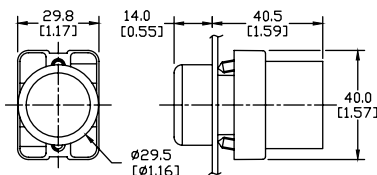


GCX Series 22mm Metal Pilot Lights and Key Switches



Dimensions: mm [inches]

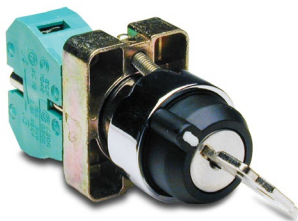


LED Pilot Light

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

| Part Number | Lamp Color | Price | Description | Replacement Incandescent Bulb | Replacement LED Lamp |
|---------------------|------------|---------|-----------------------------------------------------------|-------------------------------|-----------------------------|
| LED | | | | | |
| GCX1231-24L | Red | \$15.00 | 22mm metal LED illuminated pilot light. 24VDC/VAC | ECX1902-5 5/pk, 80mA | ECX1911-2 2/pk, 26mA |
| GCX1231-120L | Red | \$16.00 | 22mm metal LED illuminated pilot light. 120VDC/VAC | ECX1904-5 5/pk, 20mA | ECX1921-2 2/pk, 5mA |
| GCX1232-24L | Green | \$15.00 | 22mm metal LED illuminated pilot light. 24VDC/VAC | ECX1902-5 5/pk, 80mA | ECX1912-2 2/pk, 26mA |
| GCX1232-120L | Green | \$16.00 | 22mm metal LED illuminated pilot light. 120VDC/VAC | ECX1904-5 5/pk, 20mA | ECX1922-2 2/pk, 5mA |
| GCX1233-24L | Yellow | \$15.00 | 22mm metal LED illuminated pilot light. 24VDC/VAC | ECX1902-5 5/pk, 80mA | ECX1913-2 2/pk, 26mA |
| GCX1233-120L | Yellow | \$16.00 | 22mm metal LED illuminated pilot light. 120VDC/VAC | ECX1904-5 5/pk, 20mA | ECX1923-2 2/pk, 5mA |
| GCX1234-24L | Blue | \$15.00 | 22mm metal LED illuminated pilot light. 24VDC/VAC | ECX1902-5 5/pk, 80mA | ECX1914-2 2/pk, 26mA |
| GCX1234-120L | Blue | \$16.00 | 22mm metal LED illuminated pilot light. 120VDC/VAC | ECX1904-5 5/pk, 20mA | ECX1924-2 2/pk, 5mA |
| GCX1235-24L | Clear | \$17.00 | 22mm metal LED illuminated pilot light. 24VDC/VAC | ECX1902-5 5/pk, 80mA | ECX1915-2 2/pk, 26mA |
| GCX1235-120L | Clear | \$18.00 | 22mm metal LED illuminated pilot light. 120VDC/VAC | ECX1904-5 5/pk, 20mA | ECX1925-2 2/pk, 5mA |
| GCX1236-24L | White | \$17.00 | 22mm metal LED illuminated pilot light. 24VDC/VAC | ECX1902-5 5/pk, 80mA | ECX1915-2 2/pk, 26mA |
| GCX1236-120L | White | \$18.00 | 22mm metal LED illuminated pilot light. 120VDC/VAC | ECX1904-5 5/pk, 20mA | ECX1925-2 2/pk, 5mA |

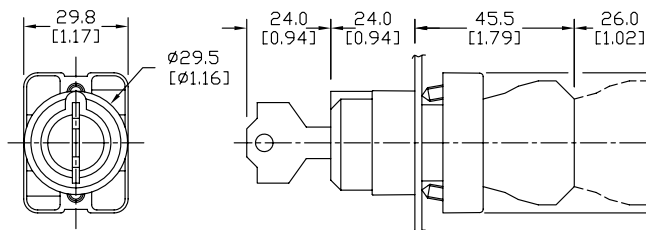
Key-operated selector switches



GCX1420
(2-position maintained)

| Part Number | Price | Description |
|-------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GCX1420 | \$18.50 | 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 | \$18.50 | 22mm metal selector switch, key-operated, two-position spring-return from right . One N.O. contact block. Replacement keys available |
| GCX1470-22 | \$26.50 | 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 |

Dimensions: mm [inches]



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.

