamp Color*	*Price*	*Description*	*Use with*
PL1170PR-5	Red	$;-dfi:	22mm metallic series pilot light replacement lens, 5/pk	
PL1170PV-5	Green	$;-dfj:	22mm metallic series pilot light replacement lens, 5/pk	
PL1170PG-5	Yellow	$;dfy:	22mm metallic series pilot light replacement lens, 5/pk	Part numbers starting with GCX123
PL1170PB-5	Blue	$;dfx:	22mm metallic series pilot light replacement lens, 5/pk	
PL1170PN-5	Clear	$;dfz:	22mm metallic series pilot light replacement lens, 5/pk	
PL1170PW-5	White	$;dfk:	22mm metallic series pilot light replacement lens, 5/pk	

PL1170PR-5

22mm Metal Pilot Device Accessories

Protective Covers for Pushbuttons

Protective Covers for Pushbuttons				
Part Number	*Color*	*Quantity*	*Price*	*Description*
ECX1700-5	Black	5	$-4j9:	Silicone protective covers for use with 22mm standard-size flush pushbuttons. Will not work with Cutler-Hammer pushbuttons, 22mm plastic illuminated or extended pushbuttons, or 22mm plastic pushbuttons with 40mm actuator face.
ECX1701-5	Red		$-4ja:	
ECX1702-5	Green		$-4jb:	
ECX1703-5	Yellow		$-4jc:	
ECX1704-5	Blue		$-4jd:	
ECX1705-5	Clear		$-4je:	
ECX1706-5	Clear		$;-04jf:	Clear silicone protective covers for use with 2 mm illuminated and extended pushbuttons only. Will not work with Cutler-Hammer pushbuttons or 22mm mushroom pushbuttons.

ECX1703-5

Replacement 22mm Support Base

Replacement 22mm Support Base				
Part Number	*Quantity*	*Price*	*Drawing Link*	*Description*
ECX1029-2	1	$eaa:	PDF	22mm metal support base Note: This item is supplied as a replacement part and is not required with any switch assembly. Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect

ECX1029-2

Replacement Contact Blocks

Replacement Contact Blocks					
Part Number	*Quantity*	*Price*	*Drawing Link*	*Contacts*	*Description*
ECX1030-2	2	$dg3:	PDF	Red, normally-closed (N.C.)	Replacement contact block for 22mm pushbuttons and selector switches. Tightening Torque, terminal screw: 0.8Nm max mounting screw: 0.5Nm max Note: Will not work with Cutler-Hammer 22mm switches.
ECX1030-5	5	$0dg4:	PDF		
ECX1040-2	2	$dg5:	PDF	Green, normally-open (N.O.)	
ECX1040-5	5	$0dg6:	PDF		
ECX1042-2	2	$dg7:	PDF	Brown, normally-open (N.O.), push-push	Replacement normally open push-push contact blocks for 22mm pushbutton and selector switches, pack of 2. Note: Will not work with Cutler-Hammer 22mm switches.

Note: See electrical specifications on ECX Series 22mm Metal Pilot Devices Specifications page at beginning of this section.

ECX1030-2

Replacement Keys

Replacement Keys			
Part Number	*Quantity*	*Price*	*Description*
ECX1067-2	Pkg of 2 sets (2 keys per set)	$;6u]:	Replacement key for GCX series key-actuated selector switches, pack of 2 sets (2 keys each). NOTE: Will not work with Cutler-Hammer 22mm switches.

Note: All key-actuated 22mm metal selector switches are keyed alike.

ECX1067-2

22mm Metal Pilot Device Accessories

EMERGENCY STOP Legend Plate

EMERGENCY STOP Legend Plate				
Part Number	**Quantity**	**Price**	**Drawing Link**	**Description**
ECX1651	1	$-6bl:	PDF	Oversize yellow circular EMERGENCY STOP legend plate for 22mm E-stop type mushroom pushbuttons, 60mm outside diameter.

ECX1651

Knockout Punches

Ruko's knockout punch hole-cutting tool includes punch, die and draw bolt (without ball bearing). Use for sheet steel, stainless-steel sheets, non-ferrous and light metals, and plastics up to 0.16" (8 ga.) thick.

Replacement bolts are offered in three of the most popular sizes.

Note: Part number 109225 is recommended when punching holes for 22mm pilot devices.

109225

Two-Position Short Lever Operator

2-Position Short Lever Replacement Operator				
Part Number	**Lamp Color**	**Price**	**2-Position**	**Use with**
GR1172PR-5	Red	$;0df0:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX124, GCX125 GCX324, GCX325
GR1172PV-5	Green	$;0df1:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
GR1172PG-5	Yellow	$0de?:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
GR1172PB-5	Blue	$;0de!:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
GR1172PN-5	Clear	$;0de,:	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	

GR1172PR-5

Three-Position Short Lever Operator

3-Position Short Lever Replacement Operator				
Part Number	**Lamp Color**	**Price**	**3-Position**	**Use with**
GR1288PR-5	Red	$;0df5:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX126, GCX128 GCX326, GCX328
GR1288PV-5	Green	$;0dfv:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PG-5	Yellow	$;0df3:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PB-5	Blue	$;0df2:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PN-5	Clear	$;0df4:	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	

GR1288PR-5

22mm Metal Pilot Device Accessories

Mushroom Switch Replacement Operator

Mushroom Switch Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
PL1171PR-5	Red	$;-dfl:	22mm, illuminated momentary Mushroom switch replacement operator, red, 5/pk	Part numbers starting with GCX1221, GCX3221 mushroom-style illuminated pushbuttons
PL1298P-5	Red	$;dfn:	22mm illuminated twist-to-release mushroom switch replacement operator, red, 5/pk	Part numbers starting with GCX1226, GCX3226 mushroom-style illuminated pushbuttons

PL1298P-5

Flush Pushbutton Replacement Operator

Flush Pushbutton Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
GR1168PR-5	Red	$;0de[:	22mm illuminated flush pushbutton replacement operator, 5/pk	Part numbers starting with GCX119, GCX120 GCX319, GCX320
GR1168PV-5	Green	$0de_:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PG-5	Yellow	$0dez:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PB-5	Blue	$0dey:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PN-5	Clear	$;0de]:	22mm illuminated flush pushbutton replacement operator, 5/pk	
GR1168PW-5	White	$0de#:	22mm illuminated flush pushbutton replacement operator, 5/pk	

GR1168PR-5

Extended Pushbutton Replacement Operator

Extended Pushbutton Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
PL1308PR-5	Red	$;dfs:	22mm illuminated extended pushbutton, replacement operator, 5/pk	Part numbers starting with GCX121, GCX321
PL1308PV-5	Green	$;;dft:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PG-5	Yellow	$;dfp:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PB-5	Blue	$;dfo:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PN-5	Clear	$;dfq:	22mm illuminated extended pushbutton, replacement operator, 5/pk	
PL1308PW-5	White	$;dfu:	22mm illuminated extended pushbutton, replacement operator, 5/pk	

PL1308PR-5

22mm Metal Pilot Device Accessories

Legend Plates

Aluminum legend plates for use with 22mm pilot devices. Black or red field with silver background. O-ring included.

ECX1670A-B04

ECX1670A-R03

Aluminum Legend Plates						
Legend	Color of Field	Text Color	Background Color	Part Number	Price	Drawing Link
AUTO OFF HAND	Black	Black	Silver	ECX1670A-B46	$;3,1x:	PDF
Blank Plate	Black	-	Silver	ECX1670A-B	$;3,0x:	PDF
Blank Plate	Red	-	Silver	ECX1670A-R	$;;3,1,:	PDF
CLAMP	Black	Black	Silver	ECX1670A-B24	$;3,18:	PDF
CLOSE	Black	Black	Silver	ECX1670A-B01	$;3,0y:	PDF
DOWN	Black	Black	Silver	ECX1670A-B02	$;3,0z:	PDF
EMERG. STOP	Red	Red	Silver	ECX1670A-R03	$;3,20:	PDF
EXTEND	Black	Black	Silver	ECX1670A-B51	$;3,1_:	PDF
FEEDER OFF	Black	Black	Silver	ECX1670A-B26	$;3,1a:	PDF
FEEDER ON	Black	Black	Silver	ECX1670A-B25	$;3,19:	PDF
FOR OFF REV	Black	Black	Silver	ECX1670A-B19	$;3,13:	PDF
FOR REV	Black	Black	Silver	ECX1670A-B13	$;;3,0!:	PDF
FORWARD	Black	Black	Silver	ECX1670A-B04	$;;3,0]:	PDF
GRIP	Black	Black	Silver	ECX1670A-B53	$;;3,1!:	PDF
HAND-AUTO	Black	Black	Silver	ECX1670A-B14	$;3,0?:	PDF
HAND OFF AUTO	Black	Black	Silver	ECX1670A-B20	$;3,14:	PDF
HIGH	Black	Black	Silver	ECX1670A-B27	$;3,1b:	PDF
HIGH LOW	Black	Black	Silver	ECX1670A-B43	$;;3,1t:	PDF
IN	Black	Black	Silver	ECX1670A-B28	$;3,1c:	PDF
INCH	Black	Black	Silver	ECX1670A-B29	$;3,1d:	PDF
JOG	Black	Black	Silver	ECX1670A-B05	$;;3,0[:	PDF
JOG FOR	Black	Black	Silver	ECX1670A-B30	$;3,1e:	PDF
JOG REV	Black	Black	Silver	ECX1670A-B31	$;;3,1f:	PDF
JOG RUN	Black	Black	Silver	ECX1670A-B15	$;;3,0,:	PDF
LOW	Black	Black	Silver	ECX1670A-B32	$;3,1g:	PDF
LOWER	Black	Black	Silver	ECX1670A-B33	$;3,1h:	PDF
MAN AUTO	Black	Black	Silver	ECX1670A-B44	$;3,1u:	PDF

Note: Legend plate text is 3mm in height
Continued on next page

22mm Metal Pilot Device Accessories

ECX1670A-B48

ECX1670A-R11

Legend	Color of Field	Text Color	Background Color	Part Number	Price	Drawing Link
MAN OFF AUTO	Black	Black	Silver	ECX1670A-B47	$;3,1y:	PDF
MOTOR RUN	Black	Black	Silver	ECX1670A-B22	$;3,16:	PDF
MOTOR STOP	Black	Black	Silver	ECX1670A-B23	$;3,17:	PDF
OFF	Black	Black	Silver	ECX1670A-B34	$;-3,1i:	PDF
OFF ON	Black	Black	Silver	ECX1670A-B16	$;3,10:	PDF
ON	Black	Black	Silver	ECX1670A-B06	$;3,0q:	PDF
OPEN	Black	Black	Silver	ECX1670A-B07	$;3,0s:	PDF
OPEN OFF CLOSE	Black	Black	Silver	ECX1670A-B48	$;3,1z:	PDF
OPEN CLOSE	Black	Black	Silver	ECX1670A-B17	$;3,11:	PDF
OUT	Black	Black	Silver	ECX1670A-B35	$;-3,1j:	PDF
POWER ON	Black	Black	Silver	ECX1670A-B21	$;3,15:	PDF
PULL ON PUSH OFF	Black	Black	Silver	ECX1670A-B50	$;;3,1[:	PDF
RAISE	Black	Black	Silver	ECX1670A-B36	$;3,1k:	PDF
READY	Black	Black	Silver	ECX1670A-B37	$;-3,1l:	PDF
RELEASE	Black	Black	Silver	ECX1670A-B54	$;3,1?:	PDF
RESET	Black	Black	Silver	ECX1670A-B38	$;3,1n:	PDF
RETRACT	Black	Black	Silver	ECX1670A-B52	$;3,1#:	PDF
REVERSE	Black	Black	Silver	ECX1670A-B08	$;;3,0t:	PDF
RUN	Black	Black	Silver	ECX1670A-B09	$;3,0u:	PDF
SAFE RUN	Black	Black	Silver	ECX1670A-B45	$;3,1v:	PDF
START	Black	Black	Silver	ECX1670A-B10	$;3,0v:	PDF
STOP	Black	Black	Silver	ECX1670A-B11	$;3,0_:	PDF
STOP	Red	Red	Silver	ECX1670A-R11	$;3,21:	PDF
TEST	Black	Black	Silver	ECX1670A-B39	$;3,1o:	PDF
TRANSFER	Black	Black	Silver	ECX1670A-B40	$;3,1p:	PDF
TRIP	Black	Black	Silver	ECX1670A-B41	$;3,1q:	PDF
UNCLAMP	Black	Black	Silver	ECX1670A-B42	$;3,1s:	PDF
UP	Black	Black	Silver	ECX1670A-B12	$;3,0#:	PDF
UP OFF DOWN	Black	Black	Silver	ECX1670A-B49	$;;3,1]:	PDF
UP DOWN	Black	Black	Silver	ECX1670A-B18	$;3,12:	PDF

Aluminum Legend Plates (continued)

Note: Legend plate text is 3mm in height

22mm Metal Pilot Device Accessories

ECX1680A-B17

ECX1680A-R03

Jumbo Aluminum Legend Plates						
Legend	**Color of Field**	**Text Color**	**Background Color**	**Part Number**	**Price**	**Drawing Link**
Blank Plate	Black	-	Silver	**ECX1680A-B**	$;-3,3j:	PDF
Blank Plate	Red	-	Silver	**ECX1680A-R**	$;3,3s:	PDF
EMERG. STOP	Red	Red	Silver	**ECX1680A-R03**	$;;3,3t:	PDF
HAND OFF AUTO	Black	Black	Silver	**ECX1680A-B20**	$;3,3p:	PDF
JOG	Black	Black	Silver	**ECX1680A-B05**	$;3,3k:	PDF
OFF ON	Black	Black	Silver	**ECX1680A-B16**	$;3,3n:	PDF
OPEN CLOSE	Black	Black	Silver	**ECX1680A-B17**	$;3,3o:	PDF
POWER ON	Black	Black	Silver	**ECX1680A-B21**	$;3,3q:	PDF
START	Black	Black	Silver	**ECX1680A-B10**	$;-3,3l:	PDF
STOP	Red	Red	Silver	**ECX1680A-R11**	$;3,3u:	PDF

Note: Legend plate text is 3mm in height

ⒸCOMEPI Control Stations

Comepi Control Stations –

Precision, Durability, and Performance

Unmatched Control and Safety for Industrial Applications

Comepi Control Stations deliver high-performance control solutions designed to optimize machine operation, safety, and efficiency in demanding industrial environments. Available in single-function, multi-function, and emergency stop (E-Stop) configurations, these control stations meet the diverse needs of industrial automation, machinery control, and safety applications. Additionally, M12 quick-connect versions allow for fast, tool-free installation, reducing wiring complexity and improving system efficiency. Whether you need basic pushbutton control, selector switches, or advanced safety mechanisms, Comepi has a solution to meet your requirements.

SB114-042-G

SB414-01B-G

Features

- Rugged Construction – Built with polycarbonate fiberglass reinforcement, these control stations offer high impact resistance, ensuring long-lasting performance in industrial settings.
- Pre-Assembled Convenience – Delivered as ready-to-install units, Comepi control stations eliminate assembly time, increasing operational efficiency.
- Superior Protection – Rated IP65, these stations are dust-tight and resistant to water jets, making them suitable for harsh environments.
- Double Insulation for Safety – Class II insulation enhances electrical safety, reducing the risk of failures.
- Versatile Operation – Available in momentary, maintained, and key-operated configurations, catering to various control requirements.
- User-Friendly Design – The ergonomic pushbuttons, knobs, and levers ensure effortless operation and precise control.
- Quick & Secure Installation – Can be mounted using four M4 screws or GR CA-001 magnets (not included), providing flexibility in mounting options.
- M12 Quick-Connect Options – Pre-wired M12 connector versions simplify installation and enable plug-and-play connectivity for industrial automation systems.

Approvals

- cULus
- CE

CE c(UL)us

COMEPI **Control Station Selection**

Control Station Selection Chart									
Part Number	*Price*	*Drawing Link*	*Operator Color*	*Operator Legend*	*Legend Plate Marking*	*Operator Type*	*Action*	*Contact Type*	*Number of Operators*
SB114-011-G	$-6gj#:	PDF	White	START	N/A	Flush	Momentary	(1) N.O.	1
SB114-021-G	$-6gj?:	PDF	Black	STOP		Extended		(1) N.O.	
SB114-022-G	$;-6gj,:	PDF		STOP		Extended		(1) N.C.	
SB114-031-G	$-6gje:	PDF	Green	(I)		Flush		(1) N.O.	
SB114-042-G	$-6gjn:	PDF	Red	(O)		Flush		(1) N.C.	
SB114-081-G	$6gk8:	PDF	Black	N/A		Flush		(1) N.O.	
SB114-051-G	$6gk4:	PDF				O - I	Knob	Maintained	(1) N.O.	
SB114-073-G	$6gk5:	PDF			O - I -2	Knob		(2) N.O.	
SB114-061-G	$6gk6:	PDF			O - I	Key-operated		(1) N.O.	
SB214-013-G	$6gk2:	PDF	Black/black	up arrow and down arrow	N/A	Flush/flush	Momentary	(1) N.O. and (1) N.O.	2
SB214-024-G	$-6gjg:	PDF	Red/green	(I) and (0)		Flush/flush		(1) N.O. and (1) N.C.	
SB214-034-G	$6gk7:	PDF		N/A		Flush/flush		(1) N.O. and (1) N.C.	
SB214-044-G	$6gkc:	PDF			START / STOP	Flush/extended		(1) N.O. and (1) N.C.	
SB314-017-G	$--6gji:	PDF	Green/red/green	(I), (O) and (II)	N/A	Flush/extended/flush		(1) N.O., (1) N.C. and (1) N.O.	3
SB414-01B-G	$;-6gj[:	PDF	Red/white/black/blue	arrow, up arrow, down arrow and RESET	N/A	Mushroom/flush/flush/flush	Twist-to-release/momentary	(1) N.C., (1) N.O., (1) N.O. and (1) N.O.	4

COMEPI **Control Station Specifications**

Approvals CE c(UL)us
• CE, cULus
• IP65

Technical Specifications			
Connection	Screw with captive cable clamp		
Body Material	Polycarbonate fiberglass reinforced		
Construction Form	Pre-assembled enclosure		
Max. Switching Frequency [cycles/hr]	3600		
Operating Temperature	- 40 to +158°F [- 4 to 70°C]		
Degree of Protection	IP65		
Protection Against Electrical Shocks	Class II - Double insulation		
Pollution Degree	3		
Rated Impulsive Voltage [kV]	8		
Short Circuit Protection (EU min 500VAC - fuses type gG (gl)) [A]	10		
Colors	Gray cover black box		
Operating Currents	*Ie - AC-15 (50-60 Hz) [VAC - A]*	24V - 10A / 240V - 6A / 400V - 4A	
	DC-13 operating currents [VDC - A]	24V - 2,8 A / 125V - 0.55A / 250V - 0.27A	
Marking Terminals	According to EN 60947 - 5-1		
B10d	2 (million of operations)		
Mechanical Durability	1 (millions of operations)		
Number of Holes	1 to 4		
Mounting	Four M4 screws or optional GR CA-001 magnets		
Rated Insulating Voltage Ui [VDC]	690		
Agency Approvals	CE, cULus		

COMEPI

Control Stations with M12 Connectors

SB314-017-G-M

Features
• M12 connectors
• Polycarbonate fiberglass reinforced
• Pre-assembled enclosure
• Class II - Double insulation

Approvals
• CE, cULus
• IP65

M12 Control Station Selection Chart										
Part Number	Price	Drawing Link	Operator Color	Operator Legend	Legend Plate Marking	Operator Type	Action	Contact Type	Number of Operators	Pin Count
SB114-011-G-M	$;-6gj!:	PDF	White	START	N/A	Flush	Momentary	(1) N.O.	1	5-pin female M12 cable
SB114-021-G-M	$6gk0:	PDF	Black	STOP		Extended				
SB114-022-G-M	$6gk1:	PDF				Extended		(1) N.C.		
SB114-031-G-M	$;-6gjf:	PDF	Green	(I)		Flush		(1) N.O.		
SB114-042-G-M	$-6gjo:	PDF	Red	(O)		Flush		(1) N.C.		
SB114-081-G-M	$6gkd:	PDF	Black	N/A		Flush		(1) N.O.		
SB114-051-G-M	$6gk9:	PDF				Knob	Maintained			
SB114-073-G-M	$6gka:	PDF				Knob		(2) N.O.		
SB114-061-G-M	$6gkb:	PDF				Key-operated		(1) N.O.		
SB214-013-G-M	$6gk3:	PDF	Black/black	up arrow and down arrow		Flush/flush	Momentary	(1) N.O. and (1) N.O.	2	
SB214-024-G-M	$-6gjh:	PDF	Red/green	(I) and (0)		Flush/flush		(1) N.O. and (1) N.C.		
SB214-034-G-M	$6gke:	PDF		N/A		Flush/flush				
SB214-044-G-M	$;6gkf:	PDF			START / STOP	Flush/extended				
SB314-017-G-M	$--6gjl:	PDF	Green/red/green	(I), (O) and (II)	N/A	Flush/extended/flush		(1) N.O., (1) N.C. and (1) N.O.	3	8-pin female M12 cable
SB414-01B-G-M	$-6gj_:	PDF	Red/white/black/blue	arrow, up arrow, down arrow and RESET		Mushroom/flush/flush/flush	Twist-to-release/momentary	(1) N.C., (1) N.O., (1) N.O. and (1) N.O.	4	

COMEPI M12 Control Station Specifications

M12 Control Station Specifications		
Operating Currents	**Ie - AC-15 (50-60 Hz) [VAC - A]**	24V - 4A
	DC-13 [VDC - A]	24V - 4A
Rated Insulating Voltage Ui [VDC]		125
Body Material		Polycarbonate fiberglass reinforced
Construction Form		Pre-wired enclosure
Operating Temperature		- 40 to +158°F [- 4 to 70°C]
Degree of Protection		IP65
Reference Regulations		Class II - Double insulation
Pollution Degree		3
Rated Impulsive Voltage [kV]		2.5
Short Circuit Protection (EU min 500VAC - fuses type gG (gl)) [A]		4
Marking Terminals		According to EN 60947 - 5-1
Mechanical Durability		1 (millions of operations)
B10d		2 (millions of operations)
Colors		Gray cover black box
Mounting		Four M4 screws or optional GR CA-001 magnets
Connection		M12x1.0 5-pole connector and 8-pin
Number of Holes		1 to 4
Agency Approvals		CE, cULus

COMEPI E-Stop Control Stations

Approvals

CE ⟨UL⟩ us

- CE, cULus
- IP65

SB115-012-G

SB115-102-G

E-Stop Selection Chart								
Part Number	Price	Drawing Link	Operator Color	Operator Legend	Operator Type	Action	Operator Protection	Contact Type
SB115-012-G	$--6gjj:	PDF	Red	Arrow	Mushroom	Twist-to-release	N/A	(1) N.C.
SB115-013-G	$-6gjk:	PDF						(1) N.O./(1) N.C.
SB115-015-G	$-6gjp:	PDF						(2) N.C.
SB115-102-G	$-6gjq:	PDF					Guarded and Padlockable	(1) N.C.
SB115-103-G	$-6gjs:	PDF						(1) N.O./(1) N.C.
SB115-105-G	$;-6gjt:	PDF						(2) N.C.

E-Stop Specifications	
Mounting	Four M4 screws or GR CA-001 magnets
Body Material	Reinforced thermoplastic
Construction Form	Pre-assembled enclosure
Connection	Screw with captive cable clamp
Operating Temperature	- 40 to +158°F [- 4 to 70°C]
EN 60947-5-5 EN ISO 13850	Compliant
Reference Regulations	Class II - Double insulation
Degree of Protection	IP65
Colors	Yellow cover black box
Rated Insulating Voltage Ui [VDC]	690
Pollution Degree	3
Rated Impulsive Voltage [kV]	8
Short Circuit Protection (EU min 500Vac - fuses type gG (gl)) [A]	10
Operating Currents	Ie - AC-15 (50-60 Hz) [VAC - A]: 24V - 10A / 240V - 6A / 400V - 4A
	DC-13 [VDC - A]: 24V - 2.8 A / 125V - 0.55A / 250V - 0.27A
Max. Switching Frequency [cycles/hr]	3600
Marking Terminals	According to EN 60947 - 5-1
Mechanical Durability	0.3 (millions of operations)
B10d	0.6 (millions of operations)
Agency Approvals	CE, cULus

COMEPI M12 E-Stop Control Stations

SB115-012-G-M

SB115-105-G-M

Approvals
• CE, cULus
• IP65

CE cULus

M12 E-Stop Selection Chart										
Part Number	Price	Drawing Link	Operator Color	Operator Legend	Operator Type	Requires	Action	Operator Protection	Contact Type
SB115-012-G-M	$-6gju:	PDF	Red	Arrow	Mushroom	5-pin female M12 cable	Twist-to-release	N/A	(1) N.C.
SB115-013-G-M	$-6gjv:	PDF							(1) N.O./(1) N.C.
SB115-015-G-M	$-6gjx:	PDF							(2) N.C.
SB115-102-G-M	$-6gjy:	PDF						Guarded and Padlockable	(1) N.C.
SB115-103-G-M	$-6gjz:	PDF							(1) N.O./(1) N.C.
SB115-105-G-M	$;-6gj]:	PDF							(2) N.C.

M12 E-Stop Specifications	
Mounting	Four M12 screws or GR CA-001 magnets
Body Material	Reinforced thermoplastic
Construction Form	Pre-wired enclosure
Connection	M12x1.0 5-pole connector
Operating Temperature	- 40 to +158°F [- 4 to 70°C]
Degree of Protection	IP65
EN 60947-5-5 EN ISO 13850	Compliant
Reference Regulations	Class II - Double insulation
Rated Insulating Voltage Ui [VDC]	125
Pollution Degree	3
Rated Impulsive Voltage [kV]	2.5
Short Circuit Protection (EU min 500Vac - fuses type gG (gl)) [A]	4
Operating Currents — Ie - AC-15 (50-60 Hz) [VAC - A]	24V - 4A
Operating Currents — DC-13 operating currents [VDC - A]	24V - 4A
Max. Switching Frequency [cycles/hr]	3600
Marking Terminals	According to EN 60947 - 5-1
B10d	0.6 (millions of operations)
Colors	Yellow cover with black box
Mechanical Durability	0.3 (millions of operations)
Agency Approvals	CE, cULus

For the latest prices, please check AutomationDirect.com.

COMEPI Operator Selection

ECX4101 ECX4410 ECX4102

Applications
• IEC 60947-5 -1

Approvals
• IP65
• CE , UL508

Operator Selection Chart

Part Number	Price	Drawing Link	Description	Operator Color	Operator Legend	Action	Type
ECX4105-91	$;6gk[:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: white, flush, 30mm, round, plastic, operator text "START". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	White	START	Momentary	Flush
ECX4110-91	$6gk_:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: black, extended, 30mm, round, plastic, operator text "STOP". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Black	STOP		Extended
ECX4111	$6gk#	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: red, extended, 30mm, round, plastic. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Red			Extended
ECX4111-01	$;6gk!:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: red, extended, 30mm, round, plastic, operator text "(O)". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.		(O)		
ECX4107-90	$6gk?:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: green, flush, 30mm, round, plastic, operator text "(I)". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Green	(I)		Flush
ECX4107-91	$6gkv:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: green, flush, 30mm, round, plastic, operator text "(II)". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.		(II)		
ECX4106	$6gkx:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: red, flush, 30mm, round, plastic, operator text "(O)". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Red	(O)		
ECX4100	$6gky:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: black, flush, 30mm, round, plastic. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Black	N/A		
ECX4300	$6gkg:	PDF	Comepi selector switch, IP65, 22mm, 2-position, maintained, operator only, thermoplastic base, thermoplastic bezel, Operator: black, knob, 30mm, round. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.			Maintained	Knob
ECX4320	$6gkh:	PDF	Comepi selector switch, IP65, 22mm, 3-position, maintained, operator only, thermoplastic base, thermoplastic bezel, Operator: black, knob, 30mm, round. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.				Knob
ECX4410	$-6gki:	PDF	Comepi selector switch, IP65, 22mm, 2-position, maintained, key removable left position, operator only, thermoplastic base, thermoplastic bezel, Operator: black, key-operated, 30mm, round. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.				Key-operated
ECX4101	$6gkz:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: red, flush, 30mm, round, plastic. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Red		Momentary	Flush
ECX4102	$;6gk]:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: green, flush, 30mm, round, plastic. Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Green			
ECX4108-01-B	$;6gk,:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: white, flush, 30mm, round, plastic, operator text "up arrow". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	White	up arrow		
ECX4108	$-6gl0:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: black, flush, 30mm, round, plastic, operator text "down arrow". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Black	down arrow		
ECX4108-01	$-6gl1:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: black, flush, 30mm, round, plastic, operator text "up arrow". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.		up arrow		
ECX4104-92	$-6gl2:	PDF	Comepi pushbutton, IP65, 22mm, momentary, operator only, thermoplastic base, thermoplastic bezel, Operator: blue, flush, 30mm, round, plastic, operator text "RESET". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Blue	RESET		
ECX4580	$-6gl3:	PDF	Comepi emergency stop pushbutton, IP65, 22mm, twist-to-release, operator only, thermoplastic base, thermoplastic bezel, Operator: red, mushroom, 40mm, mushroom, plastic, operator text "arrow". Requires ECX4029-2 mounting flange and ECX10x0N-2 contact block.	Red	arrow	Twist-to-release	Mushroom

COMEPI Operator Specifications

Operator Specifications	
Operator Diameter [mm]	30
Mounting Hole [mm]	22
Body Material	Plastic
Degree of Protection	IP65
Reference Regulations	IEC 60947-5 -1 / IEC 60947-5-5
Approvals	CE,UL

COMEPI **Accessories**

GRCA-001

ECX4029-2

ECX2790

ECX1669-G

Accessory Selection Chart					
Part Number	*Price*	*Drawing Link*	*Used with*	*Color*	*Description*
ECX4029-2	$-6gl9:	PDF	Comepi 22mm pushbuttons	Black	Comepi mounting flange, thermoplastic, black. Package of 2. For use with Comepi 22mm pushbuttons.
GRCA-001	$-6gl6:	PDF	Comepi control stations and pushbutton enclosures	N/A	Comepi SB series mounting magnets, package of 4. For use with Comepi control stations and pushbutton enclosures. Mounting hardware included.
ECX1670-B10-90	$6gkp:	PDF	22mm pilot devices	Black	Comepi legend plate, plastic, rectangular, black field, black background, white engraved text, legend plate marking "START". For use with 22mm pilot devices.
ECX1670-R11-90	$6gkq:	PDF	22mm pilot devices	Red	Comepi legend plate, plastic, rectangular, red field, red background, white engraved text, legend plate marking "STOP". For use with 22mm pilot devices.
ECX1670-B55	$;6gkt:	PDF	22mm pilot devices	Black	Comepi legend plate, plastic, rectangular, black field, black background, white engraved text, legend plate marking "0-1". For use with 22mm pilot devices.
ECX1670-B56	$6gku:	PDF	22mm pilot devices	Black	Comepi legend plate, plastic, rectangular, black field, black background, white engraved text, legend plate marking "0-1-2". For use with 22mm pilot devices.
ECX2790	$-6gl8:	PDF	Comepi 22mm pushbuttons	Yellow	Comepi SB series guard, yellow. For use with Comepi 22mm pushbuttons. For emergency stop applications.
ECX1608	$-6gl7:	PDF	Comepi 22mm pushbuttons	N/A	Comepi SB series installation/removal tool, for use with Comepi 22mm pushbuttons.
ECX1669-G	$6hu5:	PDF	22mm pilot devices	Yellow	Comepi legend plate, plastic, round, yellow field, yellow background, black engraved text, legend plate marking "EMERGENCY STOP". For use with 22mm pilot devices.

COMEPI Enclosure Selection and Specifications

Description

Comepi SB enclosures are made of fiberglass reinforced polycarbonate. Assembled to the Comepi command and control units, they are the ideal complement to be used as high quality human-machine interfaces. The SB line has been designed for applications in harsh environments, it can reach IP67 and IP69K protection degree, thanks also to gasket on deposit. The enclosure has numerous aesthetic, structural and use strengths, which distinguish it from the competition and place it among the top of the range.

SB114

Features/Applications

- Black body with gray cover or black body with yellow cover
- Pre-assembled enclosure
- Class II - Double insulation
- Polycarbonate fiberglass reinforced
- Mounting hardware included
- Form-in-place gasket for best sealing performance
- Rated IP67 and IP69K
- Contacts may be mounted on the enclosure body.
- May be mounted using four M4 screws or GR CA-001 magnets (not included), providing flexibility in mounting options.

Listings

- UL Listed
- CE, cULus
- IP67, IP69K

CE c(UL)us

SB414

Enclosures Selection Chart

Part Number	Price	Drawing Link	Color	Description	Dimensions (HxWxD) mm [in]
SB114	$-6gkj:	PDF	black body / gray cover	Comepi SB series pushbutton enclosure, 1 hole, 22mm, 83 x 72 x 53mm (HxWxD), wall mount, with knockouts, fiberglass-reinforced polycarbonate, black body / gray cover, screw cover.	83 x 72 x 53 [3.3 X 2.8 X 2.1]
SB115	$6gkk:	PDF	black body / yellow cover	Comepi SB series pushbutton enclosure, 1 hole, 22mm, 83 x 72 x 53mm (HxWxD), wall mount, with knockouts, fiberglass-reinforced polycarbonate, black body / yellow cover, screw cover.	
SB214	$-6gkl:	PDF	black body / gray cover	Comepi SB series pushbutton enclosure, 2 holes, 22mm, 123 x 72 x 53mm (HxWxD), wall mount, with knockouts, fiberglass-reinforced polycarbonate, black body / gray cover, screw cover.	123 x 72 x 53 [4.8 x 2.8 x 2.1]
SB314	$6gkn:	PDF	black body / gray cover	Comepi SB series pushbutton enclosure, 3 holes, 22mm, 156 x 72 x 53mm (HxWxD), wall mount, with knockouts, fiberglass-reinforced polycarbonate, black body / gray cover, screw cover.	156 x 72 x 53 [6.1 x 2.8 x 2.1]
SB414	$6gko:	PDF	black body / gray cover	Comepi SB series pushbutton enclosure, 4 holes, 22mm, 189 x 72 x 53mm (HxWxD), wall mount, with knockouts, fiberglass-reinforced polycarbonate, black body / gray cover, screw cover.	189 x 72 x 53 [7.4 X 2.8 X 2.1]

Enclosures Specifications

Body Material	Polycarbonate fiberglass reinforced
Construction Form	Pre-assembled enclosure
Mounting	Fixing Four M4 screws or option of GR CA-001 magnets (not included)
Operating Temperature	- 40 to +158°F [- 4 to 70°C]
Degree of Protection	IP67, IP69K
Colors	Gray cover with black box or yellow cover with black box
Standards	CE, cULus

Connection Knockout Holes

SB114	2 M20/PG13.5, 2 M20/M25 on the sides, 2 M16 on the bottom
SB115	2 M20/PG13.5, 2 M20/M25 on the sides, 2 M16 on the bottom
SB214	2 M20/PG13.5, 2 M20/M25 on the sides, 2 M16 on the bottom
SB314	6 M20/M25 on the sides, 2 M16 on the bottom
SB414	6 M20/M25 on the sides, 2 M16 on the bottom

Emergency Stop Control Stations

Features

- 3-pole positive guided contacts
- Plastic housings (IP67) or stainless steel 316 housings (IP69K/NEMA 6)
- 40mm twist-to-release mushroom head operator
- Conformance to ISO 13850, IEC 60947-5-1 and IEC 60947-5-5
- 2 conduit entries (all entries sealed)

- UL File E365665
- Lid safety trip mechanism ensures that safety contacts will open if the lid is removed
- Models available with button protection guard and padlock holes
- Includes one tamper-proof T20 Torx bit for stainless steel versions

3-Pole Emergency Stop Control Stations

Part Number	Housing Type	Contacts	Wiring Diagram	Conduit Entry	Price	Drawing Link
ES-P-230001	Plastic	2 N.C., 1 N.O.	Figure 1	Knockout (2) M20 (2) ½" NPT	$;0,1k:	PDF
ES-P-230002		3 N.C.	Figure 2		$;-0,1l:	PDF
ES-SS-231002	Stainless steel 316	2 N.C., 1 N.O.	Figure 1	(2) ½" NPT	$;00,1n:	PDF
ES-SS-231004		3 N.C.	Figure 2		$;00,1o:	PDF
ES-SSP-231006	Stainless steel 316 with button protection guard and padlock holes	2 N.C., 1 N.O.	Figure 1	(2) ½" NPT	$;00,1p:	PDF
ES-SSP-231008		3 N.C.	Figure 2		$;00,1q:	PDF

ES-P-230001

ES-SS-231002

ES-SSP-231006

Safety Classification and Reliability Data

Mechanical Reliability B10d	1.5 x 10^6 operations at 100mA load
ISO 13849-1	Up to PLe depending upon system architecture
EN 62061	Up to SIL3 depending upon system architecture
Safety Data - Annual Usage	8 cycles per hour / 24 hours per day / 365 days
PFHd	< 1.0 x 10^7
Proof Test Interval (Life)	21 years
MTTFd	214 years

Electrical and General Specifications

Enclosure / Cover	Polyester or Stainless Steel 316
IP Rating / NEMA	IP67 Plastic / IP69K Stainless Steel / NEMA 6
Mounting	(4) M4
Mounting Position	Any
Conduit Entries	(2) ½" NPT for Stainless Steel housing Knockout (2) M20 / (2) ½" for Plastic housing
Torque Settings	Mounting: M4 4.0 N·m Lid: T20 Torx M4 1.5 N·m Terminals: 1.0 N·m
Ambient Temperature	-25 to +80°C (-13 to +176°F)
Vibration Resistance	0.35 mm @ 10-500 Hz
Shock Resistance	15g @ 11ms
Weight	Plastic: 250g (0.55 lb) Stainless Steel: 1000g (2.20 lb)
Contact Type	IEC 947-5-1 double break type Zb Snap action up to 3 N.C. (positive break) 1 N.O. (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5 mm² conductors
IEC / NEMA Contact Rating	Utilization category: AC15 / A300
Operational Rating	240VAC 3A / 120VAC 6A
Thermal Current (Ith)	10A
Rated Insulation Voltage (Ui)	500V
Withstand Voltage (Uimp)	2500V
Short Circuit Overload Protection	Fuse externally 10A (fuse type FF)
Approvals	IEC 60947-5-1, IEC 60947-5-5, EN62061, UL508, ISO13850, ISO13849-1

Type ESL-SSLP with button protection guard and padlock holes

(Padlock hole diameter 1/4". Padlock shaft must exceed 2" closed)

