

ECX Series 22mm Plastic Joystick Selector Switches

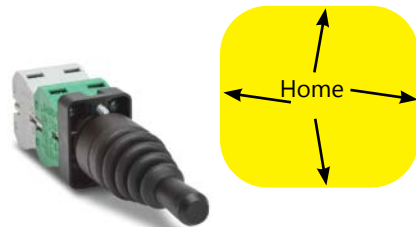
Joystick Selector Switches

Four models available



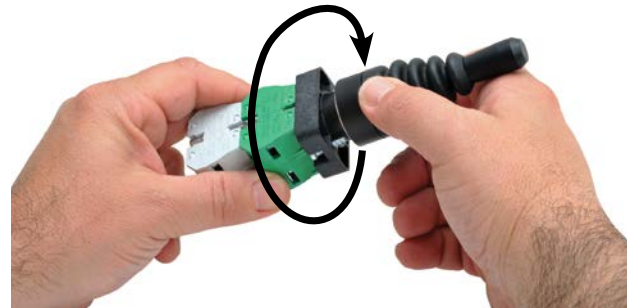
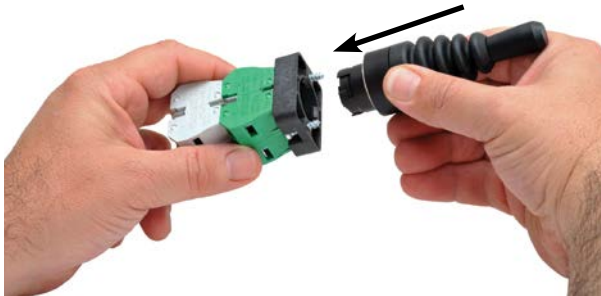
ECX3510, ECX3512

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



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.



22mm Joystick Selector Switches			
Part Number	Price	Drawing Link	Description
<u>ECX3510</u>	\$23.00	<u>PDF</u>	22mm plastic joystick-style selector switch, two-position momentary, two N.O. contact blocks
<u>ECX3512</u>	\$23.00	<u>PDF</u>	22mm plastic joystick-style selector switch, two-position maintained, two N.O. contact blocks
<u>ECX3520</u>	\$30.50	<u>PDF</u>	22mm plastic joystick-style selector switch, four-position momentary, four N.O. contact blocks
<u>ECX3524</u>	\$30.50	<u>PDF</u>	22mm plastic 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.

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
<u>ECX1900-5</u>	5	\$9.50	6V@ 200mA 1.2 watts	6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
<u>ECX1902-5</u>	5	\$9.50	24V@ 80mA 2 watts	24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
<u>ECX1904-5</u>	5	\$20.00	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
<u>ECX1911-2</u>	Red	2	\$17.50	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.
<u>ECX1912-2</u>	Green		\$22.00		
<u>ECX1913-2</u>	Yellow		\$17.50		
<u>ECX1914-2</u>	Blue		\$23.50		
<u>ECX1915-2</u>	White		\$28.00		
<u>ECX1921-2</u>	Red		\$17.50	120V@5mA 0.6 watts	
<u>ECX1922-2</u>	Green		\$22.00		
<u>ECX1923-2</u>	Yellow		\$17.50		
<u>ECX1924-2</u>	Blue		\$23.50		
<u>ECX1925-2</u>	White		\$28.00		

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
<u>ECX1490</u>	Black	\$2.75	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
<u>ECX1700-5</u>	Black	5	\$7.50	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.
<u>ECX1701-5</u>	Red		\$7.50	
<u>ECX1702-5</u>	Green		\$7.50	
<u>ECX1703-5</u>	Yellow		\$7.50	
<u>ECX1704-5</u>	Blue		\$7.50	
<u>ECX1705-5</u>	Clear		\$7.50	
<u>ECX1706-5</u>	Clear		\$13.00	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

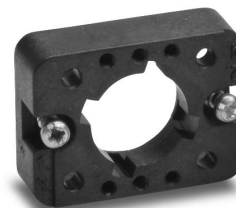
Part Number	Quantity	Price	Description
<u>ECX1067-2</u>	2	\$6.50	Replacement key for GCX series key-actuated selector switches, pack of 2 sets (2 keys each). NOTE: Will not work with Cutler-Hammer 22mm switches.

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
<u>ECX3029-2</u>	1	\$1.75	<u>PDF</u>	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
<u>ECX1030-2</u>	2	\$7.25	<u>PDF</u>	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
<u>ECX1030-5</u>	5	\$17.00	<u>PDF</u>		
<u>ECX1040-2</u>	2	\$7.25	<u>PDF</u>	Green, normally-open (N.O.)	Note: Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect
<u>ECX1040-5</u>	5	\$17.00	<u>PDF</u>		
<u>ECX1042-2</u>	2	\$7.25	<u>PDF</u>	Brown, normally-open (N.O.), push-push	Use on lighted Push-push button only



[ECX1030-2](#)

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

EMERGENCY STOP Legend Plate

EMERGENCY STOP Legend Plate				
Part Number	Quantity	Price	Drawing Link	Description
<u>ECX1651</u>	1	\$2.75	<u>PDF</u>	Oversize yellow circular EMERGENCY STOP legend plate for 22mm E-stop type mushroom pushbuttons, 60mm outside diameter.



