# GCX Series 22mm Metal Pilot Lights and Key Switches

## LED Pilot Light

12 models available

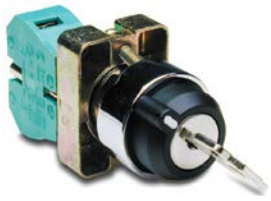
- Available in six colors
- 24V and 120V models
- LED lamps are included
- Accepts incandescent replacement bulbs

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.*

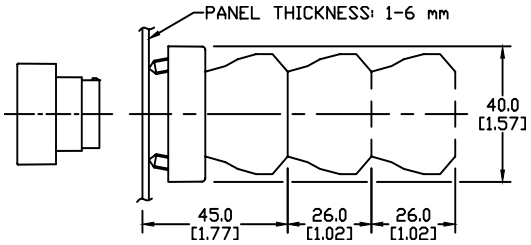
For accessories, see 22mm Metal Pilot Device Accessories in this section.

# GCX Series 22mm Metal Pilot Devices Specifications

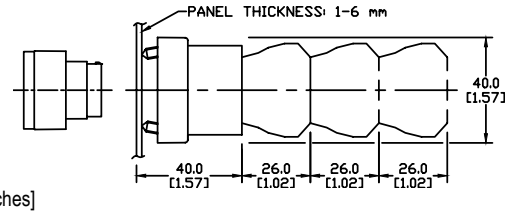
## Assembly information

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***

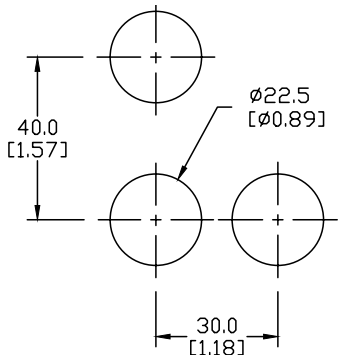



***Illuminated pushbuttons and selector switches/pilot lights***

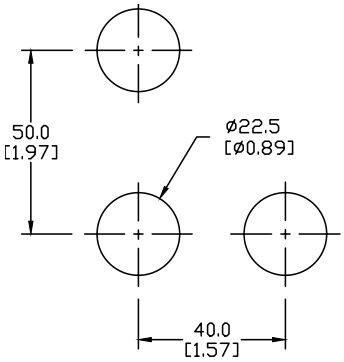



Dimensions: mm [inches]

## Mounting



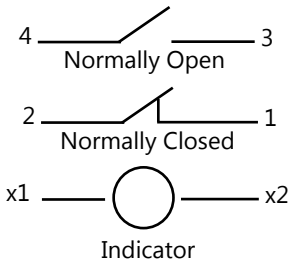

***This layout is suitable if all switches are 230V or less and the same polarity.***




***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 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 80°C (-40 to 176° F)<br>Operating: -25 to +70°C (-13 to 158° F) |
| ***Working Positions*** | All working positions are allowed |
| ***Mechanical Life*** | Pushbuttons, selector switches:<br>Joy stick switches: 1,000,000 operations<br>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,<br>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)<br>24 volts AC at 10 amps<br>130 volts AC at 6.5 amps<br>DC13 (Control of DC electromagnetic loads)<br>24 volts DC at 1.5 amps<br>110 volts DC at 0.5 amps |

***Note: Recommended, not supplied**

# 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 | 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: | | |

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 | Part numbers starting with GCX123 |
| 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 | |
| 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.<br>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.<br>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<br>Note: This item is supplied as a replacement part and is not required with any switch assembly.<br>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.<br>Tightening Torque, terminal screw: 0.8Nm max<br>mounting screw: 0.5Nm max<br>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. |

ECX1030-2

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

## 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. |

ECX1067-2

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

# 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

| Aluminum Legend Plates (continued) | | | | | | |
|---|---|---|---|---|---|---|
| *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 |