Note: To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

Emergency Stop Control Stations

Wiring Diagrams

```
33 ——�netto—— 34
21 ——⎍—— 22
11 ——⎍—— 12
```
2NC 1NO

Figure 1

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31 ——⎍—— 32
21 ——⎍—— 22
11 ——⎍—— 12
```
3NC

Figure 2

Emergency Stop Control Stations
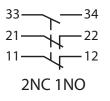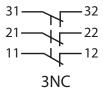
Features

- 4-pole positive guided contacts
- Stainless Steel 316 housings (IP69K/NEMA 6)
- 40mm twist-to-release mushroom head operator
- Conformance to ISO 13850,
- IEC 60947-5-1 and IEC 60947-5-5
- 3 conduit entries (all entries sealed)
- Emergency stop legend plate included

- UL File E365665
- Lid safety trip mechanism ensures that safety contacts will open if the lid is removed
- Models available with button protection guard and padlock holes
- Models available with 2-color LED
- Includes one tamper-proof T20 Torx bit for stainless steel versions

ESL-SS-232002 **ESL-SSP-232010** **ESL-SSL-232018-AS** **ESL-SSLP-232024-AS**

4-Pole Emergency Stop Control Stations						
Part Number	Housing Type	Contacts	Wiring Diagram	Conduit Entry	Price	Drawing Link
ESL-SS-232002	Stainless steel 316	2 N.C., 2 N.O.	Figure 1	(3) ½" NPT	$;00,1s:	PDF
ESL-SS-232004		3 N.C., 1 N.O.	Figure 2		$;;00,1t:	PDF
ESL-SS-232006		4 N.C.	Figure 3		$;00,1u:	PDF
ESL-SSP-232010	Stainless steel 316 with protection guard and padlock holes	2 N.C., 2 N.O.	Figure 1		$;00,1v:	PDF
ESL-SSP-232012		3 N.C., 1 N.O.	Figure 2		$;00,1x:	PDF
ESL-SSP-232014		4 N.C.	Figure 3		$;00,1y:	PDF
ESL-SSL-232018-AS	Stainless steel 316 with 2-color 24VDC LED (steady green, steady red)	2 N.C., 2 N.O.	Figure 1		$;00,1z:	PDF
ESL-SSL-232020-AS		3 N.C., 1 N.O.	Figure 2		$;;00,1[:	PDF
ESL-SSL-232018-BS	Stainless steel 316 with 2-color 110VAC LED (steady green, steady red)	2 N.C., 2 N.O.	Figure 1		$;;00,1]:	PDF
ESL-SSL-232020-BS		3 N.C., 1 N.O.	Figure 2		$;00,1_:	PDF
ESL-SSLP-232024-AS	Stainless steel 316 with 2-color 24VDC LED and protection guard with padlock holes	2 N.C., 2 N.O.	Figure 1		$;00,1#:	PDF
ESL-SSLP-232026-AS		3 N.C., 1 N.O.	Figure 2		$;00,1?:	PDF
ESL-SSLP-232024-BS	Stainless 316 steel with 2-color 110VAC LED and protection guard with padlock holes	2 N.C., 2 N.O.	Figure 1		$;;00,1!:	PDF
ESL-SSLP-232026-BS		3 N.C., 1 N.O.	Figure 2		$;;00,1,:	PDF
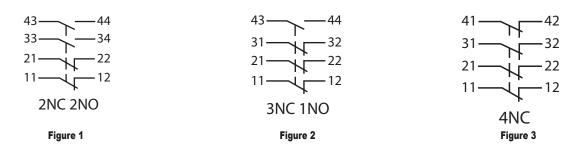
Type ESL-SSLP with button protection guard and padlock holes

(Padlock hole diameter 1/4". Padlock shaft must exceed 2" closed)

Emergency Stop Control Stations

Safety Classification and Reliability Data	
Mechanical Reliability B10d	1.5×10^6 operations at 100mA load
ISO 13849-1	Up to PLe depending upon system architecture
EN 62061	Up to SIL3 depending upon system architecture
Safety Data - Annual Usage	8 cycles per hour / 24 hours per day / 365 days
PFHd	$< 1.0 \times 10^{-7}$
Proof Test Interval (Life)	21 years
MTTFd	214 years
Electrical and General Specifications		
Enclosure / Cover	Stainless Steel 316	
IP Rating / NEMA	IP69K / NEMA 6	
Mounting	(4) M4	
Mounting Position	Any	
Conduit Entries	(3) ½" NPT	
Torque Settings	Mounting: M4 4.0 N·m Lid: T20 Torx M4 1.5 N·m Terminals: 1.0 N·m	
Ambient Temperature	-25 to +80°C (-13F to +176°F)	
Vibration Resistance	0.35 mm @ 10-500 Hz	
Shock Resistance	15g @ 11ms	
Weight	820g (1.81 lb)	
Contact Type	IEC 947-5-1 double break type Zb Snap action up to 4 N.C. (positive break) 2 N.O. (Auxiliary)	
Contact Material	Silver	
Termination	Clamp up to 2.5 mm² conductors	
IEC / NEMA Contact Rating	Utilization category: AC15 / A300	
Operational Rating	240VAC 3A / 120VAC 6A	
Thermal Current (I_{th})	10A	
Rated Insulation Voltage (U_i)	500V	
Withstand Voltage (U_{imp})	2500V	
Short Circuit Overload Protection	Fuse externally 10A (fuse type FF)	
Approvals	IEC 60947-5-1, IEC 60947-5-5, EN62061, UL508, ISO13850, ISO13849-1	

Wiring Diagrams

2NC 2NO

Figure 1

3NC 1NO

Figure 2

4NC

Figure 3

LED Wiring Note: Black (or Terminal 2) is 0V (or Neutral for 110V AC versions). When power is applied to the Red wire (or Terminal 1), the LED will illuminate Red. When power is applied to the Green wire (or Terminal 3), the LED will illuminate Green.

Foot Switches

APS1211-V0

APD1231-V0

APS1151-V0

Applications

Choose these switches for foot switch-operated machines such as shearing machines, spinning machines, spinning lathes, machine tools, wrapping machines, riveting machines, and riveting presses.

AutomationDirect stocks foot switches in these operational formats:

• Free movement (momentary):
 Contact position follows pedal movement; actuated when the pedal is pushed down, released when pedal is in state of rest.

• Foot switch locked in neutral position (safety anti-trip momentary):
 Same operation as above, after unlocking the pedal with the foot.

• Foot switch latched in low position (maintained):
 Same operation as free movement, except that a state of rest is obtained only after pedal is unlatched.

Description

• Plastic Unit Material
• Base, cover and pedal of shock-resistant ABS plastic material
• Aluminum Unit Materials Base and pedal of shock-resistant ABS plastic material; cover of die-cast aluminum
• Double switches include a 16" carrying rod

4 stainless steel 18/8. Philips no. 2 screws

Cable inlet with PG16 cable gland

Cable clamp

Block(s) of two contacts:
• one block: 1 N.O. + 1 N.C.
• two blocks: 2 N.O. + 2 N.C.
• Positive opening operation
• Zb shape: the contacts are electrically separated

1 pre-pressed PG16 knockout on each side

Base

Connecting terminals
• M 3.5 (+, –) Philips no. 1 screw
• Screw head with captive cable clamp.
• Markings conform with IEC 947-1, IEC 947-5-1, EN 50 005 and 50 013 standards

Cover

Pedal

4 skidproof pads

Foot Switches

For the latest prices, please check AutomationDirect.com.

All foot switches have heavy duty ABS plastic bases.

ABS Plastic Foot Switch Selection				
Part Number	Cover Color	Price	Drawing Link	Description
APS1211-V0	Yellow	$0d5#	PDF	Single, ABS plastic, safety actuating lever, 1 N.O. and 1 N.C. snap action contacts
APS1213-V0	Yellow	$;0d5!:	PDF	Single, ABS plastic, safety actuating lever, 2 N.O. and 2 N.C. snap action contacts
APS1151-V0	Half Red	$0d5_:	PDF	Single, ABS plastic, free-moving mounting, 1 N.O. and 1 N.C. snap action contacts
APD1231-V0	One Yellow One Gray	$;00d5[:	PDF	Double, ABS plastic, safety actuating lever, 1 N.O. and 1 N.C. snap action contacts for each switch

APS1151-V0

APS1211-V0

Die-cast Aluminum Foot Switch Selection				
Part Number	Cover Color	Price	Drawing Link	Description
APS1113-V0-M	Yellow	$0d5g:	PDF	Single, die-cast aluminum, free moving momentary actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1114-V0-M	Yellow	$0d5h:	PDF	Single, die-cast aluminum, free moving momentary actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1123-V0-M	Gray	$-0d5i:	PDF	Single, die-cast aluminum, free moving momentary actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1124-V0-M	Gray	$-0d5j:	PDF	Single, die-cast aluminum, free moving momentary actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1143-V0-M	Red	$0d5k:	PDF	Single, die-cast aluminum, free moving momentary actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1144-V0-M	Red	$-0d5l:	PDF	Single, die-cast aluminum, free moving momentary actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1213-V0-M	Yellow	$0d5n:	PDF	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1214-V0-M	Yellow	$0d5o:	PDF	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1223-V0-M	Gray	$0d5p:	PDF	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1224-V0-M	Gray	$0d5q:	PDF	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1243-V0-M	Red	$0d5s:	PDF	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1244-V0-M	Red	$;0d5t:	PDF	Single, die-cast aluminum, safety anti-trip momentary actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1313-V0-M	Yellow	$0d5u:	PDF	Single, die-cast aluminum, free moving maintained actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1314-V0-M	Yellow	$0d5v:	PDF	Single, die-cast aluminum, free moving maintained actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1323-V0-M	Gray	$0d5x:	PDF	Single, die-cast aluminum, free moving maintained actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1324-V0-M	Gray	$0d5y:	PDF	Single, die-cast aluminum, free moving maintained actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APS1343-V0-M	Red	$0d5z:	PDF	Single, die-cast aluminum, free moving maintained actuating pedal, 2 N.O. and 2 N.C. snap action contacts
APS1344-V0-M	Red	$;0d5]:	PDF	Single, die-cast aluminum, free moving maintained actuating pedal, 2 N.O. and 2 N.C. slow action contacts
APD1113-V0-M	Yellow	$00d54:	PDF	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with 2 N.O. and 2 N.C. snap action contacts
APD1114-V0-M	Yellow	$00d55:	PDF	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with 2 N.O. and 2 N.C. slow action contacts
APD1123-V0-M	Gray	$00d56:	PDF	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with 2 N.O. and 2 N.C. snap action contacts
APD1124-V0-M	Gray	$00d57:	PDF	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with 2 N.O. and 2 N.C. slow action contacts
APD1133-V0-M	One Yellow One Gray	$00d58:	PDF	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with 2 N.O. and 2 N.C. snap action contacts
APD1134-V0-M	One Yellow One Gray	$00d59:	PDF	Double, die-cast aluminum, 2 free moving momentary actuating pedals, each with 2 N.O. and 2 N.C. slow action contacts
APD1213-V0-M	Yellow	$00d5a:	PDF	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with 2 N.O. and 2 N.C. snap action contacts
APD1214-V0-M	Yellow	$00d5b:	PDF	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with 2 N.O. and 2 N.C. slow action contacts
APD1223-V0-M	Gray	$00d5c:	PDF	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with 2 N.O. and 2 N.C. snap action contacts
APD1224-V0-M	Gray	$00d5d:	PDF	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with 2 N.O. and 2 N.C. slow action contacts
APD1233-V0-M	One Yellow One Gray	$00d5e:	PDF	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with 2 N.O. and 2 N.C. snap action contacts
APD1234-V0-M	One Yellow One Gray	$;00d5f:	PDF	Double, die-cast aluminum, 2 safety anti-trip momentary actuating pedals, each with 2 N.O. and 2 N.C. slow action contacts

APS1143-V0-M

APS1243-V0-M

APD1113-V0-M

APD1213-V0-M

APS1113-V0-M

APS1213-V0-M

APD1133-V0-M

APD1223-V0-M

Foot Switches Technical Specifications

Foot Switch General Technical Data	
Standards	IEC 947-5-1
Certifications - Approvals	UL/CUL file E191072, CE, RoHS
Temperature	Operating (ambient) air temperature: – 10 to + 70°C [14 to 158°F] Storage (non-operating) air temperature: – 30 to + 80°C [-22 - 176°F]
Environmental	According to IEC 68-2-3 and salty mist according to IEC 68-2-11
Shock (according to IEC 68-2-27 and EN 60 068-2-27)	50g (1/2 sinusoidal shock for 11 ms) no change in contact position
Degree of Protection (according to IEC 529 and EN 60 529)	IP 65
Operating Torque	0.25 N·m (2.2 lb·in)
Torque - Terminal Screw	Recommended: 0.8 N·m (7.0 lb.in); Maximum 0.9 N·m (8.0 lb·in)
Torque - Cover Screw	Recommended: 5.0 N·m (4.3 lb.in); Maximum 0.8 N·m (7.0 lb·in)
Operating Angle	15 Degree
Cable Inlet	Pg 16 x 1.41 knockout
Foot Switch Electrical Data	
Rated Insulation voltage U_i	690V (according to IEC 947-1 and EN 60-947-1) Degree of pollution 3
Rated Impulse Withstand Voltage U_{imp}	6kV (according to IEC 947-1 and EN 60 947-1)
Conventional Free Air Thermal Current I_{th} $\Theta < 40\ °C$	10A (according to IEC 947-1)
Short-circuit Protection Ue < 500V AC. - gG (gI) type fuses	10A
Rated Operational Current	A 600 (according to UL 508 and CSA C22-2 n° 14) Q 600 (according to UL 508 and CSA C22-2 n° 14
AC-15 (according to IEC 947-5-1) **24V**	10A
120V	6A
230V	3.1 A
240V	3A
400V	1.8 A
DC-13 (according to IEC 947-5-1) **24V**	2.8 A
125V	0.55 A
250V	0.27 A
Resistance Between Contacts	25mΩ
Connecting Terminals	M3.5 (±) Philips head #1 with cable clamp
Positive Opening Operation (according to IEC 947-5-1)	Yes marked by ⊖
Connecting Capacity	(1 or 2 x mm²) 0.75 to 2.5
Terminal Marking	According to EN 50 013
Life Expectancy	Mechanical: 30 million operations Electrical Operations: Utilization categories AC-15 and DC-13 (Load factor of 0.5 according to curves)

Wiring

Snap-action contact: A contact element in which the contact motion is independent of the speed of the actuator. This feature ensures reliable electrical performance even in applications involving very slow moving actuators.
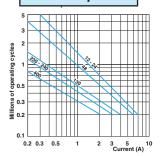
Slow-make/slow-break contact: A contact element in which the contact motion is dependent on the actuator speed.

AC-15 - Snap Action

AC-15 - Slow Action

Snap Action or Slow Action 1 N.O. and 1 N.C.

DC-13	Snap Action	Slow Action
Power breaking for a durability of 5 million operating cycles		
Voltage 24V	9.5 W	12W
Voltage 48V	6.8 W	9W
Voltage 110V	3.6 W	6W
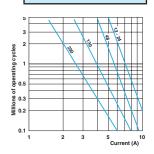
Note: See contact block accessories for AGZ11-SWITCH and AGX11-SWITCH replacement contact block (contact blocks have adjustable screw actuator).

Plastic Enclosures for 22mm Pilot Devices

Switch Enclosures

Switch Enclosures			
Specification Standard	Enclosure Material	Gasket Material	Degree of Protection
CEI EN 60947-5-1	Thermoplastic ABS, conforms to UL94/HB	Caoutchouc (rubber) foam	IP65 according to CEI EN 60529

Also check out our metal pushbutton enclosures in the Enclosures section.

SA107-40SL   **SA105-40SL**   **SA100SL**

Enclosures have molded knock-outs for 1/2" conduit fittings.
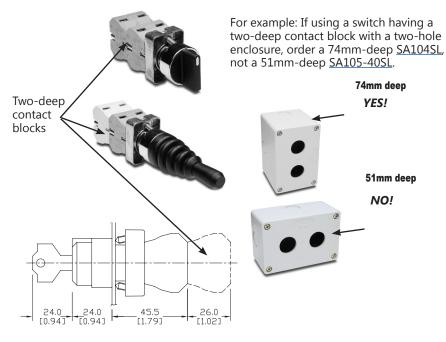
Important notes about enclosure depth and over-tightening

Switches with two-deep contact blocks require enclosures that are 74mm deep: 51mm-deep enclosures are too shallow and the switch contact block will not fit.

For switches with one-deep contact blocks, either 51mm-deep or 74mm-deep enclosures can be used.

Also, do not over-tighten when securing switch in the enclosure body. Over-tightening will crack the plastic body of the enclosure.

When installing pushbutton, switches, and joysticks with securing screws, ensure that they have good purchase on area away from the perforated key-way slots made for other switch types. Securing screws should be tightened to 4.5 lb·in or less.

Two-deep contact blocks

For example: If using a switch having a two-deep contact block with a two-hole enclosure, order a 74mm-deep SA104SL, not a 51mm-deep SA105-40SL.

74mm deep
YES!

51mm deep
NO!

24.0 [0.94]   24.0 [0.94]   45.5 [1.79]   26.0 [1.02]

Dimensions: mm [inches]

No-Hole Model

No Hole Model					
Part Number	Color	Price	Drawing Link	Hole Size/Depth	Mounting Instructions
SA111-00	Gray	$-0ayl:	PDF	No Holes	Tighten 22mm devices only as needed to provide proper sealing. Over-tightening will crack plastic body.

Note: This enclosure works with most 22mm pushbuttons but may not work with Cutler-Hammer E22 series pushbuttons. Check your pushbutton dimensions before ordering.

74mm deep:
SA111-00

Plastic Enclosures for 22mm Pilot Devices

Single-Hole Models

51mm deep:
SA100SL
SA101SL

74mm deep:
SA103SL
SA104SL

Single-Hole Models					
Part Number	Color	Price	Drawing Link	Hole Size/Depth	Mounting Instructions
SA100SL	Gray	$aya:	PDF	Hole size fits 22mm devices, 51mm depth accommodates single-deep contact block switches	Tighten 22mm devices only as needed to provide proper sealing. Over-tightening will crack plastic body.
SA101SL	Gray body/yellow top	$ayb:	PDF		
SA103SL	Gray	$ayc:	PDF	Hole size fits 22mm devices, 74mm depth accommodates two-deep contact block switches	
SA104SL	Gray body/yellow top	$ayd:	PDF		

Two-Hole Models

51mm deep:
SA105-40SL

Two-Hole Models					
Part Number	Color	Price	Drawing Link	Hole Size/Depth	Mounting Instructions
SA105-40SL	Gray	$0aye:	PDF	Hole size fits 22mm devices, 51mm depth accommodates single-deep contact block switches	Tighten 22mm devices only as needed to provide proper sealing. Over-tightening will crack plastic body.
SA106-40SL	Gray	$;0ayf:	PDF	Hole size fits 22mm devices 74mm depth accommodates two-deep contact block switches	

Three-Hole Models

51mm deep:
SA107-40SL

Three-Hole Models					
Part Number	Color	Price	Drawing Link	Hole Size/Depth	Mounting Instructions
SA107-40SL	Gray	$0ayg:	PDF	Hole size fits 22mm devices, 51mm depth accommodates single-deep contact block switches	Tighten 22mm devices only as needed to provide proper sealing. Over-tightening will crack plastic body.
SA108-40SL		$0ayh:	PDF	Hole size fits 22mm devices, 74mm depth accommodates two-deep contact block switches	

Plastic Enclosures for 22mm Pilot Devices

Four-Hole Models

51mm deep:
SA109-40SL

Four-Hhole Models					
Part Number	*Color*	*Price*	*Drawing Link*	*Hole Size/Depth*	*Mounting Instructions*
SA109-40SL	Gray	$-0ayi:	PDF	Hole size fits 22mm devices, 51mm depth accommodates single-deep contact block switches	Tighten 22mm devices only as needed to provide proper sealing. Over-tightening will crack plastic body.
SA110-40SL		$-0ayj:	PDF	Hole size fits 22mm devices, 74mm depth accommodates two-deep contact block switches	

Five-and Six-Hole Models

74mm deep:
SA111

74mm deep:
SA112

Five-and Six-Hole Models					
Part Number	*Color*	*Price*	*Drawing Link*	*Hole Size/Depth*	*Mounting Instructions*
SA111	Gray	$0ayk:	PDF	Hole size fits 22mm devices, 74mm depth accommodates two-deep contact block switches	Tighten 22mm devices only as needed to provide proper sealing. Over-tightening will crack plastic body.
SA112		$0ayn:	PDF	Hole size fits 22mm devices, 74mm depth accommodates two-deep contact block switches	
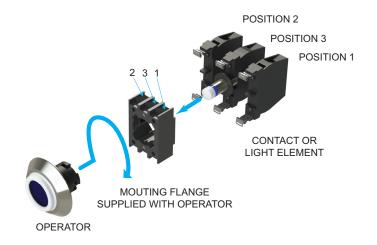
Note: These enclosures work with most 22mm pushbuttons, but may not work with Cutler-Hammer E22 series pushbuttons. Check your pushbutton dimensions before ordering.

SCHMERSAL Control and Signaling Devices 22mm IP69K

Schmersal control and signaling devices have a number of special design features that make the devices suitable for food processing, pharmaceutical, and medical applications. When utilized in food processing machines, these devices comply with the special cleaning requirements of the industry to prevent cross-contamination, particularly when used in machines that process raw goods. With an ingress protection rating of IP69K, Schmersal control and signaling devices are also suitable for marine applications, traffic systems, commercial vehicles, and in dusty and dirty environments.

Features

• Special seals prevent product residue from penetrating in the gaps between the fixed and moving device parts, thus preventing the collection of dirt and bacteria in places that are not easily accessible for cleaning.
• Smooth designs make the devices easy to clean.
• Modular contact and light terminal blocks make the devices easy to install.

POSITION 2
POSITION 3
POSITION 1
2 3 1
CONTACT OR LIGHT ELEMENT
MOUTING FLANGE SUPPLIED WITH OPERATOR
OPERATOR
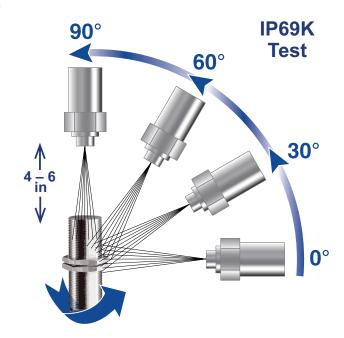
IP69K Ingress Protection Rating Overview

IP69K high-pressure cleaning test
This rating applies to devices tested in accordance with DIN 40050-9. The goal of this test is to duplicate pressure cleaning conditions on a plant floor. In the test fixture, the devices are exposed to a 1450psi spray of water at a temperature of 175°F. The duration of each cleaning cycle is 30 seconds. The test is performed at specified angles using a spray nozzle located at a distance of 4" from the devices. Devices with this rating must withstand test conditions and still be operable. This rating ensures water proofing protection that exceeds NEMA 4X rating.
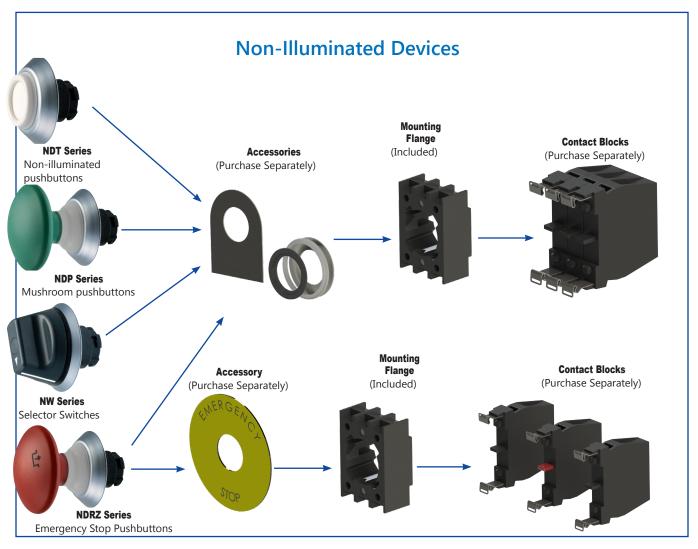
Thermal endurance
In pressure environments, controls and signaling devices can be exposed to extreme temperature conditions. To meet the criteria for IP69K rating, devices must undergo a thermal shock test by cycling the environmental temperature to ensure consistent high reliability.
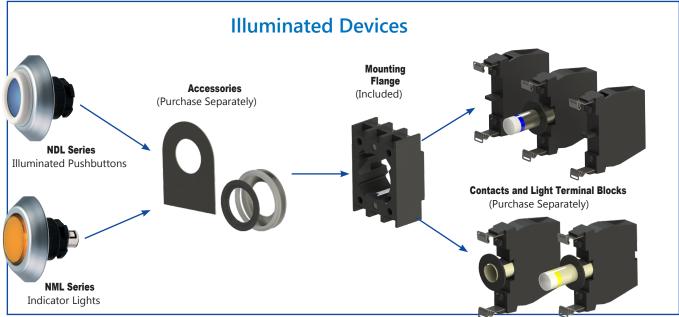
90° 60° 30° 0°
IP69K Test
4 – 6 in

SCHMERSAL **Modular Design Flexibility**

Non-Illuminated Devices

NDT Series
Non-illuminated pushbuttons

NDP Series
Mushroom pushbuttons

NW Series
Selector Switches

NDRZ Series
Emergency Stop Pushbuttons

Accessories
(Purchase Separately)

Accessory
(Purchase Separately)

EMERGENCY STOP

Mounting Flange
(Included)

Contact Blocks
(Purchase Separately)

Illuminated Devices

NDL Series
Illuminated Pushbuttons

NML Series
Indicator Lights

Accessories
(Purchase Separately)

Mounting Flange
(Included)

Contacts and Light Terminal Blocks
(Purchase Separately)

Pilot Devices tPIL-73

SCHMERSAL
Non-Illuminated 22mm IP69K Plastic Pushbuttons

NDTBL

NDTGB

NDTGN

NDTGR

NDTRT

NDTSW

NDTWS

Non-Illuminated 22mm IP69K Plastic Pushbuttons*							
Part Number	NDTBL	NDTGB	NDTGN	NDTGR	NDTRT	NDTSW	NDTWS
Color	Blue	Yellow	Green	Gray	Red	Black	White
Price	$-11sl:	$11sn:	$11so:	$11sp:	$11sq:	$11ss:	$;11st:
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF	PDF
Description	Momentary action non-illuminated IP69K pushbuttons with mounting flange						
Mounting diameter	22.3 mm [0.88 in]						
Actuating stroke	5mm						
Dome material	ABS						
Front ring material	ABS, chromium-plated						
Front panel thickness	1.5 to 6 mm						
Weight	25g [0.88 oz]						
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]						
Ambient temperature	-25 to +80°C [-13 to +176°F]						
Shock resistance	<50g						
Vibration resistance	5g						
Ingress protection rating	IP67 and IP69K						
Standards	EN 60947-5-1; IEC/EN 60947-1; UL File E57648, CE						

*Operator only. Purchase contact blocks separately.

SCHMERSAL

Illuminated 22mm IP69K Plastic Pushbuttons

NDLBL

NDLGB

NDLGN

NDLRT

NDLWS

Illuminated 22mm IP69K Plastic Pushbuttons*					
Part Number	NDLBL	NDLGB	NDLGN	NDLRT	NDLWS
Color	Blue	Yellow	Green	Red	White
Price	$11su:	$11sv:	$11sx:	$11sy:	$11sz:
Drawing Link	PDF	PDF	PDF	PDF	PDF
Description	Momentary action illuminated IP69K pushbuttons with mounting flange				
Mounting diameter	22.3 mm [0.88 in]				
Actuating stroke	5mm				
Dome material	ABS				
Front ring material	ABS, chromium-plated				
Front panel thickness	1.5 to 6 mm				
Weight	30g [1.06 oz]				
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]				
Ambient temperature	-25 to +80°C [-13 to +176°F]				
Shock resistance	< 50g				
Vibration resistance	5g				
Ingress protection	IP67 and IP69K				
Standards	EN 60947-5-1; IEC/EN 60947-1; UL File E57648, CE				

*Operator only. Purchase contact and light blocks separately.

SCHMERSAL

Non-Illuminated 22mm IP69K Mushroom Pushbuttons

NDP50BL

NDP50GB

NDP50GN

NDP50SW

NDP50WS

Non-Illuminated 22mm IP69K Mushroom Pushbuttons*					
Part Number	NDP50BL	NDP50GB	NDP50GN	NDP50SW	NDP50WS
Color	Blue	Yellow	Green	Black	White
Price	$;11s]:	$;11s[:	$11s_:	$11s#:	$;11s!:
Drawing Link	PDF	PDF	PDF	PDF	PDF
Description	Momentary action non-illuminated IP69K mushroom pushbuttons with mounting flange				
Mounting diameter	22.3 mm [0.88 in]				
Actuating stroke	5mm				
Dome material	ABS				
Front ring material	ABS, chromium-plated				
Front panel thickness	1.5 to 6 mm				
Weight	50g [1.76 oz]				
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]				
Ambient temperature	-25 to +80°C [-13 to +176°F]				
Shock resistance	< 50g				
Vibration resistance	5g				
Ingress protection rating	IP67 and IP69K				
Standards	EN 60947-5-1; IEC/EN 60947-1; UL File E57648, CE				

*Operator only. Purchase contact blocks separately.

SCHMERSAL IP69K Emergency Stop Pushbuttons

NDRZ50RT

NDRZ50RT-2905-1

IP69K Emergency Stop Pushbuttons*		
Part Number	*NDRZ50RT*	*NDRZ50RT-2905-1*
Front ring color	Silver	Yellow
Price	$11s?:	$;11!5:
Drawing Link	PDF	PDF
Description	IP69K emergency pushbuttons with mounting flange, push to latch and pull to unlatch, front plate mounting	
Mounting	22.3 mm [0.88 in]	
Actuating stroke	5mm	
Dome material	ABS	
Front ring material	ABS, chromium-plated	
Front panel thickness	1.5 to 6 mm	
Weight	50g [1.76 oz]	
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]	
Ambient temperature	-25 to +80°C [-13 to +176°F]	
Shock resistance	30g / 18ms	
Ingress protection rating	IP67 and IP69K	
Mechanical life	100,000 operations	
Standards	EN 60947-5-1; IEC/EN 60947-1; UL File E57648	

*Operator only. Purchase contact blocks separately.

SCHMERSAL 22mm IP69K Indicator Lights

NMLBL

NMLGB

NMLGN

NMLRT

NMLWS

22mm IP69K Indicator Lights*					
Part Number	NMLBL	NMLGB	NMLGN	NMLRT	NMLWS
Dome color	Blue	Yellow	Green	Red	White
Price	$;11td:	$;11te:	$;;11tf:	$;11tg:	$;11th:
Drawing Link	PDF	PDF	PDF	PDF	PDF
Description	Indicator light (purchase light block and LED or bulb separately)				
Mounting diameter	22.3 mm [0.88 in]				
Dome material	Polyamide-12				
Front ring material	ABS, chromium-plated				
Front panel thickness	1.5 to 6 mm				
Weight	30g [1.06 oz]				
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]				
Ambient temperature	-25 to +80°C [-13 to +176°F]				
Shock resistance	< 50g				
Vibration resistance	5g				
Ingress protection rating	IP67 and IP69K				
Standards	IEC 60947-5-1; IEC 60947-1; UL File E57648, CE				

*Operator only. Purchase contact and light blocks separately.

SCHMERSAL

Non-Illuminated 22mm IP69k Plastic Selector Switches

Black

White

Non-Illuminated 22mm Selector Switches*

Part Number	Price	Color	Drawing Link	Operation
NWS21GR	$-12ls:	Black	PDF	2-position maintained
NWS21WS	$;11t1:	White	PDF	
NWT21	$;11t2:	Black	PDF	2-position, spring return from right
NWT21WS	$;11t3:	White	PDF	
NWS32	$;11t4:	Black	PDF	3-position maintained
NWS32WS	$;11t5:	White	PDF	
NWT32	$;11t6:	Black	PDF	3-position, spring return to center from right or left
NWT32WS	$;11t7:	White	PDF	
NWTS32	$;11t8:	Black	PDF	3-position, spring return to center from right, maintained left
NWTS32WS	$;11t9:	White	PDF	
NWTS321	$;11ta:	Black	PDF	3-position, spring return to center from left, maintained right
NWTS321WS	$;11tb:	White	PDF	

Operator only. Purchase contact blocks separately.

Selector Switches Specifications

Toggle material	ABS
Front ring material	ABS, chrome-plated
Front panel thickness	1.5 to 6 mm
Mechanical operations	300,000
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]
Ambient temperature	0 to +80°C [32 to +176°F]
Shock resistance	< 50g
Vibration resistance	5g
Ingress protection rating	IP67 and IP69K
Standards *	IEC 60947-5-1; IEC 60947-1; UL File E57648,CE

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

Selector switches with 2-positions

NWT21

NWS21

Contact Blocks

Left (0)	Right (I)	Mounting Position 1		Mounting Position 3		Mounting Position 2	
		N.C. Contact	N.O. Contact	N.C. Contact	N.O. Contact	N.C. Contact	N.O. Contact
X		1	0	1	0	1	o
	X	0	1	0	1	0	1

SCHMERSAL

Non-Illuminated 22mm IP69k Plastic Selector Switches

Selector switches with 3-positions

NWT32

NWS32

Contact Blocks
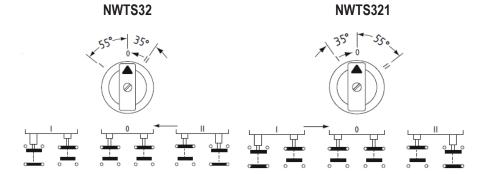
			Mounting Position 1		Mounting Position 3	Mounting Position 2	
Left (1)	Middle (0)	Right (11)	N.C. Contact	N.O. Contact		N.C. Contact	N.O. Contact
X			0	1	Free	1	0
	X		1	0		1	0
		X	1	0		0	1

Selector switches with 3-positions (mix with latching and spring return)
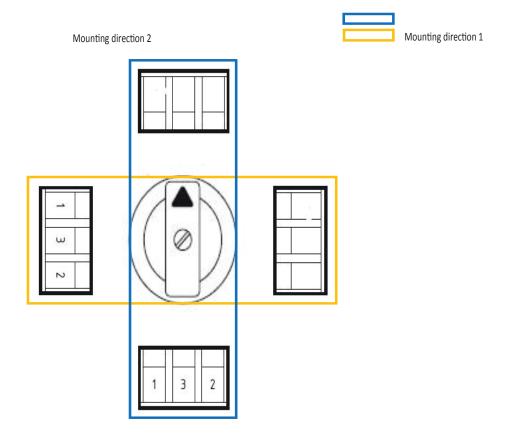
NWTS32

NWTS321

Contact Blocks

			Mounting Position 1		Mounting Position 3	Mounting Position 2	
Left (1)	Middle (0)	Right (11)	N.C. Contact	N.O. Contact		N.C. Contact	N.O. Contact
X			0	1	Free	1	0
	X		1	0		1	0
		X	1	0		0	1

SCHMERSAL Selector Switches

Important: The mounting flange can be mounted in 4 directions. Please have a look on the position of the mounting flange. Only in the two shown directions the truth table is right.

Note: Only on one side are the numbers for the mounting position of the contact blocks.

Mounting direction 2

Mounting direction 1

Pilot Devices   tPIL-81

SCHMERSAL Non-Illuminated 22mm IP69K Joystick Selector Switches

Features

- Spring-return (momentary)
- 22mm mounting hole
- Knurled mounting nut
- 6mm front plate thickness
- Front ring material: Plastic
- Bellows material: Silicone
- IP69K

Blue　　　　　　　　**Gray**

	Non-Illuminated 22mm IP69K Joystick Selector Switches			
Part Number	*Price*	*Drawing Link*	*Color*	*Operation*
NK-T-21-1ST8-2	$04c0q:	PDF	blue bellows	Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (2) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
NK-T-41-1ST8-2	$04c0s:	PDF		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
NK-T-22-2ST8-2	$;04c0t:	PDF		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
NK-T-42-2ST8-2	$04c0u:	PDF		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (8) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
RK-T-21-1ST8-2	$04c0v:	PDF	gray bellows	Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (2) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.
RK-T-41-1ST8-2	$04c0x:	PDF		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.
RK-T-22-2ST8-2	$04c0y:	PDF		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.
RK-T-42-2ST8-2	$04c0z:	PDF		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (8) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.

	Joystick Selection				
Part Number	*Service Conditions*	*Number of*			*Color*
		Switch Positions	*Contacts / Switch Position*	*Connectors*	
NK-T-21-1ST8-2	Food processing industry	2	1 (N.O.)	1 (M12, 8-pin)	black ring & blue bellows
NK-T-41-1ST8-2		4			
NK-T-22-2ST8-2		2	2 (N.O.)	2 (M12, 8-pin)	
NK-T-42-2ST8-2		4			
RK-T-21-1ST8-2	Rough ambient conditions	2	1 (N.O.)	1 (M12, 8-pin)	black ring & gray bellows
RK-T-41-1ST8-2		4			
RK-T-22-2ST8-2		2	2 (N.O.)	2 (M12, 8-pin)	
RK-T-42-2ST8-2		4			

SCHMERSAL Non-Illuminated 22mm IP69K Joystick Selector Switches

Joystick Selector Switches Specifications	
Rated operating voltage U_e	max. 30 VDC
Operating current I_e	max. 0.3 A
Rated insulation voltage U_i	30 V
Rated impulse withstand voltage U_{imp}	0.5 kV
Degree of pollution	2
Protection class	II x
Switching capacity	max. 7.2 W
Total actuating travel/switching angle	20°
Switching point	13° ± 4°
Actuating frequency	1200/h
Mechanical life	4-spring return positions: 1×10^6
	Per spring return position: 2.5×10^6
Ambient temperature	-40 to 80ºC [-40 to 176ºF]
Temperature changes	max 10°C / minute
Resistance to shock	30g / 11ms
Continuous shock	10g / 16ms
Protection class	Front: IP65, IP67, IP69/IP69K
	Contact chamber: IP67 (with connector attached)
	Switch rod area: IP30
Spacing	90 x 90 mm
Switch functions	2 to 4 switching directions
Type of switching functions	Button
Number of reed contacts	1 to 2 per switching direction
Connection	8-pin M12 connector
Number of terminals	1 … 2
Type of contact	N.O. contacts, shape A
Front plate thickness	6 mm
Securing tool	Box spanner AF41
Mechanical data at room temperature in new state	Mechanical strength: >200 N