[ECX1651](#)

Two-Position Short Lever Operator

Short Lever Replacement Operator				
Part Number	Lamp Color	Price	2-Position	Use with
<u>GR1172PR-5</u>	Red	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX124, GCX125, GCX324, GCX325
<u>GR1172PV-5</u>	Green	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
<u>GR1172PG-5</u>	Yellow	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
<u>GR1172PB-5</u>	Blue	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	
<u>GR1172PN-5</u>	Clear	\$16.50	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
<u>GR1288PR-5</u>	Red	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX126, GCX128, GCX326, GVX328
<u>GR1288PV-5</u>	Green	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
<u>GR1288PG-5</u>	Yellow	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
<u>GR1288PB-5</u>	Blue	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
<u>GR1288PN-5</u>	Clear	\$16.50	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
<u>PL1171PR-5</u>	Red	\$7.25	22mm, illuminated momentary Mushroom switch replacement operator, red, 5/pk	Part numbers starting with GCX1221, GCX3221 mushroom-style illuminated pushbuttons
<u>PL1298P-5</u>	Red	\$7.25	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
<u>GR1168PR-5</u>	Red	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	Part numbers starting with GCX119, GCX120, GCX319, GCX320
<u>GR1168PV-5</u>	Green	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PG-5</u>	Yellow	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PB-5</u>	Blue	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PN-5</u>	Clear	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PW-5</u>	White	\$9.00	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
<u>PL1308PR-5</u>	Red	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	Part numbers starting with GCX121, GCX321
<u>PL1308PV-5</u>	Green	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PG-5</u>	Yellow	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PB-5</u>	Blue	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PN-5</u>	Clear	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PW-5</u>	White	\$7.00	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	\$3.75	PDF
Blank Plate	Black	ECX1670-B	\$3.00	PDF
Blank Plate	Red	ECX1670-R	\$3.00	PDF
CLAMP	Black	ECX1670-B24	\$3.75	PDF
CLOSE	Black	ECX1670-B01	\$3.00	PDF
DOWN	Black	ECX1670-B02	\$3.00	PDF
EMERG. STOP	Red	ECX1670-R03	\$3.00	PDF
EXTEND	Black	ECX1670-B51	\$3.75	PDF
FEEDER OFF	Black	ECX1670-B26	\$3.75	PDF
FEEDER ON	Black	ECX1670-B25	\$3.75	PDF
FOR OFF REV	Black	ECX1670-B19	\$3.00	PDF
FOR-REV	Black	ECX1670-B13	\$3.00	PDF
FORWARD	Black	ECX1670-B04	\$3.00	PDF
GRIP	Black	ECX1670-B53	\$3.75	PDF
HAND-AUTO	Black	ECX1670-B14	\$3.00	PDF
HAND OFF AUTO	Black	ECX1670-B20	\$3.00	PDF
HIGH	Black	ECX1670-B27	\$3.75	PDF
HIGH LOW	Black	ECX1670-B43	\$3.75	PDF
IN	Black	ECX1670-B28	\$3.75	PDF
INCH	Black	ECX1670-B29	\$3.75	PDF
JOG	Black	ECX1670-B05	\$3.00	PDF
JOG FOR	Black	ECX1670-B30	\$3.75	PDF
JOG REV	Black	ECX1670-B31	\$3.75	PDF
JOG-RUN	Black	ECX1670-B15	\$3.00	PDF
LOW	Black	ECX1670-B32	\$3.75	PDF
LOWER	Black	ECX1670-B33	\$3.75	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	\$3.75	PDF
MAN OFF AUTO	Black	ECX1670-B47	\$3.75	PDF
MOTOR RUN	Black	ECX1670-B22	\$3.00	PDF
MOTOR STOP	Black	ECX1670-B23	\$3.00	PDF
OFF	Black	ECX1670-B34	\$3.75	PDF
OFF-ON	Black	ECX1670-B16	\$3.00	PDF
ON	Black	ECX1670-B06	\$3.00	PDF
OPEN	Black	ECX1670-B07	\$3.00	PDF
OPEN OFF CLOSE	Black	ECX1670-B48	\$3.75	PDF
OPEN-CLOSE	Black	ECX1670-B17	\$3.00	PDF
OUT	Black	ECX1670-B35	\$3.75	PDF
POWER ON	Black	ECX1670-B21	\$3.00	PDF
PULL ON PUSH OFF	Black	ECX1670-B50	\$3.75	PDF
RAISE	Black	ECX1670-B36	\$3.75	PDF
READY	Black	ECX1670-B37	\$3.75	PDF
RELEASE	Black	ECX1670-B54	\$3.75	PDF
RESET	Black	ECX1670-B38	\$3.75	PDF
RETRACT	Black	ECX1670-B52	\$3.75	PDF
REVERSE	Black	ECX1670-B08	\$3.00	PDF
RUN	Black	ECX1670-B09	\$3.00	PDF
SAFE RUN	Black	ECX1670-B45	\$3.75	PDF
START	Black	ECX1670-B10	\$3.00	PDF
STOP	Black	ECX1670-B11	\$3.00	PDF
STOP	Red	ECX1670-R11	\$3.00	PDF
TEST	Black	ECX1670-B39	\$3.75	PDF
TRANSFER	Black	ECX1670-B40	\$3.75	PDF
TRIP	Black	ECX1670-B41	\$3.75	PDF
UNCLAMP	Black	ECX1670-B42	\$3.75	PDF
UP	Black	ECX1670-B12	\$3.00	PDF
UP OFF DOWN	Black	ECX1670-B49	\$3.75	PDF
UP-DOWN	Black	ECX1670-B18	\$3.00	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	<u>ECX1690-B</u>	\$3.75	<u>PDF</u>
Blank Plate	Red	<u>ECX1690-R</u>	\$3.75	<u>PDF</u>
EMERG. STOP	Red	<u>ECX1690-R03</u>	\$3.75	<u>PDF</u>
HAND-OFF-AUTO	Black	<u>ECX1690-B20</u>	\$3.75	<u>PDF</u>
JOG	Black	<u>ECX1690-B05</u>	\$3.75	<u>PDF</u>
OFF-ON	Black	<u>ECX1690-B16</u>	\$3.75	<u>PDF</u>
OPEN-CLOSE	Black	<u>ECX1690-B17</u>	\$3.75	<u>PDF</u>
POWER ON	Black	<u>ECX1690-B21</u>	\$3.75	<u>PDF</u>
START	Black	<u>ECX1690-B10</u>	\$3.75	<u>PDF</u>
STOP	Red	<u>ECX1690-R11</u>	\$3.75	<u>PDF</u>