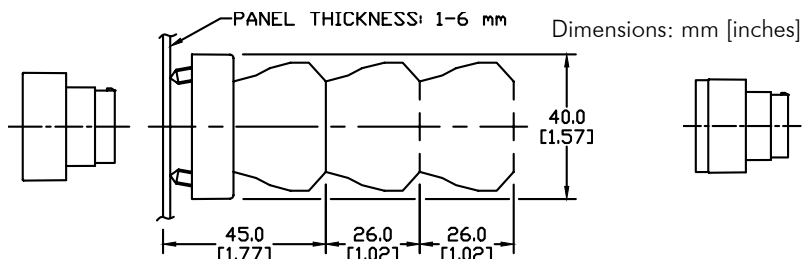
For accessories, see 22mm Metal Pilot Device Accessories in this section.

GCX Series 22mm Metal Pilot Devices Specifications

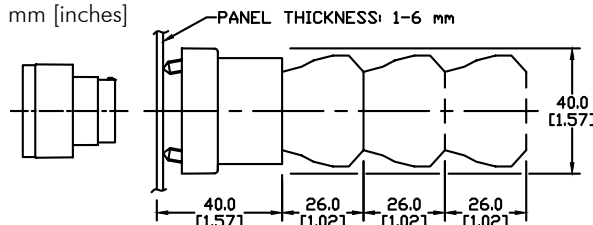
Assembly information

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.

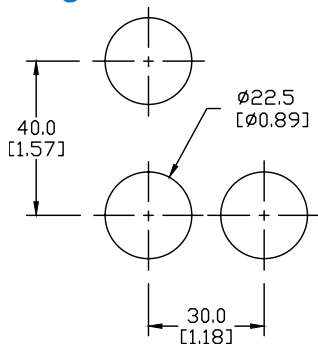
Pushbuttons and selector switches



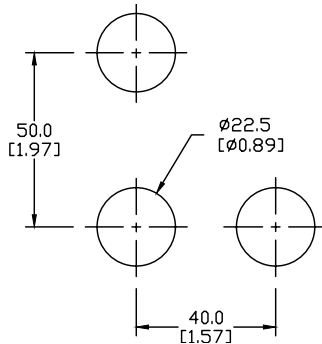
Illuminated pushbuttons and selector switches/pilot lights



Mounting



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

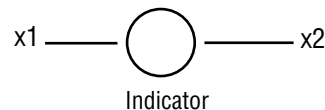
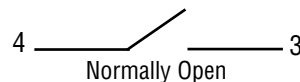


This layout is suitable if all switches are 400V or less and different polarity.



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 | IP 40 for GCX3151-24, GCX3151-120, GCX3153-24 and GCX3153-120. IP 65 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) Operating: -25° to +70°C (-13° to 158° 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 10,3x38I1 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

22mm Metal Pilot Device Accessories

Replacement incandescent bulbs



ECX1902-5

| Replacement Incandescent Bulbs | | | | |
|--------------------------------|----------------|---------|--------------------------|-----------------------------------------------------------------------------------------|
| Part Number | Quantity | Price | Rating | Description |
| ECX1900-5 | Pkg of 5 bulbs | \$8.75 | 6V@ 200mA , 1.2 watts | 6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4 |
| ECX1902-5 | Pkg of 5 bulbs | \$8.75 | 24V@ 80mA 2 watts | 24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4 |
| ECX1904-5 | Pkg of 5 bulbs | \$18.00 | 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



ECX1915-2

| Replacement LED Lamps | | | | | |
|-----------------------|--------|-----------------------|---------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number | Color | Quantity | Price | Rating | Description |
| ECX1911-2 | Red | Pkg of 2 LED lamps | \$16.00 | 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 | | \$20.00 | | |
| ECX1913-2 | Yellow | | \$16.00 | | |
| ECX1914-2 | Blue | | \$21.50 | | |
| ECX1915-2 | White | | \$25.00 | | |
| ECX1921-2 | Red | | \$16.00 | 120V@5mA 0.6 watts | |
| ECX1922-2 | Green | | \$20.00 | | |
| ECX1923-2 | Yellow | | \$16.00 | | |
| ECX1924-2 | Blue | | \$21.50 | | |
| ECX1925-2 | White | | \$25.00 | | |