	Actuating force: <20 N
Switching principle	Magnetic
Utilization category	DC-12
Max fuse rating	0.5 A FF
Required short-circuit current	100 A
Standards *	IEC 60947-1, IEC 60947-5-1

*To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL
30mm IP65 Emergency Stop Pushbuttons

EDRR40.VHRT

EDRZ40.VHRT

30mm IP65 Emergency Stop Pushbuttons*

Part Number	EDRR40.VHRT	EDRZ40.VHRT
Price	$4zec:	$4zeb:
Front ring color	Gold	Gold
Drawing Link	PDF	PDF
Description	Schmersal emergency stop pushbutton, IP65, 30mm, twist-to-release, operator only, plastic base, metal bezel, Operator: red, mushroom, 40mm, round, metal. Requires contact blocks and EFR spring element.	Schmersal emergency stop pushbutton, IP65, 30mm, push-lock pull-reset, operator only, plastic base, metal bezel, Operator: red, mushroom, 40mm, round, metal. Requires contact blocks.
Mounting diameter	30.5 mm [1.20 in]	
Actuating stroke	4 to 5 mm	
Dome material	Anodized aluminum	
Front ring material	Anodized aluminum	
Front panel thickness	1 to 6 mm	
Weight	91g [3.20 oz]	
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]	
Ambient temperature	-25 to +75°C [-13 to +167°F]	
Shock resistance	> 20g / 10 to 200Hz	
Ingress protection rating	IP65	
Mechanical life	100,000 operations	
Standards **	IEC 60947-5-1; IEC 60947-1; UL File E57648	

*Operator only. Purchase contact blocks separately.

** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

Spring Element

Part Number	Price	Description
EFR	$4zsn:	Schmersal spring element, for use with Schmersal EDRR40 series emergency stop pushbuttons.

EFR

Legend Plate

Part Number	Price	Drawing Link	Description
DPF-9	$-4zsl:	PDF	Schmersal legend plate, metal, round, yellow field, yellow background, legend plate marking "blank". For use with 30mm pilot devices.

DPF-9

SCHMERSAL 30mm IP65 Round Indicator Lights

| EML.VBL | EML.VGB | EML.VGN | EML.VRT | EML.VWS |

30mm IP65 Round Indicator Lights *					
Part Number	Price	Color	Description	Drawing Link
EML.VBL	$;4zfn:	Blue	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, blue, 34.5mm, round, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EML.VGB	$;4zfs:	Yellow	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, yellow, 34.5mm, round, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EML.VGN	$;4zfo:	Green	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, green, 34.5mm, round, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EML.VRT	$;4zfp:	Red	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, red, 34.5mm, round, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EML.VWS	$;4zfq:	White	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, white, 34.5mm, round, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF

*Operator only. Purchase light blocks separately.

30mm IP65 Round Indicator Lights Specifications	
Mounting diameter	30.5 mm [1.20 in]
Dome material	Glass
Front ring material	Aluminum
Front panel thickness	1 to 6 mm
Weight	30g [1.06 oz]
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]
Ambient temperature	-25 to +75°C [-13 to +167°F]
Shock resistance	< 50g
Vibration resistance	5g
Ingress protection rating	IP65
Standards *	IEC 60947-5-1; IEC 60947-1; UL File E57648

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL 30mm IP65 Dome Indicator Lights

EMLH.VBL   EMLH.VGB   EMLH.VGN   EMLH.VRT   EMLH.VWS

30mm IP65 Dome Indicator Lights *				
Part Number	Price	Color	Description	Drawing Link
EMLH.VBL	$;;4zft:	Blue	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, blue, 34.5mm, dome, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EMLH.VGB	$;4zfy:	Yellow	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, yellow, 34.5mm, dome, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EMLH.VGN	$;4zfu:	Green	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, green, 34.5mm, dome, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EMLH.VRT	$;4zfv:	Red	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, red, 34.5mm, dome, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF
EMLH.VWS	$;4zfx:	White	Schmersal illuminated indicating light, permanent light function, IP65, 30mm, white, 34.5mm, dome, plastic base, metal bezel. Requires light block and LED or incandescent bulb.	PDF

*Operator only. Purchase light blocks separately.

30mm IP65 Dome Indicator Lights Specifications	
Mounting diameter	30.5 mm [1.20 in]
Dome material	Glass
Front ring material	Aluminum
Front panel thickness	1 to 6 mm
Weight	30g [1.06 oz]
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]
Ambient temperature	-25 to +75°C [-13 to +167°F]
Shock resistance	< 50g
Vibration resistance	5g
Ingress protection rating	IP65
Standards *	IEC 60947-5-1; IEC 60947-1; UL File E57648

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL Non-Illuminated 30mm IP65 Plastic Selector Switches

EWS21.V   EWS32.V   EWT21.V   EWT32.V

Non-Illuminated 30mm IP65 Plastic Selector Switches*				
Part Number	Price	Color	Drawing Link	Operation
EWS21.V	$;4zf7:	Black	PDF	2-position maintained
EWS21.1.V	$;4zf8:	Black	PDF	
EWS32.V	$;4zfb:	Black	PDF	3-position maintained
EWS32.1V	$;4zfc:	Black	PDF	
EWT21.V	$;4zf9:	Black	PDF	2-position, spring return from right
EWT21.1V	$;4zfa:	Black	PDF	
EWT32.V	$;4zfd:	Black	PDF	3-position, spring return to center from right or left
EWT32.1V	$;4zfe:	Black	PDF	
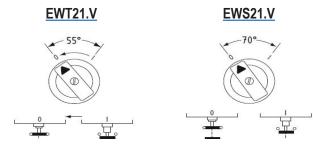
*Operator only. Purchase contact blocks separately.

Selector Switches Specifications	
Toggle material	Thermoplastic
Front ring material	Aluminum
Front panel thickness	1 to 6 mm
Mechanical operations	300,000
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]
Ambient temperature	-25 to +75°C [-13 to +167°F]
Shock resistance	< 50g
Vibration resistance	5g
Ingress protection rating	IP65
Standards *	IEC 60947-5-1; IEC 60947-1; UL File E57648

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL Non-Illuminated 30mm IP65 Plastic Selector Switches

Selector Switches with 2-Positions

EWT21.V   **EWS21.V**

		Contact Blocks					
		Mounting Position 1		Mounting Position 3		Mounting Position 2	
Left (0)	Right (I)	N.C. Contact	N.O. Contact	N.C. Contact	N.O. Contact	N.C. Contact	N.O. Contact
X		1	0	1	0	1	o
	X	0	1	0	1	0	1

Selector Switches with 3-Positions

EWT32.V   **EWS32.V**

			Contact Blocks				
			Mounting Position 1		Mounting Position 3	Mounting Position 2	
Left (1)	Middle (0)	Right (11)	N.C. Contact	N.O. Contact		N.C. Contact	N.O. Contact
X			0	1	Free	1	0
	X		1	0		1	0
		X	1	0		0	1

SCHMERSAL
Non-Illuminated 30mm IP65 Plastic Key Selector Switches

ESS21S1.V

ESS32S1.V

Non-Illuminated 30mm IP65 Plastic Key Selector Switches*

Part Number	Price	Color	Drawing Link	Operation
ESS21S1.V	$;04zfg:	Black	PDF	2-position, maintained, key removable left position
ESS21S12.V	$;;04zff:	Black	PDF	2-position, maintained, key removable left and right position
ESS21S2.V	$;04zfh:	Black	PDF	2-position, maintained, key removable right position
ESS32S1.V	$;-04zfj:	Black	PDF	3- position, maintained, key removable left position
ESS32S123.V	$;-04zfi:	Black	PDF	3- position, maintained, key removable left, right and center position
ESS32S2.V	$;04zfk:	Black	PDF	3-position, maintained, key removable center position
ESS32S3.V	$;-04zfl:	Black	PDF	3-position, maintained, key removable right position

*Operator only. Purchase contact blocks separately.
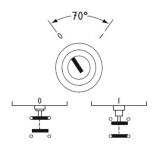
30mm IP65 Selector Switches Specifications

Toggle material	Aluminum
Front ring material	Aluminum
Front panel thickness	1 to 6 mm
Mechanical operations	300,000
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]
Ambient temperature	-25 to +75°C [-13 to +167°F]
Shock resistance	< 50g
Vibration resistance	5g
Ingress protection rating	IP65
Standards *	IEC 60947-5-1; IEC 60947-1; UL File E57648

* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL
Non-Illuminated 30mm IP65 Plastic Key Selector Switches

Key Selector Switches with 2-Positions
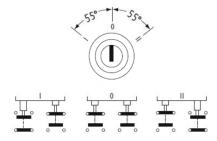
ESS21.V

Contact Blocks							
		Mounting Position 1		Mounting Position 3		Mounting Position 2	
Left (0)	Right (I)	N.C. Contact	N.O. Contact	N.C. Contact	N.O. Contact	N.C. Contact	N.O. Contact
X		1	0	1	0	1	o
	X	0	1	0	1	0	1

Key Selector Switches with 3-Positions

ESS32.V

Contact Blocks							
			Mounting Position 1		Mounting Position 3	Mounting Position 2	
Left (1)	Middle (0)	Right (11)	N.C. Contact	N.O. Contact		N.C. Contact	N.O. Contact
X			0	1	Free	1	0
	X		1	0		1	0
		X	1	0		0	1

SCHMERSAL Illuminated 30mm IP65 Plastic Pushbuttons

EDL.VBL   EDL.VGB   EDL.VGN   EDL.VRT   EDL.VWS

Illuminated 30mm IP65 Plastic Pushbuttons*					
Part Number	EDL.VBL	EDL.VGB	EDL.VGN	EDL.VRT	EDL.VWS
Price	$4zed:	$4zez:	$4zee:	$;4zef:	$4zeg:
Color	Blue	Yellow	Green	Red	White
Drawing Link	PDF	PDF	PDF	PDF	PDF
Description	Momentary action illuminated IP65 pushbuttons with flush mount				
Mounting diameter	30.5 mm [1.20 in]				
Actuating stroke	4 to 5 mm				
Dome material	Glass				
Front ring material	Aluminum				
Front panel thickness	1 to 6 mm				
Weight	30g [1.06 oz]				
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]				
Ambient temperature	-25 to +75°C [-13 to +167°F]				
Shock resistance	< 50g				
Vibration resistance	5g				
Ingress protection rating	IP65				
Standards **	IEC 60947-5-1; IEC 60947-1; UL File E57648				

*Operator only. Purchase contact and light blocks separately.
**To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL
Non-Illuminated 30mm IP65 Plastic Pushbuttons

| EDT.VBL | EDT.VGB | EDT.VGN | EDT.VRT | EDT.VSW | EDT.VWS |

Non-Illuminated 30mm IP65 Plastic Pushbuttons*					
Part Number	**EDT.VBL**	**EDT.VGB**	**EDT.VGN**	**EDT.VRT**	**EDT.VSW**	**EDT.VWS**
Price	$4zes:	$4zex:	$;4zet:	$4zeu:	$4zey:	$4zev:
Color	Blue	Yellow	Green	Red	Black	White
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF
Description	Momentary action non-illuminated IP65 pushbuttons flush mount					
Mounting diameter	30.5 mm [1.20 in]					
Actuating stroke	4 to 5 mm					
Dome material	Aluminum					
Front ring material	Aluminum					
Front panel thickness	1 to 6 mm					
Weight	30g [1.06 oz]					
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]					
Ambient temperature	-25 to +75°C [-13 to +167°F]					
Shock resistance	< 50g					
Vibration resistance	5g					
Ingress protection rating	IP65					
Standards *	IEC 60947-5-1; IEC 60947-1; UL File E57648					

*Operator only. Purchase contact blocks separately.
** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL

Non-Illuminated 30mm IP65 Mushroom Pushbuttons

EDP40.VBL   **EDP40.VGB**   **EDP40.VGN**   **EDP40.VRT**   **EDP40.VSW**   **EDP40.VWS**

Non-Illuminated 30mm IP65 Mushroom Pushbuttons*						
Part Number	EDP40.VBL	EDP40.VGB	EDP40.VGN	EDP40.VRT	EDP40.VSW	EDP40.VWS
Price	$-4zei:	$;4ze[:	$;4ze]:	$4zek:	$-4zej:	$4zeh:
Color	Blue	Yellow	Green	Red	Black	White
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF
Description	Momentary action 30mm non-illuminated IP65 mushroom pushbuttons with 40mm operator and mounting flange					
Mounting diameter	30.5 mm [1.20 in]					
Actuating stroke	4 to 5 mm					
Dome material	Aluminum					
Front ring material	Aluminum					
Front panel thickness	1 to 6 mm					
Weight	68g [2.40 oz]					
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]					
Ambient temperature	-25 to +75°C [-13 to +167°F]					
Shock resistance	< 50g					
Vibration resistance	5g					
Ingress protection rating	IP65					
Standards **	IEC 60947-5-1; IEC 60947-1; UL File E57648					

*Operator only. Purchase contact blocks separately.
** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL
Non-Illuminated 30mm IP65 Mushroom Pushbuttons

EDP55.VBL EDP55.VGB EDP55.VGN EDP55.VRT EDP55.VSW EDP55.VWS

Non-Illuminated 30mm IP65 Mushroom Pushbuttons*						
Part Number	EDP55.VBL	EDP55.VGB	EDP55.VGN	EDP55.VRT	EDP55.VSW	EDP55.VWS
Price	$4ze_:	$4zep:	$-4zel:	$4zen:	$4zeq:	$4zeo:
Color	Blue	Yellow	Green	Red	Black	White
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF
Description	Momentary action non-illuminated IP65 mushroom pushbuttons with 55mm operator and mounting flange					
Mounting diameter	30.5 mm [1.20 in]					
Actuating stroke	4 to 5 mm					
Dome material	Aluminum					
Front ring material	Aluminum					
Front panel thickness	1 to 6 mm					
Weight	91g [3.20 oz]					
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]					
Ambient temperature	-25 to +75°C [-13 to +167°F]					
Shock resistance	< 50g					
Vibration resistance	5g					
Ingress protection rating	IP65					
Standards **	IEC 60947-5-1; IEC 60947-1; UL File E57648					

*Operator only. Purchase contact blocks separately.
** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

SCHMERSAL

Contact Blocks and Light Terminal Blocks Overview

Features

- A self-cleaning contact bridge system, known as Elan four-way system, which is particularly suitable for low voltage applications and has a lower switching capacity of 5VDC/3.2 mA (max. 400VAC/8A). It is designed in the form of a bent twin contact bridge, with parallel and also diagonal operation.
- Block mounting via snap-on stainless steel springs.

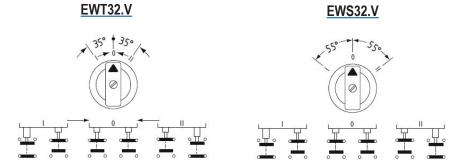- Complete terminal designations visible at a glance in compliance with IEC 60 947-1 (VDE 0660, Part 100) with a complete function and sequence number (refer also to product ranges). The function number identifies the N.C. and N.O. contact. The sequence number specifies the number and the order of the contacts on the complete switching device.

- N.C. contacts with positive opening in compliance with IEC 60 947-5-1 (VDE 0660 Part 200).
- Galvanically isolated contact circuits in 2-pole blocks.
- High resistance to shock and vibrations.

Technical Specifications

	Contact Blocks	Light Blocks (ELE)	Light Blocks (ELDE)
General description	Contact element	Light terminal block w/Ba9S base	Light terminal block w/LED
Enclosure material	Plastic, glass fiber reinforced	Plastic, glass fiber reinforced	Plastic, glass fiber reinforced
Contact material	Fine-silver, phosphor bronze or brass carrier	–	–
Utilization category	AC-15: 250 V / 8 A DC-13: 24 V / 5 A	–	–
Suitability for low voltages	≥ 5VDC / 3.2 mA	–	–
Rated insulation voltage U_i	400V	440V	440V
Rated impulse withstand voltage U_{imp}	4kV	–	–
Thermal test current Ithe	10A	–	–
Max. fuse rating	10A gG D-fuse slow blow	10A gG T-slow blow	10A gG T-slow blow
Wire size	0.5 mm² to 2.5 mm² (20 - 14 AWG)		
Tightening torque wire connection	Maximum 1 N·m (0.74 lb·ft)		
NEMA contact rating	A300 / P300	–	–
Switching frequency	1200 s/h	–	–
Switching capacity	5VDC / 3.2 mA (max 400VAC / 8A)	–	–
Mechanical life	10,000,000 operation	–	–
Resistance to shock	110 g/4ms to 30 g/18ms no bouncing	–	–
Resistance to vibration	> 20 g/10ms to 200Hz	–	–
Ambient temperature	-25 to +80°C [-13 to +176°F]		
Ingress protection rating	IP20 terminals / IP40 switching compartment	IP20 terminals	IP20 terminals
Standards	IEC 60947-5-1; IEC 60947-1; UL File E57648		

NEMA Contact Rating Designation

	Thermal Current	Voltage	Volt amperes
A300	10	300 AC	N/A
P300	5	300 DC	138

SCHMERSAL **Contact Blocks**

EF03.2

EF10.1

EF103.2

EF220.2

EF303.2

Contact Blocks								
Part Number	Price	Qty.	Drawing Link	Contacts	Mounting Position	Travel Diagram (mm)	Wiring Diagram	Application
EF10.1*	$;11t?:	1	PDF	1 N.C.	1	0 2 4 6		Standard
EF10.2*	$11u5:	1	PDF		2			
EF10.3*	$11uc:	1	PDF		3			
EF03.1	$;11t#:	1	PDF	1 N.O.	1	0 2 4 6		
EF03.2	$11u3:	1	PDF		2			
EF03.3	$11ua:	1	PDF		3			
EF110.1*	$11u0:	1	PDF	2 N.C.	1	0 2 4 6		
EF110.2*	$11u7:	1	PDF		2			
EF110.3*	$11ue:	1	PDF		3			
EF033.1	$;;11t!:	1	PDF	2 N.O.	1	0 2 4 6		
EF033.2	$11u4:	1	PDF		2			
EF033.3	$11ub:	1	PDF		3			
EF103.1*	$;;11t,:	1	PDF	1 N.C. / 1 N.O.	1	0 2 4 6		
EF103.2*	$11u6:	1	PDF		2			
EF103.3*	$11ud:	1	PDF		3			
EF220.1**	$11u1:	1	PDF	2 N.C.	1	0 2 4 6		Emergency Stop
EF220.2**	$11u8:	1	PDF		2			
EF220.3**	$;11uf:	1	PDF		3			
EF303.1**	$11u2:	1	PDF	1 N.C. / 1 N.O.	1	0 2 4 6		
EF303.2**	$11u9:	1	PDF		2			
EF303.3**	$11ug:	1	PDF		3			

*Not suitable for Emergency Stop devices
**Not suitable for maintained selector switches NWS/NWT

Travel Diagram Legend

■ = contact closed
□ = contact open

Numbers indicate distance in mm

EFM

Mounting Flange			
Part Number	Price	Description	Drawing Link
EFM	$;4zfz:	Schmersal mounting flange, replacement. For use with E and N series pushbuttons.	PDF

SCHMERSAL Light Terminal Blocks

ELDE.Nxx230

ELDE.Nxx24

ELE

ELE230

Light Terminal Blocks								
Part Number	Color	Price	Drawing Link	Voltage	Wattage	Diagram	Function	
ELDE.NBL230	Blue	$;-11tj:	PDF	115-230 VAC	4	X1 ⊸ ▷⊢ ⊸ X2	Integrated LED	
ELDE.NBL24		$;11tk:	PDF	24 VAC/VDC	0.4			
ELDE.NGB230	Yellow	$;-11tl:	PDF	115-230 VAC	4			
ELDE.NGB24		$;11tn:	PDF	24 VAC/VDC	0.4			
ELDE.NGN230	Green	$;11to:	PDF	115-230 VAC	4			
ELDE.NGN24		$;11tp:	PDF	24 VAC/VDC	0.4			
ELDE.NRT230	Red	$;11tq:	PDF	115-230 VAC	4			
ELDE.NRT24		$;11ts:	PDF	24 VAC/VDC	0.4			
ELDE.NWS230	White	$;:11tt:	PDF	115-230 VAC	4			
ELDE.NWS24		$;11tu:	PDF	24 VAC/VDC	0.4			
ELE	–	$;11tv:	PDF	24 VAC/VDC	1	X1 ⊸ ▷⊢ ⊸ X2	Ba9S Lamp holder	
ELE230	–	$;11tx:	PDF	115-230 VAC	1	X1 ⊸ ⊣⊢ ▷⊢ ⊸ X2		

Ba9S Bulbs for ELE and ELE230 Light Terminal Blocks							
Part Number	Color	Price	Qty	Lamp Voltage	Current Consumption	Power Consumption	Lamp Durability
APX510-24R	Red	$1081:	2	24V AC/DC	12mA AC 11mA DC	0.8 W	30,000h
APX510-24G	Green	$1082:					
APX510-24Y	Yellow	$1083:					
APX510-24S	Blue	$1084:					
APX510-24O	Orange	$;107,:					

APX510-24R

Replacement LED Lamps for ELE and ELE230 Light Terminal Blocks							
Part Number	Color	Price	Qty	Lamp Voltage	Current Consumption	Power Consumption	Lamp Durability
ECX1911-2	Red	$0e9c:	2	24V AC/DC	14mA	0.6 W	100,000h
ECX1912-2	Green	$0e9d:			13mA		
ECX1913-2	Yellow	$0e9e:			13.3 mA		
ECX1914-2	Blue	$;0e9f:			13mA		
ECX1915-2	White	$0e9g:			19mA		

ECX1915-2

NOTE: ELE230 has transformer to step down to 24V

Mounting Flange			
Part Number	Price	Description	Drawing Link
ELM	$;;4zf]:	Schmersal mounting flange, replacement. For use with E and N series illuminated pushbuttons.	PDF

ELM

SCHMERSAL Accessories
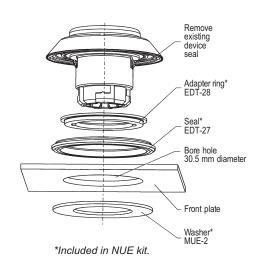
NB

NDP-70-ES

EDT-25-5ST

NZSO-V4A

Part Number	Price	Drawing Link	Description
IP69K Accessories			
NB	$12ca:	PDF	Schmersal pilot device hole seal, 22mm, silver.
NDP-70-ES	$;11tz:	N/A	Schmersal legend plate, metal, round, yellow field, yellow background, black engraved text, legend plate marking "Emergency Stop". For use with 22mm pilot devices.
NUE	$12cb:	N/A	Schmersal pilot device hole adapter, reduces from 30.5 mm to 22.3 mm. Adapter ring, seal and washer included.
EDT-25-5ST	$12cc:	N/A	Schmersal pilot device seal, replacement. Package of 5.
NZSO-V4A	$;;11t]:	N/A	Schmersal legend plate, metal, rectangular, gray field, gray background, legend plate marking "blank". For use with 22mm pilot devices.

NUE

Remove existing device seal

Adapter ring*
EDT-28

Seal*
EDT-27

Bore hole
30.5 mm diameter

Front plate

Washer*
MUE-2

*Included in NUE kit.

Pilot Devices tPIL-98

E22 Series 22mm Pilot Devices Overview*

Cutler-Hammer

22mm Non-Metal Operator and Pilot Devices

Cutler-Hammer's 22mm industrial pushbutton line offers a wide array of functional, smartly-styled illuminated and non-illuminated pushbuttons, selector switches, and more. We offer transformer, full voltage, resistor, or LED light units. The operators feature a matte black bezel. The space-saving design and modular construction of the E22 line makes on-the-job installation fast and easy.

Complete assembled devices
The devices listed are shipped complete with operator, contact blocks and light (if applicable).

Variety of operators, such as this illuminated extended button

Aluminum legend plates available

Mounting adapter

Terminal clamps are shipped open, ready to wire

Black bezel

Octagonal mounting nut eliminates spacer washers and set screws

T3-1/4 bayonet base bulbs used throughout

Light units and contact blocks have clip-on mounting (no tools required)

* Cutler-Hammer products are available for sale to North America locations only.

EAT·N
Cutler-Hammer

E22 Series Selection Guide

Indicating Lights

Complete assembly includes:

- Illuminated operator, including optically enhanced lens
- Incandescent or LED light units
- (Order legend plate separately)

Selector Switches

Complete assembly includes:

- Selector operator
- Contact block(s) - one or two normally open or normally closed
- Black bezel
- (Order legend plate separately)

Pushbuttons

Complete assembly includes:

- Flush or extended momentary operators
- One normally open or normally closed contact
- Push-push models also available
- 120VAC light (if illuminated)
- (Order legend plate separately)

40 and 50mm Mushroom Pushbuttons

- Push-Pull trigger action
- Illuminated or non-illuminated
- (Order legend plate separately)

Double Headed Pushbutton

- On/Off control

Control Station

- For Start/Stop applications

Illuminated Pushbuttons

- Red, green or amber
- 120VAC or 24 VAC/DC
- Order legend plate separately

Push-to-Test Indicating Lights

- Red, green or amber
- Order legend plate separately

Tools and Accessories

- Legend plates
- Hole plugs
- Bulb tools
- Replacement bulbs

EAT•N
Cutler-Hammer

E22 Series Technical Specifications

Ingress Protection (IP) Rating

(IP65, IP66 ratings to IEC 529) UL Listed (NEMA) Types 1, 2, 3, 3R, 4, 4X, 12, and 13 when mounted in an enclosure rated for those same applications.

Electrical Specifications

Electrical Rating	UL508; UL File E131568. CSA certified class 3211 03, LR 68551. NEMA ICS5-2000: A600, Q600 (refer to page 90). IEC 60947-5-1: AC15, DC13.

Maximum Frequency of Operation

22mm Pushbuttons	6,000 operations/hour IEC 60947-5-1: AC15, DC13.
Key and Lever Selector Switches	3,000 operations/hour
Twist-to-Release Devices	1,200 operations/hour
Push-Pull Operators	3,000 operations/hour

Mechanical Life

Pushbutton	5 million operations
Selector Switches	500,000 operations
Push-Pull and Twist-to-Release	300,000 operations
Contact Block	3 million operations

Environmental Specifications

Operating Temperature	Maximum 60°C at 95% RH, -20 to 60°C (-14 to 140°F), altitude 2000 meters
Storage Temperature	Maximum 60°C at 95% RH, -40 to 80°C (-40 to 176°F)

Vibration

Vibration	5G/0.7 mm peak-to-peak 10 sweeps, 10-500 Hz
Shock	18G, 18ms
Bump	25G, 6ms for 1,000 cycles

Construction

Components	*Materials*
Housing, Bezel, Mounting Rings	Glass-filled nylon
Internal Seal	Nitrate rubber
Panel Gasket	Nitrate rubber
Illuminated Lenses	Polycarbonate
Buttons	Polyester or polycarbonate
Springs	Stainless steel
Contacts	Silver
Terminal Screws/ Terminals	Brass

Panel Thickness - mm (inches)

Nominal	6.8 (0.2)[1]
Aluminum Legend Plates	1.3 (0.05)
Large Yellow Round Legend Plates	1.0 (0.04)
Minimum	1.0 (0.04)

1) Installation of certain accessories will increase the total (overall) panel thickness by the amount shown. The total panel thickness with all accessories installed cannot exceed the maximum allowable nominal dimensions of 6.8 mm (0.27 in.).

Wire Specifications

Minimum/Maximum	18AWG (0.75 mm²) / 12AWG (2.5 mm²)
Tightening Torque	7 lb·in

Electrical life

- AC15 durability:
  - 120V, 6A 1×10^6 operations
- DC13 durability:
  - 24V, 8A 0.15×10^6 operations
  - 660V, .1A 0.5×10^6

Logic-level operation

5 VDC, 1mA (minimum recommended)

Contacts feature a pointed surface called "Reliability Nib." The projection penetrates through any oxidation providing unmatched low-level operation without using exotic metals or sealed contacts.

Standards and approvals

- UL listed – UL 508 electrical/environmental;
- UL 486E terminal secureness, File E131568
- CSA Certified – CSA 22.2 #14
- NEMA ICS-1, ICS-2
- IEC 144, 337, 529, 947
- IP65 when mounted in enclosure
- Lloyds No. 4 and 5
- M.T.T.A.
- CE

IEC utilization categories & ratings

AC15
(Control of AC electromagnetic loads)

- 24 volts AC at 10 amps
- 130 volts AC at 6.5 amps

DC13
(Control of DC electromagnetic loads)
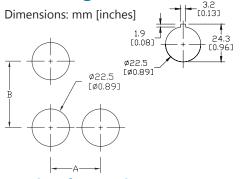
- 24 volts DC at 1.5 amps
- 110 volts DC at .5 amps

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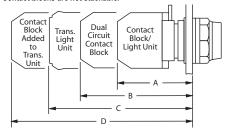
E22 Mounting / NEMA Aux Contact Ratings

Mounting

Dimensions: mm [inches]

ø22.5 [ø0.89]

3.2 [0.13]

1.9 [0.08]

24.3 [0.96]

ø22.5 [ø0.89]

B

A

Back-of-panel extensions

Note: This view is to show dimensions only. Contact blocks are not stackable.

Contact Block Added to Trans. Unit

Trans. Light Unit

Dual Circuit Contact Block

Contact Block/ Light Unit

A

B

C

D
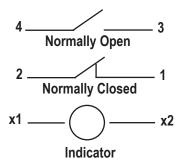
Minimum Spacing — mm [inches]

Size/Type of Operator	Dimensions	
	A	B
All types up to 30 (1.18) dia. including knob and key operated selector switches — except those listed below Three-way adapter	30 (1.18)	50 (1.97)
50 (1.97) dia. operators	55 (2.16)	55 (2.16)
Large yellow round legend plate - 70 (2.76) diameter	75 (2.95)	50 (1.97)

Approximate Dimensions — mm [inches]

A	B	C	D
Single circuit block — full voltage and resistor units	Dual circuit contact block	Transformer light unit	Transformer light unit and single circuit contact block
Pushbuttons (All Types and Push-Pull)			
51 [2.0]	66 (2.6)	74 (2.91)	94 (3.7)
Key and Knob Selector Switches			
57 [2.2]	72 (2.83)	80 (3.15)	99 (3.9)

Control Circuit Contact Electrical Ratings and Wiring

Typical Wiring

4 ———/ ——— 3

Normally Open

2 ———/ ——— 1

Normally Closed

x1 ——— ◯ ——— x2

Indicator

NEMA Mechanical Switching Ratings and Test Values for DC Control Circuit Contacts

Contact Rating Designation	Thermal Continuous Test Current (A)	Maximum Make or Break DC Current (A)			Volt amperes
		125 Volts	250 Volts	301 to 600 Volts	
P300	5.0	1.1	0.55	---	138
P600	5.0	1.1	0.55	0.20	138
Q300	2.5	0.55	0.27	---	69
Q600	2.5	0.55	0.27	0.10	69
R300	1.0	0.22	0.11	---	28

This chart is provided as a guideline only, and the ratings and values are not guaranteed to be accurate. It is the users' responsibility to properly size their control circuit devices. The chart values are from NEMA Standard ICS 5-2000, Table 1-4-2.

NEMA Mechanical Switching Ratings and Test Values for AC Control Circuit Contacts

Contact Rating Designation	Thermal Continuous Test Current (A)	Maximum AC Current, 50/60Hz (A)								Volt amperes	
		120 Volts		240 Volts		480 Volts		600 Volts			
		Make	Break	Make	Break	Make	Break	Make	Break	Make	Break
A300	10	60	6.00	30	3.00	---	---	---	---	7200	720
A600	10	60	6.00	30	3.00	15	1.50	12	1.20	7200	720
B300	5	30	3.00	15	1.50	---	---	---	---	3600	360
B600	5	30	3.00	15	1.50	7.5	0.75	6	0.60	3600	360
C600	2.5	15	1.5	7.5	0.75	3.75	0.375	3.00	0.30	1800	180

This chart is provided as a guideline only, and the ratings and values are not guaranteed to be accurate. It is the users' responsibility to properly size their control circuit devices. The chart values are from NEMA Standard ICS 5-2000, Table 1-4-1.

E22 Non-Illuminated Pushbuttons

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Flush Pushbuttons

Approximate dimensions in mm (in). See dimensions for "back-of-panel extensions" at the beginning of the E22 series section.

Non-Illuminated Pushbuttons				
Color	**Part Number**	**Description**	**Price**	**Drawing Link**
Flush Button with Bezel				
Black	**E22PB1A**	Momentary pushbutton, black bezel, flush black button with one N.O. contact	$0ddy:	PDF
Green	**E22PB3A**	Momentary pushbutton, black bezel, flush green button with one N.O. contact	$0ddz:	PDF
Push - Push Flush Button, Operator Only				
Black	**E22PPB1**	Push to open, push to close, flush, operator only	$;0dd]:	PDF
White	**E22PPB5**	Push to open, push to close, flush, operator only	$;0dd[:	PDF
Extended Button				
Red	**E22EB2B**	Momentary pushbutton, black bezel, extended red button with one N.C. contact	$0ddx:	N/A
Control Station - One Extended Button, One Flush Button				
Green-Red	**E22ASB204**	Control station: Flush, Momentary, green button (START) with one N.O. contact; Extended, Momentary, red button (STOP) with one N.C. contact Dimensions: mm(inches) H x W x D 120(4.72) x 80(3.15) x 60(2.36)	$00des:	PDF

See specifications and mounting data at the beginning of this E22 series section.
Note: Contact blocks sold separately, see E22 accessories section.

Extended Pushbuttons

Approximate dimensions in mm (in). See dimensions for "back-of-panel extensions" at the beginning of the E22 series section.

Push-Push Flush Pushbuttons

Control Station

E22 Illuminated Pushbuttons

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Illuminated Pushbuttons

Note: Bulb removal tool available. See replacement bulbs on the accessories page.

Color	Part Number	Description	Price	Drawing Link
Illuminated Pushbuttons				
24V AC/DC Full Voltage				
Red	E22TB2X4B	Momentary illuminated pushbutton, black bezel, extended red button with one N.C. contact, 24V full voltage light unit	$0dd#:	PDF
Green	E22TB3X4A	Momentary illuminated pushbutton, black bezel, extended green button with one N.O. contact 24V full voltage light unit	$0dd?:	PDF
Amber	E22TB9X4A	Momentary illuminated pushbutton, black bezel, extended amber button with one N.O. contact, 24V full voltage light unit	$0de0:	PDF
*120V AC Resistor ***				
Red	E22TB2X10B	Momentary illuminated pushbutton, black bezel, extended red button with one N.C. contact, 120V resistor light unit	$0dd_:	PDF
Green	E22TB3X10A	Momentary illuminated pushbutton, black bezel, extended green button with one N.O. contact, 120V resistor light unit	$;0dd!:	PDF
Amber	E22TB9X10A	Momentary Illuminated pushbutton, black bezel, extended amber button with one N.O. contact, 120V resistor light unit	$;0dd,:	PDF

See specifications and mounting data at the beginning of this E22 series section.
* Use 60V replacement lamp (W1226) for 120 VAC resistor models

Illuminated Double-Headed Pushbutton

Color	Part Number	Description	Price	Drawing Link
Illuminated Double-Headed Pushbutton				
*Double-headed Pushbutton ***				
Green-Red	E22DB1B20X11C	Momentary illuminated double-headed pushbutton with clear lens, O and I legend markings, 120V transformer light unit, one N.O. and one N.C. contact	$;00det:	PDF

See specifications and mounting data at the beginning of this section.
Note: This IP65 or UL (NEMA) Type 3, 3R, 4, 4X, 12, 13 pushbutton includes a protective clear silicone boot.
 ** Use 6V replacement lamp (ECX1900-5)

Mushroom Pushbutton Station

Color	Part Number	Description	Price	Drawing Link
Mushroom Pushbutton Station				
Emergency Stop Station				
Red/Yellow	E22ASB106	Latch in, twist-to-release 40mm red mushroom pushbutton, black bezel, with one N.C. contact.	$005#8:	PDF

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E22 Emergency Stop Mushroom Pushbuttons

