# 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: | 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 | 2 | $;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 | | $-4j9: | |
| ECX1701-5 | Red | | $-4ja: | Silicone protective covers for use with 22mm standard-size flush pushbuttons. |
| ECX1702-5 | Green | | $-4jb: | |
| ECX1703-5 | Yellow | 5 | $-4jc: | Will not work with Cutler-Hammer pushbuttons, 22mm plastic illuminated or extended pushbuttons, or 22mm plastic pushbuttons with 40mm actuator face. |
| 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**

For the latest prices, please check AutomationDirect.com.

# 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**

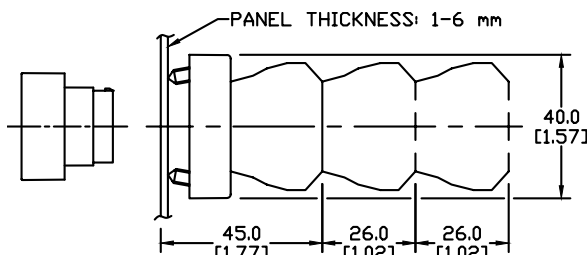# GCX Series 22mm Plastic Pilot Devices Specifications

## Assembly information

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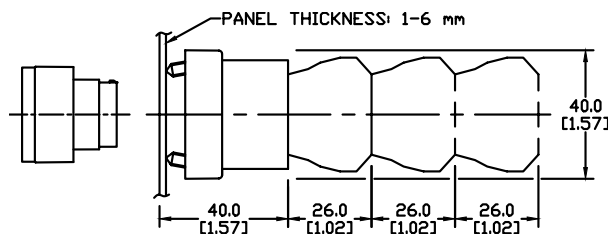Use these drawings as a guide to make sure there is adequate clearance behind the panel.
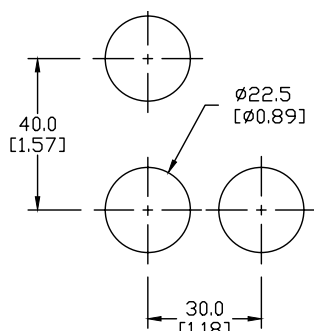
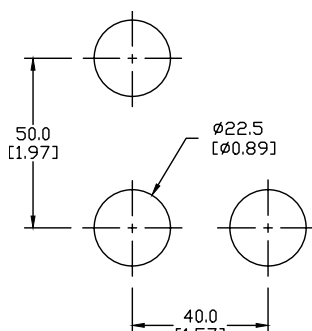## Dimensions

mm
[inches]

**Pushbuttons and selector switches**

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

PANEL THICKNESS: 1-6 mm

40.0 [1.57]

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

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]
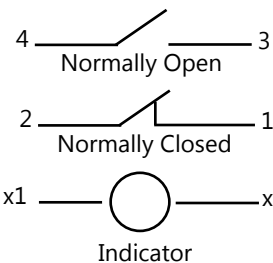
Ø22.5 [Ø0.89]

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 ———⟋——— 3
Normally Open

2 ———⟋——— 1
Normally Closed

x1 ———◯——— x2
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*