Hole plug



ECX1490

| Hole Plug | | | |
|-------------|-------|--------|----------------------------------------------------------------------------------------------------------------------------------|
| Part Number | Color | Price | Description |
| ECX1490 | 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. |

Pilot Light replacement lens



PL1170PR-5

| Pilot Light Replacement Lens | | | | |
|------------------------------|------------|--------|---------------------------------------------------------|--------------------------------------|
| Part Number | Lamp Color | Price | Description | Use with |
| PL1170PR-5 | Red | \$6.25 | 22mm metallic series pilot light replacement lens, 5/pk | Part numbers starting with GCX123 |
| PL1170PV-5 | Green | \$6.25 | 22mm metallic series pilot light replacement lens, 5/pk | |
| PL1170PG-5 | Yellow | \$6.25 | 22mm metallic series pilot light replacement lens, 5/pk | |
| PL1170PB-5 | Blue | \$6.25 | 22mm metallic series pilot light replacement lens, 5/pk | |
| PL1170PN-5 | Clear | \$6.25 | 22mm metallic series pilot light replacement lens, 5/pk | |
| PL1170PW-5 | White | \$6.25 | 22mm metallic series pilot light replacement lens, 5/pk | |

22mm Metal Pilot Device Accessories

Protective covers for pushbuttons



ECX1703-5

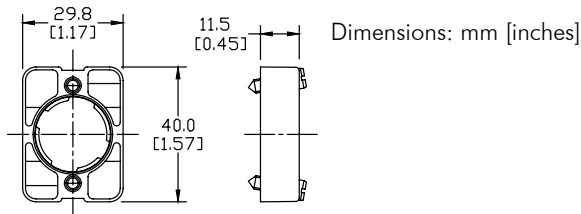
| Protective Covers for Pushbuttons | | | | |
|-----------------------------------|--------|--------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number | Color | Quantity | Price | Description |
| ECX1700-5 | Black | Pkg of 5 Protective caps | \$6.75 | Silicone protective covers for use with 22mm standard-size flush pushbuttons. |
| ECX1701-5 | Red | | \$6.75 | |
| ECX1702-5 | Green | | \$6.75 | |
| ECX1703-5 | Yellow | | \$6.75 | |
| ECX1704-5 | Blue | | \$6.75 | |
| ECX1705-5 | Clear | | \$6.75 | |
| ECX1706-5 | Clear | | \$12.00 | Clear silicone protective covers for use with 22mm illuminated and extended pushbuttons only . Will not work with Cutler-Hammer pushbuttons or 22mm mushroom pushbuttons. |

Replacement 22mm support base

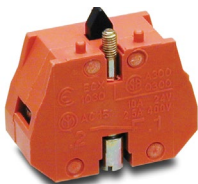


ECX1029-2

| Replacement 22mm Support Base | | | |
|-------------------------------|----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number | Quantity | Price | Description |
| ECX1029-2 | Pkg of 1 | \$6.25 | 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 |



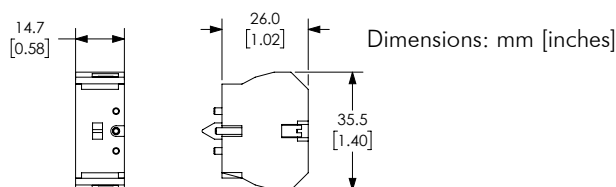
Replacement contact blocks



ECX1030-2

| Replacement Contact Blocks | | | | |
|----------------------------|----------|---------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number | Quantity | Price | Contacts | Description |
| ECX1030-2 | Pkg of 2 | \$6.50 | 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 |
| ECX1030-5 | Pkg of 5 | \$15.50 | Green, normally-open (N.O.) | |
| ECX1040-2 | Pkg of 2 | \$6.50 | Green, normally-open (N.O.) | Note: Will not work with Cutler-Hammer 22mm switches. |
| ECX1040-5 | Pkg of 5 | \$15.50 | Brown, normally-open (N.O.), push-push | |
| ECX1042-2 | Pkg of 2 | \$6.50 | 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.



Replacement keys



ECX1067-2

| Replacement Keys | | | |
|------------------|--------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number | Quantity | Price | Description |
| ECX1067-2 | Pkg of 2 sets (2 keys per set) | \$6.00 | 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.