The European Machinery Safety Directive EN 418 requires all emergency OFF devices to be self-latching types and to have positive (direct) opening operation. Devices have to be manually reset. EN 418 states that actuators shall be mushroom head type and colored RED. The background immediately around the device actuator should be colored YELLOW (see the E22 accessories in this section to order legend plate part number E22VA8 or guard part number E22MGTA).

E22VA8   **E22MGTA**

The E22LTA2QB Emergency Stop pushbutton, in conjunction with direct-opening action contact blocks and either a yellow nameplate or yellow guard, is fully compliant with this safety directive, and is third-party certified by DEMKO.

CE EN 418 Compliant Non-illuminated Emergency Stop Mushroom Pushbuttons

Color	Part Number	Description	Price	Drawing Link
(A) Red	E22LTA2QB	Trigger action twist-to-release Maintained 40mm red mushroom pushbutton, Emergency Stop. black bezel, with one N.C. contact	$;05d,:	PDF
(B) Red	E22LPB2B	Push-Pull Maintained 40mm red mushroom pushbutton, Emergency Stop. black bezel, with one N.C. contact	$05d?:	PDF
(C) Red	E22JLB2N8B	Push-Pull Maintained 50 mm red aluminum mushroom pushbutton, Emergency Stop engraved, black bezel, with one N.C. contact	$;05d]:	N/A
(D) Red	E22JPLB2B	Push-Pull Maintained 50 mm red mushroom pushbutton, not engraved, black bezel, with one N.C. contact	$05d_:	PDF

See specifications and mounting data at the beginning of this E22 series section.
Note: E22MGTA fits E22LTA2QB.
It is not recommended for use with devices that are not EN-418 compliant .

Non-illuminated Mushroom Pushbuttons (NOT CE EN 418 Compliant)

Color	Part Number	Description	Price	Drawing Link
(E) Red	E22JPB2B	Momentary 50 mm red mushroom pushbutton, black bezel, with one N.C. contact	$;05d[:	PDF
(F) Red	E22LB2B	Momentary 40 mm red mushroom pushbutton, black bezel, with one N.C. contact	$05d#:	PDF
(G) Red	E22LLB2B	Twist release Maintained 40mm red mushroom pushbutton, black bezel, with one N.C. contact	$;05d!:	PDF

See specifications and mounting data at the beginning of this E22 series section.

A   B   C

D, E   F   G

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E22 Monoblock Indicating Lights

Monoblock Indicating Lights				
Color	Part Number	Description	Price	Drawing LInk
24V AC/DC Full Voltage Incandescent				
Red	E22HV2X4	Monoblock indicating light, red optically enhanced lens, 24V full voltage incandescent	$0dea:	PDF
Green	E22HV3X4	Monoblock indicating light, green optically enhanced lens, 24V full voltage incandescent	$0dec:	PDF
Amber	E22HV9X4	Monoblock indicating light, amber optically enhanced lens, 24V full voltage incandescent	$0dee:	PDF
120V AC Full Voltage Incandescent				
Red	E22HV2X8	Monoblock indicating light, red optically enhanced lens, 120V full voltage incandescent	$0deb:	PDF
Green	E22HV3X8	Monoblock indicating light, green optically enhanced lens, 120V full voltage incandescent	$0ded:	PDF
Amber	E22HV9X8	Monoblock indicating light, amber optically enhanced lens, 120V full voltage incandescent	$;0def:	PDF
24V AC/DC Full Voltage LED*				
Red	E22HL2X4	Monoblock indicating light, red optically enhanced lens, 24V full voltage LED	$0de4:	PDF
Green	E22HL3X4	Monoblock indicating light, green optically enhanced lens, 24V full voltage LED	$0de6:	PDF
Amber	E22HL9X4	Monoblock indicating light, amber optically enhanced lens, 24V full voltage LED	$0de8:	PDF
120V AC Full Voltage LED*				
Red	E22HL2X8	Monoblock indicating light, red optically enhanced lens, 120V full voltage LED	$0de5:	PDF
Green	E22HL3X8	Monoblock indicating light, green optically enhanced lens, 120V full voltage LED	$0de7:	PDF
Amber	E22HL9X8	Monoblock indicating light, amber optically Enhanced lens, 120V full voltage LED	$0de9:	PDF
120V AC Transformer Incandescent**				
Red	E22H2X11	Monoblock Indicating light, red optically enhanced lens, 120V transformer incandescent	$0de1:	PDF
Green	E22H3X11	Monoblock indicating light, green optically enhanced lens, 120V transformer incandescent	$0de2:	PDF
Amber	E22H9X11	Monoblock indicating light, amber optically enhanced lens, 120V transformer incandescent	$0de3:	PDF

See also specifications and mounting data at the beginning of this E22 series section.
Note: * Cutler-Hammer 22mm LED indicators feature an LED cluster module.
    The LED clusters are permanently installed and are non-replaceable.
    **Use 6V replacement lamp (ECX1900-5) for 120VAC transformer models.
See the E22 accessories in this section for replacement lamp information.

E22 Lights and Selector Switches

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Push-to-Test Indicating Lights

Push-to-Test Indicating Lights				
These are designed to illuminate for bulb test when operator is pressed. Otherwise, they function as indicator lights.				
Color	*Part Number*	*Description*	*Price*	*Drawing LInk*
*120V AC Resistor ***				
Amber	E22TB9X26	Push-to-Test indicating light, amber optically enhanced lens, 120V resistor incandescent	$-00dei:	PDF
*120V AC Transformer ****				
Red	E22TB2X27	Push-to-Test indicating light, red optically enhanced lens, 120V transformer incandescent	$00deg:	PDF

See specifications and mounting data at the beginning of this E22 series section.
Notes: Bulb removal tool available. See replacement bulbs on the E22 accessories page in this section.
*   Use 60V replacement lamp (W1226) for 120VAC resistor models.
** Use 6V replacement lamp (ECX1900-5) for 120VAC transformer models.

Selector Switches

Two-Position

Three-Position

Selector Switches				
Two-Position	*Part Number*	*Description*	*Price*	*Drawing Link*
Left — Right M — M Maintained Left Maintained Right	E22XB51A	Selector switch, black bezel ,two position, black knob, "OFF ON" with one N.O. contact block	$0den:	PDF
	E22XB51C	Selector switch, black bezel, two-position, black knob, "ON ON" with one N.O. and one N.C. contact block	$0deo:	PDF
Three-Position				
Left Center Right M M M Maintained Left Maintained Center Maintained Right	E22XBG1RR	Selector switch, black bezel, 3-position, black knob, "ON ON ON" with two contact blocks, each having one N.O. and one N.C. contact. (Contact part numberE22B11)	$0dep:	PDF
Three-Position Spring-Return to Center Position				
Left Center Right S M S Spring return Left Maintained Center Spring return Right	E22XBL1D	Selector switch, black bezel, 3-position, black knob. "ON OFF ON", spring return to center, with two N.O. contact blocks	$0deq:	PDF

See specifications and mounting data at the beginning of this E22 series section.

E22 Key Switches and Accessories

Cutler-Hammer

Two-Position Key Switches

Key Switches			
Part Number	**Description**	**Price**	**Drawing Link**
E22KB53A	Selector switch, black bezel, 2-position key, "OFF ON" with one N.O. contact block	$00dek:	PDF
E22KB62A	Selector switch, black bezel, 2-position key, spring from right "OFF ON" with one N.O. contact block	$-00del:	PDF

See specifications and mounting data at the beginning of this E22 series section.
Notes:
All E22 series key switches are keyed alike. The key is not compatible with the metal 22mm key switches.
All E22 series key switches will hold only one single row of (2) contacts (non-stackable).
Key can be removed in all positions.

Replacement Contact Blocks

E22B1   **E22B2**   **E22CB1M**

Replacement Contact Blocks			
Part Number	**Description**	**Price**	**Drawing Link**
E22B1*	One N.C. contact (Direct Opening Action)	$0dc#:	PDF
E22B2	One N.O. contact	$0dc?:	PDF
E22B11*	One N.O., One N.C. contact (N.C. Direct Opening Action)	$;0dc!:	PDF
E22B20	Two N.O. contacts	$;0dc,:	PDF
E22CB1M*	Self-monitoring contact block (N.C. Direct Opening Action)	$0dd0:	PDF

Note: See contact electrical ratings on E22 series mounting and contact ratings page in this E22 series section.
*All N.C. contact blocks are EN 418 compliant when used with compliant operators.

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E22 Accessories

Octagonal Wrench

Hole Plug

Dimensions: mm [inches]

28.0 [1.10]

14.0 [0.55]

Locking Ring

Bulb Removal Tool

Accessories		
Part number	**Description**	**Price**
HT8WRENCH	Octagonal wrench for tightening back-of-panel mounting nut on all Cutler-Hammer operators.	$04#5:
E22BHP	Hole plug for unused 22mm panel holes.	$06b?:
HT8LAMPTOOL	Lamp extraction tool for removing lamps from switches, indicators and stacklights	$0551:
E22MGTA	22mm yellow guard for E22LTA2QB and E22LPB2B for emergency stop applications.	$06u8:
E22LRM	Eaton optional metal locking ring, package of 10. For use with E22 operators.	$6ud:

Guard for E22 E-Stop

43.5 [1.71] 40.6 [1.60]

76.2 [3.00] Ø22.5 [Ø0.89] 44.0 [1.73]

6.5 [0.26] 5.0 [0.20]

Replacement Incandescent Bulbs

Part Number	Rating	Description	Quantity	Price
ECX1900-5	6V, 1.2 watts	6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4.	5	$0ec1:
ECX1902-5	24V@ 80mA	24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4.	5	$0ec2:
ECX1904-5	130V@20mA	120V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4.	5	$0ec3:
W1121	120V@20mA	Replacement bulb for Cutler-Hammer E22 full voltage indicators and switches. Does not replace the LED monoblock indicators.	4	$0deu:
W1226	60V@20mA	Replacement bulb for Cutler-Hammer E22 resistor indicators, switches and pushbuttons. Does not replace the LED monoblock indicators.	4	$0dev:
W1819	24V@20mA	Replacement bulb for Cutler-Hammer E22 indicators and pushbuttons. Does not replace the LED monoblock indicators.	4	$0dex:

Replacement LED Lamps

Part Number	Color	Rating	Description	Quantity	Price
ECX1911-2	Red	24V@26mA	LED replacement lamp for miniature bayonet bases Works with 22mm switches and indicators, but illumination will not be as even when used with the ECX 22mm indicators Note: Will not replace sealed Cutler-Hammer monoblock LED indicators.	2	$0e9c:
ECX1912-2	Green				$0e9d:
ECX1913-2	Yellow				$0e9e:
ECX1914-2	Blue				$;0e9f:
ECX1915-2	White				$0e9g:
ECX1921-2	Red	120V@5mA			$0e9h:
ECX1922-2	Green				$-0e9i:
ECX1923-2	Yellow				$-0e9j:
ECX1924-2	Blue				$0e9k:
ECX1925-2	White				$-0e9l:

E·T·N

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E22 Legend Plates

Legend Plates
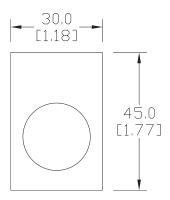
Aluminum legend plates feature a plastisol backing to help prevent rotation of the operator.

Dimensions: mm [inches]

30.0 [1.18]

45.0 [1.77]

E22VA8

Legend Plates				
Part Number	*Price*	*Color*	*Legend*	*Drawing Link*
E22NS11	$dd3:	Black	"CLOSE"	PDF
E22NS12	$dd4:	Black	"DOWN"	PDF
E22NS13	$dd5:	Red	"EMERG. STOP"	PDF
E22NS15	$dd6:	Black	"FORWARD"	PDF
E22NS19	$dd7:	Black	"JOG"	PDF
E22NS25	$dd8:	Black	"ON"	PDF
E22NS26	$dd9:	Black	"OPEN"	PDF
E22NS30	$dda:	Black	"REVERSE"	PDF
E22NS31	$ddb:	Black	"RUN"	PDF
E22NS33	$ddc:	Black	"START"	PDF
E22NS34	$ddd:	Red	"STOP"	PDF
E22NS35	$dde:	Black	"UP"	PDF
E22NS36	$;ddf:	Black	Blank plate	PDF
E22NS37	$ddg:	Red	Blank plate	PDF
E22NS38	$ddh:	Black	"FOR-REV"	PDF
E22NS39	$-ddi:	Black	"HAND-AUTO"	PDF
E22NS41	$-ddj:	Black	"JOG-RUN"	PDF
E22NS42	$ddk:	Black	"OFF-ON"	PDF
E22NS43	$-ddl:	Black	"OPEN-CLOSE"	PDF
E22NS48	$ddn:	Black	"UP-DOWN"	PDF
E22NS50	$ddo:	Black	"FOR-OFF-REV"	PDF
E22NS51	$ddp:	Black	"HAND-OFF-AUTO"	PDF
E22NS80	$ddq:	Black	"POWER ON"	PDF
E22NS81	$dds:	Black	"MOTOR RUN"	PDF
E22NS82	$;ddt:	Black	"MOTOR STOP"	PDF
E22NL36	$dd1:	Black	Jumbo alum. blank plate (1.57 in wide x 1.85 in tall)	PDF
E22NL37	$dd2:	Red	Jumbo alum. blank plate (1.57 in wide x 1.85 in tall)	PDF
E22NSP77	$ddu:	Red /black	Plastic blank plate; red on one side, black on other side; either side can have letters engraved down into white plastic	PDF
E22VA8	$0ddv:	Yellow	"EMERGENCY STOP" oversize yellow legend plate, 2.76" (70mm), printed	N/A

NOTE: Legend plates also work with the GCX/ECX series 22mm metal switches. The removal of the locator tab on the legend plate is required. This is easily accomplished with a round file or small grinder.

E22 Series Cross-reference Tables

Pushbutton, Indicator Light, and Selector Switch Cross Reference				
Cutler-Hammer	*Allen-Bradley*	*Telemecanique* *XB2B (chrome bezel) XA2B (black bezel)*	*GE C-2000*	*Siemens*
Non-Illuminated Pushbuttons				
E22PB1A	800EPF2 800E3LX10	ZA2BA2 ZA2BZ101	P9XPNNG10N0	3SB1000-0AB01 3SB02-CBH 3SB1400-0B
E22PB3A	800EPF3 800E3LX10	ZA2BA3 ZA2BZ101	P9XPNVG10N0	3SB1000-0AE01 3SB02-CBH 3SB1400-0B
E22EB2B	800EPE4 800E3LX01	ZA2BL4 ZA2BZ102	P9XPNRS20N0	3SB1000-0LC01 3SB02-CBH 3SB1400-0B
E22ASB204	ENCLSR: 800E-2P 800EP-F3 800E-2LX10 800EP-E4 800E-2LX01 800E-34BE208 800E-34R212	XALB211 Both flush - stop is not extended	P9CPNRSN20NO P9CPNVGN10NO P9EPB02 P9AEPN201 P9AEPN202	3SB02-S21
Illuminated Pushbuttons				
E22TB2X4B	800EPLE4 800E3DL3 800E3X01	ZA2BW14 ZA2BW06224	P9XPLRSDN12NADI	3SB1001-0LC01 3SB02-CBH 3SB1400-0C 3SB1400-2H
E22TB3X4A	800EPLE3 800E3DL3 800E3X10	ZA2B213 AZ2B206124	P9XPLVSDN12NADI	3SB1001-0LE01 3SB02-CBH 3SB1400-0B 3SB1440-2H
E22TB9X4A	800EPLE5 800E3DL3 800E3X10	ZA2BW15 ZA2BW06124	P9XPLASDN12NADI	3SB1001-0LD01 3SB02-CBH 3SB1400-0B 3SB1400-2H
E22TB2X10B	800EPLE4 800E2RL5 800E3X01	ZA2BW14 ZA2BW062120	P9XPLRSB P9PRNVJ P9PDNVD	3SB1001-0LC01 3SB02-CBH 3SB1400-0C
E22TB3X10A	800EPLE3 800E2RL5 800E3X10	ZA2BW13 ZA2BW061120	P9XPLVSD P9PRNVJ P9PDNVD	3SB02-UPR1P 3SB1910-0DE 3SB1400-OB
E22TB9X10A	800DPLE5 800E2RL5 800E3X10	ZA2BW15 ZA2B2061120	P9XPLASD P9PRNVJ P9PDNVD	3SB02-UPR1P 3SB1910-0DD 3SB1400-0B

E22 Series Cross-reference Tables

Pushbutton, Indicator Light, and Selector Switch Cross Reference (cont'd)				
Cutler-Hammer	*Allen-Bradley*	*Telemecanique* *XB2B (chrome bezel) XA2B (black bezel)*	*GE C-2000*	*Siemens*
Non-Illuminated Mushroom Pushbuttons				
E22LB2B	800EPM4 800E3LX01	ZA2BC4 ZA2BZ102	P9XEM4RNN20N0	3SB1000-1RC01 3SB02-CBH 3SB1400-0C
E22LLB2B	800EPMT4 800E3LX01	ZA2BS54 ZA2BZ102	P9XER4RAN20N0	3SB1000-1AC01 3SB02-CBH 3SB1400-0C
E22JPB2B	800EPMJ4 800E3LX01	ZA2BR4 ZA2BZ102	P9XEMGRN (60mm) P9BO1VN	3SB1000-1VC01 (70MM) 3SB1400-0C
E22JLB2N8B	800EPMJP28 800E3LX01	NO EQUAL	NO EQUAL	NO EQUAL
E22JPLB2B	800EPMJP24 800E3LX01	ZA2BX4 ZA2BZ102	P9XET4RN1200	3SB1000-0KC01 (40mm) 3SB1400-0C
E22ASB106	800EP-MT4 800E-2LX01 800E-1P 800E-15YE112	XALJ174 No Nameplate +Yellow Cover	P9XER4RAN20N0 P9EPB01 P9AEPNEN	3SB02-S13 No Nameplate + Yellow Cover
Indicating Lights				
Use ZA2 or ZB2 for these indicating lights				
E22HV2X4	800EPPL4 800E3DL3	ZA2BV04 ZA2BV624	P9XURRD0 BA9S24	N/A
E22HV3X4	800EPPL3 800E3DL3	ZA2BV03 ZA2BV624	P9XUGRD0 BA9S24	N/A
E22HV9X4	800EPPL5 800E3DL3	ZA2BVO5 ZA2BV624	P9XUARD0 BA9S24	N/A
E22HV2X8	800EPPL4 800E3DL5	ZA2BV04 ZA2BV6120	B9XURRD0 BA9S130	N/A
E22HV3X8	800EPPL3 800E3DL5	ZA2BV03 ZA2BV6120	B9XUGRD0 BA9S130	N/A
E22HV9X8	800EPPL5 800E3DL5	ZA2BV05 ZA2BV6120	B9XUARD0 BA9S130	N/A
E22HL2X4	800EPPL4 800E3DL3R	ZA2BV043 ZA2BV624 DL1CJUS0244	B9XURRD0 080BA9S24LR	N/A
E22HL3X4	800EPPL3 800E3DL3G	ZA2BV033 ZA2BV624 DL1CJUS0243	B9XUGRD0 080BA9S24LG	N/A
E22HL9X4	800EPPL5 800E3DL3A	ZA2BV053 ZA2BV624 DL1CJUS0245	B9XUARD0 080BA9S24LA	N/A
E22HL2X8	800EPPL4 800E3DL5R	ZA2BV043 ZA2BV620 DL1CJUS1204	B9XURRD0 080BA9S120LR	N/A
E22HL3X8	800EPPL3 800E3DL5G	ZA2BV033 ZA2BV6120 DL1CJUS1203	B9XUGRD0 080BA9S120LG	N/A
E22HL9X8	800EPPL5 800E3DL5A	ZA2BV053 ZA2BV6120 DL1CJUS1205	B9XUARD0 080BA9S120LA	N/A

For the latest prices, please check AutomationDirect.com.

E22 Series Cross-reference Tables

Pushbutton, Indicator Light, and Selector Switch Cross Reference (cont'd)				
Cutler-Hammer	Allen-Bradley	Telemecanique XB2B (chrome bezel) XA2B (black bezel)	GE C-2000	Siemens
Indicating Lights (cont'd)				
Use ZA2 or ZB2 for these indicating lights				
E22H2X11	800EPPL4 800E3TL5	ZA2BV04 ZA2BV3	P9XLRGJI	3SB1001-6CC06 3SB02-CBH 3SB1400-5M
E22H3X11	800EPPL3 800E3TL5	ZA2BV03 ZA2BVB3	P9XLGGJI	3SB1001-6CE06 3SB02-CBH 3SB1400-5M
E22H9X11	800EPPL5 800E3TL5	ZA2BV05 ZA2BV3	P9XLAGJI	3SB1001-6CD06 3SB02-CBH 3SB1400-5M
E22TB9X26	800DPLE5 800ETLT5X11	ZA2B215 ZA2BW065120	P9XPLASDN30NKJI	3SB02-UPR1P 3SB1910-0DD 3SB1400-0B
E22TB2X27	800EPLE4 800E3TLT5X11	ZA2BW14 ZA2BW035	P9XPLRSDN30NHJI	3SB100-0QC01 3SB02-CBH 3SB1400-5M
E22TB9X27	800EPLE5 800E3TLT5X11	ZA2BW15 ZA2BW035	P9XPLASDN30NHJI	3SB1001-0QA01 3SB02-CBH 3SB1400-5M
Selector Switches				
E22XB51A	800EPSM22 800E3LX10	ZA2BD2 ZA2BZ101	P9XSMD0N P9B10VN	3SB02-2MKBP 3SB1400-0B
E22XB51C	800EPSM22 800E3LX11	ZA2BD2 ZA2BZ105	P9XSMD0N P9B11VN	3SB02-2MKBP 3SB1400-0C
E22XBG1RR	800EPSM32 800E3LX20 800E3LX02	ZA2BD3 ZA2BZ103 ZA2BZ104	P9XSMZ0N P9B11VN	3SB02-3MKBP 3SB1400-0G 3SB1400-0H
E22KB53A	800EPKM2Z1 800E3LX11	ZA2BG4 ZA2BZ101	P9XSCD0K95 P9B10VN	3XB02-2MHC1P 3SB1400-0B
E22KB62A	800EPKR2Z1 800E3LX10	ZA2BG6 ZA2BZ101	P9XSCD0K95 P9B10VN	3SB02-2LHC1P 3SB1400-0B

Pilot Devices tPIL-113

For the latest prices, please check AutomationDirect.com.

E22 Series Cross-reference Tables

Pushbutton, Indicator Light, and Selector Switch Cross Reference (cont'd)				
Cutler-Hammer	Allen-Bradley	Telemecanique XB2B (chrome bezel) XA2B (black bezel)	GE C-2000	Siemens
Accessories				
E22B1	800E3X01	ZA2BZ102	P9B01VN	3SB1400-0C
E22B2	800E3X10	ZA2BZ101	P9B10VN	3SB1400-0B
E22NS33	800E13BE208	ZA2BZ32303	P9ACP2N202	P22MPS03
E22NS34	800E13BE212	ZA2BZ32304	P9ACP2N201	P22MPS04
E22NS19	800E13BE138	ZA2BZ32101 + custom text	P9ACP2N210	P22MPS28
E22NS11	800E13BE107	ZA2BZ32314	P9ACP2N205	P22MPS19
E22NS12	800E13BE110	ZA2BZ32308	P9ACP2N203	P22MPS17
E22NS50	800E13BE261	ZA2BZ32101+ custom text	P9ACP2N239	P22MPS81
E22NS15	800E13BE120	ZA2BZ32305	P9ACP2N214	P22MPS07
E22NS38	800E1BE253	ZA2BZ32101+ custom text	P9ACP2N231	P22MPS57
E22NS39	800E13BE127	ZA2BZ32101 + custom text	P9ACP2N243	P22MPS52
E22NS51	800E13BE128	ZA2BZ32387	P9ACP2N261	P22MPS80
E22NS41	800E13BE142	ZA2BZ32101 + custom text	P9ACP2N245	P22MPS65
E22NS81	800E13B	ZA2BZ32101 + custom text	P9ACP2NFEN	P22MPS38
E22NS82	800E13B	ZA2BZ32101 + custom text	P9ACP2NFEN	P22MPSBB + custom text
E22NS25	800E13BE166	ZA2BZ32311	P9ACP2R212	P22MPS01
E22NS26	800E13BE170	ZA2BZ32313	P9ACP2N206	P22MPS18
E22NS43	800E13BE171	ZA2BZ32101 + custom text	P9ACP2N234	P22MPS60
E22NS30	80013BE188	ZA2BZ32306	P9ACP2N215	P22MPS08
E22NS31	800E13BE193	ZA2BZ32334	P9ACP2N211	P22MPS06
E22NS35	800E13BE22	ZA2BZ32307	P9ACP2N204	P22MPS16
E22NS48	80013BE224	ZA2BZ32101 + custom text	P9ACP2N256	P22MPS61
E22NS13	800E13BE112	ZA2BZ32330	P9ACP2R229	P22MPS27
E22VA8	800E16Y	ZB2BY9303	080XTG802	3SX1348

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NEMA Ruggedness at IEC Prices

Overview
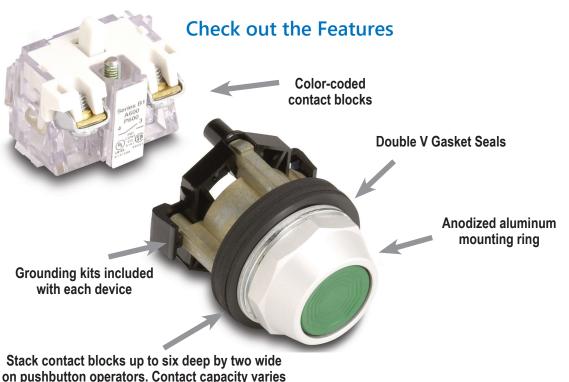
We took advantage of the experience of Cutler-Hammer engineering to take existing product technology and make it better. From the corrosion-resistant anodized mounting rings to the optically-enhanced lenses on our indicators, the HT800 30mm line finishes out your control panel in style. Extended lamps and LEDs provide better side illumination in our indicators and illuminated pushbuttons. Watertight double V gaskets stand between the environment and your control system. Use them indoors or out. They're protected to NEMA 1, 2 , 3, 3R, 4, 4X, 12, and 13.

30mm Pushbuttons

Available in green, black, and red

Flush and Extended

Illuminated (in seven colors)

Guarded Illuminated (in seven colors)

Push-pull Illuminated

Mushroom

Check out the Features

Color-coded contact blocks

Double V Gasket Seals

Anodized aluminum mounting ring

Grounding kits included with each device

Stack contact blocks up to six deep by two wide on pushbutton operators. Contact capacity varies with operator.

30mm Selector Switches

(in knob or lever versions)

30mm Indicating Lights

(in seven colors)

30mm Push-to-Test Indicators

Cutler-Hammer products are available for sale to North America locations only.

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Cutler-Hammer

HT800 30mm Pushbuttons Specifications

Overview

The HT800 family of 30.5 mm pushbutton devices includes momentary, illuminated and mushroom-head pushbuttons, selector switches, indicating lights and push-pull switches.

Features
- Anodized aluminum mounting rings
- Watertight double V-gasket seals
- Extended height bulbs
- Transparent housing contact blocks
- Color-coded contact blocks
- Gold-plated contacts (on low voltage contact block)
- Reliability ridge on movable contact
- Stackable screw-mounted contact blocks
- Contact blocks can be mounted in left/right or top/bottom positions
- Standard N.C. contact opens before N.O. contact closes (break before make operation)
- Bright and long lasting LED indicating lights in six colors
- Field convertible maintained selector switches from two-position to three-position and vice versa
- Field selectable knob/lever mounting positions – at any 22.5° increment

Benefits
- Corrosion resistant NEMA 4X finish
- Watertight and oil-tight NEMA 4, 13 ingress protection
- Increased side illumination of indicating lights and illuminated pushbuttons
- Easy visual inspection of contact conditions
- Easily identifiable N.O. (white) or N.C. black) contact blocks
- Gold-plated contacts suitable for logic level circuits
- Reliability ridge penetrates contamination buildup on stationary contacts
- Left/right or top/bottom mounted contact blocks allow correct positioning in retrofit applications
- All-purpose selector switches are convertible and can rotate in 22.5° increments to suit panel layouts
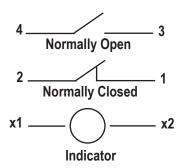
Standards and Certifications
- UL508, File No. E131568
- CSA C22.2 No. 14, File No. LR68551

Ingress Protection
- UL (NEMA) 1, 2, 3, 3R, 4, 4X, 12 and 13 when mounted in similarly rated enclosures

Typical Wiring

4 ———— 3
Normally Open

2 ———— 1
Normally Closed

x1 ——○—— x2
Indicator

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HT800 30mm Pushbuttons Specifications

HT800 — Specifications

Mechanical Ratings	
Frequency of Operation	
Pushbuttons	6,000 Operations per hour
Selector Switches	3,000 Operations per hour
Push-Pull Operators	3,000 Operations per hour
Mechanical Endurance/Life	
Pushbuttons	10 x 10^6 Operations 6K Ops/Hr with 6 N.O. on left and 6 N.C. on right
Selector Switches	250 x 10^3 Operations 3K Ops/Hr with 2 N.O. on left and 2 N.C. on right
Push-Pull Operators	250 x 10^3 Operations 3K Ops/Hr with 6 N.O. on left and 6 N.C. on right
Environmental Specifications	
Operating Temperature	10 to 140°F (-12° to 60°C)
Storage Temperature	-40 to 176°F (-40° to 80°C)
Altitude	6,562 ft. (2,000m)
Humidity	95% RH @ 60°C
Terminals	
Contact Blocks	#6-32 posi-drive saddle clamp type, 1 x 16 AWG to 2 x 14 AWG, 12 in-lbs max.
Light Units	#6-32 posi-drive saddle clamp type, 1 x 22 AWG to 2 x 14 AWG, 7 in-lbs max.

HT800 Standard Contact Blocks UL (NEMA) Rating

Electrical Ratings Description/Function	Contact Type	Catalog Number	AC	DC
Standard Normally Open contact	N.O.	HT8A	A600	P600
Standard Normally Closed contact	N.C.	HT8B	A600	P600
Normally Open Early Make Contact will make circuit before standard N.O. contact. DC ratings do not apply.	N.O.E.M.	HT8C	A600	—
Normally Closed Late Break contact will open after standard N.C. contact. DC ratings do not apply.	N.C.L.B.	HT8D	A600	—
Logic level, low voltage N.O .contact. Gold plated contacts.	N.O.	HT8E	5V 1mA (minimum) 28V 500mA (maximum)	

UL (NEMA) A600 and P600 Ratings

Description	Volts AC 50/60 Hz				Volts DC [1]		
	120	240	480	600	125	250	600
Make and Emerg. Interrupting Capacity (Amp)	60	30	15	12	1.1	0.55	0.2
Normal Load Break (Amp)	6	3	1.5	1.2	1.1	0.55	0.2
Thermal Current (Amp)	10	10	10	10	5	5	5
Volt amperes							
Make and Emerg. Interrupting Capacity	7200	7200	7200	7200	138[2]	138[2]	138[2]
Normal Load Break	720	720	720	720	138	138	138

Note: 1: DC ratings do not apply to N.O.E.M. (Normally Open Early Make) and N.C.L.B. (Normally Closed Late Break) contact blocks HT8C and HT8D.
2: Maximum make or break volt-amperes at 300V or less

1-800-633-0405

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HT800 30mm Momentary Pushbuttons

Flush

HT8AAG

Extended

HT8ABR

Mushroom

HT8AEH

HT800 30mm Momentary Pushbuttons							
Contact Type	**Button Color**	**Flush Head Momentary**		**Extended Head Momentary**		**Mushroom Head Momentary**	
		Part Number	*Price*	*Part Number*	*Price*	*Part Number*	*Price*
Operator Only, No Contacts	Black	HT8AAH	$0dcb:	HT8ABH	$0dcs:	HT8AEH	$;0da[:
	Red	HT8AAR	$0dcg:	HT8ABR	$0dcy:	HT8AER	$;0da,:
	Green	HT8AAG	$0dc6:	HT8ABG	$-0dcl:	HT8AEG	$0da9:
1 N.O.	Black	HT8AAHA	$0dcc:	*HT8ABHA	$;0dct:	*HT8AEHA	$0da_:
	Red	*HT8AARA	$0dch:	*HT8ABRA	$0dcz:	*HT8AERA	$0db0:
	Green	*HT8AAGA	$0dc7:	*HT8ABGA	$0dcn:	*HT8AEGA	$0dax:
1 N.C.	Black	*HT8AAHB	$0dce:	*HT8ABHB	$0dcv:	*HT8AEHB	$;0da!:
	Red	*HT8AARB	$-0dcj:	*HT8ABRB	$;0dc[:	*HT8AERB	$0db2:
	Green	*HT8AAGB	$0dc9:	*HT8ABGB	$0dcp:	*HT8AEGB	$0daz:
1 N.O. and 1 N.C.	Black	*HT8AAHAB	$0dcd:	*HT8ABHAB	$0dcu:	*HT8AEHAB	$0da#:
	Red	*HT8AARAB	$-0dci:	*HT8ABRAB	$;0dc]:	*HT8AERAB	$0db1:
	Green	*HT8AAGAB	$0dc8:	*HT8ABGAB	$0dco:	*HT8AEGAB	$0day:
2 N.O. and 2 N.C.	Black	*HT8AAHF1Q1	$;0dcf:	*HT8ABHF1Q1	$0dcx:	*HT8AEHF1Q1	$00da?:
	Red	*HT8AARF1Q1	$0dck:	*HT8ABRF1Q1	$0dc_:	*HT8AERF1Q1	$00db3:
	Green	*HT8AAGF1Q1	$0dca:	*HT8ABGF1Q1	$0dcq:	*HT8AEGF1Q1	$;00da]:

Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer.

HT800 30mm Momentary Pushbuttons

Cutler-Hammer

30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

STACKING SCREW
TORQUE: 12 in-lbs MAX

#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x16 TO 2x14 AWG
TERMINAL TORQUE 12 in-lbs. MAX
COPPER WIRE ONLY

PANEL

4.600 (116.8)
3.700 (94.0)
2.900 (73.7)
2.000 (50.8)
0.900 (22.9) Extended

1.400 (35.6)

0.750 (19.1) Flush

SIDE VIEW

BACK VIEW

2.500 (63.5)

0.180 (4.6)

0.680 (17.3)

1.000 (25.4)

2.000 (50.8)

1.200 (30.5) Diameter

2.500 (63.5)

Optional notch locations

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

Figure 2
Back, Side and Bottom views of pushbutton operator with attached contact blocks.

Note:
RECOMMENDED MAXIMUM OF 4 TANDEM STACKS OF CONTACT BLOCKS BEHIND OPERATOR AT USER'S DISCRETION, TWO ADDITIONAL TANDEM STACKS MAY BE ADDED.

OPTIONAL 2 STACKS

RECOMMENDED 4 STACKS (8 CONTACT BLOCKS TOTAL)

BOTTOM VIEW

OPERATOR SUB-ASSEMBLY WITH CONTACT BLOCKS

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

FLUSH OR EXTENDED HEAD

SEALING SPACER GASKETS

PANEL (VARIES)

T

LEGEND PLATE
NOTE:
DISCARD THE TRIM RING IF A LEGEND PLATE IS USED. DO NOT USE BOTH THE TRIM RING AND A LEGEND PLATE.

OR

TRIM RING

THRUST WASHER
ANTI-ROTATION

CLAMP RING

3.5 ft-lbs MAX

Figure 3
Exploded view of pushbutton operator (Flush and extended)

HT800 30mm Two-position Push-pull Button

EAT-N
Cutler-Hammer

HT8CBR
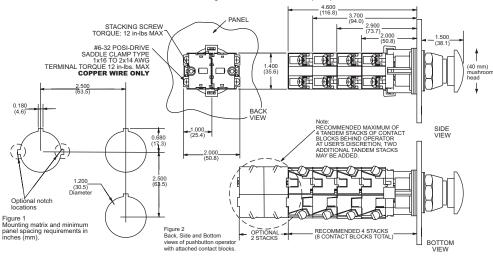
Contact Configuration	Operator Position		Two-position Maintained Push-Pull		
	Out	In	Color	Part Number	Price
Operator Only	--------------		Red	HT8CBR	$-0d9i:
1 N.C.	X	O	Red	*HT8CBRB	$00d9k:
1 N.O. and 1 N.C.	"O X"	"X O"	Red	*HT8CBRAB	$-00d9j:

Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer.

30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

STACKING SCREW TORQUE: 12 in-lbs MAX

#6-32 POSI-DRIVE SADDLE CLAMP TYPE 1x16 TO 2x14 AWG TERMINAL TORQUE 12 in-lbs. MAX **COPPER WIRE ONLY**

PANEL

4.600 (116.8)
3.700 (94.0)
2.900 (73.7)
2.000 (50.8)
1.500 (38.1)
1.400 (35.6)
(40 mm) mushroom head

BACK VIEW

SIDE VIEW

0.180 (4.6)
2.500 (63.5)
0.680 (17.3)
1.000 (25.4)
2.000 (50.8)
2.500 (63.5)
1.200 (30.5) Diameter

Optional notch locations

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

Note:
RECOMMENDED MAXIMUM OF 4 TANDEM STACKS OF CONTACT BLOCKS BEHIND OPERATOR AT USER'S DISCRETION, TWO ADDITIONAL TANDEM STACKS MAY BE ADDED.

OPTIONAL 2 STACKS
RECOMMENDED 4 STACKS (8 CONTACT BLOCKS TOTAL)

BOTTOM VIEW

Figure 2
Back, Side and Bottom views of pushbutton operator with attached contact blocks.

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

OPERATOR SUB-ASSEMBLY WITH CONTACT BLOCKS

FLUSH OR EXTENDED HEAD

SEALING SPACER GASKETS

PANEL (VARIES)

T

LEGEND PLATE
NOTE:
DISCARD THE TRIM RING IF A LEGEND PLATE IS USED. DO NOT USE BOTH THE TRIM RING AND A LEGEND PLATE.

TRIM RING

OR

THRUST WASHER ANTI-ROTATION

CLAMP RING

3.5 ft-lbs MAX

MUSHROOM HEAD
NOTE:
TIGHTEN TO PROVIDE A GOOD SEAL

OPERATOR SEALING WASHER (DO NOT REMOVE)

Figure 3
Exploded view of mushroom head operator

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HT800 30mm Push-Pull Illuminated Pushbutton

Contact Configuration	24 Volt Incandescent full Voltage Lamp 50mA @ 24 Volts	Price	120 Volt Incandescent Full Voltage Lamp 19mA @ 120 Volts	Price	24 Volt LED full Voltage Lamp	Price	120 Volt LED full Voltage Lamp	Price
Red Lens								
Operator only	HT8FBRV3	$00d52:	HT8FBRV7	$00d53:	HT8FBRF3	$00d50:	HT8FBRF7	$00d51:
1 N.O.	*HT8FBRAV3	$;00d4[:	*HT8FBRAV7	$00d4_:	*HT8FBRAF3	$00d4z:	*HT8FBRAF7	$;00d4]:
1 N.C.	*HT8FBRBV3	$00d4?:	*HT8FBRBV7	$;00d4,:	*HT8FBRBF3	$00d4#:	*HT8FBRBF7	$;00d4!:
Green Lens								
Operator only	HT8FBGV3	$00d4x:	HT8FBGV7	$00d4y:	HT8FBGF3	$00d4u:	HT8FBGF7	$00d4v:
1 N.O.	*HT8FBGAV3	$00d4n:	*HT8FBGAV7	$00d4o:	*HT8FBGAF3	$00d4k:	*HT8FBGAF7	$-00d4l:
1 N.C.	*HT8FBGBV3	$00d4s:	*HT8FBGBV7	$;00d4t:	*HT8FBGBF3	$00d4p:	*HT8FBGBF7	$00d4q:

HT8FBRV3
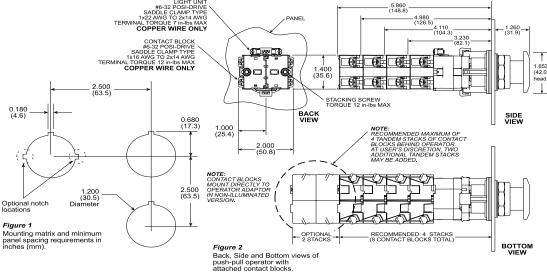
HT8FBGF3
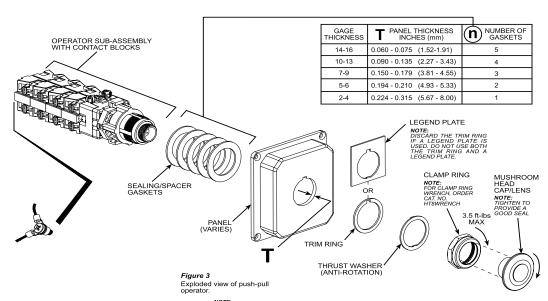
Notes: A grounding kit is included with each operator or switch assembly.
***Part numbers with an * are kitted from individual components at AutomationDirect.**
The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer.

30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

Figure 2
Back, Side and Bottom views of push-pull operator with attached contact blocks.

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27 - 3.43)	4
7-9	0.150 - 0.179 (3.81 - 4.55)	3
5-6	0.194 - 0.210 (4.93 - 5.33)	2
2-4	0.224 - 0.315 (5.67 - 8.00)	1

Figure 3
Exploded view of push-pull operator.

NOTE:
FOR EASY BULB REMOVAL FROM FRONT OF PANEL USE BULB REMOVAL TOOL CATNO. HT8LAMPTOOL.

Pilot Devices

HT800 30mm Selector Switches

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Cutler-Hammer

HT8JAH3A knob version

HT8JDH3A lever version

EAT·N
Cutler-Hammer

HT8JBH1D knob version

HT8JEH1D lever version

Two-position Selector Switches					
Contact Type	**Operator Type M=Maintained S=Spring Return**	**Standard Black Knob Operator**		**Standard Black Lever Operator**	
		Part Number	**Price**	**Part Number**	**Price**
No Contacts	M M	HT8JAH3A	$0daa:	HT8JDH3A	$0dae:
	M<S	HT8JNH3A	$-0dai:	HT8JPH3A	$0dak:
1 N.O.	M M	*HT8JAH3AA5	$0dab:	*HT8JDH3AA5	$;0daf:
	M<S	*HT8JNH3AA5	$-0daj:	*HT8JPH3AA5	$-0dal:

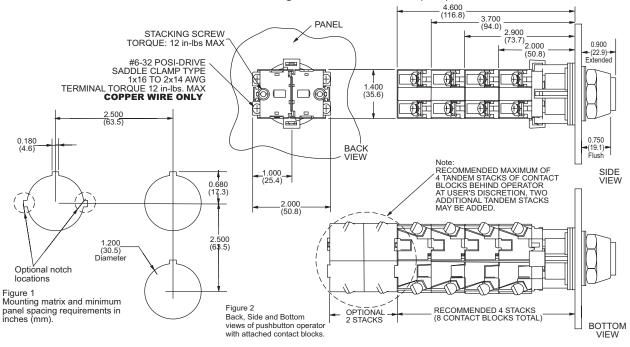| Switch Part Numbers	Contact Blocks		Cam Code 3A	
			Switch Position	
HT8JAH3A, HT8JNH3A, HT8JAH3AA5, HT8JNH3AA5, HT8JDH3A, HT8JPH3A, HT8JDH3AA5, HT8JPH3AA5 *(Contact block configuration varies with part number)*	**Left**	**Right**		
Two-position Selector Switch	N.O.	------	X	0
	N.C.	------	0	X
	------	N.O.	0	X
	------	N.C.	X	0
Note: AutomationDirect only offers cam code 3A for two position selector switches.			X = On	O = Off

Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer.

Three-position Selector Switches					