Note: Legend plate text is 3mm in height

GCX Series 22mm Plastic Pilot Devices

Specifications

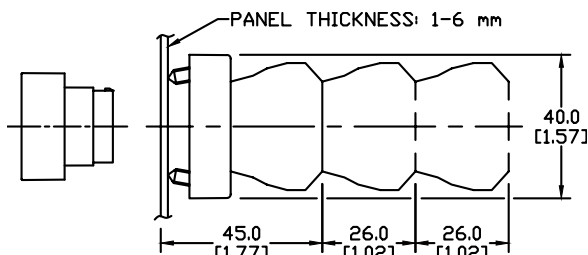
Assembly information

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]

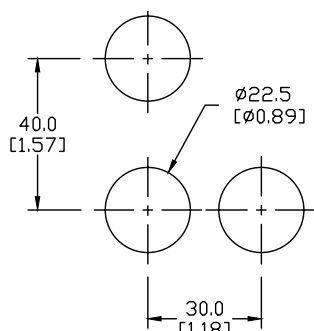
Pushbuttons and selector switches



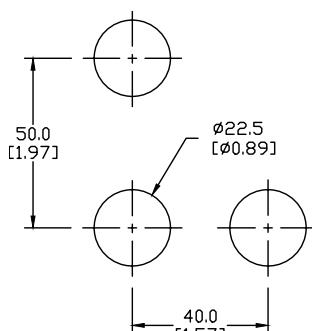
Illuminated pushbuttons and selector switches/indicator lights



Mounting



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

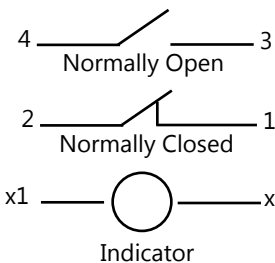


This layout is suitable if all switches are 400V or less and different polarity.

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



Typical Wiring



Specifications

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

Physical Specifications		Electrical Specifications	
Standards Reference	CEI EN 60947-5-1, CSA C22-2 n.14	Rated Thermal Current (contact block)	A300, Q300 (Refer to E22 Series mounting/contact rating section for details)
Approvals	UL File E189258, IMQ (where specified)	Rated Insulation Voltage	Ui 660V according to CEI EN 60947-5-1, 300V according to CSA C22-2 n.14 and UL 508
Enclosure Material	Fiberglass reinforced thermoplastic	Dielectric Strength	3kV (1 second)
Contacts Material	Silver	Insulation Resistance	2MΩ min. (500VDC)
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.)	Initial Contact Resistance	≤ 25mΩ
Electric Shock Protection	IEC 536, Class II	Short-Circuit Protection*	Cartridge fuses gl 10 A-500V 10, 3x38/1 100 KA
Temperature Ratings	Storage: -40 to 80°C (-40 to 176° F) Operating: -25° to +70°C (-13° to 158° F)	Terminal Markings	According to CENELEC EN 50013
Working Positions	All working positions are allowed	Connections	Single screw with non-loosening plate clamp, 14AWG max., Tighten to 0.8Nm max
Mechanical Life	Pushbuttons, selector switches, joy stick switches: 1,000,000 operations Emergency mushrooms and push-push pushbuttons: 300,000 operations	Contacts Operation	Self-cleaning types EN01 (N.C.) EN 10 (N.O.) slow-action, positive opening
Positive Opening Operation	(according to IEC 947-5-1) All functions incorporating an NC contact are positive opening operation	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