**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 |

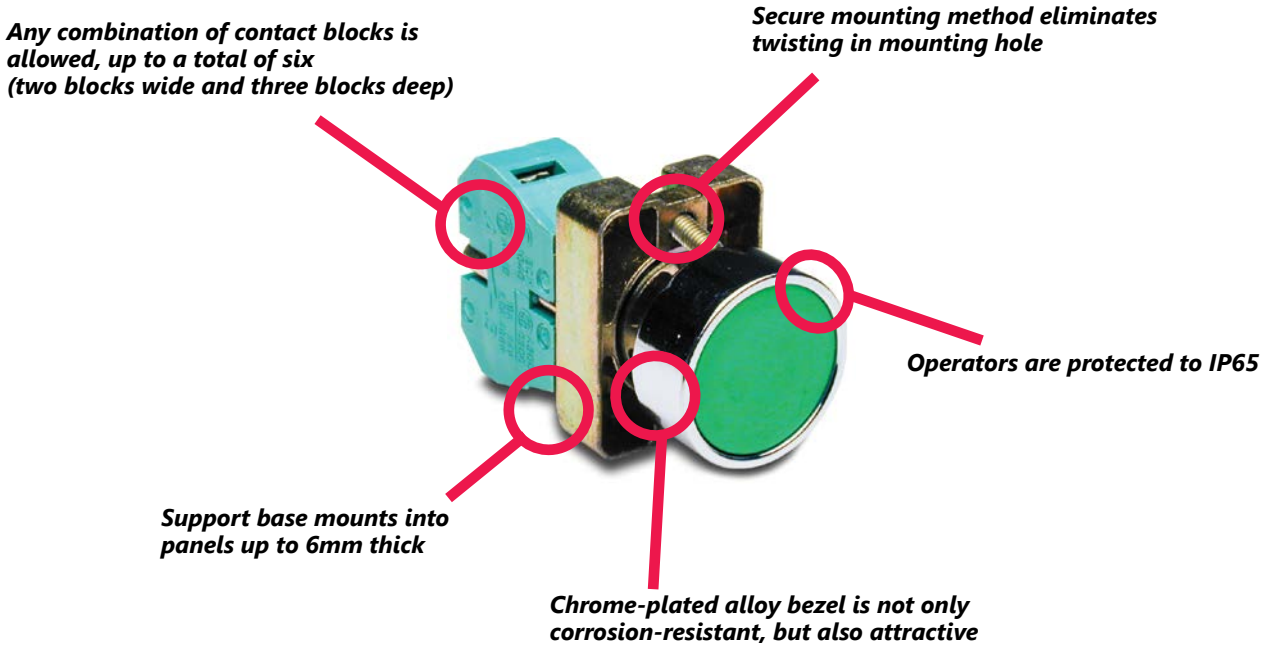
**Note: Legend plate text is 3mm in height**

# E22 Series Cross-reference Tables

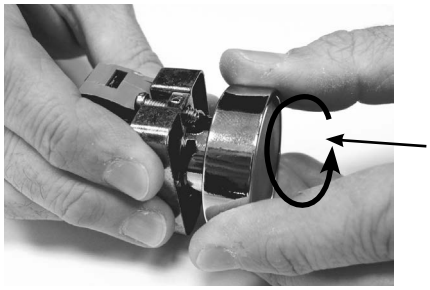
| Pushbutton, Indicator Light, and Selector Switch Cross Reference | | | | |
|---|---|---|---|---|
| ***Cutler-Hammer*** | ***Allen-Bradley*** | ***Telemecanique XB2B (chrome bezel) XA2B (black bezel)*** | ***GE C-2000*** | ***Siemens*** |
| ***Non-Illuminated Pushbuttons*** | | | | |
| E22PB1A | 800EPF2<br>800E3LX10 | ZA2BA2<br>ZA2BZ101 | P9XPNNG10N0 | 3SB1000-0AB01<br>3SB02-CBH<br>3SB1400-0B |
| E22PB3A | 800EPF3<br>800E3LX10 | ZA2BA3<br>ZA2BZ101 | P9XPNVG10N0 | 3SB1000-0AE01<br>3SB02-CBH<br>3SB1400-0B |
| E22EB2B | 800EPE4<br>800E3LX01 | ZA2BL4<br>ZA2BZ102 | P9XPNRS20N0 | 3SB1000-0LC01<br>3SB02-CBH<br>3SB1400-0B |
| E22ASB204 | ENCLSR: 800E-2P<br>800EP-F3<br>800E-2LX10<br>800EP-E4<br>800E-2LX01<br>800E-34BE208<br>800E-34R212 | XALB211<br>Both flush - stop is not extended | P9CPNRSN20NO<br>P9CPNVGN10NO P9EPB02<br>P9AEPN201 P9AEPN202 | 3SB02-S21 |
| ***Illuminated Pushbuttons*** | | | | |
| E22TB2X4B | 800EPLE4<br>800E3DL3<br>800E3X01 | ZA2BW14<br>ZA2BW06224 | P9XPLRSDN12NADI | 3SB1001-OLC01<br>3SB02-CBH<br>3SB1400-0C<br>3SB1400-2H |
| E22TB3X4A | 800EPLE3<br>800E3DL3<br>800E3X10 | ZA2B213<br>AZ2B206124 | P9XPLVSDN12NADI | 3SB1001-0LE01<br>3SB02-CBH<br>3SB1400-0B<br>3SB1440-2H |
| E22TB9X4A | 800EPLE5<br>800E3DL3<br>800E3X10 | ZA2BW15<br>ZA2BW06124 | P9XPLASDN12NADI | 3SB1001-0LD01<br>3SB02-CBH<br>3SB1400-0B<br>3SB1400-2H |
| E22TB2X10B | 800EPLE4<br>800E2RL5<br>800E3X01 | ZA2BW14<br>ZA2BW062120 | P9XPLRSB<br>P9PRNVJ<br>P9PDNVD | 3SB1001-0LC01<br>3SB02-CBH<br>3SB1400-0C |
| E22TB3X10A | 800EPLE3<br>800E2RL5<br>800E3X10 | ZA2BW13<br>ZA2BW061120 | P9XPLVSD<br>P9PRNVJ<br>P9PDNVD | 3SB02-UPR1P<br>3SB1910-0DE<br>3SB1400-OB |
| E22TB9X10A | 800DPLE5<br>800E2RL5<br>800E3X10 | ZA2BW15<br>ZA2B2061120 | P9XPLASD<br>P9PRNVJ<br>P9PDNVD | 3SB02-UPR1P<br>3SB1910-0DD<br>3SB1400-0B |