Contact Type	**Operator Type M=Maintained S=Spring Return**	**Standard Black Knob Operator**		**Standard Black Lever Operator**	
		Part Number	**Price**	**Part Number**	**Price**
No Contacts	M M M	HT8JBH1D	$0dac:	HT8JEH1D	$0dag:
	M M < S	HT8JUH1D	$0dan:	HT8JVH1D	$0dap:
	S > M < S	HT8JXH1D	$0das:	HT8JYH1D	$0dau:
2 N.O.	M M M	HT8JBH1DAA5	$0dad:	*HT8JEH1DAA5	$0dah:
	M M < S	*HT8JUH1DAA5	$0dao:	*HT8JVH1DAA5	$0daq:
	S > M < S	*HT8JXH1DAA5	$;0dat:	*HT8JYH1DAA5	$0dav:
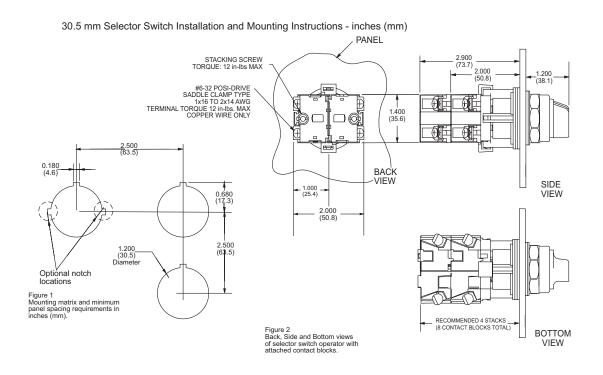
Switch Part Numbers	Contact Blocks		Cam Code 1D		
			Switch Position		
HT8JBH1D, HT8JUH1D, HT8JXH1D, HT8JBH1DAA5, HT8JUH1DAA5, HT8JXH1DAA5, HT8JEH1D, HT8JVH1D, HT8JYH1D, HT8JEH1DAA5, HT8JVH1DAA5, HT8JYH1DAA5 *(Contact block configuration varies with part number)*	**Left**	**Right**			
Three-position Selector Switch	N.O.	------	X	0	0
	N.C.	------	0	X	X
	------	N.O.	0	0	X
	------	N.C.	X	X	0
	*N.O.--------------	--------------N.O.	X	0	X
	**N.C.--------------	--------------N.C.	0	X	0
* Indicates contact blocks wired in parallel ** Indicates contact blocks wired in series			X = On	O = Off	
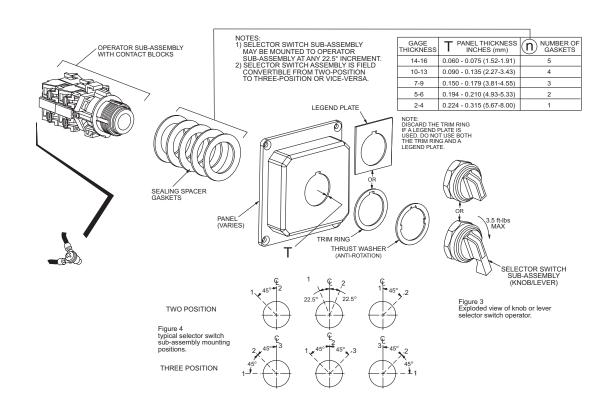
Note: AutomationDirect only offers cam code 1D for three-position selector switches.
Note: For additional contact blocks, see HT800 accessories in this section.

HT800 30mm Three-position Selector Switches

EAT•N
Cutler-Hammer

30.5 mm Selector Switch Installation and Mounting Instructions - inches (mm)

PANEL

STACKING SCREW
TORQUE: 12 in-lbs MAX

#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x16 TO 2x14 AWG
TERMINAL TORQUE 12 in-lbs. MAX
COPPER WIRE ONLY

2.900 (73.7)
2.000 (50.8)
1.200 (38.1)

1.400 (35.6)

BACK VIEW

SIDE VIEW

2.500 (63.5)

0.180 (4.6)

0.680 (17.3)

1.000 (25.4)

2.000 (50.8)

2.500 (63.5)

1.200 (30.5) Diameter

Optional notch locations

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

RECOMMENDED 4 STACKS
(8 CONTACT BLOCKS TOTAL)

BOTTOM VIEW

Figure 2
Back, Side and Bottom views of selector switch operator with attached contact blocks.

OPERATOR SUB-ASSEMBLY
WITH CONTACT BLOCKS

NOTES:
1) SELECTOR SWITCH SUB-ASSEMBLY MAY BE MOUNTED TO OPERATOR SUB-ASSEMBLY AT ANY 22.5° INCREMENT.
2) SELECTOR SWITCH ASSEMBLY IS FIELD CONVERTIBLE FROM TWO-POSITION TO THREE-POSITION OR VICE-VERSA.

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	(n) NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

LEGEND PLATE

NOTE:
DISCARD THE TRIM RING IF A LEGEND PLATE IS USED. DO NOT USE BOTH THE TRIM RING AND A LEGEND PLATE.

OR

SEALING SPACER GASKETS

PANEL (VARIES)

TRIM RING

THRUST WASHER (ANTI-ROTATION)

T

OR

3.5 ft-lbs MAX

SELECTOR SWITCH SUB-ASSEMBLY (KNOB/LEVER)

Figure 3
Exploded view of knob or lever selector switch operator.

TWO POSITION

45° 45°
22.5° 22.5°

Figure 4
typical selector switch sub-assembly mounting positions.

THREE POSITION

45° 45° 45° 45°

EAT•N
Cutler-Hammer

HT800 30mm Extended Illuminated Pushbuttons

HT8GBRV7

HT8GBGV7

HT8GBAV7

HT8GBCV7

| HT800 30mm Extended Illuminated Pushbuttons					
Contact Configuration	24 Volt Incandescent full Voltage Lamp 50mA @ 24 Volts	Price	120 Volt Incandescent Full Voltage Lamp 19mA @ 120 Volts	Price	
Red Lens					
Operator only	HT8GBRV3	$0dbz:	HT8GBRV7	$;0db]:	
1 N.O.	*HT8GBRAV3	$00dbu:	*HT8GBRAV7	$00dbv:	
1 N.C.	*HT8GBRBV3	$00dbx:	*HT8GBRBV7	$00dby:	
Green Lens					
Operator only	HT8GBGV3	$0dbs:	HT8GBGV7	$;0dbt:	
1 N.O.	*HT8GBGAV3	$00dbn:	*HT8GBGAV7	$00dbo:	
1 N.C.	*HT8GBGBV3	$00dbp:	*HT8GBGBV7	$00dbq:	
Amber Lens					
Operator only	HT8GBAV3	$0db8:	HT8GBAV7	$0db9:	
1 N.O.	*HT8GBAAV3	$00db4:	*HT8GBAAV7	$00db5:	
1 N.C.	*HT8GBABV3	$00db6:	*HT8GBABV7	$00db7:	
Clear Lens					
Operator only	HT8GBCV3	$0dbk:	HT8GBCV7	$-0dbl:	
1 N.O.	*HT8GBCAV3	$00dbg:	*HT8GBCAV7	$00dbh:	
1 N.C.	*HT8GBCBV3	$-00dbi:	*HT8GBCBV7	$-00dbj:	
White Lens					
Operator only	HT8GBWV3	$0db?:	HT8GBWV7	$;0db,:	
1 N.O.	*HT8GBWAV3	$;00db[:	*HT8GBWAV7	$00db_:	
1 N.C.	*HT8GBWBV3	$00db#:	*HT8GBWBV7	$;00db!:	
Yellow Lens					
Operator only	HT8GBYV3	$0dc4:	HT8GBYV7	$0dc5:	
1 N.O.	*HT8GBYAV3	$00dc0:	*HT8GBYAV7	$00dc1:	
1 N.C.	*HT8GBYBV3	$00dc2:	*HT8GBYBV7	$00dc3:	
Blue Lens					
Operator only	HT8GBBV3	$0dbe:	HT8GBBV7	$;0dbf:	
1 N.O.	*HT8GBBAV3	$00dba:	*HT8GBBAV7	$00dbb:	
1 N.C.	*HT8GBBBV3	$00dbc:	*HT8GBBBV7	$00dbd:	
Spare Incandescent Lamps For HT8 Series					
Spare lamp	HT8BULBV3	$0eap:	HT8BULBV7	$0eaq:	

See HT800 accessories in this section.
Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer. Lens not sold separately.

HT8GBWV7

HT8GBYV7

HT8GBBBV7

HT800 30mm Extended Illuminated Pushbuttons

EAT•N
Cutler-Hammer

30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

LIGHT UNIT
#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x22 AWG TO 2x14 AWG
TERMINAL TORQUE 7in-lbs MAX
COPPER WIRE ONLY

CONTACT BLOCK
#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x16 TO 2x14 AWG
TERMINAL TORQUE 12 in-lbs. MAX
COPPER WIRE ONLY

PANEL

5.150 (130.8)
4.350 (110.5)
3.550 (90.2)
2.750 (69.9)
1.500 (38.1)
1.400 (35.6)

STACKING SCREW
TORQUE: 12 in-lbs MAX

BACK VIEW

SIDE VIEW

2.500 (63.5)
0.180 (4.6)
0.680 (17.3)
1.200 (30.5) Diameter
2.500 (63.5)

1.000 (25.4)
2.000 (50.8)

Optional notch locations

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

Note:
RECOMMENDED MAXIMUM OF
4 TANDEM STACKS OF CONTACT
BLOCKS BEHIND OPERATOR
AT USER'S DISCRETION, TWO
ADDITIONAL TANDEM STACKS
MAY BE ADDED.

OPTIONAL 2 STACKS

RECOMMENDED 4 STACKS
(8 CONTACT BLOCKS TOTAL)

BOTTOM VIEW

Figure 2
Back, Side and Bottom views of pushbutton operator with attached contact blocks.

OPERATOR SUB-ASSEMBLY WITH CONTACT BLOCKS

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

LEGEND PLATE
NOTE:
DISCARD THE TRIM RING
IF A LEGEND PLATE IS
USED. DO NOT USE BOTH
THE TRIM RING AND A
LEGEND PLATE.

SEALING/SPACER GASKETS

PANEL (VARIES)

TRIM RING

OR

THRUST WASHER (ANTI-ROTATION)

CLAMP RING

3.5 ft-lbs MAX

12 -15 in-lbs

LENS CAP/BUTTON

Figure 3
Exploded view of illuminated pushbutton operator.

EAT•N
Cutler-Hammer

HT800 30mm Push-to-Test Indicators

HT8GVRV7

HT8GVGV7

HT8GVAV7

HT800 30mm Push-to-Test Indicators				
Push-To-Test Indicator	24 Volt AC/DC Incandescent Full Voltage Lamp 50mA @ 24 Volts	Price	120 Volt AC/ DC Incandescent Full Voltage Lamp 19mA @ 120 Volts	Price
Red Lens				
PTT indicator assembly	HT8GVRV3	$00d9u:	HT8GVRV7	$00d9v:
Green Lens				
PTT indicator assembly	HT8GVGV3	$00d9s:	HT8GVGV7	$;00d9t:
Amber Lens				
PTT indicator assembly	HT8GVAV3	$-00d9l:	HT8GVAV7	$00d9n:
Clear Lens				
PTT indicator assembly	—	—	HT8GVCV7	$00d9q:
White Lens				
PTT indicator assembly	HT8GVWV3	$00d9x:	HT8GVWV7	$00d9y:
Yellow Lens				
PTT indicator assembly	HT8GVYV3	$00d9z:	HT8GVYV7	$;00d9]:
Blue Lens				
PTT indicator assembly	HT8GVBV3	$00d9o:	HT8GVBV7	$00da8:
Spare Incandescent Lamps For HT8 Series				
Spare lamp	HT8BULBV3	$0eap:	HT8BULBV7	$0eaq:

See HT800 accessories in this section.
Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer. Lens not sold separately.

HT8GVCV7

HT8GVWV7

HT8GVYV7

HT8GVBV7

EAT•N
Cutler-Hammer

HT800 30mm Push-to-Test Indicators

30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

STACKING SCREW
TORQUE: 12In-lbs MAX

PANEL

"LINE" TERMINAL

2.750 (69.9)

1.500 (38.1)

CONTACT BLOCK
#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x16 TO 2x14 AWG
TERMINAL TORQUE 12 in-lbs. MAX
COPPER WIRE ONLY

"TEST" TERMINAL

1.400 (35.6)

LIGHT UNIT
#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x22 AWG TO 2x14 AWG
TERMINAL TORQUE
7in-lbs MAX
COPPER WIRE ONLY

2.500 (63.5)

0.180 (4.6)

1.000 (25.4)

BACK VIEW

FACTORY SUPPLIED WIRE JUMPERS
(DO NOT REMOVE)

SIDE VIEW

2.000 (50.8)

0.680 (17.3)

A   B

1X

2.500 (63.5)

2X

COM

BOTTOM VIEW

1.200 (30.5) Diameter

"COM" TERMINAL

Optional notch locations

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

L1   L2
STOP   START   M   OL

M

X2   X1
COM   LINE   Jumper B

2   1
LINE   LINE
3   4
TEST   TEST   Jumper A

PUSH-TO-TEST OPERATOR

Figure 3 Typical Connection Diagram

Figure 2
Back, Side and Bottom views of Push-To-Test operator

OPERATOR SUB-ASSEMBLY

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

LEGEND PLATE
NOTE:
DISCARD THE TRIM RING IF A LEGEND PLATE IS USED. DO NOT USE BOTH THE TRIM RING AND A LEGEND PLATE.

OR

CLAMP RING

3.5 ft-lbs MAX

SEALING/SPACER GASKETS

PANEL (VARIES)

TRIM RING

THRUST WASHER (ANTI-ROTATION)

12 -15 in-lbs

LENS CAP/BUTTON

Figure 4
Exploded view of Push-To-Test operator

EAT•N
Cutler-Hammer

HT800 30mm Incandescent Indicators

HT8HFRV7

HT8HFGV7

HT8HFAV7

HT800 30mm Incandescent Indicators				
Incandescent Indicator	**24 Volt Incandescent Full Voltage Lamp 50mA @ 24 Volts**	**Price**	**120 Volt Incandescent Full Voltage Lamp 19mA @ 120 Volts**	**Price**
Red Lens				
Indicator assembly	HT8HFRV3	$0da2:	HT8HFRV7	$0da3:
Green Lens				
Indicator assembly	HT8HFGV3	$0da0:	HT8HFGV7	$0da1:
Amber Lens				
Indicator assembly	HT8HFAV3	$;0d9[:	HT8HFAV7	$0d9_:
Clear Lens				
Indicator assembly	HT8HFCV3	$0d9?:	HT8HFCV7	$;0d9,:
White Lens				
Indicator assembly	HT8HFWV3	$0da4:	HT8HFWV7	$0da5:
Yellow Lens				
Indicator assembly	HT8HFYV3	$0da6:	HT8HFYV7	$0da7:
Blue Lens				
Indicator assembly	HT8HFBV3	$0d9#:	HT8HFBV7	$;0d9!:
Spare Incandescent Lamps For HT8 Series				
Spare lamp	HT8BULBV3	$0eap:	HT8BULBV7	$0eaq:

See HT800 accessories in this section.
Notes: A grounding kit is included with each operator or switch assembly.
Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer. Lens not sold separately.

HT8HFCV7

HT8HFWV7

HT8HFYV7

HT8HFBV7

EAT•N
Cutler-Hammer

HT800 30mm Incandescent Indicators

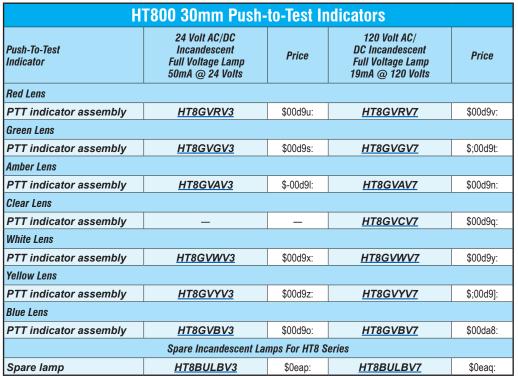30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x16 TO 2x14 AWG
TERMINAL TORQUE 12 in-lbs. MAX
COPPER WIRE ONLY

STACKING SCREW
TORQUE: 12 in-lbs MAX

PANEL

1.300
(33.0)

1.680
(42.7)

BACK
VIEW

SIDE
VIEW

LIGHT UNIT
ASSEMBLY

1.670
(42.4)

BOTTOM
VIEW

2.500
(63.5)

0.180
(4.6)

0.680
(17.3)

1.200
(30.5)
Diameter

2.500
(63.5)

Optional notch
locations

Figure 1
Mounting matrix and minimum
panel spacing requirements in
inches (mm).

Figure 2
Back, Side and bottom views of
indicating light with attached
light unit assembly

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27-3.43)	4
7-9	0.150 - 0.179 (3.81-4.55)	3
5-6	0.194 - 0.210 (4.93-5.33)	2
2-4	0.224 - 0.315 (5.67-8.00)	1

HOUSING AND LIGHT
UNIT SUB-ASSEMBLY

SEALING/SPACER
GASKETS

PANEL
(VARIES)

T

Figure 3
Exploded view of indicating light.

LEGEND PLATE

TRIM RING
NOTE:
DISCARD THE TRIM RING
IF A LEGEND PLATE IS USED.
DO NOT USE BOTH THE TRIM
PLATE AND A LEGEND PLATE.

OR

THRUST WASHER
(ANTI-ROTATION)

CLAMP RING

3.5 ft-lbs
MAX

LENS CAP
NOTE:
TIGHTEN SO THAT
LENS CAP SITS FLUSH
ON CLAMP RING

LENS SEAL
(DO NOT REMOVE)

E·T·N
Cutler-Hammer

HT800 30mm Guarded Flush Pushbuttons

HT8GDRV3

HT8GDGV3

HT8GDAV3

HT8GDCV3

HT8GDWV3

HT8GDYV3

HT8GDBV3

HT800 30mm Guarded Flush Pushbuttons								
Contact Configuration	24 Volt AC/DC Incandescent Full Voltage Lamp 50mA @ 24 Volts	Price	120 Volt AC/DC Incandescent Full Voltage Lamp 19mA @ 120 Volts	Price	24 Volt LED Full Voltage Lamp	Price	120 Volt LED Full Voltage Lamp	Price
Red Lens								
Operator only	HT8GDRV3	$00d7c:	HT8GDRV7	$00d7d:	HT8GDRF3	$00d6a:	HT8GDRF7	$00d6b:
1 N.O.	*HT8GDRAV3	$00d78:	*HT8GDRAV7	$00d79:	*HT8GDRAF3	$00d66:	*HT8GDRAF7	$00d67:
1 N.C.	*HT8GDRBV3	$00d7a:	*HT8GDRBV7	$00d7b:	*HT8GDRBF3	$00d68:	*HT8GDRBF7	$00d69:
Green Lens								
Operator only	HT8GDGV3	$00d76:	HT8GDGV7	$00d77:	HT8GDGF3	$00d64:	HT8GDGF7	$00d65:
1 N.O.	*HT8GDGAV3	$00d72:	*HT8GDGAV7	$00d73:	*HT8GDGAF3	$00d60:	*HT8GDGAF7	$00d61:
1 N.C.	*HT8GDGBV3	$00d74:	*HT8GDGBV7	$00d75:	*HT8GDGBF3	$00d62:	*HT8GDGBF7	$00d63:
Amber Lens								
Operator only	HT8GDAV3	$00d6u:	HT8GDAV7	$00d6v:	HT8GDAF3	$00d48:	HT8GDAF7	$00d49:
1 N.O.	*HT8GDAAV3	$00d6p:	*HT8GDAAV7	$00d6q:	*HT8GDAAF3	$00d44:	*HT8GDAAF7	$00d45:
1 N.C.	*HT8GDABV3	$00d6s:	*HT8GDABV7	$;00d6t:	*HT8GDABF3	$00d46:	*HT8GDABF7	$00d47:
Clear Lens								
Operator only	HT8GDCV3	$00d70:	HT8GDCV7	$00d71:	HT8GDCF3	$00d5?:	HT8GDCF7	$;00d5,:
1 N.O.	*HT8GDCAV3	$00d6#:	*HT8GDCAV7	$;00d6!:	*HT8GDCAF3	$00d4g:	*HT8GDCAF7	$00d4h:
1 N.C.	*HT8GDCBV3	$00d6?:	*HT8GDCBV7	$;00d6,:	*HT8GDCBF3	$-00d4i:	*HT8GDCBF7	$-00d4j:
White Lens								
Operator only	HT8GDWV3	$-00d7i:	HT8GDWV7	$-00d7j:	HT8GDWF3	$00d6g:	HT8GDWF7	$00d6h:
1 N.O.	*HT8GDWAV3	$00d7e:	*HT8GDWAV7	$;00d7f:	*HT8GDWAF3	$00d6c:	*HT8GDWAF7	$00d6d:
1 N.C.	*HT8GDWBV3	$00d7g:	*HT8GDWBV7	$00d7h:	*HT8GDWBF3	$00d6e:	*HT8GDWBF7	$;00d6f:
Yellow Lens								
Operator only	HT8GDYV3	$00d7p:	HT8GDYV7	$00d7q:	HT8GDYF3	$00d6n:	HT8GDYF7	$00d6o:
1 N.O.	*HT8GDYAV3	$00d7k:	*HT8GDYAV7	$-00d7l:	*HT8GDYAF3	$-00d6i:	*HT8GDYAF7	$-00d6j:
1 N.C.	*HT8GDYBV3	$00d7n:	*HT8GDYBV7	$00d7o:	*HT8GDYBF3	$00d6k:	*HT8GDYBF7	$-00d6l:
Blue Lens								
Operator only	HT8GDBV3	$;00d6[:	HT8GDBV7	$00d6_:	HT8GDBF3	$00d4e:	HT8GDBF7	$;00d4f:
1 N.O.	*HT8GDBAV3	$00d6x:	*HT8GDBAV7	$00d6y:	*HT8GDBAF3	$00d4a:	*HT8GDBAF7	$00d4b:
1 N.C.	*HT8GDBBV3	$00d6z:	*HT8GDBBV7	$;00d6]:	*HT8GDBBF3	$00d4c:	*HT8GDBBF7	$00d4d:
Spare Incandescent and LED Lamps For HT8 Series - starting Prices								
	HT8BULBV3	$0eap:	HT8BULBV7	$0eaq:	HT8LED**F3	$0e8#:	HT8LED**F7	$;0e8!:
30mm Guard for Illuminated Pushbuttons								
	HT8A15							$06u9:

See HT800 accessories in this section.
Notes: A grounding kit is included with each operator or switch assembly.
* Part numbers with an * are kitted from individual components at AutomationDirect. The individual components are picked and shipped in the same shipping box. Final assembly of the individual components must be done by the customer. Lens not sold separately.
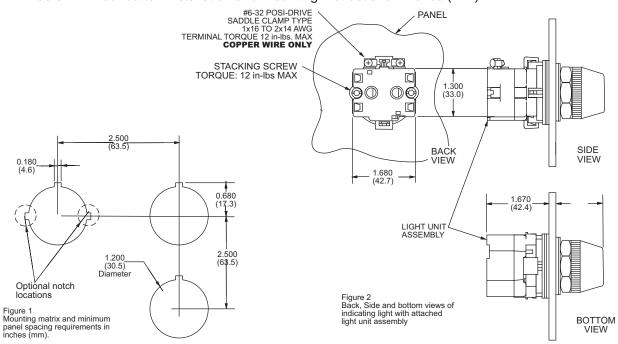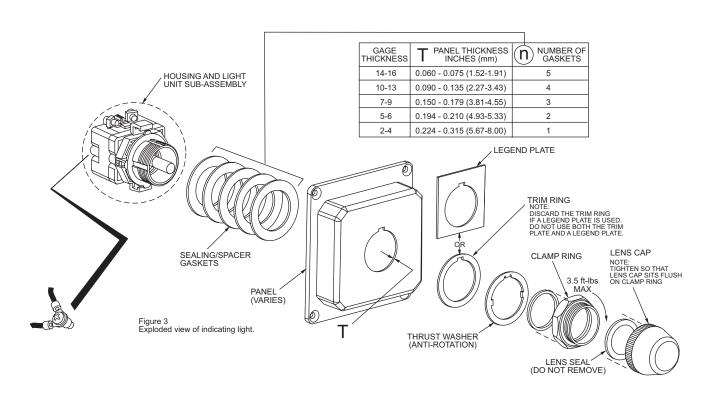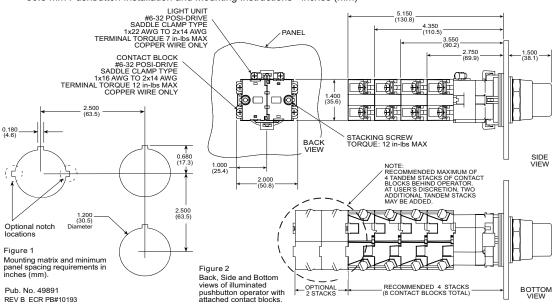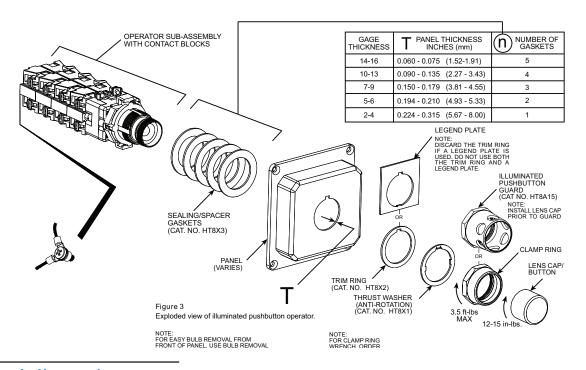**Insert letter of color bulb needed; for example, HT8LEDYF3 is the part number for a yellow 24 volt LED replacement bulb. See the accessories page at the end of this section for the complete listing of LED replacement bulbs.

EAT·N
Cutler-Hammer
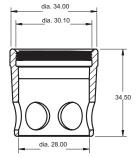
HT800 30mm Guarded Flush Pushbuttons

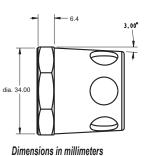30.5 mm Pushbutton Installation and Mounting Instructions - inches (mm)

LIGHT UNIT
#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x22 AWG TO 2x14 AWG
TERMINAL TORQUE 7 in-lbs MAX
COPPER WIRE ONLY

PANEL

5.150 (130.8)
4.350 (110.5)
3.550 (90.2)
2.750 (69.9)
1.500 (38.1)

CONTACT BLOCK
#6-32 POSI-DRIVE
SADDLE CLAMP TYPE
1x16 AWG TO 2x14 AWG
TERMINAL TORQUE 12 in-lbs MAX
COPPER WIRE ONLY

1.400 (35.6)

STACKING SCREW
TORQUE: 12 in-lbs MAX

BACK VIEW

SIDE VIEW

2.500 (63.5)

0.180 (4.6)

0.680 (17.3)

1.000 (25.4)

2.000 (50.8)

1.200 (30.5) Diameter

2.500 (63.5)

Optional notch locations

NOTE:
RECOMMENDED MAXIMUM OF
4 TANDEM STACKS OF CONTACT
BLOCKS BEHIND OPERATOR.
AT USER'S DISCRETION, TWO
ADDITIONAL TANDEM STACKS
MAY BE ADDED.

Figure 1
Mounting matrix and minimum panel spacing requirements in inches (mm).

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Figure 2
Back, Side and Bottom views of illuminated pushbutton operator with attached contact blocks.

OPTIONAL 2 STACKS

RECOMMENDED 4 STACKS (8 CONTACT BLOCKS TOTAL)

BOTTOM VIEW

OPERATOR SUB-ASSEMBLY WITH CONTACT BLOCKS

GAGE THICKNESS	T PANEL THICKNESS INCHES (mm)	n NUMBER OF GASKETS
14-16	0.060 - 0.075 (1.52-1.91)	5
10-13	0.090 - 0.135 (2.27 - 3.43)	4
7-9	0.150 - 0.179 (3.81 - 4.55)	3
5-6	0.194 - 0.210 (4.93 - 5.33)	2
2-4	0.224 - 0.315 (5.67 - 8.00)	1

LEGEND PLATE
NOTE:
DISCARD THE TRIM RING
IF A LEGEND PLATE IS
USED. DO NOT USE BOTH
THE TRIM RING AND A
LEGEND PLATE.

ILLUMINATED
PUSHBUTTON
GUARD
(CAT. NO. HT8A15)
NOTE:
INSTALL LENS CAP
PRIOR TO GUARD

SEALING/SPACER
GASKETS
(CAT. NO. HT8X3)

PANEL
(VARIES)

T

OR

TRIM RING
(CAT. NO. HT8X2)

THRUST WASHER
(ANTI-ROTATION)
(CAT. NO. HT8X1)

OR

CLAMP RING

LENS CAP/
BUTTON

3.5 ft-lbs
MAX

12-15 in-lbs.

Figure 3
Exploded view of illuminated pushbutton operator.

NOTE:
FOR EASY BULB REMOVAL FROM
FRONT OF PANEL, USE BULB REMOVAL

NOTE:
FOR CLAMP RING
WRENCH, ORDER

Guard dimensions

dia. 34.00

dia. 30.10

6.4

3.00°

34,50

dia. 34.00

dia. 28.00

Dimensions in millimeters

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Cutler-Hammer

HT800 30mm Contact Blocks & Accessories

Contact blocks

HT8A

HT8B

HT8 Series Contact Blocks		
Part Number	*Description*	*Price*
HT8A	Normally open contact block for HT8 series switches. NEMA Rated A600, P6001	$0d7s:
HT8B	Normally closed contact block for HT8 series switches. NEMA Rated A600, P6001	$;0d7t:
HT8C	Early closing normally open contact block for HT8 series switches. NEMA Rated A6001	$0d7u:
HT8D	Late opening normally closed contact block for HT8 series switches. NEMA Rated A6001	$0d7v:
HT8E	Logic level normally open contact block for HT8 series switches. Gold plated contacts for reliable low energy switching. Power Rating: Min 1mA @ 5V; Max 500mA 28V.	$0d7x:

Notes
1. See HT800 specifications in this section for typical contact wiring diagram.
2. NEMA ICS 5-2000. For more information, refer to HT800 technical specifications and control circuit contact electrical ratings at the beginning of this section.

Spare parts and tools

HT8WRENCH   **HT8LAMPTOOL**   **109305**   **HT8BULBV3**   **HT8LEDYF3**

HT8 Series Spare Parts and Tools		
Part Number	*Description*	*Price*
HT8WRENCH	Installation wrench for Cutler-Hammer HT8 series and E22 series pushbuttons, switches, and indicators	$04#5:
HT8LAMPTOOL	Bulb extraction tool for removing bulbs from switches, indicators and stacklights	$0551:
109305	Knockout punch hole cutting tool for 30.5 mm mounting hole. Includes punch, die and draw stud	$;0cfq:
HT8X1	Spare anti-rotation ring for HT8 series. Included with each HT8 device. (not shown)	$6ua:
HT8X2	Spare trim ring for HT8 series. Included with each HT8 device. (not shown)	$6ub:
HT8X3	Spare sealing/spacing ring for HT8 series. Included with each HT8 device. (not shown)	$6uc:
HT8GR1	Spare grounding kit for HT8 series devices except non-PTT indicators. Included with each HT8 device. (not shown)	$;6u[:
HT8GR2	Spare grounding kit for HT8 series non-PTT indicators. Included with each HT8 device. (not shown)	$6u_:
HT8BULBV3	24 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 50mA at 24 volts.	$0eap:
HT8BULBV7	120 volt incandescent bulb for HT8 illuminated devices. This is an extended bulb for enhanced illumination with HT8 devices. 19mA at 120 volts.	$0eaq:
HT8LEDRF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red	$0e92:
HT8LEDYF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow	$0e96:
HT8LEDGF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green	$0e90:
HT8LEDBF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue	$0e8?:
HT8LEDWF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White	$0e94:
HT8LEDAF3	24 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber	$0e8#:
HT8LEDRF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Red	$0e93:
HT8LEDYF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Yellow	$0e97:
HT8LEDGF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Green	$0e91:
HT8LEDBF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Blue	$;0e8,:
HT8LEDWF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: White	$0e95:
HT8LEDAF7	120 volt replacement LED bulb for HT800 30mm pushbuttons. Color: Amber	$;0e8!:

NOTE: LED modules have very low current draw and should not be used with triac output devices like PLC triac output modules.

EAT•N
Cutler-Hammer

30mm Legend Plates

For Pushbutton Operators and Indicating Lights

Legend	Color of Field	Catalog Number	Price
Clamp	Black	HT8SP90	$d9c:
Close	Black	HT8SP73	$d8?:
Down	Black	HT8SP74	$;d8,:
Emergency Stop	Red	HT8SP13	$d7_:
Fast	Black	HT8SP75	$d90:
Faster	Black	HT8SP87	$d9a:
Feeder On	Black	HT8SP94	$d9g:
Feeder Off	Black	HT8SP95	$d9h:
Forward	Black	HT8SP15	$d7#:
High	Black	HT8SP16	$;d7!:
In	Black	HT8SP17	$d7?:
Inch	Black	HT8SP18	$;d7,:
Jog	Black	HT8SP19	$d80:
Jog Forward	Black	HT8SP20	$d81:
Jog Reverse	Black	HT8SP21	$d82:
Low	Black	HT8SP22	$d83:
Lower	Black	HT8SP23	$d84:
Lube-fail	Black	HT8SP92	$d9e:
Motor Run	Black	HT8SP81	$d94:
Motor Stop	Black	HT8SP82	$d95:
Off	Red	HT8SP24	$d85:
On	Black	HT8SP25	$d86:
Open	Black	HT8SP26	$d87:
Out	Black	HT8SP27	$d88:
Power On	Black	HT8SP80	$d93:
Raise	Black	HT8SP28	$d89:
Ready	Black	HT8SP86	$d99:
Reset	Black	HT8SP29	$d8a:
Reverse	Black	HT8SP30	$d8b:
Run	Black	HT8SP31	$d8c:
Safe	Black	HT8SP85	$d98:
Slow	Black	HT8SP32	$d8d:
Slower	Black	HT8SP88	$d9b:
Start	Black	HT8SP33	$d8e:
Stop	Red	HT8SP34	$;d8f:
Test	Black	HT8SP83	$d96:
Transfer	Black	HT8SP93	$;d9f:
Trip	Black	HT8SP84	$d97:
Unclamp	Black	HT8SP91	$d9d:
Up	Black	HT8SP35	$d8g:

*Note: Dimensions: 1.77" (45mm) x1.77" (45mm)

For Selector Switch Operators/ Two-Position

Legend	Color of Field	Catalog Number	Price
Forward Reverse	Black	HT8SP38	$d8h:
Hand Auto	Black	HT8SP39	$-d8i:
High Low	Black	HT8SP40	$-d8j:
Jog Run	Black	HT8SP41	$d8k:
Manual Auto	Black	HT8SP67	$;d8]:
Off On	Black	HT8SP42	$-d8l:
Open Close	Black	HT8SP43	$d8n:
Run Jog	Black	HT8SP44	$d8o:
Safe Run	Black	HT8SP45	$d8p:
Start Jog	Black	HT8SP46	$d8q:
Start Stop	Black	HT8SP47	$d8s:
Up Down	Black	HT8SP48	$;d8t:

For Selector Switch Operators/ Three-Position

Legend	Color of Field	Catalog Number	Price
Auto Off Hand	Black	HT8SP49	$d8u:
For. Off Rev	Black	HT8SP50	$d8v:
For. Safe Rev.	Black	HT8SP69	$d8_:
Hand Off Auto	Black	HT8SP51	$d8x:
Man. Off Auto	Black	HT8SP68	$;d8[:
Open Off Close	Black	HT8SP53	$d8y:
Run Safe Jog	Black	HT8SP70	$d8#:
Up Off Down	Black	HT8SP54	$d8z:
On Stop Safe	Black	HT8SP71	$;d8!:

For PUSH/PULL Units

Legend 3/32" lettering	Color of Field	Catalog Number	Price
ON/OFF	Black	HT8PP5	$d7z:
OPEN/CLOSE	Black	HT8PP8	$;d7]:
UP/DOWN	Black	HT8PP11	$d7y:

Square Blank Plastic Legend Plates

Lettering	Color of Field	Catalog Number	Price
Black	White/Silver	HT8SP76	$d91:
White	Red/Black	HT8SP77	$d92:

Round Plastic Legend Plates

Legend	Color of Field	Catalog Number	Price
ESTOP	Yellow	HT8RP79	$;d7[:

NOTE: 70 mm / 2-3/4" diameter

NOTE: All 30 mm legend plates are plastic.

Fⓔ Fuji Electric Command Series Pilot Devices

Fuji Electric Command Series pilot devices are used in machine tools, industrial machines, control panels, distribution panels, and instrumentation panels. Pushbuttons improve interfacing by allowing better layout and wiring, easier installation and increased safety. Reliability is also built in to handle complex multi-functional controls.

The AR16, AR22 and AR30 series are configurable with a wide range of choices. Our selection of 16mm, 19mm, 22mm and 30mm pushbuttons include non-illuminated as well as

illuminated models with flush round heads, extended round heads, and mushroom style heads. Other 16mm, 22mm and 30mm pilot devices available include emergency stop pushbuttons, selector switches, pilot lights, joystick selector switches, and buzzers.

We also offer a wide array of accessories to complement our selection of Fuji 16mm, 19mm, 22mm and 30mm Command Series pilot devices.

AR16 Series Features
• 16.2 or 19.2 mm diameter hole
• Fits 1 to 6mm max panel thickness
• Integrated structure with built-in contacts that reduce control panel depth
• Offered in Thin-type profile with only 2mm of panel protrusion for high-density mounting and attractive panel designs
• Bright LED-illuminated surface with less power consumption
• Gold-plated contacts and snap-action mechanism with low 1mA at 5V switching
• Oil- and dust-proof operator modules (IP65)

AR22 Series Features
• 22.3 mm diameter hole
• Fits 1 to 6mm max panel thickness
• Mountable in either a 22.3 or 25.5 mm diameter cutout (except for joysticks and buzzers)
• Provided with release arm
• Terminal cover included for added safety
• Wiring possible in vertical and horizontal directions
• Oil- and dust-proof operator modules (IP65), except for buzzers DR22B5 (IP00), DR22B8 (IP54)

AR30 Series Features
• 30.5 mm diameter hole
• Fits 1mm to 6mm max panel thickness
• Quick snap-on replacement of contact blocks
• Double-break self-cleaning contacts
• Terminal cover included for added safety
• Wiring possible in vertical and horizontal directions
• Oil- and dust-proof operator modules (IP65) except for buzzer DR30B5 (IP00)

Pushbuttons

E-Stop Pushbuttons

Selector Switches

Pilot Lights

Electronic Buzzers

Joysticks

Command Series Accessories

TO OBTAIN THE MOST CURRENT AGENCY APPROVAL INFORMATION, SEE THE AGENCY COMPLIANCE & CERTIFICATIONS CHECKLIST SECTION ON THE SPECIFIC PART NUMBER'S WEB PAGE.

Fuji Electric
Command LED-Illuminated 16mm Plastic Pushbuttons

AR16F0N-C2E3G

AF16F0N-C2E3R

AR16F5N-C2E3W

AF16F5N-C2E3Y

AF16F5N-C2E3S

Command LED-Illuminated 16mm Plastic Pushbuttons									
Part Number	Color	Price	Drawing Link	Operator	Type*	Voltage	Protection	Contacts	Material
AR16F0N-C2E3G	Green	$;;5nf[:	PDF	Momentary, Flush, 24.0 x 18.0 mm, rectangular	Standard	24 VAC/VDC full voltage	IP65	DPDT	wBase: Plastic Bezel: Plastic
AR16F0N-C2E3R	Red	$;5nf_:	PDF						
AR16F0N-C2E3W	White	$;5nf#:	PDF						
AR16F0N-C2E3Y	Yellow	$;;5nf!:	PDF						
AR16F0N-C2E3S	Blue	$;5nf?:	PDF						
AR16F0N-C2E3A	Orange	$;;5nf,:	PDF						
AF16F0N-C2E3G	Green	$5ng0:	PDF	Momentary, Flush, 28.0 x 22.0 mm, rectangular	Thin				
AF16F0N-C2E3R	Red	$5ng1:	PDF						
AF16F0N-C2E3W	White	$5ng2:	PDF						
AF16F0N-C2E3Y	Yellow	$5ng3:	PDF						
AF16F0N-C2E3S	Blue	$5ng4:	PDF						
AF16F0N-C2E3A	Orange	$5ng5:	PDF						
AR16F5N-C2E3G	Green	$5ng6:	PDF	Push ON - push OFF, Flush, 24.0 x 18.0 mm, rectangular	Standard				
AR16F5N-C2E3R	Red	$5ng7:	PDF						
AR16F5N-C2E3W	White	$5ng8:	PDF						
AR16F5N-C2E3Y	Yellow	$5ng9:	PDF						
AR16F5N-C2E3S	Blue	$5nga:	PDF						
AR16F5N-C2E3A	Orange	$5ngb:	PDF						
AF16F5N-C2E3G	Green	$5ngc:	PDF	Push ON - push OFF, Flush, 28.0 x 22.0 mm rectangular	Thin				
AF16F5N-C2E3R	Red	$5ngd:	PDF						
AF16F5N-C2E3W	White	$5nge:	PDF						
AF16F5N-C2E3Y	Yellow	$;5ngf:	PDF						
AF16F5N-C2E3S	Blue	$5ngg:	PDF						
AF16F5N-C2E3A	Orange	$5ngh:	PDF						
AR16G0N-C2E3G	Green	$-5ngi:	PDF	Momentary, Flush, 24.0 x 18.0 mm, rectangular, guarded	Standard				
AR16G0N-C2E3R	Red	$-5ngj:	PDF						
AR16G0N-C2E3W	White	$5ngk:	PDF						
AR16G0N-C2E3Y	Yellow	$-5ngl:	PDF						
AR16G0N-C2E3S	Blue	$5ngn:	PDF						
AR16G0N-C2E3A	Orange	$5ngo:	PDF						
AR16G5N-C2E3G	Green	$5ngp:	PDF	Push ON - push OFF, Flush, 24.0 x 18.0 mm, rectangular, guarded	Standard				
AR16G5N-C2E3R	Red	$5ngq:	PDF						
AR16G5N-C2E3W	White	$5ngs:	PDF						
AR16G5N-C2E3Y	Yellow	$;5ngt:	PDF						
AR16G5N-C2E3S	Blue	$5ngu:	PDF						
AR16G5N-C2E3A	Orange	$5ngv:	PDF						

* Type: Standard = 28.4 mm deep, Thin - 35.9 mm deep

Fuji Electric
Command Non-Illuminated 16mm Plastic Pushbuttons

AR16F0T-C2G   AF16F0T-C2R   AR16F5T-C2W   AF16F5T-C2Y   AR16G5T-C2S

Command Non-Illuminated 16mm Plastic Pushbuttons								
Part Number	Color	Price	Drawing Link	Operator	Type*	Protection	Contacts	Material
AR16F0T-C2G	Green	$5ngx:	PDF	Momentary Flush, 24.0 x 18.0 mm rectangular	Standard	IP65	DPDT	Base: Plastic Bezel: Plastic
AR16F0T-C2R	Red	$5ngy:	PDF					
AR16F0T-C2W	White	$5ngz:	PDF					
AR16F0T-C2Y	Yellow	$;5ng]:	PDF					
AR16F0T-C2S	Blue	$;5ng[:	PDF					
AR16F0T-C2A	Orange	$5ng_:	PDF					
AR16F0T-C2B	Black	$5ng#:	PDF					
AF16F0T-C2G	Green	$;5ng!:	PDF	Momentary Flush, 24.0 x 18.0 mm rectangular	Thin			
AF16F0T-C2R	Red	$5ng?:	PDF					
AF16F0T-C2W	White	$;5ng,:	PDF					
AF16F0T-C2Y	Yellow	$5nh0:	PDF					
AF16F0T-C2S	Blue	$5nh1:	PDF					
AF16F0T-C2A	Orange	$5nh2:	PDF					
AF16F0T-C2B	Black	$5nh3:	PDF					
AR16F5T-C2G	Green	$5nh4:	PDF	Push ON - push OFF, Flush, 24.0 x 18.0 mm rectangular	Standard			
AR16F5T-C2R	Red	$5nh5:	PDF					
AR16F5T-C2W	White	$5nh6:	PDF					
AR16F5T-C2Y	Yellow	$5nh7:	PDF					
AR16F5T-C2S	Blue	$5nh8:	PDF					
AR16F5T-C2A	Orange	$5nh9:	PDF					
AR16F5T-C2B	Black	$5nha:	PDF					
AF16F5T-C2G	Green	$5nhb:	PDF	Push ON - push OFF, Flush, 28.0 x 22.0 mm rectangular	Thin			
AF16F5T-C2R	Red	$5nhc:	PDF					
AF16F5T-C2W	White	$5nhd:	PDF					
AF16F5T-C2Y	Yellow	$5nhe:	PDF					
AF16F5T-C2S	Blue	$;5nhf:	PDF					
AF16F5T-C2A	Orange	$5nhg:	PDF					
AF16F5T-C2B	Black	$5nhh:	PDF					
AR16G0T-C2G	Green	$-5nhi:	PDF	Momentary Flush, 24.0 x 18.0 mm rectangular guarded	Standard			
AR16G0T-C2R	Red	$-5nhj:	PDF					
AR16G0T-C2W	White	$5nhk:	PDF					
AR16G0T-C2Y	Yellow	$-5nhl:	PDF					
AR16G0T-C2S	Blue	$5nhn:	PDF					
AR16G0T-C2A	Orange	$5nho:	PDF					
AR16G0T-C2B	Black	$5nhp:	PDF					
AR16G5T-C2G	Green	$5nhq:	PDF	Push ON - push OFF, Flush, 24.0 x 18.0 mm rectangular guarded	Standard			
AR16G5T-C2R	Red	$5nhs:	PDF					
AR16G5T-C2W	White	$;5nht:	PDF					
AR16G5T-C2Y	Yellow	$5nhu:	PDF					
AR16G5T-C2S	Blue	$5nhv:	PDF					
AR16G5T-C2A	Orange	$5nhx:	PDF					
AR16G5T-C2B	Black	$5nhy:	PDF					

* Type: Standard = 28.4 mm deep, Thin = 35.9 mm deep

Fuji Electric Command 16mm LED Plastic Indicating Lights

DR16F0N-E3G   **DF16F0N-E3S**   **DR16E0L-E3A**

Command 16mm LED Plastic Indicating Lights									
Part Number	Color	Price	Drawing Link	Operator	Type*	Protection	Voltage	Power Consumption	Material
DR16F0N-E3G	Green	$5nbu:	PDF	Permanent, flush, 24.0 x 18.0 mm rectangular	Standard	IP65	24 VAC/VDC full voltage	Green, Red, Amber, Blue: 7.5 mA AC, 7.5 mA DC Orange, Yellow: 9 mA AC, 8.5 mA DC	Base: Plastic Bezel: Plastic
DR16F0N-E3R	Red	$5nbv:	PDF						
DR16F0N-E3W	White	$5nbx:	PDF						
DR16F0N-E3Y	Yellow	$5nby:	PDF						
DR16F0N-E3A	Amber	$5nbz:	PDF						
DR16F0N-E3S	Blue	$5nbo:	PDF						
DF16F0N-E3G	Green	$5nbp:	PDF	Permanent, flush, 28.0 x 22.0 mm rectangular	Thin				
DF16F0N-E3R	Red	$5nbq:	PDF						
DF16F0N-E3W	White	$5nbs:	PDF						
DF16F0N-E3Y	Yellow	$;5nbt:	PDF						
DF16F0N-E3A	Amber	$;5nb]:	PDF						
DF16F0N-E3S	Blue	$;5nb[:	PDF						
DR16E0L-E3G	Green	$5nb_:	PDF	Permanent, extended, 18.0 mm, round	Standard				
DR16E0L-E3R	Red	$5nb#:	PDF						
DR16E0L-E3W	White	$;5nb!:	PDF						
DR16E0L-E3Y	Yellow	$5nb?:	PDF						
DR16E0L-E3A	Amber	$;5nb,:	PDF						
DR16E0L-E3S	Blue	$5nc0:	PDF						

* Type: Standard = 28.4 mm deep, Thin - 35.9 mm deep

Fuji Electric
Command 16mm Emergency Stop Pushbuttons

AR16V0R-11R   **AR16V1R-01R**   **AR16V0L-01E3R**   **AR16V1L-01E3R**

Command 16mm Emergency Stop Pushbuttons

Part Number	Price	Drawing Link	Contacts	Operator	Voltage	Bulb Type	Action	Legend	Protection	Material
AR16V0R-11R	$5nhz:	PDF	(1) N.O./(1) N.C.	32.0 mm, mushroom, Red	—	—	Push to lock, pull or turn to reset	Arrow	IP65	Base: Plastic Bezel: Plastic
AR16V0R-02R	$;5nh]:	PDF	(2) N.C.							
AR16V1R-01R	$;5nh[:	PDF	(1) N.C.	40.0 mm, mushroom, Red						
AR16V1R-11R	$5nh_:	PDF	(1) N.O./(1) N.C.							
AR16V1R-02R	$5nh#:	PDF	(2) N.C.							
AR16V1R-12R	$;5nh!:	PDF	(1) N.O./(2) N.C.							
AR16V1R-03R	$5nh?:	PDF	(3) N.C.							
AR16V1R-13R	$;5nh,:	PDF	(1) N.O./(3) N.C.							
AR16V1R-04R	$-5ni0:	PDF	(4) N.C.							