22mm Metal Pilot Device Accessories

EMERGENCY STOP legend plate



ECX1651

| EMERGENCY STOP Legend Plate | | | |
|-----------------------------|----------|--------|------------------------------------------------------------------------------------------------------------------------|
| Part Number | Quantity | Price | Description |
| ECX1651 | Pkg of 1 | \$2.75 | Oversize yellow circular EMERGENCY STOP legend plate for 22mm E-stop type mushroom pushbuttons, 60mm outside diameter. |

Knockout Punches



109225

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.

Two-position short lever operator



GR1172PR-5

| Short Lever Replacement Operator | | | | |
|----------------------------------|------------|---------|------------------------------------------------------------------------------------|----------------------------------------------------------|
| Part Number | Lamp Color | Price | 2-Position | Use with |
| GR1172PR-5 | Red | \$15.00 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pk | Part numbers starting with GCX124, GCX125 GCX324, GCX325 |
| GR1172PV-5 | Green | \$15.00 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1172PG-5 | Yellow | \$15.00 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1172PB-5 | Blue | \$15.00 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1172PN-5 | Clear | \$15.00 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pk | |

Three-position short lever operator



GR1288PR-5

| Short Lever Replacement Operator | | | | |
|----------------------------------|------------|---------|------------------------------------------------------------------------------------|----------------------------------------------------------|
| Part Number | Lamp Color | Price | 3-Position | Use with |
| GR1288PR-5 | Red | \$15.00 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | Part numbers starting with GCX126, GCX128 GCX326, GCX328 |
| GR1288PV-5 | Green | \$15.00 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1288PG-5 | Yellow | \$15.00 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1288PB-5 | Blue | \$15.00 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1288PN-5 | Clear | \$15.00 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |

22mm Metal Pilot Device Accessories

Mushroom switch replacement operator



PL1298P-5

| Mushroom Switch Replacement Operator | | | | |
|--------------------------------------|------------|--------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Part Number | Lamp Color | Price | Description | Use with |
| PL1171PR-5 | Red | \$6.50 | 22mm, illuminated momentary Mushroom switch replacement operator, red, 5/pk | Part numbers starting with GCX1221, GCX3221 mushroom-style illuminated pushbuttons |
| PL1298P-5 | Red | \$6.50 | 22mm illuminated twist-to-release mushroom switch replacement operator, red, 5/pk | Part numbers starting with GCX1226, GCX3226 mushroom-style illuminated pushbuttons |

Flush pushbutton replacement operator



GR1168PR-5

| Flush Pushbutton Replacement Operator | | | | |
|---------------------------------------|------------|--------|--------------------------------------------------------------|----------------------------------------------------------|
| Part Number | Lamp Color | Price | Description | Use with |
| GR1168PR-5 | Red | \$8.25 | 22mm illuminated flush pushbutton replacement operator, 5/pk | Part numbers starting with GCX119, GCX120 GCX319, GCX320 |
| GR1168PV-5 | Green | \$8.25 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PG-5 | Yellow | \$8.25 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PB-5 | Blue | \$8.25 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PN-5 | Clear | \$8.25 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PW-5 | White | \$8.25 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |

Extended pushbutton replacement operator



PL1308PR-5

| Extended Pushbutton Replacement Operator | | | | |
|------------------------------------------|------------|--------|------------------------------------------------------------------|-------------------------------------------|
| Part Number | Lamp Color | Price | Description | Use with |
| PL1308PR-5 | Red | \$6.25 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | Part numbers starting with GCX121, GCX321 |
| PL1308PV-5 | Green | \$6.25 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PG-5 | Yellow | \$6.25 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PB-5 | Blue | \$6.25 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PN-5 | Clear | \$6.25 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PW-5 | White | \$6.25 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |

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

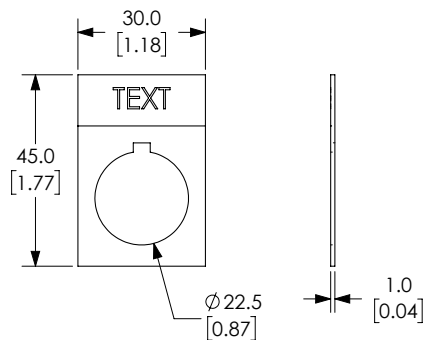


ECX1670A-R03

| Aluminum Legend Plates | | | | | |
|------------------------|----------------|------------|------------------|---------------------|--------|
| Legend | Color of Field | Text Color | Background Color | Part Number | Price |
| AUTO OFF HAND | Black | Black | Silver | ECX1670A-B46 | \$3.50 |
| Blank Plate | Black | - | Silver | ECX1670A-B | \$3.50 |
| Blank Plate | Red | - | Silver | ECX1670A-R | \$3.50 |
| CLAMP | Black | Black | Silver | ECX1670A-B24 | \$3.50 |
| CLOSE | Black | Black | Silver | ECX1670A-B01 | \$3.50 |
| DOWN | Black | Black | Silver | ECX1670A-B02 | \$3.50 |
| EMERG. STOP | Red | Red | Silver | ECX1670A-R03 | \$3.50 |
| EXTEND | Black | Black | Silver | ECX1670A-B51 | \$3.50 |
| FEEDER OFF | Black | Black | Silver | ECX1670A-B26 | \$3.50 |
| FEEDER ON | Black | Black | Silver | ECX1670A-B25 | \$3.50 |
| FOR OFF REV | Black | Black | Silver | ECX1670A-B19 | \$3.50 |
| FOR REV | Black | Black | Silver | ECX1670A-B13 | \$3.50 |
| FORWARD | Black | Black | Silver | ECX1670A-B04 | \$3.50 |
| GRIP | Black | Black | Silver | ECX1670A-B53 | \$3.50 |
| HAND-AUTO | Black | Black | Silver | ECX1670A-B14 | \$3.50 |
| HAND OFF AUTO | Black | Black | Silver | ECX1670A-B20 | \$3.50 |
| HIGH | Black | Black | Silver | ECX1670A-B27 | \$3.50 |
| HIGH LOW | Black | Black | Silver | ECX1670A-B43 | \$3.50 |
| IN | Black | Black | Silver | ECX1670A-B28 | \$3.50 |
| INCH | Black | Black | Silver | ECX1670A-B29 | \$3.50 |
| JOG | Black | Black | Silver | ECX1670A-B05 | \$3.50 |
| JOG FOR | Black | Black | Silver | ECX1670A-B30 | \$3.50 |
| JOG REV | Black | Black | Silver | ECX1670A-B31 | \$3.50 |
| JOG RUN | Black | Black | Silver | ECX1670A-B15 | \$3.50 |
| LOW | Black | Black | Silver | ECX1670A-B32 | \$3.50 |
| LOWER | Black | Black | Silver | ECX1670A-B33 | \$3.50 |
| MAN AUTO | Black | Black | Silver | ECX1670A-B44 | \$3.50 |

Continued on next page

Note: Legend plate text is 3mm in height



Dimensions: mm [inches]