# GCX Series 22mm Metal Pilot Devices

## Features

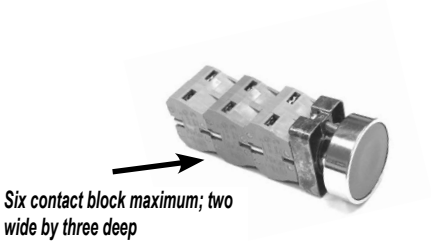


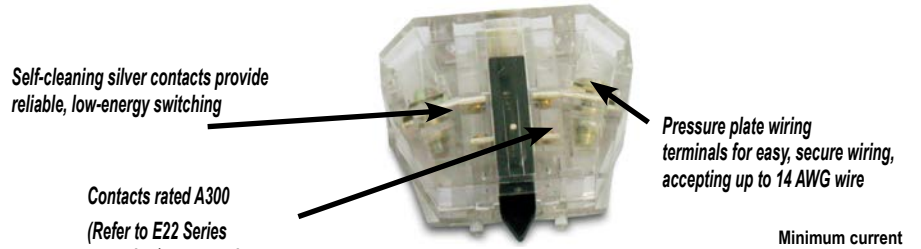

## Easy installation



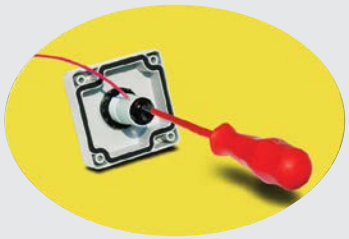
To remove operator, press toward support base and twist counterclockwise.

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.




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



# GCX Series 22mm Plastic Pilot Devices Specifications

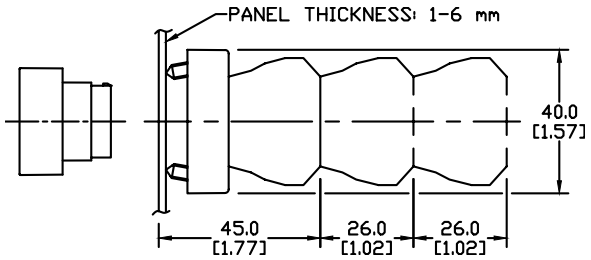
## Assembly information

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.

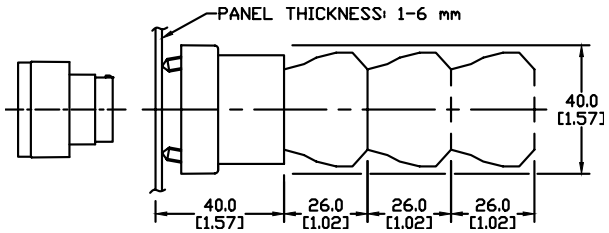
## Dimensions

mm
[inches]

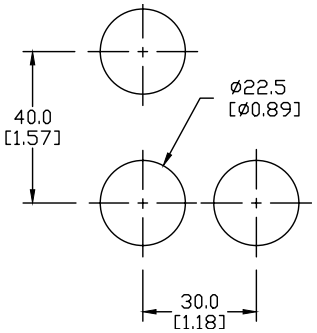
***Pushbuttons and selector switches***



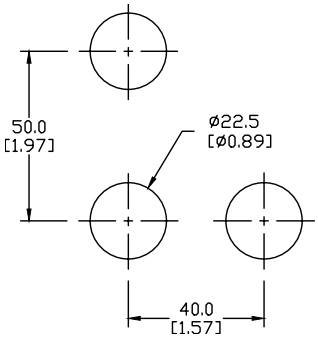

***Illuminated pushbuttons and selector switches/ indicator lights***




## Mounting



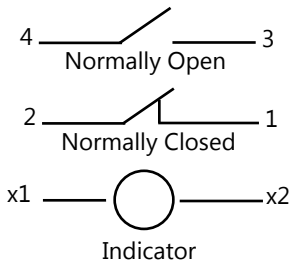

***This layout is suitable if all switches are 230V or less and the same polarity.***




***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 | |
|---|---|
| ***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)<br>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<br>Emergency mushrooms and push-push pushbuttons: 300,000 operations |
| ***Positive Opening Operation*** | (according to IEC 947-5-1)<br>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,<br>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)<br>24 volts AC at 10 amps<br>130 volts AC at 6.5 amps<br>DC13 (Control of DC electromagnetic loads)<br>24 volts DC at 1.5 amps<br>110 volts DC at 0.5 amps |

***Note: Recommended, not supplied**