AR16V0L-01E3R	$-5ni1:	PDF	(1) N.C.	32.0 mm, mushroom, Red	24 VAC/VDC full voltage	LED illuminated				
AR16V0L-11E3R	$-5ni2:	PDF	(1) N.O./(1) N.C.							
AR16V0L-02E3R	$-5ni3:	PDF	(2) N.C.							
AR16V0L-12E3R	$-5ni4:	PDF	(1) N.O./(2) N.C.							
AR16V0L-13E3R	$-5ni5:	PDF	(1) N.O./(3) N.C.							
AR16V1L-01E3R	$-5ni6:	PDF	(1) N.C.	40.0 mm, mushroom, Red						
AR16V1L-11E3R	$-5ni7:	PDF	(1) N.O./(1) N.C.							
AR16V1L-02E3R	$-5ni8:	PDF	(2) N.C.							
AR16V1L-12E3R	$-5ni9:	PDF	(1) N.O./(2) N.C.							
AR16V1L-13E3R	$-5nia:	PDF	(1) N.O./(3) N.C.							

Accessory

Part Number	Price	Drawing Link	Description
AR6P719-5A	$-5nbl:	PDF	Fuji Electric legend plate, plastic, round, yellow field, yellow background, black engraved text, legend plate marking "EMERGENCY STOP". For use with 16mm pilot devices.

AR6P719-5A

Fuji Electric

Command Non-Illuminated 19mm Knob Plastic Selector Switches

AF16PR-2C1B

AF16PR-6C2B

Command Non-Illuminated 19mm Knob Plastic Selector Switches

Part Number	Price	Drawing Link	Operator	Operation	Type*	Contacts	Protection	Material
AF16PR-2C1B	$-5niq:	PDF	22mm round Knob	2-pos maintained	Thin	SPDT	IP65	Base: Plastic Bezel: Plastic
AF16PR-2C2B	$-5nis:	PDF				DPDT		
AF16PR-0C1B	$;-5nit:	PDF		2-pos spring return from right		SPDT		
AF16PR-0C2B	$-5niu:	PDF				DPDT		
AF16PR-3C2B	$-5niv:	PDF		3-pos maintained		DPDT		
AF16PR-6C2B	$-5nix:	PDF		3-pos spring return to center from left, maintained right		DPDT		
AF16PR-7C2B	$-5niy:	PDF		3-pos spring return to center from right, maintained left		DPDT		
AF16PR-1C2B	$-5niz:	PDF		3-pos spring return to center from right or left		DPDT		

* Type: Thin - 35.9 mm deep

Contact Operation Table

No. of positions	Operator action	Code
2-position (90°)	Maintained	2
	Spring return (Right to left) ↻	0
3-position (45°)	Maintained	3
	Spring/manual return (Left to center) ↺	6
	Spring/manual return (Right to center) ↻	7
	Spring return (Left or right to center) ↺↻	1

• Key position and contact operation

2-position

Operator action (View form the front)		Contact arrangement	Contact unit		Operator position *2	
2	0				1	2
Maintained/90°	Spring return/90°	SPDT	Left COM	NC	●	
				NO		●
		2PDT	Left COM	NC	●	
				NO		●
			Right COM	NC	●	
				NO		●

Terminal arrangement
View from the terminal side (the back)

NC
NO
COM

Left contact   Right contact

3-position

Operator action (View form the front)				Contact arrangement	Contact unit		Operator position *2		
3	6	7	1				1	2	3
Maintained/each 45°	Spring/manual return/each 45°	Spring/manual return/each 45°	Spring return/each 45°	2PDT	Left COM	NC	▬▬▬		
						NO			●
					Right COM	NC		▬▬▬	
						NO	●		
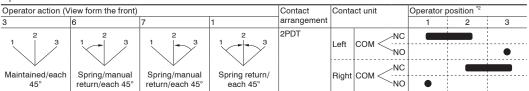
Note: *2 ●, ▬▬: means the contact closed (ON).

Fuji Electric

Command Non-Illuminated 19mm Key Plastic Selector Switches

AF16JR-0AC2A

AF16JR-7EC2A

Command Non-Illuminated 19mm Key Plastic Selector Switches									
Part Number	*Price*	*Drawing Link*	*Operator*	*Operation*	**Type*	*Key Removable Position*	*Contacts*	*Protection*	*Material*
AF16JR-2AC1A	$;-5ni]:	PDF	22mm round Key	2-pos maintained	Thin	Key removable left position	SPDT	IP65	Base: Plastic Bezel: Plastic
AF16JR-2AC2A	$;-5ni[:	PDF					DPDT		
AF16JR-2BC1A	$-5ni_:	PDF				Key removable left and right position	SPDT		
AF16JR-2BC2A	$-5ni#:	PDF					DPDT		
AF16JR-2DC1A	$;-5ni!:	PDF				Key removable right position	SPDT		
AF16JR-2DC2A	$-5ni?:	PDF					DPDT		
AF16JR-0AC1A	$;-5ni,:	PDF		2-pos spring return from right		Key removable left position	SPDT		
AF16JR-0AC2A	$-5nj0:	PDF					DPDT		
AF16JR-3AC2A	$-5nj1:	PDF		3-pos maintained		Key removable left position	DPDT		
AF16JR-3BC2A	$-5nj2:	PDF				Key removable left and right position	DPDT		
AF16JR-3CC2A	$-5nj3:	PDF				Key removable left, right and center position	DPDT		
AF16JR-3DC2A	$-5nj4:	PDF				Key removable right position	DPDT		
AF16JR-3EC2A	$-5nj5:	PDF				Key removable center position	DPDT		
AF16JR-3FC2A	$-5nj6:	PDF				Key removable center and right position	DPDT		
AF16JR-3GC2A	$-5nj7:	PDF				Key removable left and center position	DPDT		
AF16JR-6DC2A	$-5nj8:	PDF		3-pos spring return to center from left, maintained right		Key removable right position	DPDT		
AF16JR-6EC2A	$-5nj9:	PDF				Key removable center position	DPDT		
AF16JR-6FC2A	$-5nja:	PDF				Key removable center and right position	DPDT		
AF16JR-7AC2A	$-5njb:	PDF		3-pos spring return to center from right, maintained left		Key removable left position	DPDT		
AF16JR-7EC2A	$-5njc:	PDF				Key removable center position	DPDT		
AF16JR-7GC2A	$-5njd:	PDF				Key removable left and center position	DPDT		
AF16JR-1EC2A	$-5nje:	PDF		3-pos spring return to center from right or left		Key removable center position	DPDT		

* Type: Thin - 35.9 mm deep

Accessory			
Part Number	*Price*	*Drawing Link*	*Description*
AR6C662-A	$5nbn:	PDF	Fuji Electric key, replacement, metal. Package of 2. For use with AF16JR series selector switches with key actuation.

AR6C662-A

Fuji Electric Command Non-Illuminated 19mm Key Plastic Selector Switches

Contact Operation Table

No. of positions	Operator action	Code
2-position (90°)	Maintained	2
	Spring return (Right to left) ◌	0
3-position (45°)	Maintained	3
	Spring/manual return (Left to center) ◌	6
	Spring/manual return (Right to center) ◌	7
	Spring return (Left or right to center) ◌	1
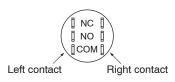
Key removable position	Applicable operator action						Code
	2	0	3	6	7	1	
Left ◌	○	○	○	–	○	–	A
Left and right ⊗	○	–	○	–	–	–	B
Left, center and right ⊛	–	–	○	–	–	–	C
Right ⊘	○	–	○	○	–	–	D
Center ◌	–	–	○	○	○	○	E
Center and right ⊘	–	–	○	○	–	–	F
Left and center ◌	–	–	○	–	○	–	G

• Key position and contact operation

2-position

Operator action (View form the front)		Contact arrangement	Contact unit			Operator position *3	
2	0					1	2
Maintained/90°	Spring return/90°	SPDT	Left	COM	NC	●	
					NO		●
		2PDT	Left	COM	NC	●	
					NO		●
			Right	COM	NC	●	
					NO		●

Terminal arrangement
View from the terminal side (the back)

NC
NO
COM

Left contact   Right contact

3-position

Operator action (View form the front)				Contact arrangement	Contact unit			Operator position *3		
3	6	7	1					1	2	3
Maintained/each 45°	Spring/manual return/each 45°	Spring/manual return/each 45°	Spring return/each 45°	2PDT	Left	COM	NC	▬▬▬		
							NO			●
					Right	COM	NC		▬▬▬	
							NO	●		

Note: *3 ●, ▬▬▬: means the contact closed (ON).

Fuji Electric
Command Series 16mm/19mm Pilot Devices Specifications

Specifications (Indoor Use)		
	Pushbuttons / Selector Switches / Indicating Lights	Emergency Stop Pushbuttons
Rated thermal current (contact block)	D300	C300 / R300
Mechanical durability	Pushbuttons: Momentary 1 million operations Alternate: 250,000 operations Selector Switch: 250,000 operations Indicating Lights: NA	100,000 operations
Electrical durability	100,000 operations (220 VAC 0.7A)	100,000 operations (AC-15, AC-13, AC-12, DC-13, DC-12)
Operating frequency	1200 operations/hour (On-load factor: 40%)	
Operating force (Avg)	Pushbuttons: 10N max Selector switches 0.1 N·m max	Push to lock: 25N max Pull to reset: 20N max Turn to reset: 0.3 N·m max
Dielectric strength	2000 VAC for 1 min	
Insulation resistance	100MΩ (500 VDC megger)	
Rated impulse dielectric strength	2.5kV	
Conditional short-circuit current	1000A	
Short-circuit protective device	2A	6A
Pollution degree	3 (inside the enclosure 2)	
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm* / Constant: 16.7 Hz, double amplitude 3mm	
Shock	Malfunction: 100 m/s² Mechanical: 500 m/s²	Malfunction:150m/s² Durability: 1000 m/s²
Ambient temperature	-10 to +55°C [+14 to +131°F] (no icing or no condensation)	
Temperature ratings	Storage: -40 to +70°C [-40 to +158°F]	
Humidity	45 to 85% RH (within -5° to +40°C) (no icing or no condensation)	
Degree of protection	IP65	
Initial contact resistance	50mΩ max 6VDC 1A voltage drop	
Connections	0.3 to 0.75 mm² (22 to 18 AWG) Stripping length: 11 ± 1mm Solder connection or 2.8 mm crimp-on disconnect connector	
Mounting tightening torque	0.6 to 1.0 N•m, 5.3 to 8.8 in·lb	
Contacts operation	Self-cleaning types. Slow action. Positive opening.	
Operation frequency	1,200 cycle/hour (Application ratio 40%)	
Utilization category/contact ratings	120 VAC 1A (AC-13), 24 VDC 0.7 A (DC-13, to 0.95 = 21ms) 240 VAC 0.7 A (AC-13), 125 VDC 0.15 A (DC-13, to 0.95 = 21ms)	—
Rated insulation voltage	250V AC/DC	
Materials	Enclosure: Polyamide / Contacts: silver, nickel	
Standards	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1 Pushbutton, Illuminated pushbutton: R50116757 Selector: R50116759 Pilot lights: R50116762	
Approvals	cURus File Number E44592, CE	

To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.
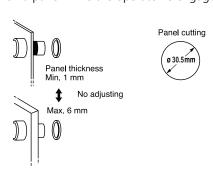
Fuji Electric 22mm Pilot Devices Overview

Pushbuttons, Selectors, Pilot Lights, Joysticks, Buzzers

Fuji Electric AR22 pilot devices can be mounted on panels up to 6mm thick by securing the operator with a locking nut from behind the panel without needing any adjustment.

Easy mounting
Fuji AR22 pilot devices can be mounted on panels between 1 and 6mm thick and are mountable in panel cutouts of 22.3 or 25.5 mm. The button and lens can be mounted on a panel while the operator is engaged.

Panel cutting

ø 30.5mm

Panel thickness
Min. 1 mm

No adjusting

Max. 6 mm

Pushbuttons

AR22F0R-01RZA

Illuminated Pushbuttons

AR22F0L-10E3YZA

Pilot Lights

DR22E3L-E3SZA

E-Stop Pushbuttons
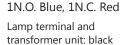
AR22V0R-01R

Selector Switches

AR22PR-210BZA

Buzzers

DR22B8-EB

Wiring
These pilot devices can be wired in both vertical and lateral directions making wiring in narrow spaces easier. Contact block color coding makes wiring even easier.
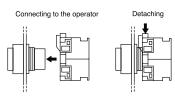
1N.O. Blue, 1N.C. Red

Lamp terminal and transformer unit: black

Short depth
Fuji AR22 pilot devices are designed to occupy less space than traditional 22mm devices.

Quick contact block and transformer replacement
Fuji AR22 pilot devices have a snap-on mounting that makes replacing or adding a contact block and transformer unit easier.

Connecting to the operator   Detaching

Snap-fitting of contact blocks   Detaching

Safety
AR22 pilot devices include terminal covers for added safety and security. Emergency stop pushbuttons include a trigger action mechanism that prevents the contacts from moving until the button is pushed and locked.

Protection
AR22 pilot devices feature oil and dust-tight operator construction (IP65), except for buzzers DR22B5 (IP00), DR22B8 (IP54).
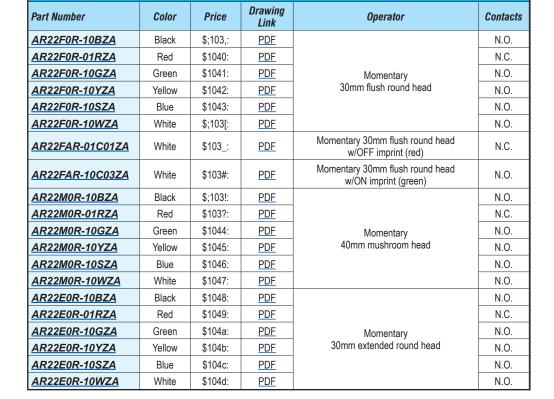
Fe Fuji Electric

Command Non-Illuminated 22mm Metal Pushbuttons

AR22F0R-01RZA

AR22M0R-10YZA

Command Non-Illuminated 22mm Metal Pushbuttons					
Part Number	*Color*	*Price*	*Drawing Link*	*Operator*	*Contacts*
AR22F0R-10BZA	Black	$;103,:	PDF	Momentary 30mm flush round head	N.O.
AR22F0R-01RZA	Red	$1040:	PDF		N.C.
AR22F0R-10GZA	Green	$1041:	PDF		N.O.
AR22F0R-10YZA	Yellow	$1042:	PDF		N.O.
AR22F0R-10SZA	Blue	$1043:	PDF		N.O.
AR22F0R-10WZA	White	$;103[:	PDF		N.O.
AR22FAR-01C01ZA	White	$103_:	PDF	Momentary 30mm flush round head w/OFF imprint (red)	N.C.
AR22FAR-10C03ZA	White	$103#:	PDF	Momentary 30mm flush round head w/ON imprint (green)	N.O.
AR22M0R-10BZA	Black	$;103!:	PDF	Momentary 40mm mushroom head	N.O.
AR22M0R-01RZA	Red	$103?:	PDF		N.C.
AR22M0R-10GZA	Green	$1044:	PDF		N.O.
AR22M0R-10YZA	Yellow	$1045:	PDF		N.O.
AR22M0R-10SZA	Blue	$1046:	PDF		N.O.
AR22M0R-10WZA	White	$1047:	PDF		N.O.
AR22E0R-10BZA	Black	$1048:	PDF	Momentary 30mm extended round head	N.O.
AR22E0R-01RZA	Red	$1049:	PDF		N.C.
AR22E0R-10GZA	Green	$104a:	PDF		N.O.
AR22E0R-10YZA	Yellow	$104b:	PDF		N.O.
AR22E0R-10SZA	Blue	$104c:	PDF		N.O.
AR22E0R-10WZA	White	$104d:	PDF		N.O.

AR22E0R-10SZA

AR22FAR-01C01ZA

AR22FAR-10C03ZA

Fuji Electric
Command Illuminated 22mm Metal and Plastic Pushbuttons

AR22F0L-10E3YZA

AR22F5L-10L3SZA

AR22E0L-10E3GZA

AR22V5L-01L3R

AR22M0L-01E3RZA

AR22M0L-01L3RZA

Command LED Illuminated 22mm Pushbuttons							
Part Number	*Color*	*Price*	*Drawing Link*	*Operator*	*Material*	*Lamp Voltage*	*Contacts*
AR22F0L-01E3RZA	Red	$104e:	PDF	30mm momentary flush round head	Metal	24V AC/DC (without transformer)	N.C.
AR22F0L-10E3GZA	Green	$;104f:	PDF				N.O.
AR22F0L-10E3YZA	Yellow	$104g:	PDF				N.O.
AR22F0L-10E3SZA	Blue	$104h:	PDF				N.O.
AR22F0L-10E3WZA	White	$-104i:	PDF				N.O.
AR22F0L-01L3RZA	Red	$-104j:	PDF			115-127 VAC (with transformer)	N.C.
AR22F0L-10L3GZA	Green	$104k:	PDF				N.O.
AR22F0L-10L3YZA	Yellow	$-104l:	PDF				N.O.
AR22F0L-10L3SZA	Blue	$104n:	PDF				N.O.
AR22F0L-10L3WZA	White	$104o:	PDF				N.O.
AR22F5L-10E3RZA	Red	$;104,:	PDF	30mm push-push flush round head	Metal	24V AC/DC (without transformer)	N.O.
AR22F5L-10E3GZA	Green	$1050:	PDF				N.O.
AR22F5L-10E3YZA	Yellow	$1051:	PDF				N.O.
AR22F5L-10E3SZA	Blue	$1052:	PDF				N.O.
AR22F5L-10E3WZA	White	$1053:	PDF				N.O.
AR22F5L-10L3RZA	Red	$1054:	PDF			115-127 VAC (with transformer)	N.O.
AR22F5L-10L3GZA	Green	$1055:	PDF				N.O.
AR22F5L-10L3YZA	Yellow	$1056:	PDF				N.O.
AR22F5L-10L3SZA	Blue	$1057:	PDF				N.O.
AR22F5L-10L3WZA	White	$1058:	PDF				N.O.
AR22E0L-01E3RZA	Red	$104p:	PDF	30mm momentary extended round head	Metal	24V AC/DC (without transformer)	N.C.
AR22E0L-10E3GZA	Green	$104q:	PDF				N.O.
AR22E0L-10E3YZA	Yellow	$104s:	PDF				N.O.
AR22E0L-10E3SZA	Blue	$;104t:	PDF				N.O.
AR22E0L-10E3WZA	White	$104u:	PDF				N.O.
AR22E0L-01L3RZA	Red	$104v:	PDF			115-127 VAC (with transformer)	N.C.
AR22E0L-10L3RZA	Red	$104x:	PDF				N.O.
AR22E0L-10L3GZA	Green	$104y:	PDF				N.O.
AR22E0L-10L3YZA	Yellow	$104z:	PDF				N.O.
AR22E0L-10L3SZA	Blue	$;104]:	PDF				N.O.
AR22E0L-10L3WZA	White	$;104[:	PDF				N.O.
AR22M0L-01E3RZA	Red	$104_:	PDF	40mm momentary mushroom head	Metal	24V AC/DC (without transformer)	N.C.
AR22M0L-01L3RZA	Red	$104#:	PDF			115-127 VAC (with transformer)	N.C.
AR22V5L-01E3R	Red	$;104!:	PDF	40mm push-lock, twist release, with white arrow	Plastic	24V AC/DC (without tranformer)	N.C.
AR22V5L-01L3R	Red	$104?:	PDF			115-127 VAC (with transformer)	N.C.

Illuminated Pushbutton Switch/AR22

Contact Block Terminal Cover

Contact Block

Terminal Cover

Transformer unit

Lamp

Lamp Base

Locking Nut

Packing

Plunger

Frame

Legend Plate

Illuminated Color Button

Fe Fuji Electric

Command 22mm
Emergency Stop Pushbuttons

AR22VQR-01R   AR22VPR-12R   AR22VQL-01E3R   AR22VQL-12EAR

UL EMERGENCY STOP DEVICE LISTED

Command 22mm Emergency Stop Pushbuttons										
Part Number	**Price**	**Drawing Link**	**Contacts**	**Operator**	**Voltage**	**Bulb type**	**Action**	**Legend**	**Protection**	**Material**
AR22VQR-01R	$-5nib:	PDF	(1) N.C.	40.0 mm, mushroom, Red	—	—	Push to lock, pull or turn to reset	Arrow	IP65	Base: Plastic Bezel: Plastic
AR22VQR-12R	$-5nic:	PDF	(1) N.O./(2) N.C.							
AR22VPR-01R	$-5nid:	PDF	(1) N.C.	65.0 mm, mushroom, Red						
AR22VPR-12R	$-5nie:	PDF	(1) N.O./(2) N.C.							
AR22VQL-01E3R	$;-5nif:	PDF	(1) N.C.	40.0 mm, mushroom, Red	24 VAC/VDC full voltage	LED illuminated				
AR22VQL-12E3R	$-5nig:	PDF	(1) N.O./(2) N.C.							
AR22VQL-01EAR	$-5nih:	PDF	(1) N.C.			Interlocked LED illuminated				
AR22VQL-12EAR	$--5nii:	PDF	(1) N.O./(2) N.C.							

AR22V0R-01R   AR22V7R-01R   AR22Q2R-01R   AR22V0L-01E3R

Command 22mm Emergency Stop Pushbuttons										
Part Number	**Price**	**Drawing Link**	**Contacts**	**Operator**	**Voltage**	**Bulb Type**	**Action**	**Legend**	**Protection**	**Material**
AR22V0R-01R	$1059:	PDF	(1) N.C.	40.0 mm, Mushroom Red	—	—	Twist-to-release	Arrow	IP65	Base: Plastic Bezel: Plastic
AR22V7R-01R	$105a:	PDF	(1) N.C.				Key operated release			
AR22Q2R-01R	$105b:	PDF	(1) N.C.	35.0 mm, Mushroom, Red			Push to lock, pull to reset	—		
AR22V0L-01E3R	$105c:	PDF	(1) N.C.	40.0 mm, Mushroom, Red	24 VAC/VDC full voltage	LED illuminated	Twist-to-release	Arrow		
AR22V0L-01L3R	$105d:	PDF	(1) N.C.		115–127 VAC transformer					
Accessory										
AR9P719-5A	$1080:	PDF	Fuji Electric oversized legend plate, aluminum, round, yellow field, yellow background, black engraved text, legend plate marking "EMERGENCY STOP". For use with 22mm pilot devices.							

AR9P719-5A

Fuji Electric
Command Non-Illuminated 22mm Metal Selector Switches

AR22PR-210BZA   **AR22JR-2B10AZA**   **AR22WR-210BZA**   **AR9C022-A**
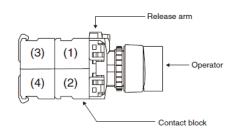
Command Non-Illuminated 22mm Metal Selector Switches						
Part Number	Price	Drawing Link	Operator	Operation	Key Removable Position	Contacts
AR22PR-210BZA	$105e:	PDF	knob	2-pos maintained	–	N.O.
AR22PR-010BZA	$;105f:	PDF	knob	2-pos spring return	–	N.O.
AR22PR-322BZA	$105g:	PDF	knob	3-pos maintained	–	2 N.O. + 2 N.C.
AR22PR-122BZA	$105h:	PDF	knob	3-pos spring return	–	2 N.O. + 2 N.C.
AR22JR-2B10AZA	$105n:	PDF	key	2-pos maintained	Left and right	N.O.
AR22JR-0A10AZA	$105o:	PDF	key	2-pos spring return	Left	N.O.
AR22JR-3C22AZA	$105p:	PDF	key	3-pos maintained	Left, right, center	2 N.O. + 2 N.C.
AR22WR-210BZA	$-105i:	PDF	lever	2-pos maintained	–	N.O.
AR22WR-010BZA	$-105j:	PDF	lever	2-pos spring return	–	N.O.
AR22WR-322BZA	$105k:	PDF	lever	3-pos maintained	–	2 N.O. + 2 N.C.
AR22WR-122BZA	$-105l:	PDF	lever	3-pos spring return	–	2 N.O. + 2 N.C.
Accessory						
Part Number	Price	Drawing Link	Description			
AR9C022-A	$108b:	PDF	Fuji Electric key, replacement, metal. Package of 4. For use with AR22JR and AR30JR series selector switches with key actuation.			

Contact Operation Table

For Selector Types:
AR22PR-1, AR22WR-1,

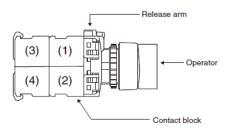| Selector Switch Type (3-position)					
Contact Arrangement	Mounting Position	Type	Left	Center	Right
2 N.O. + 2 N.C.	1	N.C.	▬	–	
	2	N.C.	–	▬	
	3	N.O.	–	–	●
	4	N.O.	●	–	–

● Position of contact block
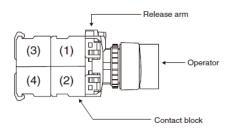
Fe Fuji Electric Command Non-Illuminated 22mm Metal Selector Switches

Contact Operation Table

For Selector Types:
AR22PR-2, AR22PR-0,
AR22WR-2, AR22WR-0,
AR22JR-2, AR22JR-0

Selector Switch Type (2-position)				
	Contact Block		**Operator Position**	
			Left	**Right**
Contact Arrangement	**Mounting Position**	**Type**	↖ ⊗	↗ ⊘
1 N.O.	1	N.O.	–	●
1 N.C.	1	N.C.	●	–
2 N.O.	1	N.O.	–	●
	2	N.O.	–	●
1 N.O. + 1 N.C.	1	N.O.	–	●
	2	N.C.	●	–
2 N.C.	1	N.C.	●	–
	2	N.C.	●	–
3 N.O.	1	N.O.	–	●
	2	N.O.	–	●
	3	N.O.	–	●
2 N.O. + 1 N.C.	1	N.O.	–	●
	2	N.C.	●	–
	3	N.O.	–	●
1 N.O. + 2 N.C.	1	N.O.	–	●
	2	N.C.	●	–
	4	N.C.	●	–
3 N.C.	1	N.C.	●	–
	2	N.C.	●	–
	3	N.C.	●	–
4 N.O.	1	N.O.	–	●
	2	N.O.	–	●
	3	N.O.	–	●
	4	N.O.	–	●
3 N.O. + 1 N.C.	1	N.O.	–	●
	2	N.C.	●	–
	3	N.O.	–	●
	4	N.O.	–	●
2 N.O. + 2 N.C.	1	N.O.	–	●
	2	N.C.	●	–
	3	N.O.	–	●
	4	N.C.	●	–
1 N.O. + 3 N.C.	1	N.O.	–	●
	2	N.C.	●	–
	3	N.C.	●	–
	4	N.C.	●	–
4 N.C.	1	N.C	●	–
	2	N.C	●	–
	3	N.C	●	–
	4	N.C	●	–

● **Position of contact block**

Fuji Electric Command Non-Illuminated 22mm Metal Selector Switches

Contact Operation Table

For Selector Types:
AR22PR-3, AR22WR-3,
AR22JR-3

Selector Switch Type (3-position)					
Contact Arrangement	**Contact Block**		**Operator Position**		
	Mounting Position	**Type**	**Left** ↖	**Center** ↑	**Right** ↗
1 N.O.	1	N.O.	●	–	–
1 N.C.	1	N.C.	–	–	●
2 N.O.	1	N.O.	●	–	–
	2	N.O.	●	–	–
1 N.O. + 1 N.C.	1	N.O.	●	–	–
	2	N.C.	–	–	●
2 N.C.	1	N.C.	–	–	●
	2	N.C.	–	–	●
3 N.O.	1	N.O.	●	–	–
	2	N.O.	●	–	–
	3	N.O.	●	–	–
2 N.O. + 1 N.C.	1	N.O.	●	–	–
	2	N.C.	–	–	●
	3	N.O.	●	–	–
1 N.O. + 2 N.C.	1	N.O.	●	–	–
	2	N.C.	–	–	●
	4	N.C.	–	–	●
3 N.C.	1	N.C.	–	–	●
	2	N.C.	–	–	●
	3	N.C.	–	–	●
4 N.O.	1	N.O.	●	–	–
	2	N.O.	●	–	–
	3	N.O.	●	–	–
	4	N.O.	●	–	–
3 N.O. + 1 N.C.	1	N.O.	●	–	–
	2	N.C.	–	–	●
	3	N.O.	●	–	–
	4	N.O.	●	–	–
2 N.O. + 2 N.C.	1	N.O.	●	–	–
	2	N.C.	–	–	●
	3	N.O.	●	–	–
	4	N.C.	–	–	●
1 N.O. + 3 N.C.	1	N.O.	●	–	–
	2	N.C.	–	–	●
	3	N.C.	–	–	●
	4	N.C.	–	–	●
4 N.C.	1	N.C	–	–	●
	2	N.C	–	–	●
	3	N.C	–	–	●
	4	N.C	–	–	●

● **Position of contact block**

Fuji Electric

Command Illuminated 22mm Metal Selector Switches

AR22PL-010E3RZA

AR22PL-210E3GZA

AR22PL-322E3YZA

AR22PL-322E3SZA

Command LED Illuminated 22mm Metal Selector Switches						
Part Number	Color	Price	Drawing Link	Operation	Contacts	Lamp Voltage
AR22PL-010E3RZA	Red	$105q:	PDF	2-pos spring return	N.O.	24V AC/DC
AR22PL-010E3GZA	Green	$105s:	PDF			
AR22PL-010E3YZA	Yellow	$;105t:	PDF			
AR22PL-010E3SZA	Blue	$105u:	PDF			
AR22PL-210E3RZA	Red	$105v:	PDF	2-pos maintained	N.O.	24V AC/DC
AR22PL-210E3GZA	Green	$105x:	PDF			
AR22PL-210E3YZA	Yellow	$105y:	PDF			
AR22PL-210E3SZA	Blue	$105z:	PDF			
AR22PL-322E3RZA	Red	$;105]:	PDF	3-position maintained	2 N.O. + 2 N.C.	24V AC/DC
AR22PL-322E3GZA	Green	$;105[:	PDF			
AR22PL-322E3YZA	Yellow	$105_:	PDF			
AR22PL-322E3SZA	Blue	$105#:	PDF			
AR22PL-611E3RZA	Red	$;105!:	PDF	3-position spring/manual return (left to center)	1 N.O. + 1 N.C.	24V AC/DC
AR22PL-611E3GZA	Green	$105?:	PDF			
AR22PL-611E3YZA	Yellow	$;105,:	PDF			
AR22PL-611E3SZA	Blue	$1060:	PDF			
AR22PL-010L3RZA	Red	$1061:	PDF	2-pos spring return	N.O.	115-127 VAC
AR22PL-010L3GZA	Green	$1062:	PDF			
AR22PL-010L3YZA	Yellow	$1063:	PDF			
AR22PL-010L3SZA	Blue	$1064:	PDF			
AR22PL-210L3RZA	Red	$1065:	PDF	2-pos maintained	N.O.	115-127 VAC
AR22PL-210L3GZA	Green	$1066:	PDF			
AR22PL-210L3YZA	Yellow	$1067:	PDF			
AR22PL-210L3SZA	Blue	$1068:	PDF			
AR22PL-311L3RZA	Red	$1069:	PDF	3-position maintained	1 N.O. + 1 N.C.	115-127 VAC
AR22PL-311L3GZA	Green	$106a:	PDF			
AR22PL-311L3YZA	Yellow	$106b:	PDF			
AR22PL-311L3SZA	Blue	$106c:	PDF			
AR22PL-611L3RZA	Red	$106d:	PDF	3-position spring/manual return (left to center)	1 N.O. + 1 N.C.	115-127 VAC
AR22PL-611L3GZA	Green	$106e:	PDF			
AR22PL-611L3YZA	Yellow	$;106f:	PDF			
AR22PL-611L3SZA	Blue	$106g:	PDF			

2-Position Replacement Knobs				
	Color	Drawing Link	Part Number	Qty	Price
	Red	PDF	AR9M005-R	5	$108c:
	Green	PDF	AR9M005-G		$1085:
	Yellow	PDF	AR9M005-Y		$1086:
	Blue	PDF	AR9M005-S		$1087:
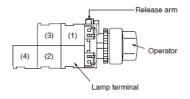
Fuji Electric
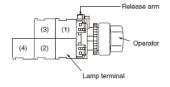
Command Illuminated 22mm Metal Selector Switches

Contact Operation Table
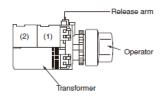
Selector Switch Type: AR22PL-0 (2-position)					
Transformer	**Contact Arrangement**	**Contact Block**		**Operator Position**	
		Mounting Position	**Type**	**Left** ⊘	**Right** ⊘
With/without	1 N.O.	1	N.O.	–	●
With/without	1 N.C.	1	N.C.	●	–
Without	1 N.O. + 1 N.C.	1	N.O.	–	●
		2	N.C.	●	–
With	1 N.O. + 1 N.C.	1	N.C.	●	–
		2	N.O.	–	●
With/without	2 N.O.	1	N.O.	–	●
		2	N.O.	–	●
With/without	2 N.C.	1	N.C.	●	–
		2	N.C.	●	–
Without	3 N.O.	1	N.O.	–	●
		2	N.O.	–	●
		3	N.O.	–	●
Without	2 N.O. + 1 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.O.	–	●
Without	1 N.O. + 2 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.C.	●	–
Without	3 N.C.	1	N.C.	●	–
		2	N.C.	●	–
		3	N.C.	●	–

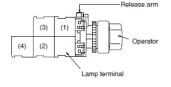● Position of contact block

Without transformer

With transformer

Fⓔ Fuji Electric

Command Illuminated 22mm Metal Selector Switches

Contact Operation Table

Selector Switch Type: AR22PL-2 (2-position)					
Transformer	**Contact Arrangement**	**Contact Block**		**Operator Position**	
		Mounting Position	**Type**	**Left** ⊙	**Right** ⊙
With/without	1 N.O.	1	N.O.	–	●
With/without	1 N.C.	1	N.C.	●	–
Without	1 N.O. + 1 N.C.	1	N.O.	–	●
		2	N.C.	●	–
With	1 N.O. + 1 N.C.	1	N.C.	●	–
		2	N.O.	–	●
With/without	2 N.O.	1	N.O.	–	●
		2	N.O.	–	●
With/without	2 N.C.	1	N.C.	●	–
		2	N.C.	●	–
With/without	3 N.O.	1	N.O.	–	●
		2	N.O.	–	●
		3	N.O.	–	●
Without	2 N.O. + 1 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.O.	–	●
With	2 N.O. + 1 N.C.	1	N.C.	●	–
		2	N.O.	–	●
		3	N.O.	–	●
Without	1 N.O. + 2 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.C.	●	–
With	1 N.O. + 2 N.C	1	N.C.	●	–
		2	N.C	●	–
		3	N.O.	–	●
With/without	3 N.C.	1	N.C.	●	–
		2	N.C.	●	–
		3	N.C.	●	–
Without	4 N.O.	1	N.O.	–	●
		2	N.O.	–	●
		3	N.O.	–	●
		4	N.O.	–	●
Without	3 N.O. + 1 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.O.	–	●
		4	N.O.	–	●
Without	2 N.O. + 2 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.O.	–	●
		4	N.C.	●	–
Without	1 N.O. + 3 N.C.	1	N.O.	–	●
		2	N.C.	●	–
		3	N.C.	●	–
		4	N.C.	●	–
Without	4 N.C.	1	N.C	●	–
		2	N.C	●	–
		3	N.C	●	–
		4	N.C	●	–

● Position of contact block

Without transformer

With transformer

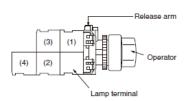# Fⓔ Fuji Electric Command Illuminated 22mm Metal Selector Switches

Contact Operation Table

Selector Switch Type: AR22PL-3 (3-position)						
Transformer	Contact Arrangement	Contact Block		Operator Position		
		Mounting Position	Type	Left ↖	Center ↑	Right ↗
With/without	1 N.O.	1	N.O.	●	–	–
With/without	1 N.C.	1	N.C.	–	–	●
Without	1 N.O. + 1 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
With	1 N.O. + 1 N.C.	1	N.C.	–	–	●
		2	N.O.	●	–	–
With/without	2 N.O.	1	N.O.	●	–	–
		2	N.O.	●	–	–
With/without	2 N.C.	1	N.C.	–	–	●
		2	N.C.	–	–	●
With/without	3 N.O.	1	N.O.	●	–	–
		2	N.O.	●	–	–
		3	N.O.	●	–	–
Without	2 N.O. + 1 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.O.	●	–	–
With	2 N.O. + 1 N.C.	1	N.C.	–	–	●
		2	N.O.	●	–	–
		3	N.O.	●	–	–
Without	1 N.O. + 2 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.C.	–	–	●
With	1 N.O. + 2 N.C	1	N.C.	–	–	●
		2	N.C	–	–	●
		3	N.O.	●	–	–
With/without	3 N.C.	1	N.C.	–	–	●
		2	N.C.	–	–	●
		3	N.C.	–	–	●
Without	4 N.O.	1	N.O.	●	–	–
		2	N.O.	●	–	–
		3	N.O.	●	–	–
		4	N.O.	●	–	–
Without	3 N.O. + 1 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.O.	●	–	–
		4	N.O.	●	–	–
Without	2 N.O. + 2 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.O.	●	–	–
		4	N.C.	–	–	●
Without	1 N.O. + 3 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.C.	–	–	●
		4	N.C.	–	–	●
Without	4 N.C.	1	N.C	–	–	●
		2	N.C	–	–	●
		3	N.C	–	–	●
		4	N.C	–	–	●

● Position of contact block

Without transformer

Release arm
(3) (1)
(4) (2)
Operator
Lamp terminal

With transformer

Release arm
(2) (1)
Operator
Transformer

Fuji Electric
Command Illuminated 22mm Metal Selector Switches

Contact Operation Table

Selector Switch Type: AR22PL-6 (3-position)						
Transformer	Contact Arrangement	Contact Block		Operator Position		
		Mounting Position	Type	Left ↖	Center ↑	Right ↗
With/without	1 N.O.	1	N.O.	●	–	–
With/without	1 N.C.	1	N.C.	–	–	●
Without	1 N.O. + 1 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
With	1 N.O. + 1 N.C.	1	N.C.	–	–	●
		2	N.O.	●	–	–
With/without	2 N.O.	1	N.O.	●	–	–
		2	N.O.	●	–	–
With/without	2 N.C.	1	N.C.	–	–	●
		2	N.C.	–	–	●
Without	3 N.O.	1	N.O.	●	–	–
		2	N.O.	●	–	–
		3	N.O.	●	–	–
Without	2 N.O. + 1 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.O.	●	–	–
Without	1 N.O. + 2 N.C.	1	N.O.	●	–	–
		2	N.C.	–	–	●
		3	N.C.	–	–	●
Without	3 N.C.	1	N.C	–	–	●
		2	N.C	–	–	●
		3	N.C	–	–	●

● Position of contact block

Without transformer

With transformer

Fe Fuji Electric Command 22mm Pilot Lights

DR22E3L-E3GZA   DR22E3L-L3SZA

Command 22mm Pilot Lights					
Part Number	**Color**	**Price**	**Drawing Link**	**Lens**	**Lamp Voltage**
DR22E3L-E3RZA	Red	$-107l:	PDF	extended round	24V AC/DC without transformer
DR22E3L-E3GZA	Green	$107n:	PDF		
DR22E3L-E3YZA	Yellow	$107o:	PDF		
DR22E3L-E3SZA	Blue	$107p:	PDF		
DR22E3L-E3WZA	White	$107q:	PDF		
DR22E3L-L3RZA	Red	$107s:	PDF		115-127 VAC with transformer
DR22E3L-L3GZA	Green	$107d:	PDF		
DR22E3L-L3YZA	Yellow	$107e:	PDF		
DR22E3L-L3SZA	Blue	$;107f:	PDF		
DR22E3L-L3WZA	White	$107g:	PDF		
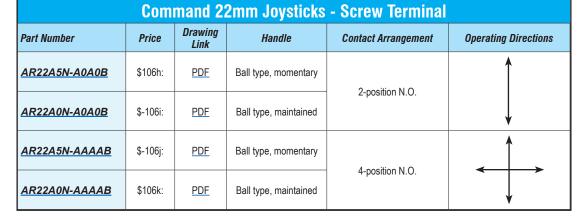
**DR22E3L-E3xxx
Terminal Layout**

X1
X1 → X1
X2 → X2
X2

Fuji Electric Command 22mm Joysticks

AR22A5N-A0A0B
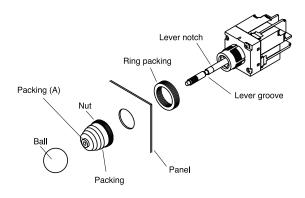
AR22A0N-AAAAB

Command 22mm Joysticks - Screw Terminal					
Part Number	*Price*	*Drawing Link*	*Handle*	*Contact Arrangement*	*Operating Directions*
AR22A5N-A0A0B	$106h:	PDF	Ball type, momentary	2-position N.O.	↕
AR22A0N-A0A0B	$-106i:	PDF	Ball type, maintained		
AR22A5N-AAAAB	$-106j:	PDF	Ball type, momentary	4-position N.O.	✛
AR22A0N-AAAAB	$106k:	PDF	Ball type, maintained		

Joystick selector switch mounting on panel
- Twist and remove the ball from the operator.
- If no locking nut is provided, loosen the nut and remove the switch after the packing part (A) shown in the illustration is stretched to the lever groove.
- Mount the switch in the order opposite of removal. Set the packing to the notch on the lever as a reference. Do not separate the nut from the packing.
- Use a torque wrench to tighten the nut from the front of the panel. Recommended tightening torque is 1 to 1.5 N·m.

Lever notch / Ring packing / Packing (A) / Nut / Ball / Packing / Panel / Lever groove

Fuji Electric **Command 22mm Buzzers**

DR22B8-EB

DR22B5-HB

Command 22mm Buzzers							
Part Number	*Qty*	*Price*	*Drawing Link*	*Sound Type*	*Sound Level*	*LED Indicator*	*Operating Voltage*
DR22B8-EB	1	$107h:	PDF	Intermittent/continuous electronic sound	80dB @ 0.1 m 60dB @ 1m	–	12-24V AC/DC
DR22B8-HB	1	$-107i:	PDF				100-110VAC
DR22B5-EB	1	$-107j:	PDF	Intermittent/continuous electronic sound	90dB @ 0.1 m 70dB @ 1m	Red	12-24V AC/DC
DR22B5-HB	1	$107k:	PDF				100-110VAC

Specifications		
	DR22B5	*DR22B8*
Rated insulation voltage	Without transformer: 60V AC/DC With transformer: 250VAC	
Durability	1000h	
Frequency	2.4 to 3.3 kHz	
Intermittent cycle	Approx. 170-cycle/min	
Dielectric strength	Without transformer: 1000VAC 1 minute With transformer: 2000VAC 1 minute	
Insulation resistance	100MΩ or more (500VDC megger)	
Pollution degree	3	
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm Constant: 16.7 Hz, double amplitude 3.0 mm	
Shock	Mechanical durability: 500 m/s²	
Ambient temperature	-20 to +60°C [-4 to +140°F] no condensation or no icing	
Storage temperature	-30 to +70°C [-22 to +158°F]	
Humidity	45 to 85% RH (within -5 to 40°C [23 to 104°F]	
Degree of protection	IP00	IP54

Current Consumption	
24V AC/DC	40mA AC, 25mA DC
110VAC	30mA AC

Fe Fuji Electric
Accessories for 22mm Command Series Pilot Devices

AR9B290

AR9B291

APX510-24R

Contact Blocks for Command Series 22mm Pushbuttons

Part Number	Qty	Price	Drawing Link	Color	Contacts
AR9B290	1	$c?3:	PDF	Blue	N.O.
AR9B291	1	$c?4:	PDF	Red	N.C.

Minimum current requirement AC/DC is 5mA

Terminal Layout

3 4
Terminal No.3, 4

1 2
Terminal No.1, 2

3 ——— 4
AR9B290

1 —|— 2
AR9B291

Max 6 contacts for non-illuminated momentary devices. Max 4 for alternate action non-illuminated devices.
Max 5 contacts for illuminated momentary devices.
Max 3 for alternate action illuminated devices.
Exceeding the maximum number of contacts could affect the mechanical durability of the operators.
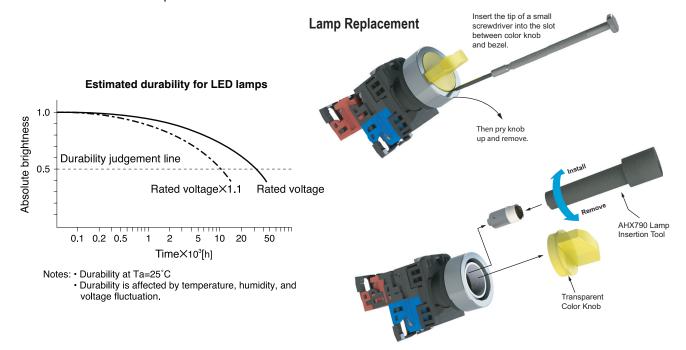
LED Bulbs for Command Series 22mm Pilot Devices

Part Number	Color	Qty	Price	Use With	Lamp Voltage	Current Consumption	Power Consumption	Lamp Durability
APX510-24R	Red	2	$1081:	AR22 / DR22 Series	24V AC/DC	12mA AC 11mA DC	0.8 W	30,000h
APX510-24G	Green	2	$1082:					
APX510-24Y	Yellow	2	$1083:					
APX510-24S	Blue	2	$1084:					
APX510-24O	Orange	2	$;107,:					

*Lamp base: Ba9s/13

Lamp Replacement

Insert the tip of a small screwdriver into the slot between color knob and bezel.

Then pry knob up and remove.

Install