22mm Metal Pilot Device Accessories



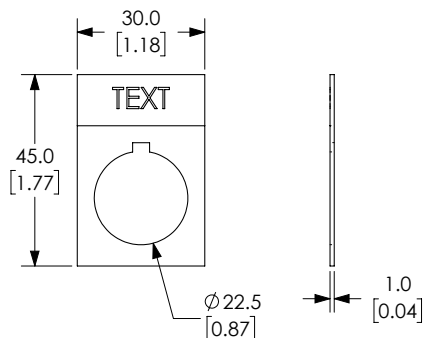
ECX1670A-B48



ECX1670A-R11

| Aluminum Legend Plates (continued) | | | | | |
|------------------------------------|----------------|------------|------------------|--------------|--------|
| Legend | Color of Field | Text Color | Background Color | Part Number | Price |
| MAN OFF AUTO | Black | Black | Silver | ECX1670A-B47 | \$3.50 |
| MOTOR RUN | Black | Black | Silver | ECX1670A-B22 | \$3.50 |
| MOTOR STOP | Black | Black | Silver | ECX1670A-B23 | \$3.50 |
| OFF | Black | Black | Silver | ECX1670A-B34 | \$3.50 |
| OFF ON | Black | Black | Silver | ECX1670A-B16 | \$3.50 |
| ON | Black | Black | Silver | ECX1670A-B06 | \$3.50 |
| OPEN | Black | Black | Silver | ECX1670A-B07 | \$3.50 |
| OPEN OFF CLOSE | Black | Black | Silver | ECX1670A-B48 | \$3.50 |
| OPEN CLOSE | Black | Black | Silver | ECX1670A-B17 | \$3.50 |
| OUT | Black | Black | Silver | ECX1670A-B35 | \$3.50 |
| POWER ON | Black | Black | Silver | ECX1670A-B21 | \$3.50 |
| PULL ON PUSH OFF | Black | Black | Silver | ECX1670A-B50 | \$3.50 |
| RAISE | Black | Black | Silver | ECX1670A-B36 | \$3.50 |
| READY | Black | Black | Silver | ECX1670A-B37 | \$3.50 |
| RELEASE | Black | Black | Silver | ECX1670A-B54 | \$3.50 |
| RESET | Black | Black | Silver | ECX1670A-B38 | \$3.50 |
| RETRACT | Black | Black | Silver | ECX1670A-B52 | \$3.50 |
| REVERSE | Black | Black | Silver | ECX1670A-B08 | \$3.50 |
| RUN | Black | Black | Silver | ECX1670A-B09 | \$3.50 |
| SAFE RUN | Black | Black | Silver | ECX1670A-B45 | \$3.50 |
| START | Black | Black | Silver | ECX1670A-B10 | \$3.50 |
| STOP | Black | Black | Silver | ECX1670A-B11 | \$3.50 |
| STOP | Red | Red | Silver | ECX1670A-R11 | \$3.50 |
| TEST | Black | Black | Silver | ECX1670A-B39 | \$3.50 |
| TRANSFER | Black | Black | Silver | ECX1670A-B40 | \$3.50 |
| TRIP | Black | Black | Silver | ECX1670A-B41 | \$3.50 |
| UNCLAMP | Black | Black | Silver | ECX1670A-B42 | \$3.50 |
| UP | Black | Black | Silver | ECX1670A-B12 | \$3.50 |
| UP OFF DOWN | Black | Black | Silver | ECX1670A-B49 | \$3.50 |
| UP DOWN | Black | Black | Silver | ECX1670A-B18 | \$3.50 |

Note: Legend plate text is 3mm in height

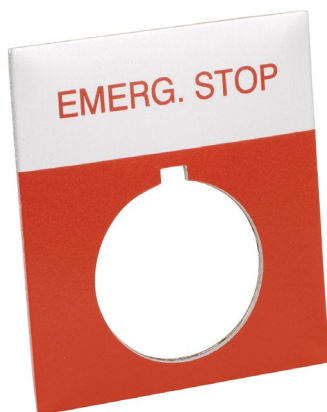


Dimensions: mm [inches]

22mm Metal Pilot Device Accessories



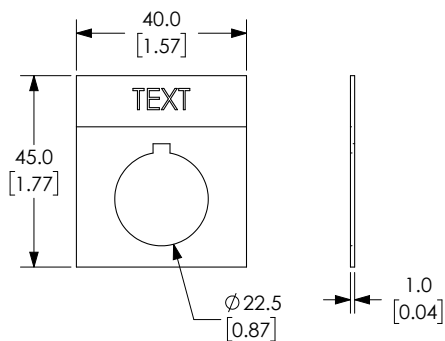
ECX1680A-B17



ECX1680A-R03

| Jumbo Aluminum Legend Plates | | | | | |
|------------------------------|----------------|------------|------------------|---------------------|--------|
| Legend | Color of Field | Text Color | Background Color | Part Number | Price |
| Blank Plate | Black | - | Silver | ECX1680A-B | \$4.00 |
| Blank Plate | Red | - | Silver | ECX1680A-R | \$4.00 |
| EMERG. STOP | Red | Red | Silver | ECX1680A-R03 | \$4.00 |
| HAND OFF AUTO | Black | Black | Silver | ECX1680A-B20 | \$4.00 |
| JOG | Black | Black | Silver | ECX1680A-B05 | \$4.00 |
| OFF ON | Black | Black | Silver | ECX1680A-B16 | \$4.00 |
| OPEN CLOSE | Black | Black | Silver | ECX1680A-B17 | \$4.00 |
| POWER ON | Black | Black | Silver | ECX1680A-B21 | \$4.00 |
| START | Black | Black | Silver | ECX1680A-B10 | \$4.00 |
| STOP | Red | Red | Silver | ECX1680A-R11 | \$4.00 |