Remove

AHX790 Lamp Insertion Tool

Transparent Color Knob

Estimated durability for LED lamps

Absolute brightness

1.0

0.5

Durability judgement line

Rated voltage×1.1   Rated voltage

0.1 0.2 0.5   1   2   5   10 20   50
Time×10³[h]

Notes: • Durability at Ta=25°C
       • Durability is affected by temperature, humidity, and voltage fluctuation.

Fe Fuji Electric

Accessories for 22mm Command Series Pilot Devices

AR9C016-R

AR9C021-R

AR9C011-G

AR9C012-S

Lenses for Command Series 22mm Illuminated Pushbuttons

Part Number	Color	Qty	Price	Drawing Link	Use With
AR9C016-R	Red	5	$107z:	PDF	AR22MOL, AR22M5L
AR9C021-R	Red	5	$;107]:	PDF	AR22VOR, AR22VOL
AR9C011-R	Red	5	$;107[:	PDF	AR22FOL AR22F5L
AR9C011-G	Green	5	$107_:	PDF	
AR9C011-Y	Yellow	5	$107#:	PDF	
AR9C011-S	Blue	5	$;107t:	PDF	
AR9C011-C	Clear	5	$107u:	PDF	
AR9C012-R	Red	5	$107v:	PDF	AR22EOL
AR9C012-G	Green	5	$107x:	PDF	
AR9C012-Y	Yellow	5	$107y:	PDF	
AR9C012-S	Blue	5	$;107!:	PDF	
AR9C012-C	Clear	5	$107?:	PDF	

AHX790

Tools and Lock Nut for Use with Command Series 22mm Pilot Devices

Part Number	Qty	Price	Drawing Link	Description
AHX790	1	$1088:	PDF	Bulb removal tool
AHX702	1	$1089:	N/A	Wrench/lamp removal tool
AR9A004	1	$108d:	N/A	Wrench
AR9R744	5	$108a:	PDF	Lock nut

AHX702

AR9A004

AR9R744

AHX790 Lamp Insertion Tool

Install

Remove

AR9A004 Lens Removal Tool

Translucent Legend Plate

Transparent Lens

Fuji Electric Command Series 22mm Pilot Devices Specifications

Specifications (Indoor Use)			
	Pushbuttons **Emergency stop pushbuttons** **Selector switches**	**Joysticks**	**Pilot Lights**
Rated thermal current (contact block)	A600 / P600	–	–
Mechanical durability	See durability table below	250,000 operations	–
Electrical durability	500,000 operations at 220V AC 6A 1 million operations at 220V AC 3A	100,000 operations at 220V AC 1A (Res. load)	–
Operating frequency	1200 operations/hour (On-load factor: 40%)		–
Operating force (Avg)	9N – Pushbuttons 30-45 N – Emergency stop pushbuttons 0.15 - 0.1 N·m – Selector switches	Less than 100N	
Positive opening operation	All functions incorporating a N.C. contact are positive-opening operation.		
Dielectric strength	2,500VAC, 1 minute (w/o transformer 2000VAC)	2000VAC, 1 minute (Pilot light with transformer: 2500 VAC, 1minute)	
Insulation resistance	100MΩ or more (500VDC megger)		
Rated impulse dielectric strength	6kV	–	6kV
Conditional short-circuit current	1000A		–
Short-circuit protective device	Fuse 15A (recommended, not supplied)	Fuse 1A (recommended, not supplied)	–
Pollution degree	3		
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm* / Constant: 16.7 Hz, double amplitude 3mm		
Shock	Malfunction durability: 100 m/s² ** / Mechanical durability: 500 m/s²		Mechanical durability: 500 m/s²
Ambient temperature (no condensation or no icing)	-20 to +70°C [-4 to +158°F] Illuminated type: -20 to -50°C [-4 to -58°F]	-5 to +60°C [+23 to +140°F]	-2 to +50°C [-4 to +122°F]
Temperature ratings	Storage: -40 to +80°C [-40 to +176°F]		
Humidity	45 to 85% RH (within -5° to +40°C)		
Degree of protection	IP65		
Initial contact resistance	≤ 50mΩ	–	–
Terminal markings	IEC 60445	–	–
Connections	AWG 18 to AWG 14; Stripping length: 8mm to 11mm / Tightening torque: 0.8 to 1.0 N·m, 7.1 in·lb to 8.8 in·lb		
Contacts operation	Self-cleaning types. Slow action. Positive opening.		
Operation frequency	1,200 cycle/hour (Application ratio 40%)	–	–
Utilization category/contact ratings	AC-15: 24VAC at 6A, 110VAC at 6A DC-13: 24VDC at 4A, 110VDC at 1.3 A	AC-1: 110VAC at 0.3 A DC-13: 24VDC at 0.7 A, 110VDC at 0.15 A	–
Rated insulation voltage	600V AC/DC***	250V AC/DC	250V AC/DC (w/transformer 600VAC)
Materials	Enclosure: Polyamide / Contacts: silver, nickel		
Standards	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1		
Approvals	UL file E44592, CSA file LR20479		

* Emergency stop type: 10 to 500 Hz, double amplitude 0.7mm(acceleration 50m/s²), according to test condition of EN60947-5-5 (1998)
** Emergency stop type: 150 m/s²   ***Illuminated type without transformer

Mechanical Durability		
		Operations
Pushbutton switch **Illuminated pushbutton switch** **E-stop pushbutton switch** **E-stop illuminated pushbutton**	Momentary action Alternate action Push-lock, turn-reset Push-lock, pull-reset	5 million 1 million 100,000 30,000
Selector switch	Maintained 1, 2, 3, 4-contact Maintained 5, 6-contact Spring return, spring/manual return	1 million 500,000 200,000

Illuminated selector switch	Maintained
	Without transformer 1, 2, 3-contact
	                4-contact
	With transformer 1, 2-contact
	                3-contact
	Spring return, spring/manual return
		1 million
		500,000
		1 million
		500,000
		200,000

Note: Key insertion/removal durability for selector switch key types   • Key type 10,000

22mm Pilot Devices Cutouts

AR22 pilot devices can be mounted in either 22.3 or 25.5 mm diameter holes as shown in the figure below without any extra adapter.

Note: If key washer or legend plate is not used, 3.2 mm-wide location holes do not need to be cut out.

Command Series 22mm Emergency Stop Pushbuttons Specifications

Fuji Electric

22mm Emergency Stop Pushbuttons Specifications (Indoor Use)

Series	AR22 - V0R, V7R, Q2R, V0L	AR22 VQR, VPR, VQL
Rated thermal current (contact block)	A600 / P600	B300 / R300
Mechanical durability	See durability table	250,000 operations
Electrical durability	500,000 operations at 220 VAC 6A 1 million operations at 220 VAC 3A	100,000 operations
Operating frequency	1200 operations/hour (On-load factor: 40%)	900 operations/hour (On-load factor: 40%)
Operating force (Avg)	30-45N	Push to Lock: 40N, Pull to reset: 33N Turn to reset: 0.3 N·m
Positive opening operation	All functions incorporating a N.C. contact are positive-opening operation.	
Dielectric strength	2,500VAC, 1 minute (w/o transformer 2000VAC)	2000 VAC 1 min
Insulation resistance	100MΩ or more (500VDC megger)	
Rated impulse dielectric strength	6kV	2.5 kV
Conditional short-circuit current	1000A	
Short-circuit protective device	Fuse 15A (recommended, not supplied)	Fuse 10A
Pollution degree	3	
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm* Constant: 16.7 Hz, double amplitude 3mm	10 to 55Hz, double amplitude 0.7 mm/s²
Shock	Malfunction durability: 100 m/s² ** Mechanical durability: 500 m/s²	Malfunction:150m/s² Durability: 1000 m/s²
Ambient temperature (no condensation or no icing)	Non-illuminated -20 to +70°C [-4 to +158°F] Illuminated -20 to -50°C [-4 to -58°F]	Non-illuminated -20 to +60°C [-4 to 140°F] Illuminated -20 to +50°C [-4 to 122°F]
Temperature ratings	Storage: -40 to +80°C [-40 to +176°F]	
Humidity	45 to 85% RH (within -5° to +40°C)	
Degree of protection	IP65	
Initial contact resistance	≤ 50mΩ	
Terminal markings	IEC 60445	
Connections	AWG 18 to 14; Stripping length: 8mm to 11mm Tightening torque: 0.8 to 1.0 N·m, 7.1 to 8.8 in·lb	Stranded wire: up to 1.25 mm², 24 to 16 AWG-CU Solid wire: up to ø1.2 mm, 24 to 16 AWG-CU Tightening torque: 1.0 to 1.5 N·m, 8.8 to 13.2 in·lb
Contacts operation	Self-cleaning types. Slow action. Positive opening.	
Operation frequency	1,200 cycle/hour (Application ratio 40%)	900 operations/hour (On-lard factor: 40 %)
Utilization category/ contact ratings	AC-15: 24VAC at 6A, 110VAC at 6A DC-13: 24VDC at 4A, 110VDC at 1.3 A	DC-13: 24VDC at 1A DC-12 24VDC at 2A B300 120VAC Make 30A Break 3A 240VAC Make 15A Break 1.5 A
Rated insulation voltage	600 VAC/VDC***	250 VAC/VDC
Materials	Enclosure: Polyamide / Contacts: silver, nickel	
Standards	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1	
Approvals	UL file E44592, CSA file LR20479	

* Emergency stop type: 10 to 500 Hz, double amplitude 0.7mm (acceleration 50m/s²), according to test condition of EN60947-5-5 (1998)
** Emergency stop type: 150 m/s²
***Illuminated type without transformer
To obtain the most current agency approval information, see the Agency Compliance & Certifications checklist section on the specific part number's web page.
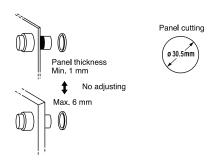
Fe Fuji Electric 30mm Pilot Devices Overview

Pushbuttons, Selectors, Pilot Lights, Joysticks, Buzzers

Fuji Electric AR30 pilot devices can be mounted on panels up to 6mm thick by securing the operator with a locking nut from behind the panel without needing any adjustment.

Easy mounting
Fuji Electric AR30 pilot devices can be mounted on panels between 1 and 6mm thick and are mountable in panel cutouts of 30.5 mm.
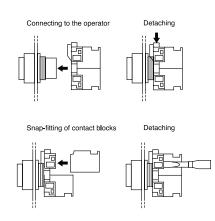
Panel cutting
ø 30.5mm

Panel thickness
Min. 1 mm

No adjusting

Max. 6 mm

Wiring
These pilot devices can be wired in both vertical and lateral directions making wiring in narrow spaces easier. Contact block color coding makes wiring even easier.

1N.O. Blue, 1N.C. Red

Lamp terminal and transformer unit: black

Quick contact block and transformer replacement
Fuji AR30 pilot devices have a snap-on mounting that makes replacing or adding a contact block and transformer unit easier.

Connecting to the operator | Detaching

Snap-fitting of contact blocks | Detaching

Pushbuttons

AR30F0R-01RZC

Illuminated Pushbuttons

AR30E0L-10L3GZC

Pilot Lights

DR30D0L-L9SZC

E-Stop Pushbuttons

AR30Q2R-01RZC

Selector Switches

AR30PR-210BZC

Buzzers

DR30B5-EBZC

Short depth
Fuji AR30 pilot devices are designed to occupy less space than traditional 30mm devices.

Safety
AR30 pilot devices include terminal covers for added safety and security. Emergency stop pushbuttons include a trigger action mechanism that prevents the contacts from moving until the button is pushed and locked

Protection
AR30 pilot devices feature oil- and dust-tight operator construction (IP65), except for buzzers DR30B5 (IP00).

TO OBTAIN THE MOST CURRENT AGENCY APPROVAL INFORMATION, SEE THE AGENCY COMPLIANCE & CERTIFICATIONS CHECKLIST SECTION ON THE SPECIFIC PART NUMBER'S WEB PAGE.

Fⓔ Fuji Electric

Command Non-Illuminated 30mm Metal Pushbuttons

Non-Illuminated Metal Mushroom-Style Pushbuttons

These pushbuttons feature large 65mm diameter plastic actuator and mount in standard 30.5 mm hole. All pushbuttons include operator, support base and contact block(s).

All switches in this series use replacement contact block AR9B290 (Blue, N.O.) or AR9B291 (Red, N.C.), sold separately in packages of one.

AR30B0R-10G

Command Non-Illuminated 30mm Metal Pushbuttons						
Part Number	*Color*	*Price*	*Drawing Link*	*Operator*	*Material*	*Contacts*
AR30B0R-10G	Green	$0c?7:	PDF	Momentary 65mm giant mushroom head	Metal	N.O.
AR30B0R-10B	Black	$0c?6:	PDF			N.O.
AR30B0R-10Y	Yellow	$0c?8:	PDF			N.O.
AR30B0R-01R	Red	$0c?5:	PDF			N.C.
AR30B0R-11G	Green	$0c?a:	PDF			1 N.O. + 1 N.C.
AR30B0R-11B	Black	$0c?9:	PDF			1 N.O. + 1 N.C.
AR30B0R-11Y	Yellow	$0c?c:	PDF			1 N.O. + 1 N.C.
AR30B0R-11R	Red	$0c?b:	PDF			1 N.O. + 1 N.C.

Fe Fuji Electric

Command Non-Illuminated 30mm Metal and Plastic Pushbuttons

AR30F0R-10GZC

AR30E0R-10RZC

AR30M0R-10SZC

Command Non-Illuminated 30mm Pushbuttons						
Part Number	*Color*	*Price*	*Drawing Link*	*Operator*	*Material*	*Contacts*
AR30F0R-10GZC	Green	$;2cu!:	PDF	35mm momentary flush round head	Base: Plastic Bezel: Metal	N.O.
AR30F0R-10BZC	Black	$2cu?:	PDF			N.O.
AR30F0R-10RZC	Red	$;2cu,:	PDF			N.O.
AR30F0R-01RZC	Red	$2cv0:	PDF			N.C.
AR30F0R-10SZC	Blue	$2cv1:	PDF			N.O.
AR30F0R-10WZC	White	$2cuz:	PDF			N.O.
AR30F0R-10YZC	Yellow	$;2cu]:	PDF			N.O.
AR30E0R-10GZC	Green	$;2cu[:	PDF	35mm momentary extended round head		N.O.
AR30E0R-10BZC	Black	$2cu_:	PDF			N.O.
AR30E0R-10RZC	Red	$2cu#:	PDF			N.O.
AR30E0R-01RZC	Red	$2cv2:	PDF			N.C.
AR30E0R-10SZC	Blue	$2cv3:	PDF			N.O.
AR30E0R-10WZC	White	$2cv4:	PDF			N.O.
AR30E0R-10YZC	Yellow	$2cv5:	PDF			N.O.
AR30M0R-10GZC	Green	$2cv6:	PDF	40mm momentary mushroom round head		N.O.
AR30M0R-10BZC	Black	$2cv7:	PDF			N.O.
AR30M0R-10RZC	Red	$2cv8:	PDF			N.O.
AR30M0R-01RZC	Red	$2cv9:	PDF			N.C.
AR30M0R-10SZC	Blue	$2cva:	PDF			N.O.
AR30M0R-10WZC	White	$2cvb:	PDF			N.O.
AR30M0R-10YZC	Yellow	$2cvc:	PDF			N.O.

Fuji Electric
Command Illuminated 30mm Metal and Plastic Pushbuttons

AR30Q7L-11E3RZC

AR30E0L-10E3AZC

AR30G2L-10L3GZC
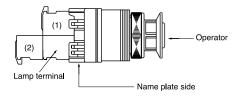
AR30G2L-01E3RZC

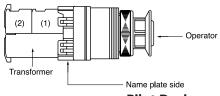| Command LED Illuminated 30mm Pushbuttons							
Part Number	Color	Price	Drawing Link	Operator	Material	Lamp Voltage	Contacts*
AR30Q7L-11E3RZC	Red	$;02cvf:	PDF	35mm push-pull/ momentary mushroom round head	Base: Plastic Bezel: Metal	24V AC/DC (without transformer)	1 N.O. + 1 N.C.
AR30Q7L-11E3GZC	Green	$02cvg:	PDF				1 N.O. + 1 N.C.
AR30Q7L-11L3RZC	Red	$02cvh:	PDF			115-127 VAC (with transformer)	1 N.O. + 1 N.C.
AR30Q7L-11L3GZC	Green	$-02cvi:	PDF				1 N.O. + 1 N.C.
AR30E0L-10E3RZC	Red	$2cx0:	PDF	35mm momentary extended round head		24V AC/DC (without transformer)	N.O.
AR30E0L-01E3RZC	Red	$2cx1:	PDF				N.C.
AR30E0L-10E3GZC	Green	$2cx2:	PDF				N.O.
AR30E0L-10E3AZC	Orange	$2cx3:	PDF				N.O.
AR30E0L-10E3WZC	White	$2cx4:	PDF				N.O.
AR30E0L-10E3YZC	Yellow	$2cx5:	PDF				N.O.
AR30E0L-10E3SZC	Blue	$2cx6:	PDF				N.O.
AR30E0L-10L3RZC	Red	$;2cv]:	PDF			115-127 VAC (with transformer)	N.O.
AR30E0L-01L3RZC	Red	$;2cv[:	PDF				N.C.
AR30E0L-10L3GZC	Green	$2cv_:	PDF				N.O.
AR30E0L-10L3AZC	Orange	$2cv#:	PDF				N.O.
AR30E0L-10L3WZC	White	$;2cv!:	PDF				N.O.
AR30E0L-10L3YZC	Yellow	$2cv?:	PDF				N.O.
AR30E0L-10L3SZC	Blue	$;2cv,:	PDF				N.O.
AR30G2L-10E3RZC	Red	$2cx7:	PDF	35mm momentary extended with full guard, round head		24V AC/DC (without transformer)	N.O.
AR30G2L-01E3RZC	Red	$2cx8:	PDF				N.C.
AR30G2L-10E3GZC	Green	$2cx9:	PDF				N.O.
AR30G2L-10E3AZC	Orange	$2cxa:	PDF				N.O.
AR30G2L-10E3WZC	White	$2cxb:	PDF				N.O.
AR30G2L-10E3YZC	Yellow	$2cxc:	PDF				N.O.
AR30G2L-10E3SZC	Blue	$2cxd:	PDF				N.O.
AR30G2L-10L3RZC	Red	$2cxe:	PDF			115-127 VAC (with transformer)	N.O.
AR30G2L-01L3RZC	Red	$;2cxf:	PDF				N.C.
AR30G2L-10L3GZC	Green	$2cxg:	PDF				N.O.
AR30G2L-10L3AZC	Orange	$2cxh:	PDF				N.O.
AR30G2L-10L3WZC	White	$-2cxi:	PDF				N.O.
AR30G2L-10L3YZC	Yellow	$-2cxj:	PDF				N.O.
AR30G2L-10L3SZC	Blue	$2cxk:	PDF				N.O.

* AR30Q7L series pushbuttons include 2 N.C. contacts. When assembled, one of the N.C. contacts are held open, becoming an N.O. contact.

AR30Q7L Contact Operation				
Contact Block Mounting Position		Button Position		
No.	Type	Pull	Free	Push
(1)	N.C.	X	O	O
(2)	N.C.	X	X	O
O = Contact Open, X = Contact Closed				

AR30Q7L Contact Position without Transformer

(1)
(2)
Lamp terminal
Operator
Name plate side

AR30Q7L Contact Position with Transformer

(2) (1)
Operator
Transformer
Name plate side

Fuji Electric

Command 30mm Emergency Stop Pushbuttons

AR30VPR-01R

AR30VPL-01E3R

AR30VPL-12EAR

UL EMERGENCY STOP DEVICE LISTED

■ Support for Padlock

● To avoid a restart due to careless reset of a pushbutton switch in case of emergency stop, make use of Padlock or HASP.

Padlock
Equivalent of 6835KARFRED manufactured by Master Lock
Up to two mountable

HASP
Equivalent of 420 manufactured by Master Lock
Up to two mountable

HASP
When one is mounted at the center

The total mass should be 1500 g or less.

Command 30mm Emergency Stop Pushbuttons

Part Number	Price	Drawing Link	Contacts	Operator	Voltage	Bulb Type	Action	Legend	Protection	Material
AR30VPR-01R	$--5nij:	PDF	(1) N.C.	44.0 mm, mushroom, Red padlock support	—	—	Push to lock, turn to reset	Arrow	IP65	Base: Plastic Bezel: Metal
AR30VPR-12R	$-5nik:	PDF	(1) N.O./(2) N.C.							
AR30VPL-01E3R	$--5nil:	PDF	(1) N.C.		24 VAC/VDC full voltage	LED illuminated				
AR30VPL-12E3R	$-5nin:	PDF	(1) N.O./(2) N.C.							
AR30VPL-01EAR	$-5nio:	PDF	(1) N.C.			Interlocked LED illuminated				
AR30VPL-12EAR	$-05nip:	PDF	(1) N.O./(2) N.C.							

AR30Q2R-01RZC

AR30Q2R-11RZC

AR30V0L-01E3RZC

AR30V0L-01L3RZC

AR30V0R-01RZC

Command 30mm Emergency Stop Pushbuttons

Part Number	Price	Drawing Link	Contacts	Operator	Voltage	Bulb Type	Action	Legend	Protection	Material
AR30Q2R-01RZC	$2cvd:	PDF	(1) N.C.	35.0 mm, Mushroom, Red	—	—	Push to lock, pull to reset	—	IP65	Base: Plastic Bezel: Metal
AR30Q2R-11RZC	$2cve:	PDF	(1) N.O./(1) N.C.							
AR30V0L-01E3RZC	$2cz#:	PDF	(1) N.C.	40.0 mm, Mushroom, Red	24 VAC/VDC	LED illuminated	Twist-to-release	Arrow		
AR30V0L-01L3RZC	$;2cz!:	PDF	(1) N.C.		115-127 VAC					
AR30V0R-01RZC	$2cz?:	PDF	(1) N.C.		—	—				

Fⓔ Fuji Electric Command Non-Illuminated 30mm Metal Selector Switches
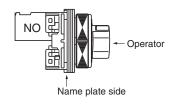
**Knob Operator
AR30PR Series**

**Lever Operator
AR30WR Series**

**Key Operator
AR30JR Series**

Command Non-Illuminated 30mm Metal 2-Position Selector Switches

Part Number	Price	Drawing Link	Operator	Operation	Key Removable Position*	Contacts
AR30PR-210BZC	$-2cvj:	PDF	Knob	2-pos maintained	–	N.O.
AR30PR-010BZC	$2cvk:	PDF	Knob	2-pos spring return from right		N.O.
AR30WR-210BZC	$2cvs:	PDF	Lever	2-pos maintained		N.O.
AR30WR-010BZC	$;2cvt:	PDF	Lever	2-pos spring return from right		N.O.
AR30JR-0A10AZC	$2czh:	PDF	Key	2-pos spring return from right	left	N.O.
AR30JR-2B10AZC	$-2czi:	PDF	Key	2-pos maintained	left and right	N.O.

* Keys are only removable in the listed maintained or "at-rest" positions.

Contact Block Mounting Position		Operator 2-Position	
Top	Bottom		
N.O.	------	O	X

NO ← Operator

Name plate side

2-pos Contact Positions

Command Non-Illuminated 30mm Metal 3-Position Selector Switches

Part Number	Price	Drawing Link	Operator	Operation	Key Removable Position*	Contacts
AR30PR-311BZC	$-2cvl:	PDF	Knob	3-pos maintained	–	1 N.O. + 1 N.C.
AR30PR-711BZC	$2cvn:	PDF	Knob	3-pos spring return from right, manual return from left		1 N.O. + 1 N.C.
AR30PR-120BZC	$2cvo:	PDF	Knob	3-pos spring return from left and right		2 N.O.
AR30WR-311BZC	$2cvu:	PDF	Lever	3-pos maintained		1 N.O. + 1 N.C.
AR30WR-711BZC	$2cvv:	PDF	Lever	3-pos spring return from right, manual return from left		1 N.O. + 1 N.C.
AR30WR-120BZC	$2cvx:	PDF	Lever	3-pos spring return from left and right		2 N.O.
AR30JR-1E22AZC	$-2czj:	PDF	Key	3-pos spring return from left and right	center	2 N.O. + 2 N.C.
AR30JR-3C22AZC	$2czk:	PDF	Key	3-pos maintained	left, right, and center	2 N.O. + 2 N.C.

* Keys are only removable in the listed maintained or "at-rest" positions.

NO NC ← Operator
NO NC

Name plate side

3-pos Contact Positions

Contact Block Mounting Position		Operator 3-Position		
Top	Bottom			
N.O.	------	X	O	O
N.C.	------	O	O	X
------	N.O.	X	O	O
------	N.C.	O	O	X
X = On, O = Off				
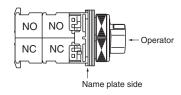
Part Numbers:
AR30PR-711BZC
AR30WR-711BZC
AR30JR-1E22AZC
AR30JR-3C22AZC

Continue on following page.
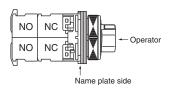
Fuji Electric Command Non-Illuminated 30mm Metal Selector Switches

Continued from previous page.

Part Numbers:
AR30PR-311BZC
AR30WR-311BZC

NO NO
NC NC
— Operator
Name plate side

Part Numbers:
AR30PR-120BZC
AR30WR-120BZC

NO NC
NO NC
— Operator
Name plate side

3-pos Contact Positions

Contact Block Mounting Position		Operator 3-Position		
Top	Bottom	↖	↑	↗
N.O.	------	X	O	O
N.O.	------	X	O	O
------	N.C.	O	O	X
------	N.C.	O	O	X
X = On, O = Off				

Contact Block Mounting Position		Operator 3-Position		
Top	Bottom	↖	↑	↗
N.O.	------	O	O	X
N.C.	------	X	O	O
------	N.O.	X	X	O
------	N.C.	O	X	X
X = On, O = Off				

Command Non-Illuminated 30mm Metal 4-Position Selector Switches

Part Number	Price	Drawing Link	Operator	Operation	Contacts
AR30PCR-441CBZC	$2cvp:	PDF	Knob	4-pos maintained	2 N.O. + 2 N.C.
AR30WCR-441CBZC	$2cvy:	PDF	Lever	4-pos maintained	2 N.O. + 2 N.C.

Contact Block Mounting Position		Operator 4-Position (40 degree sweep)			
Top	Bottom	↖	↖	↑	↗
N.C.	------	O	O	X	O
N.O.	------	O	X	O	O
------	N.C.	X	O	O	O
------	N.O.	O	O	O	X
X = On, O = Off					

NO NC
NO NC
— Operator
Name plate side

4- and 5-pos Contact Positions

Command Non-Illuminated 30mm Metal 5-Position Selector Switches

Part Number	Price	Drawing Link	Operator	Operation	Contacts
AR30PCR-551CBZC	$2cvq:	PDF	Knob	5-pos maintained	2 N.O. + 2 N.C.
AR30WCR-551CBZC	$2cvz:	PDF	Lever	5-pos maintained	2 N.O. + 2 N.C.

Contact Block Mounting Position		Operator 5-Position (30 degree sweep)				
Top	Bottom	↖	↖	↑	↗	↗
N.O.	------	X	O	O	O	O
N.C.	------	O	O	O	X	O
------	N.O.	O	O	O	O	X
------	N.C	O	X	O	O	O
X = On, O = Off						

Fuji Electric Command LED Illuminated 30mm Metal Selector Switches

AR30PL-010E3RZC

AR30PL-311E3GZC
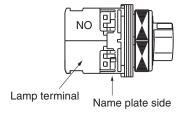
AR30PL-210L3SZC
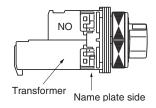
Command LED Illuminated 30mm Metal 2-Position Selector Switches

Part Number	Color	Price	Drawing Link	Operation	Contacts	Lamp Voltage
AR30PL-010E3RZC	Red	$2cyg:	PDF	2-pos spring return from right	N.O.	24V AC/DC
AR30PL-010E3GZC	Green	$;2cyf:	PDF			
AR30PL-010E3WZC	White	$2cyh:	PDF			
AR30PL-010E3SZC	Blue	$-2cyi:	PDF			
AR30PL-010E3YZC	Yellow	$-2cyj:	PDF			
AR30PL-010E3AZC	Orange	$2cyk:	PDF			
AR30PL-210E3RZC	Red	$2cya:	PDF	2-pos maintained	N.O.	24V AC/DC
AR30PL-210E3GZC	Green	$2cy9:	PDF			
AR30PL-210E3WZC	White	$2cyb:	PDF			
AR30PL-210E3SZC	Blue	$2cyc:	PDF			
AR30PL-210E3YZC	Yellow	$2cyd:	PDF			
AR30PL-210E3AZC	Orange	$2cye:	PDF			
AR30PL-010L3RZC	Red	$2cyu:	PDF	2-pos spring return from right	N.O.	115-127 VAC
AR30PL-010L3GZC	Green	$;2cyt:	PDF			
AR30PL-010L3WZC	White	$2cyv:	PDF			
AR30PL-010L3SZC	Blue	$2cyx:	PDF			
AR30PL-010L3YZC	Yellow	$2cyy:	PDF			
AR30PL-010L3AZC	Orange	$2cyz:	PDF			
AR30PL-210L3RZC	Red	$2cyn:	PDF	2-pos maintained	N.O.	115-127 VAC
AR30PL-210L3GZC	Green	$-2cyl:	PDF			
AR30PL-210L3WZC	White	$2cyo:	PDF			
AR30PL-210L3SZC	Blue	$2cyp:	PDF			
AR30PL-210L3YZC	Yellow	$2cyq:	PDF			
AR30PL-210L3AZC	Orange	$2cys:	PDF			

Contact Block Mounting Position		Operator 2-Position	
Top	Bottom	↖	↗
N.O.	------	O	X
X = On, O = Off			

Note: Selector switches with transformers do not allow contact blocks in the bottom positions.

NO

Lamp terminal   Name plate side

2-pos Contact Positions

NO

Transformer   Name plate side

2-pos Contact Positions (with transformer)
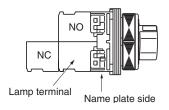
Fe Fuji Electric ## Command LED Illuminated 30mm Metal Selector Switches

Command LED Illuminated 30mm Metal 3-Position Selector Switches						
Part Number	Color	Price	Drawing Link	Operation	Contacts	Lamp Voltage
AR30PL-311E3RZC	Red	$;2cy[:	PDF	3-position maintained	1 N.O. + 1 N.C.	24V AC/DC
AR30PL-311E3GZC	Green	$;2cy]:	PDF			
AR30PL-311E3WZC	White	$2cy_:	PDF			
AR30PL-311E3SZC	Blue	$2cy#:	PDF			
AR30PL-311E3YZC	Yellow	$;2cy!:	PDF			
AR30PL-311E3AZC	Orange	$2cy?:	PDF			
AR30PL-611E3RZC	Red	$2cz0:	PDF	3-position spring return from left to center / manual return from right to center	1 N.O. + 1 N.C.	24V AC/DC
AR30PL-611E3GZC	Green	$;2cy,:	PDF			
AR30PL-611E3WZC	White	$2cz1:	PDF			
AR30PL-611E3SZC	Blue	$2cz2:	PDF			
AR30PL-611E3YZC	Yellow	$2cz3:	PDF			
AR30PL-611E3AZC	Orange	$2cz4:	PDF			
AR30PL-311L3RZC	Red	$2cz6:	PDF	3-position maintained	1 N.O. + 1 N.C.	115-127 VAC
AR30PL-311L3GZC	Green	$2cz5:	PDF			
AR30PL-311L3WZC	White	$2cz7:	PDF			
AR30PL-311L3SZC	Blue	$2cz8:	PDF			
AR30PL-311L3YZC	Yellow	$2cz9:	PDF			
AR30PL-311L3AZC	Orange	$2cza:	PDF			
AR30PL-611L3RZC	Red	$2czc:	PDF	3-position spring return from left to center / manual return from right to center	1 N.O. + 1 N.C.	115-127 VAC
AR30PL-611L3GZC	Green	$2czb:	PDF			
AR30PL-611L3WZC	White	$2czd:	PDF			
AR30PL-611L3SZC	Blue	$2cze:	PDF			
AR30PL-611L3YZC	Yellow	$;2czf:	PDF			
AR30PL-611L3AZC	Orange	$2czg:	PDF			
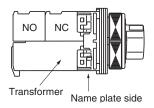
Contact Block Mounting Position		Operator 3-Position		
Top	Bottom	↖	↑	↗
N.O.	------	X	O	O
N.C.*	------	O	O	X
------	N.C.**	O	O	X
X = On, O = Off				

*Models with transformers
**Models without transformers
Note: Selector switches with transformers do not allow contact blocks in the bottom position.

3-pos Contact Positions

3-pos Contact Positions (with transformer)

Fe Fuji Electric Command 30mm Indicating Lights

DR30D0L-E3AZC

DR30E3L-E3SZC

Command 30mm Indicating Lights					
Part Number	*Color*	*Price*	*Drawing Link*	*Lens*	*Lamp Voltage*
DR30D0L-E3AZC	Orange	$;2cxt:	PDF	Dome	24V AC/DC without transformer
DR30D0L-E3SZC	Blue	$2cxu:	PDF		
DR30D0L-E3GZC	Green	$2cxv:	PDF		
DR30D0L-E3RZC	Red	$2cxx:	PDF		
DR30D0L-E3WZC	White	$2cxy:	PDF		
DR30D0L-E3YZC	Yellow	$2cxz:	PDF		
DR30D0L-L9AZC	Orange	$-2cxl:	PDF		115-127 VAC with transformer
DR30D0L-L9SZC	Blue	$2cxn:	PDF		
DR30D0L-L9GZC	Green	$2cxo:	PDF		
DR30D0L-L9RZC	Red	$2cxp:	PDF		
DR30D0L-L9WZC	White	$2cxq:	PDF		
DR30D0L-L9YZC	Yellow	$2cxs:	PDF		
DR30E3L-E3GZC	Green	$;2cx]:	PDF	Extended round	24V AC/DC without transformer
DR30E3L-E3RZC	Red	$;2cx[:	PDF		
DR30E3L-E3WZC	White	$2cx_:	PDF		
DR30E3L-E3YZC	Yellow	$2cx#:	PDF		
DR30E3L-E3AZC	Orange	$;2cx!:	PDF		
DR30E3L-E3SZC	Blue	$2cx?:	PDF		
DR30E3L-L3GZC	Green	$;2cx,:	PDF		115-127 VAC with transformer
DR30E3L-L3RZC	Red	$2cy0:	PDF		
DR30E3L-L3WZC	White	$2cy1:	PDF		
DR30E3L-L3YZC	Yellow	$2cy2:	PDF		
DR30E3L-L3AZC	Orange	$2cy3:	PDF		
DR30E3L-L3SZC	Blue	$2cy4:	PDF		

Fuji Electric Command 30mm Joysticks

AR30A0N-A0A0BZC

AR30A0N-AAAABZC
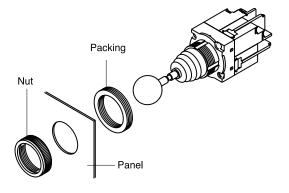
Command 30mm Joysticks - Screw Terminal					
Part Number	Price	Drawing Link	Handle	Contact Arrangement	Operating Directions
AR30A5N-A0A0BZC	$2cy5:	PDF	Ball type, momentary	2-position N.O.	↕
AR30A0N-A0A0BZC	$2cy6:	PDF	Ball type, maintained		
AR30A5N-AAAABZC	$2cy7:	PDF	Ball type, momentary	4-position N.O.	✛
AR30A0N-AAAABZC	$2cy8:	PDF	Ball type, maintained		

Joystick selector switch mounting on panel

- Twist and remove the ball from the operator.
- If no locking nut is provided, loosen the nut and remove the switch after the packing part (A) shown in the illustration is stretched to the lever groove.
- Mount the switch in the order opposite of removal. Set the packing to the notch on the lever as a reference. Do not separate the nut from the packing.
- Tighten the nut from the front of the panel.

Note: Recommended tightening torque is 1 to 1.5 N·m.

Packing

Nut

Panel

Fe Fuji Electric Command 30mm Buzzers

DR30B5-EBZC

DR30B5-HBZC

Command 30mm Buzzers							
Part Number	*Qty*	*Price*	*Drawing Link*	*Sound Type*	*Sound Level*	*LED Indicator*	*Operating Voltage*
DR30B5-EBZC	1	$;2cz[:	PDF	Intermittent/continuous electronic sound	90dB @ 0.1 m 70dB @ 1m	Red	12-24V AC/DC
DR30B5-HBZC	1	$2cz_:	PDF				100-110VAC

Specifications	
DR30B5-xBZC	
Rated insulation voltage	Without transformer: 60V AC/DC With transformer: 250VAC
Durability	1000h
Frequency	2.4 to 3.3 kHz
Intermittent cycle	Approx. 170-cycle/min
Dielectric strength	Without transformer: 1000VAC 1 minute With transformer: 2000VAC 1 minute
Insulation resistance	100MΩ or more (500VDC megger)
Pollution degree	3
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1 mm Constant: 16.7 Hz, double amplitude 3.0 mm
Shock	Mechanical durability: 500 m/s²
Ambient temperature	-20 to +60°C [-4 to +140°F] no condensation or no icing
Storage temperature	-30 to +70°C [-22 to +158°F]
Humidity	45 to 85% RH (within -5 to 40°C [23 to 104°F])
Degree of protection	IP00

Current Consumption	
24V AC/DC	40mA AC, 25mA DC
110VAC	30mA AC

Fuji Electric
Accessories for 30mm Command Series Pilot Devices

AHX177-00

AHX177-0B

Legend Plates for Command Series 30mm Devices					
Part Number	**Price**	**Drawing Link**	**Legend**	**Material**	**Color**
AHX177-00	$;2czt:	PDF	Blank	Brass	Silver field, silver background
AHX177-0B	$2czu:	PDF	OFF		Silver field, silver background, black text
AHX177-0A	$2czv:	PDF	ON		
AHX177-0C	$2czx:	PDF	START		
AHX177-0D	$2czy:	PDF	STOP		
AHX177-2A	$2czz:	PDF	OFF-ON		
AHX720-5A	$;2cz]:	PDF	EMERGENCY STOP	Aluminum	Yellow field, yellow background, black text

AHX720-5A

Tools and Lock Nut for Use with Command Series 30mm Pilot Devices		
Part Number	**Price**	**Description**
AR9A006	$-2czl:	Fuji Electric mounting wrench. For use with AR22, AR30, DR22 and DR30 series pushbuttons, switches, indicators and buzzers.
AR9R055	$2czn:	Fuji Electric guard ring, replacement, 30mm, metal. Package of 5. For use with AR30G2L series pushbuttons.
AHX082	$2czo:	Fuji Electric key washer, replacement, 30mm, metal. Package of 5. For use with AR30 and DR30 series pushbuttons, switches, indicators and buzzers.
AHX088	$2czp:	Fuji Electric lock nut, replacement, 30mm, metal. Package of 5. For use with AR30F0R, DR30D0L, E0L, E0R and Q7L series pushbuttons, switches and indicators.
AHX093	$2czq:	Fuji Electric lock nut, replacement, 30mm, metal. Package of 5. For use with AR30M0R, A_N, JR, PL, PR, Q2R and WR series pushbuttons, switches and indicators.
AHX282	$2czs:	Fuji Electric sealing/spacer washer, replacement, 30mm. Package of 5. For use with AR30 and DR30 series pushbuttons, switches, indicators and buzzers.

AR9R055

AHX082

AHX088

AHX282

Fe Fuji Electric # Accessories for 30mm Command Series Pilot Devices

Contact Blocks

AR9B290

AR9B291
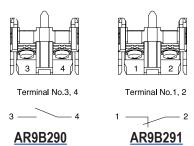
Contact Blocks for Command Series 30mm Pushbuttons					
Part Number	*Qty*	*Price*	*Drawing Link*	*Color*	*Contacts*
AR9B290	1	$c?3:	PDF	Blue	N.O.
AR9B291	1	$c?4:	PDF	Red	N.C.

Minimum current requirement AC/DC is 5mA

Terminal Layout

Terminal No.3, 4

Terminal No.1, 2

3 —— 4

1 —— 2

AR9B290

AR9B291

Max 6 contacts for non-illuminated momentary devices. Max 4 for alternate action non-illuminated devices.
Max 5 contacts for illuminated momentary devices.
Max 3 for alternate action illuminated devices.
*Exceeding the maximum number of contacts could affect the mechanical durability of the operators.

Fuji Electric Command Series 30mm
Pilot Devices Specifications

Assembly Information
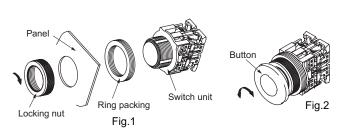
These pushbuttons are supplied with the appropriate contact blocks, unless otherwise indicated. Use these drawings as a guide to make sure there is adequate clearance behind the panel. Insert the switch unit in the panel hole at the back of the panel and secure it with a locking nut at the panel front.
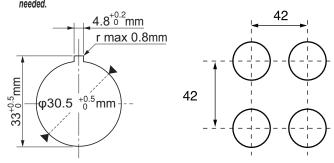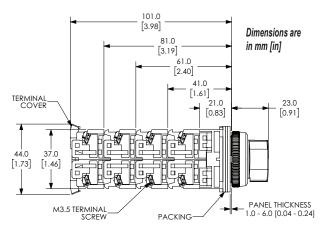
Example mounting diagram for AR30M0R

Dimensions are in mm [in]

NOTE: Contact blocks can be arranged up to four deep by two wide.

Panel Holes

For safe operation, use these mounting hole drawings to ensure that there is adequate space between switches.
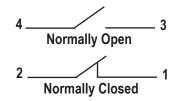
Note: Location hole 4.8mm x 33mm is for use with a key washer or legend plate. If key-washer or legend plate are not used, this location hole is not needed. ADC does not currently carry an appropriate 4.8mm punch if the hole is needed.

$4.8^{+0.2}_{0}$ mm
r max 0.8mm
$33^{+0.5}_{0}$ mm
$\phi 30.5^{+0.5}_{0}$ mm

42
42

Typical Wiring

4 ——— 3
Normally Open

2 ——— 1
Normally Closed

Mechanical Durability

		Operations
Pushbutton switch **Illuminated pushbutton switch** **E-stop pushbutton switch** **E-stop illuminated pushbutton**	Momentary action Alternate action Push-lock, turn-reset Push-lock, pull-reset	5 million 1 million 100,000 30,000
Selector switch	Maintained 1, 2, 3, 4-contact Maintained 5, 6-contact Spring return, spring/manual return	1 million 500,000 200,000