Note: Legend plate text is 3mm in height



Dimensions: mm [inches]

E22 Series Cross-reference Tables

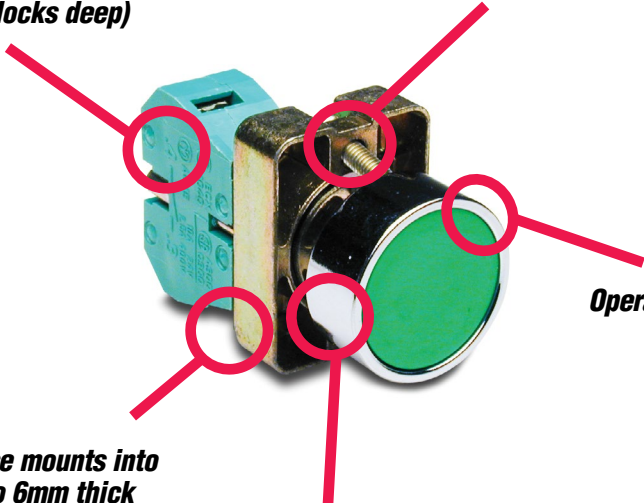
| Pushbutton, Indicator Light, and Selector Switch Cross Reference | | | | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------|
| Cutler-Hammer | Allen-Bradley | Telemecanique XB2B (chrome bezel) XA2B (black bezel) | GE C-2000 | Siemens |
| Non-Illuminated Pushbuttons | | | | |
| E22PB1A | 800EPF2 800E3LX10 | ZA2BA2 ZA2BZ101 | P9XPNG10N0 | 3SB1000-0AB01 3SB02-CBH 3SB1400-0B |
| E22PB3A | 800EPF3 800E3LX10 | ZA2BA3 ZA2BZ101 | P9XPNG10N0 | 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 | P9CPNRSN20N0 P9CPNVGN10N0 P9EPB02 P9AEPN201 P9AEPN202 | 3SB02-S21 |
| Illuminated Pushbuttons | | | | |
| E22TB2X4B | 800EPL4 800E3DL3 800E3X01 | ZA2BW14 ZA2BW06224 | P9XPLRSDN12NADI | 3SB1001-0LC01 3SB02-CBH 3SB1400-0C 3SB1400-2H |
| E22TB3X4A | 800EPL3 800E3DL3 800E3X10 | ZA2B213 AZ2B206124 | P9XPLVSDN12NADI | 3SB1001-0LE01 3SB02-CBH 3SB1400-0B 3SB1440-2H |
| E22TB9X4A | 800EPL5 800E3DL3 800E3X10 | ZA2BW15 ZA2BW06124 | P9XPLASDN12NADI | 3SB1001-0LD01 3SB02-CBH 3SB1400-0B 3SB1400-2H |
| E22TB2X10B | 800EPL4 800E2RL5 800E3X01 | ZA2BW14 ZA2BW062120 | P9XPLRSB P9PRNVJ P9PDNVD | 3SB1001-0LC01 3SB02-CBH 3SB1400-0C |
| E22TB3X10A | 800EPL3 800E2RL5 800E3X10 | ZA2BW13 ZA2BW061120 | P9XPLVSD P9PRNVJ P9PDNVD | 3SB02-UPR1P 3SB1910-0DE 3SB1400-0B |
| E22TB9X10A | 800DPLE5 800E2RL5 800E3X10 | ZA2BW15 ZA2B2061120 | P9XPLASD P9PRNVJ P9PDNVD | 3SB02-UPR1P 3SB1910-0DD 3SB1400-0B |

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

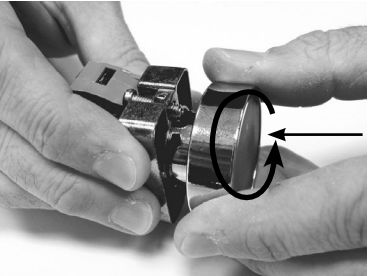


Operators are protected to IP65

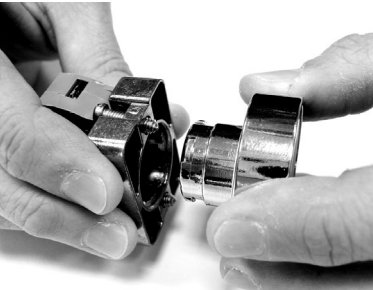
Support base mounts into panels up to 6mm thick

Chrome-plated alloy bezel is not only corrosion-resistant, but also attractive

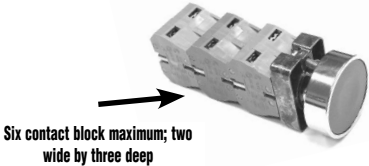
Easy installation



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

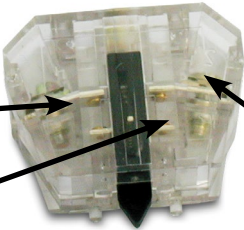


To install switch, place support base against rear of panel (not shown here), insert the operator and twist clockwise until it clicks into place. Carefully tighten the securing screws. Do not over-tighten.



Six contact block maximum; two wide by three deep

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



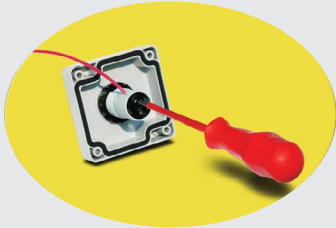
Contacts rated A300
(Refer to E22 Series mounting/contact rating section for details)

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

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

Minimum current rating 15mA @ 24vdc

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

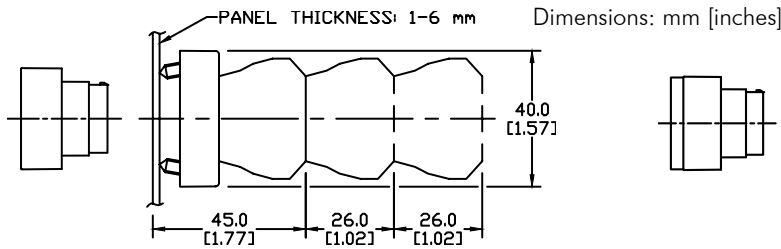


GCX Series 22mm Plastic Pilot Devices Specifications

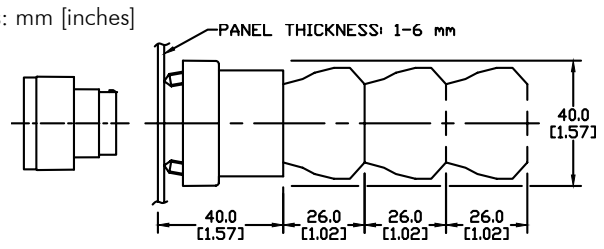
Assembly information

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.

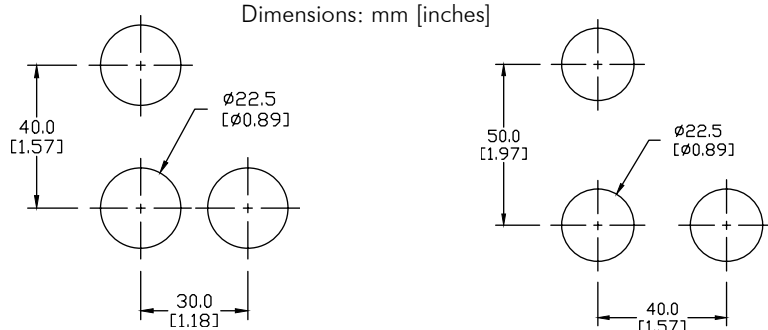
Pushbuttons and selector switches



Illuminated pushbuttons and selector switches/indicator lights

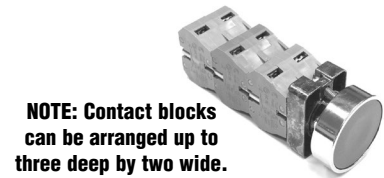


Mounting



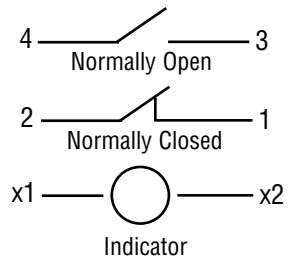
This layout is suitable if all switches are 230V or less and the same polarity.

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 | IP 40 for GCX3151-24, GCX3151-120, GCX3153-24 and GCX3153-120. IP 65 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, 3x381 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

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