Illuminated selector switch	Maintained Without transformer 1, 2, 3-contact 4-contact With transformer 1, 2-contact 3-contact Spring return, spring/manual return	1 million 500,000 1 million 500,000 200,000

Note: Key insertion/removal durability for selector switch key types
Key type 10,000

Fuji Electric
Command Series 30mm Pilot Devices Specifications

Specifications (Indoor Use)			
	Pushbuttons Selector switches	**Joysticks**	**Pilot Lights**
Rated thermal current (contact block)	A600 P600	—	—
Mechanical durability	See mechanical durability table	250,000 operations	—
Electrical durability	500,000 operations at 220VAC 6A 1,000,000 operations at 220VAC 3A	100,000 operations at 220VAC 1A (res. load)	—
Operating frequency	1200 operations/hour (on-load factor: 40%)		—
Operating force (Avg)	9N – Pushbuttons 0.15 - 0.1 N·m – Selector switches	Less than 100N	
Positive opening operation	All functions incorporating an N.C. contact are positive-opening operation.		
Dielectric strength	2,000VAC, 1 minute*** 2,500VAC, 1 minute****	2,000VAC, 1 minute	
Insulation resistance	100MΩ or more (500VDC megger)		
Rated impulse dielectric strength	6kV	-	6kV
Conditional short-circuit current	1000A		—
Short-circuit protective device	Fuse 15A	Fuse 1A	—
Pollution degree	3		
Vibration	Resonance: 10 to 55 Hz, double amplitude 0.1mm*, Constant: 16.7 Hz, double amplitude 3mm		
Shock	Malfunction: 100m/s²** Mechanical: 500m/s²		Mechanical: 500m/s²
Ambient temperature (no condensation or no icing)	-20 to 70°C [-4 to 158°F]	-5 to 60°C [23 to 140°F]	-20 to 50°C [-4 to 122°F]
Temperature ratings	Storage: -40 to 80°C [-40 to 176°F]		
Humidity	45 to 85% RH [within -5°C to 40°C]		
Degree of protection	IEC IP65		
Initial contact resistance	≥ 50mΩ	—	—
Terminal markings	IEC 60445	—	—
Connections	14 to 18 AWG; Stripping length: 5 to 11mm Tightening torque: 0.8 to 1.0 N·m, 7.1 to 8.8 in·lb		
Contacts operation	Self-cleaning types. Slow action. Positive opening.		
Operation frequency	1,200 cycle/hour (Application ratio 40%)	—	—
Utilization category/ contact ratings	AC-15: 24VAC at 6A, 110VAC at 6A DC-13: 24VDC at 4A, 110VDC at 1.3 A	AC-1: 110VAC at 0.3 A DC-13: 24VDC at 0.7 A, 110VDC at 0.15 A	—
Rated insulation voltage	250V AC/DC*** 600V AC/DC	250V AC/DC	250V AC/DC*** 600VAC w/transformer
Materials	Enclosure: Polyamide, Contacts: Silver, nickel		
Standards	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1		
Approvals	UL file E44592, CSA file LR20479		

* Emergency stop type: 10 to 500 Hz, double amplitude 0.7mm (acceleration 50m/s²), according to test condition of EN60947-5-5 (1998)
** Emergency stop type: 150 m/s²
*** Illuminated type without transformer
**** Illuminated type with transformer
To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.

Fuji Electric

Command 30mm Emergency Stop Pushbuttons Specifications

30mm Emergency Stop Pushbuttons Specifications (Indoor Use)		
	AR30 Q2R, V0L, V0R	*AR30 VPR, VPL*
Rated thermal current (contact block)	A600 P600	B300 R300
Mechanical durability	See mechanical durability table	250,000 operations
Electrical durability	500,000 operations at 220VAC 6A 1,000,000 operations at 220VAC 3A	100,000 operations AC12, DC13, DC12
Operating frequency	1200 operations/hour (on-load factor: 40%)	900 operations/hour (on-load factor: 40%)
Operating force (Avg)	30-45 N	Push to Lock: 40N Turn to reset: 0.5 N·m
Positive opening operation	All functions incorporating an N.C. contact are positive-opening operation.	
Dielectric strength	2,000VAC, 1 minute*** 2,500VAC, 1 minute****	2,000 VAC, 1 minute
Insulation resistance	100MΩ or more (500VDC megger)	
Rated impulse dielectric strength	6kV	2.5 kV
Conditional short-circuit current	1000A	
Short-circuit protective device	Fuse 15A	Fuse 10A
Pollution degree	3	
Vibration	Resonance: 10 to 55 Hz, double amplitude 0.1mm*, Constant: 16.7 Hz, double amplitude 3mm	Malfunction: max double amplitude: 0.7 mm (max: 50 m/s2), frequency: 10 to 500 Hz Durability: max double amplitude: 0.7 mm (max: 50 m/s2), frequency: 10 to 500 Hz*
Shock	Malfunction: 100m/s^2 Mechanical: 500m/s^2	Malfunction:150m/s^2 Durability: 1000 m/s² **
Ambient temperature (no condensation or no icing)	-20 to 70°C [-4 to 158°F]	Non-illuminated -20 to +60°C [-4 to 140°F] Illuminated -20 to +50°C [-4 to 122°F]
Temperature ratings	Storage: -40 to 80°C [-40 to 176°F]	
Humidity	45 to 85% RH [within -5°C to 40°C]	
Degree of protection	IEC IP65	
Initial contact resistance	≥ 50mΩ	1000mΩ
Terminal markings	IEC 60445	
Connections	14 to 18 AWG; Stripping length: 5 to 11mm Tightening torque: 0.8 to 1.0 N·m, 7.1 to 8.8 in·lb	Stranded wire: up to 1.25 mm², 24 to 16 AWG-CU Solid wire: up to ø1.2 mm², 24 to 16 AWG-CU Tightening torque: 1.5 to 2.5 N·m, 13.27 to 22.1 in·lb
Contacts operation	Self-cleaning types. Slow action. Positive opening.	
Operation frequency	1,200 cycle/hour (Application ratio 40%)	900 operations/hour (On-load factor: 40%)
Utilization category/ contact ratings	AC-15: 24VAC at 6A, 110VAC at 6A DC-13: 24VDC at 4A, 110VDC at 1.3 A	DC-13: 24VDC at 1A DC-12 24VDC at 2A
Rated insulation voltage	250 VAC/VDC*** 600 VAC/VDC	250 VAC/VDC
Materials	Enclosure: Polyamide, Contacts: Silver, nickel	
Standards	UL 508, CSA C22.2, No.14, TUV - EN60947-5-1	
Approvals	UL file E44592, CSA file LR20479	cUL Listed, CE, UL Category Emergency Stop Device

* Emergency stop type: 10 to 500 Hz, double amplitude 0.7mm (acceleration 50m/s²), according to test condition of EN60947-5-5 (1998)
** Except when the switch is mounted upside down
*** Illuminated type without transformer
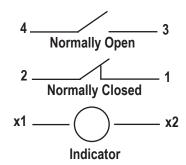****** Illuminated type with transformer**
To obtain the most current agency approval information, see the Agency Compliance & Certifications section on the specific part number's web page.

Fuji Electric NEMA Aux Contact Ratings

Control Circuit Contact
Electrical Ratings and Wiring

Typical Wiring

4 —— / —— 3
Normally Open

2 —— / —— 1
Normally Closed

x1 —— ( ) —— x2
Indicator

Contact Rating Designation	Thermal Continuous Test Current (A)	Maximum Make or Break DC Current (A)			Volt amperes
		125 Volts	250 Volts	301 to 600 Volts	
P300	5.0	1.1	0.55	---	138
P600	5.0	1.1	0.55	0.20	138
Q300	2.5	0.55	0.27	---	69
Q600	2.5	0.55	0.27	0.10	69
R300	1.0	0.22	0.11	---	28

NEMA Mechanical Switching Ratings and Test Values for DC Control Circuit Contacts

This chart is provided as a guideline only, and the ratings and values are not guaranteed to be accurate. It is the users' responsibility to properly size their control circuit devices. The chart values are from NEMA Standard ICS 5-2000, Table 1-4-2.

NEMA Mechanical Switching Ratings and Test Values for AC Control Circuit Contacts

Contact Rating Designation	Thermal Continuous Test Current (A)	120 Volts		240 Volts		480 Volts		600 Volts		Volt amperes	
		Make	Break	Make	Break	Make	Break	Make	Break	Make	Break
A300	10	60	6.00	30	3.00	---	---	---	---	7200	720
A600	10	60	6.00	30	3.00	15	1.50	12	1.20	7200	720
B300	5	30	3.00	15	1.50	---	---	---	---	3600	360
B600	5	30	3.00	15	1.50	7.5	0.75	6	0.60	3600	360
C600	2.5	15	1.5	7.5	0.75	3.75	0.375	3.00	0.30	1800	180

This chart is provided as a guideline only, and the ratings and values are not guaranteed to be accurate. It is the users' responsibility to properly size their control circuit devices. The chart values are from NEMA Standard ICS 5-2000, Table 1-4-1.

molex Pendant Switches

Overview

Molex pendant switches with quick connectors are designed for demanding conditions where reliable ON/OFF actuation is essential, providing a flexible means to control equipment during production, material handling, changeovers, setup, inspection, cleaning and troubleshooting.

Features

- Switch cover available in nitrile/PVC rubber or silicone rubber
- Nitrile/PVC rubber is uniquely suited to withstand chemical abuse and exposure in the petrochemical environment.
- Silicone rubber/PVC repels and inhibits bacterial growth and is ideal for any indoor or outdoor wet location, such as in food and beverage processing.

55501   **55501S**

Pendant Switches

Part Number	Price	Switch Type	Contact	Action	Connector	Color	Housing Material	Drawing Link
55501	$59d3:	Momentary	(1) N.O.	Snap Action	7/8in - 16 UN2 2-pin male	Yellow	nitrile rubber/PVC	PDF
55502	$59d4:	Momentary	(1) N.C.	Snap Action	7/8in - 16 UN2 2-pin male	Yellow	nitrile rubber/PVC	PDF
55503	$59d5:	Momentary	(1) N.O./(1) N.C.	Snap Action	7/8in - 16 UN2 3-pin male	Yellow	nitrile rubber/PVC	PDF
55504	$59d6:	Momentary	(1) N.O.	Snap Action	7/8in - 16 UN2 3-pin male	Yellow	nitrile rubber/PVC	PDF
55501S	$59d7:	Momentary	(1) N.O.	Snap Action	7/8in - 16 UN2 2-pin male	Yellow	silicone rubber/PVC	PDF
55502S	$59d0:	Momentary	(1) N.C.	Snap Action	7/8in - 16 UN2 2-pin male	Yellow	silicone rubber/PVC	PDF
55503S	$59d1:	Momentary	(1) N.O./(1) N.C.	Snap Action	7/8in - 16 UN2 3-pin male	Yellow	silicone rubber/PVC	PDF
55504S	$59d2:	Momentary	(1) N.O.	Snap Action	7/8in - 16 UN2 3-pin male	Yellow	silicone rubber/PVC	PDF
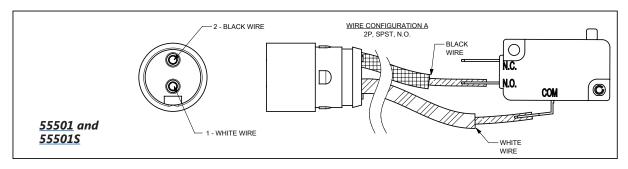
Pendant Switch Specifications

|		
Electrical Specifications	10A (AC), 125/250 VAC, ½ HP	
Wire Conductor Size	16 AWG (1.5 mm²)	
Environmental Rating	NEMA Type 3R rainproof ; IP24 wet-locations	
Operating Temperature Range	-20 to 85°C [-4 to 185°F]	
Operating Force	0.75 N to 1.2 N	
Permissible Operating Speed	0.1 mm to 1 m/s max.	
Permissible Operating Frequency	Mechanical: 600 operations per minute (max.)	Electrical: 60 operations per minute
Operating Life (Electrical Life at Rated Load 85°C)	6000 hours	
Vibration Resistance (Malfunction)	10 to 55Hz, 1.5 mm double amplitude	
Shock Resistance	Durability: 1000 m/s² (approx. 100G) max.	Malfunction: 200 m/s² (approx. 20G) max.
Weight	100g / 0.22 lbs.	
Agency Approval	cULus LISTED [ALL models]; CSA (LR44136) [nitrile rubber/PVC models only]	
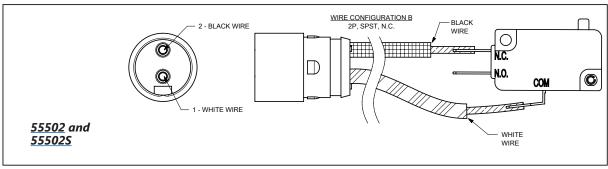
To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.
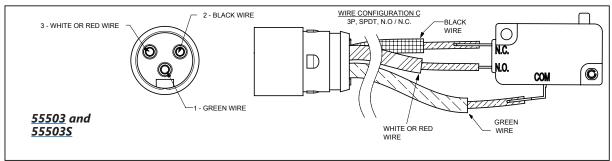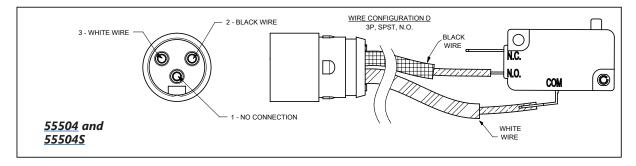
molex Pendant Switches

Wiring Diagrams

WIRE CONFIGURATION A
2P, SPST, N.O.

55501 and 55501S

2 - BLACK WIRE
1 - WHITE WIRE
BLACK WIRE
N.C.
N.O.
COM
WHITE WIRE

WIRE CONFIGURATION B
2P, SPST, N.C.

55502 and 55502S

2 - BLACK WIRE
1 - WHITE WIRE
BLACK WIRE
N.C.
N.O.
COM
WHITE WIRE

WIRE CONFIGURATION C
3P, SPDT, N.O / N.C.

55503 and 55503S

3 - WHITE OR RED WIRE
2 - BLACK WIRE
1 - GREEN WIRE
BLACK WIRE
N.C.
N.O.
COM
WHITE OR RED WIRE
GREEN WIRE

WIRE CONFIGURATION D
3P, SPST, N.O.

55504 and 55504S

3 - WHITE WIRE
2 - BLACK WIRE
1 - NO CONNECTION
BLACK WIRE
N.C.
N.O.
COM
WHITE WIRE

CAPTRON Capacitive Switches

Overview

SENSORswitches are capacitive pushbuttons that are activated without pressure, using a hand or other parts of the body. The buttons have a determinate sensing distance, which may be altered by varying the approach speed and/or damping factor. A quickly approaching finger will achieve a higher sensing distance than a slowly approaching finger. A hand, with its larger damping surface, will achieve a greater sensing distance than a finger at the same speed. The sensitivity of the buttons is specified by the electronic circuit and cannot be changed. All sensors are checked for consistent sensitivity values, which have been determined by long-standing experience.

Switch Type

Static
- The output signal is continuously on as long as the sensor area is activated.

Dynamic
- The output signal length is limited to x milliseconds when the sensor area is activated.

Toggle
- The output signal turns on when the sensor area is activated and stays on until the sensor area is activated again.

LED Control
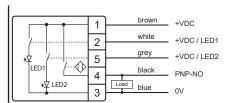
Semi-Automatic
Semi-Automatic (4-Pin) LED1 can be controlled separately. Ideal for when the system designer would like to display a flashing signal to prompt the user to activate and or touch the switch.
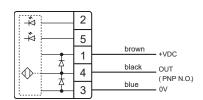
Manual
Manual (5-Pin) LED1 and LED2 can be controlled separately. Ideal for use when the user would like to show optical feedback acting like a signal indicator (e.g. CDL series or CML series indicator lights).

Automatic
Automatic (3-Pin) LED1 turns off and the LED2 lights up when the operating surface is touched. Ideal choice for all Human-Machine Interface (HMI) applications that require an intuitive and clearly visible status display.

CAPTRON

50 and 60mm IP69K Capacitive Switches

CE CSA

CHT3-15XX-XX-XXXX

CHT4-25XX-XX-XXXX

CHT4-25XX-X-XXXX

*50 and 60mm IP69K Capacitive Switches (Require AR3 or AR4 Cover Ring)											
Part Number	Price	LED Color (Idle/Active)	Switch Type	Barrel Size mm	Diameter (w/Cover ring) mm	LED Control	Legend	Symbol Illuminated	Connection (M8)	Agency Approvals	Weight lbs	Drawing Link
CHT3-15XB-29-TGSR	$-04j28:	red/green	Dynamic	50.0 mm	88.0 mm	Manual	START	No	5-pole	CE, CSA	0.18	PDF
CHT3-15XB-29-TGSRS	$-04j2a:		Static				START					PDF
CHT3-15XB-30-TGSR	$-04j2c:		Dynamic				-					PDF
CHT3-15XB-30-TGSRS	$-04j2e:		Static				-					PDF
CHT3-15XB-H-TGSR	$-04j24:		Dynamic				Hand Symbol					PDF
CHT3-15XB-H-TGSRS	$-04j26:		Static				Hand Symbol					PDF
CHT3-15XP-29-TGSR	$-04j27:		Dynamic			Semi-automatic	START		4-pole			PDF
CHT3-15XP-29-TGSRS	$-04j29:		Static				START					PDF
CHT3-15XP-30-TGSR	$-04j2b:		Dynamic				-					PDF
CHT3-15XP-30-TGSRS	$-04j2d:		Static				-					PDF
CHT3-15XP-H-TGSR	$-04j23:		Dynamic				Hand Symbol					PDF
CHT3-15XP-H-TGSRS	$-04j25:		Static				Hand Symbol					PDF
CHT4-25XB-29-TGSR	$--04j2i:		Dynamic	60.0 mm	100.0 mm	Manual	START		5-pole		0.21	PDF
CHT4-25XB-30-TGSR	$-04j2k:						-					PDF
CHT4-25XB-H-TGSR	$-04j2g:						Hand Symbol					PDF
CHT4-25XP-29-TGSR	$-04j2h:					Semi-automatic	START		4-pole			PDF
CHT4-25XP-30-TGSR	$--04j2j:						-					PDF
CHT4-25XP-H-TGSR	$;-04j2f:						Hand Symbol					PDF

*Purchase cable separately.

CAPTRON

Capacitive Switches Specifications

Specifications									
Part Number	Supply Voltage	Output	Output Pulse	Load Current	Current Consumption	Operating Temperature	Storage Temperature	IP Rating	Material
CHT1	10–30 VDC	PNP-N.O.	Continuous when actuated	Max 400mA	Max 20mA @24V	-30 to70°C [-22 to158°F]	-35 to 75°C [-31 to 167°F]	IP69K	CHT1-158 Plastic and Stainless Steel CHT1-159 and CHT12 Plastic and Aluminum
CHT12			Toggle						
CHTX-XXXX-XX-TGSR	24VDC (21.6–26.4 V)		Approx. 300ms		Max 30mA @24V	-30 to 80°C [-22 to176°F]	-35 to 85°C [-31 to 185°F]		CHT3-456X Plastic and Delrin CHT3-15XX and CHT4 Plastic and Polycarbonate
CHTX-XXXX-XX-TGSRS			Continuous when actuated			0 to 55°C [32 to131°F]			

CAPTRON
Cover Rings and Indicator Lights

AR3 Cover Ring (Fits All CHT3 Switches)

Part Number	Price	Color	Image
AR3-1X0	$4h4e:	Red	
AR3-1X1	$;4h4f:	Green	
AR3-1X5	$4h4g:	Yellow	
AR3-1X6	$4h4h:	Black	

AR4 Cover Ring (Fits All CHT4 Switches)

Part Number	Price	Color	Image
AR4-BX0	$-4h4i:	Red	
AR4-BX1	$-4h4j:	Green	
AR4-BX5	$4h4k:	Yellow	
AR4-BX6	$-4h4I:	Black	

*IP6K 22mm CDL and CML Series IP69K Indicator Lights

Part Number	Price	Color	Material	Supply Voltage	Load Current	Current Consumption	Operating Temperature	Storage Temperature	Agency Approvals	Weight lbs	Drawing Links
CDL1-158-30-GR	$-4j1h:	Red/green	Plastic And Stainless Steel	24VDC [21.6–26.4 V]	Max 400mA	Max 20mA @24V	-20 to 50°C [-4 to 122°F]	-25 to 55°C [-13 to 131°F]	CE, CSA	0.08	PDF
CDL1-159-30-GR	$-4j1g:		Plastic And Aluminum							0.05	PDF
CML1-158-30	$;-4j1f:	Red/yellow/ green/blue/ white/orange/ violet	Plastic And Stainless Steel			Max 30mA @24V				0.08	PDF
CML1-159-30	$-4j1e:		Plastic And Aluminum							0.05	PDF

*Purchase cable separately.

CDL1-158-30-GR
CML1-158-30
(Hygienic)

CDL1-159-30-GR
CML1-159-30

CE CSA

CAPTRON
CANEO Series10 Standard Capacitive Switches

IO-Link   **CS10KMLDT-C12-00AE**   **CS10KMLDT-C20-00BB**   **CS10KMLDT-B14-054A**

*22mm Series10 Standard Capacitive Switches									
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Connection	Output Pulse	Drawing Link
CS10KMLDT-C10-00A6	$5gqn:	green/red	Dynamic	Semi-automatic	START	No	4-pole	Approx. 300ms	PDF
CS10KMLDT-C10-00A7	$5gqo:	green/red	Static		START			Continuous when actuated	PDF
CS10KMLDT-C11-0543	$5gqp:	red/green	Dynamic		STOP			Approx. 300ms	PDF
CS10KMLDT-C11-0547	$5gqq:	red/green	Static		STOP			Continuous when actuated	PDF
CS10KMLDT-C12-00AE	$5gqs:	green/red	Dynamic		ON/OFF			Approx. 300ms	PDF
CS10KMLDT-C12-00AF	$;5gqt:	green/red	Static		ON/OFF			Continuous when actuated	PDF
CS10KMLDT-C12-00B0	$5gqu:	green/red	Toggle		ON/OFF			Toggle	PDF
CS10KMLDT-C16-0548	$5gqv:	red/green	Static		Power Symbol			Continuous when actuated	PDF
CS10KMLDT-C16-0549	$5gqx:		Static		Power Symbol				PDF
CS10KMLDT-C17-00B7	$5gqy:	green/red	Dynamic		START			Approx. 300ms	PDF
CS10KMLDT-C17-00B8	$5gqz:	green/red	Static		START			Continuous when actuated	PDF
CS10KMLDT-C20-00BB	$;5gq]:	green/red	Dynamic	Manual	-			Approx. 300ms	PDF
CS10KMLDT-C20-00BC	$;5gq[:	green/red	Dynamic	Manual	-		5-pole	Approx. 300ms	PDF
CS10KMLDT-C20-00BD	$5gq_:	green/red	Static	Semi-automatic	-		4-pole	Continuous when actuated	PDF
CS10KMLDT-C20-00BE	$5gq#:	green/red	Static	Manual	-		5-pole	Continuous when actuated	PDF
CS10KMLDT-B10-00C7	$;5gq!:	green/red	Dynamic	Semi-automatic	START	Yes	4-pole	Approx. 300ms	PDF
CS10KMLDT-B10-00C8	$5gq?:	green/red	Static		START			Continuous when actuated	PDF
CS10KMLDT-B11-00C9	$;5gq,:	red/green	Dynamic	Semi-automatic	STOP			Approx. 300ms	PDF
CS10KMLDT-B11-00CA	$5gs0:	red/green	Static		STOP			Continuous when actuated	PDF
CS10KMLDT-B14-054A	$5gs1:	green/red	Static		Power Symbol			Continuous when actuated	PDF
CS10KMLDT-B14-054B	$5gs2:	red/green	Static		Power Symbol				PDF

*Purchase cable separately.

22mm Series10 Standard Capacitive Switches									
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Connection	Output Pulse	Drawing Link
CS10KMMDU-B13-092D	$;6ht_:	blue/off	dynamic	automatic	RESET	Yes	7.87in (200mm) pigtail	Approx. 300ms	PDF
CS10KMMDU-B14-0A5F	$;6ht#:	green/red	static	semi-automatic	Power Symbol	No		Continuous when actuated	PDF
CS10KMMDU-C20-0793	$6hu4:	green/red	dynamic	semi-automatic	-	Yes		Approx. 300ms	PDF

Note: An additional pigtail connection makes these part numbers distinguishable from other parts in this series.

CANEO Series10 Standard Capacitive Switches

CAPTRON

22mm Series10 Standard Capacitive Switches Specifications	
Supply Voltage	24VDC [8.4 to 32V]
Output	PNP-N.O.
Load Current	Max 200mA
Current Consumption	Max 40mA @24V
Operating Temperature	-30 to 65°C [-22 to 149°F]
Storage Temperature	-30 to 65°C [-22 to 149°F]
IP Rating	IP69K
Material	Housing: Polycarbonate (PC) Switch surface: Polycarbonate (PC)
Weight (lbs)	0.1
Agency Approvals	CE, CSA

IO-Link Specifications	
IO-Link	v1.1
Port Speed	COM2
SIO Supported	Yes
ISDU Supported	Yes
Data Storage	Yes
Block Parameter	No

Wiring Diagrams

Plug M12, 4-pin

Plug M12, 5-pin

4-pin

Pin	Color	Signal
2	white	E1
5		
1	brown	+VDC
4	black	OUT / IO - Link Communication (PNP N.O.)
3	blue	0V

5-pin

Pin	Color	Signal
2	white	E1
5	gray	E2
1	brown	+VDC
4	black	OUT / IO - Link Communication (PNP N.O.)
3	blue	0V

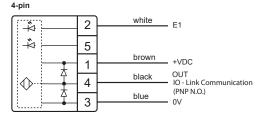### Safety
General safety

All work on electrical systems or operating equipment may only be carried out by a specially qualified electrician according to the applicable electrotechnical regulations.
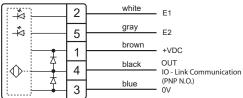
The safety of the system in which the SENSORswitch is integrated is the responsibility of the operator.

⚠ **WARNING**

Improper work on electrical systems!
Electric shock can result in death or life-threatening injuries.
▸ Before working on electrical systems, disconnect them from their voltage supply and secure them against being switched on again.

▸ Wear appropriate personal protective equipment (PPE).

CAPTRON

CANEO Series10 Hygienic Capacitive Switches

Overview

MEETS THE HIGHEST OF HYGIENE STANDARDS AS THE FIRST EHEDG-CERTIFIED SWITCH

The CANEO Series10 Hygienic is the first EHEDG-certified switch (European Hygienic Engineering and Design Group). It also meets FDA requirements, making it perfect for all industries with high requirements for hygienic cleaning, such as the food & beverages and medicine & pharmaceuticals sectors.

◈ **IO**-Link

CS10HMSDT-C12-02F

CS10HMSDT-C20-030B

CS10HMSDT-B14-0475

*22mm Series10 Hygienic Capacitive Switches									
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Connection (M12)	Output Pulse	Drawing Link
CS10HMSDT-C10-02F1	$5gs3:	green/red	Dynamic	Semi-automatic	START	No	4-pole	Approx. 300ms	PDF
CS10HMSDT-C10-02F2	$5gs4:		Static					Continuous when actuated	PDF
CS10HMSDT-C11-054C	$5gs5:	red/green	Dynamic		STOP			Approx. 300ms	PDF
CS10HMSDT-C11-054D	$5gs6:		Static					Continuous when actuated	PDF
CS10HMSDT-C12-02F9	$5gs7:	green/red	Dynamic		ON/OFF			Approx. 300ms	PDF
CS10HMSDT-C12-02FA	$5gs8:		Static					Continuous when actuated	PDF
CS10HMSDT-C12-02FB	$5gs9:		Toggle					Toggle	PDF
CS10HMSDT-C16-0469	$5gsa:	red/green	Static		Power Symbol			Continuous when actuated	PDF
CS10HMSDT-C16-054E	$5gsb:								PDF
CS10HMSDT-C17-0306	$5gsc:	green/red	Dynamic		START			Approx. 300ms	PDF
CS10HMSDT-C17-0307	$5gsd:		Static					Continuous when actuated	PDF
CS10HMSDT-C17-030A	$5gse:		Dynamic	Manual			5-pole	Approx. 300ms	PDF
CS10HMSDT-C20-030B	$;5gsf:		Static	Semi-automatic	-		4-pole	Continuous when actuated	PDF
CS10HMSDT-C20-020C	$5gsg:			Manual			5-pole		PDF
CS10HMSDT-B10-0314	$5gsh:		Dynamic	Semi-automatic	START	Yes	4-pole	Approx. 300ms	PDF
CS10HMSDT-B10-0315	$-5gsi:		Static					Continuous when actuated	PDF
CS10HMSDT-B11-0316	$-5gsj:	red/green	Dynamic		STOP			Approx. 300ms	PDF
CS10HMSDT-B11-0473	$5gsk:		Static					Continuous when actuated	PDF
CS10HMSDT-B14-0475	$-5gsl:	green/red			Power Symbol				PDF

22mm Series10 Hygienic Capacitive Switches									
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Connection	Output Pulse	Drawing Link
CS10HMODU-C16-0A60	$;6ht,:	green/red	Static	Semi-automatic	Power Symbol	Yes	7.87in (200mm) pigtail	Continuous when actuated	PDF
CS10HMODU-C19-0A3F	$;6ht?:	teal/red		Automatic	RESET	No			PDF
CS10HMODU-C20-0A61	$;6ht!:	green/red		Semi-automatic	-				PDF

Note: An additional pigtail connection makes these part numbers distinguishable from other parts in this series.

CAPTRON
CANEO Series10 Hygienic Capacitive Switches

22mm Series10 Hygienic Capacitive Switches Specifications

Supply Voltage	24VDC [8.4 to 32V]
Output	PNP-N.O.
Load Current	Max 200mA
Current Consumption	Max 40mA @24V
Operating Temperature	-30 to 65°C [-22 to 149°F]
Storage Temperature	-30 to 65°C [-22 to 149°F]
IP Rating	IP69K
Material	Housing: Stainless Steel (V4A) Switch surface:Polycarbonate (PC)
Weight (lbs)	0.1
Agency Approvals	CE, CSA

IO-Link Specifications

IO-Link	v1.1
Port Speed	COM2
SIO Supported	Yes
ISDU Supported	Yes
Data Storage	Yes
Block Parameter	No

Wiring Diagrams

Plug M12, 4-pin   **Plug M12, 5-pin**

4-pin

Pin	Color	Signal
2	white	E1
5		
1	brown	+VDC
4	black	OUT / IO - Link Communication (PNP N.O.)
3	blue	0V

5-pin

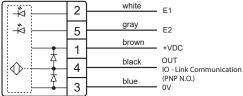| Pin	Color	Signal
2	white	E1
5	gray	E2
1	brown	+VDC
4	black	OUT / IO - Link Communication (PNP N.O.)
3	blue	0V

⚠ **WARNING**

Improper work on electrical systems!
Electric shock can result in death or life-threatening injuries.

▸ Before working on electrical systems, disconnect them from their voltage supply and secure them against being switched on again.

▸ Work on electrical installations should be carried out only by qualified personnel in compliance with local and national electrical regulations and specifications.

Intended use

The SENSORswitch is intended for use in accordance with the items listed here, the values from the "Technical specifications" chapter and the product description.

CANEO Series10 Stainless Steel Capacitive Switches

CAPTRON

IO-Link

CS10SMTDT-C12-044C   CS10SMTDT-C20-0453   CS10SMTDT-B14-045E

*22mm Series10 Stainless Steel Capacitive Switches									
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Connection (M12)/	Output Pulse	Drawing Link
CS10SMTDT-C10-0448	$5gso:	green/red	Dynamic	Semi-automatic	START	No	4-pole	Approx. 300ms	PDF
CS10SMTDT-C10-0449	$5gsp:		Static					Continuous when actuated	PDF
CS10SMTDT-C11-054F	$5gsq:	red/green	Dynamic		STOP			Approx. 300ms	PDF
CS10SMTDT-C11-0550	$5gss:		Static					Continuous when actuated	PDF
CS10SMTDT-C12-044C	$;5gst:	green/red	Dynamic		ON/OFF			Approx. 300ms	PDF
CS10SMTDT-C12-044D	$5gsu:		Static					Continuous when actuated	PDF
CS10SMTDT-C12-044E	$5gsv:		Toggle					Toggle	PDF
CS10SMTDT-C16-044F	$5gsx:	red/green	Static		Power Symbol			Continuous when actuated	PDF
CS10SMTDT-C16-0551	$5gsy:								PDF
CS10SMTDT-C17-0451	$5gsz:	green/red	Dynamic		START			Approx. 300ms	PDF
CS10SMTDT-C17-0452	$;5gs]:		Static					Continuous when actuated	PDF
CS10SMTDT-C20-0453	$;5gs[:		Dynamic	Manual	-			Approx. 300ms	PDF
CS10SMTDT-C20-0454	$5gs_:						5-pole		PDF
CS10SMTDT-C20-0455	$5gs#:		Static	Semi-automatic			4-pole	Continuous when actuated	PDF
CS10SMTDT-C20-0456	$;5gs!:			Manual			5-pole		PDF
CS10SMTDT-B10-0457	$5gs?:		Dynamic	Semi-automatic	START	Yes	4-pole	Approx. 300ms	PDF
CS10SMTDT-B10-0458	$;5gs,:		Static					Continuous when actuated	PDF
CS10SMTDT-B11-045B	$;5gt0:	red/green	Dynamic		STOP			Approx. 300ms	PDF
CS10SMTDT-B11-045C	$;5gt1:							Continuous when actuated	PDF
CS10SMTDT-B14-045E	$;5gt2:	green/red	Static		Power Symbol				PDF
CS10SMTDT-B14-0460	$;5gt3:	red/green							PDF

*Purchase cable separately.

CAPTRON

CANEO Series10 Stainless Steel Capacitive Switches

CE CSA

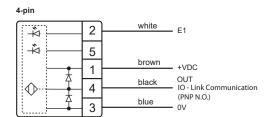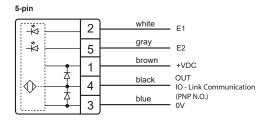| 22mm Series10 Stainless Steel Capacitive Switches Specifications	
Supply Voltage	24VDC [8.4 to 32V]
Output	PNP-N.O.
Load Current	Max 200mA
Current Consumption	Max 40mA @24V
Operating Temperature	-30 to 65°C [-22 to 149°F]
Storage Temperature	-30 to 65°C [-22 to 149°F]
IP Rating	IP69K
Material	Housing: Stainless Steel (V4A) Switch surface: Polycarbonate (PC)
Weight (lbs)	0.1
Agency Approvals	CE, CSA

IO-Link Specifications	
IO-Link	v1.1
Port Speed	COM2
SIO Supported	Yes
ISDU Supported	Yes
Data Storage	Yes
Block Parameter	No

Wiring Diagrams

Plug M12, 4-pin

Plug M12, 5-pin

4-pin

2	white — E1
5	
1	brown — +VDC
4	black — OUT / IO - Link Communication (PNP N.O.)
3	blue — 0V

5-pin

2	white — E1
5	gray — E2
1	brown — +VDC
4	black — OUT / IO - Link Communication (PNP N.O.)
3	blue — 0V

CANEO Series41 and Series40 Standard Capacitive Switches

⬡ **IO**-Link

CS41KCRBK-P10-01E7   CS41KCRBK-P11-029F   CS41KCRBK-P20-0253

*22mm Series41 and Series40 Standard Capacitive Switches									
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Connection	Output Pulse	Drawing Link
CS40KMSBN-P20-063A	$06hu1:	green/red	Dynamic	Automatic	-	No	3-pole	Approx. 300ms	PDF
CS40KMSBN-P10-05BC	$06hu2:			Semi-automatic	Hand Symbol				PDF
CS41KCRBK-P10-01E7	$;05gt4:			Automatic					PDF
CS41KCRBK-P10-029A	$;05gt5:			Semi-automatic			4-pole		PDF
CS41KCRBK-P10-029B	$;05gt6:			Manual			5-pole		PDF
CS41KCRBK-P11-029F	$;05gt7:			Automatic	Power Symbol		4-pole		PDF
CS41KCRBK-P11-02A0	$;05gt8:			Semi-automatic			4-pole		PDF
CS41KCRBK-P11-02A1	$;05gt9:			Manual			5-pole		PDF
CS41KDMBL-P11-0552	$;05gta:	red/green		Automatic			3-pole		PDF
CS41KDMBL-P11-0553	$;05gtb:			Semi-automatic			4-pole		PDF
CS41KDMBL-P11-0554	$;05gtc:			Manual			5-pole		PDF
CS41KDMBL-P12-0555	$;05gtd:			Automatic	STOP		3-pole		PDF
CS41KDMBL-P12-0556	$;05gte:			Semi-automatic			4-pole		PDF
CS41KDMBL-P12-0557	$;;05gtf:			Manual			5-pole		PDF
CS41KCRBK-P13-02AB	$;05gtg:	green/red		Automatic	START		3-pole		PDF
CS41KDMBL-P13-0591	$;05gth:			Semi-automatic			4-pole		PDF
CS41KDMBL-P13-0594	$;-05gti:			Manual			5-pole		PDF
CS41KCRBK-P20-0253	$;-05gtj:			Automatic	-		3-pole		PDF
CS41KDMBL-P20-0595	$;05gtk:			Semi-automatic			4-pole		PDF
CS41KDMBL-P20-0596	$;-05gtl:			Manual			5-pole		PDF

*Purchase cable separately.

CAPTRON

CANEO Series41 and Series40 Standard Capacitive Switches

22mm Series41 and Series40 Standard Capacitive Switches Specifications

Supply Voltage	24VDC [19.2 to 28.8 V]
Output	PNP-N.O.
Load Current	Max 200mA
Current Consumption	Max 90mA @24V
Operating Temperature	-25 to 50°C [-13 to 122°F]
Storage Temperature	-25 to 50°C [-13 to 122°F]
IP Rating	IP69K
Material	Housing : Polycarbonate (PC) Switch surface Polycarbonate (PC)
Weight (lbs)	0.1
Agency Approvals	CE, CSA

IO-Link Specifications

IO-Link	v1.1
Port Speed	COM2
SIO Supported	Yes
ISDU Supported	Yes
Data Storage	Yes
Block Parameter	No

Wiring Diagrams

Plug M12, 3-pin

Plug M12, 4-pin

Plug M12, 5-pin

3-pin

1 brown	+VDC
4 black	OUT IO - Link Communication (PNP N.O.)
3 blue	0V

4-pin

2 white	E1
1 brown	+VDC
4 black	OUT IO - Link Communication (PNP N.O.)
3 blue	0V

5-pin

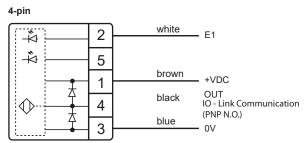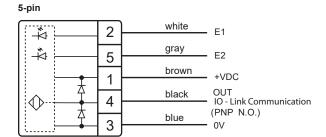|	
2 white	E1
5 gray	E2
1 brown	+VDC
4 black	OUT IO - Link Communication (PNP N.O.)
3 blue	0V

CAPTRON

CANEO Series41 and Series40 Standard Display Capacitive Switches

IO-Link CE CSA
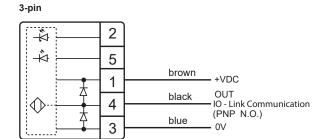
CD41KCRBK-P20-0254

*Series41 and Series40 Standard Display Capacitive Switches											
Part Number	Price	LED Color (Idle/Active)	Switch Type	LED Control	Legend	Symbol Illuminated	Output Pulse	Connection	Agency Approvals	Weight (lbs)	Drawing Link
CD40KMSBN-P20-050F	$06hu0:	teal/red	Static	Automatic	-	No	Continuous when actuated	3-pole	CE, CSA	0.25	PDF
CD41AARBK-P20-0256	$06hu3:	green/red	Dynamic					Approx 300ms				PDF
CD41KCRBK-P20-0254	$;05gtn:	green/red	Dynamic					Approx 300ms				PDF
CD41KCRBK-P20-0597	$;05gto:	green/red	Dynamic	Semi-automatic				Approx 300ms	4-pole			PDF
CD41KCRBK-P20-0598	$;05gtp:	green/red	Dynamic	Manual				Approx 300ms	5-pole			PDF

*Purchase cable separately.

Series41 and Series40 Standard Display Capacitive Switches Specifications								
Supply Voltage	Output	Output Pulse	Load Current	Current Consumption	Operating Temperature	Storage Temperature	IP Rating	Material
24VDC [19.2 to 28.8 V]	PNP - N.O.	Approx. 300ms	Max 200mA	Max 90mA @24V	-25 to 50°C [-13 to 122°F]	-25 to 50°C [-13 to 122°F]	IP69K	Housing: Polycarbonate [PC] Switch surface: Polycarbonate [PC]

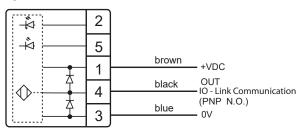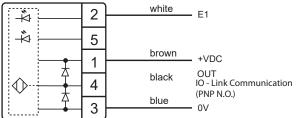## Wiring Diagrams

Plug M12, 3-pin

Plug M12, 4-pin

Plug M12, 5-pin

IO-Link Specifications	
IO-Link	v1.1
Port Speed	COM2
SIO Supported	Yes
ISDU Supported	Yes
Data Storage	Yes
Block Parameter	No

3-pin

brown — +VDC
black — OUT / IO - Link Communication (PNP N.O.)
blue — 0V

4-pin

white — E1
brown — +VDC
black — OUT / IO - Link Communication (PNP N.O.)
blue — 0V

5-pin

white — E1
gray — E2
brown — +VDC
black — OUT / IO - Link Communication (PNP N.O.)
blue — 0V