

GCX Series 22mm Plastic Key Switches and Selector Switches

Key-operated selector switches



GCX3420 (2-position maintained)
 • Keyed switches come with two keys.

| Part Number | Price | Description |
|-------------------|---------|--|
| GCX3420 | \$13.50 | 22mm plastic selector switch, key-operated, two-position maintained , key can be removed in all positions. One N.O. contact block. Replacement keys available |
| GCX3430 | \$13.50 | 22mm plastic selector switch, key-operated, two-position spring-return from right . One N.O. contact block. Replacement keys available |
| GCX3470-22 | \$20.00 | 22mm plastic 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 |

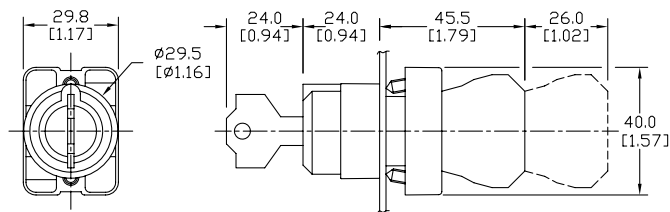


Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed the same. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2). Keys for plastic 22mm keyed switches are not compatible with Cutler-Hammer key switches.



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

Dimensions: mm [inches]



Two-position selector switches

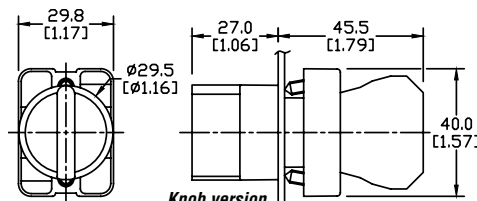


GCX3300
 Knob version

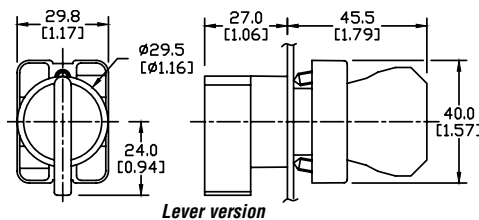


GCX3350
 Lever version

| Part Number | Price | Description - 2-Position Switches |
|----------------|--------|---|
| GCX3300 | \$7.25 | 22mm plastic selector switch, two-position maintained , black knob. One N.O. contact block |
| GCX3310 | \$8.00 | 22mm plastic selector switch, two-position spring-return from right , black knob. One N.O. contact block |
| GCX3350 | \$8.00 | 22mm plastic selector switch, two-position maintained , black lever. One N.O. contact block |
| GCX3360 | \$8.50 | 22mm plastic selector switch, two-position spring-return from right , black lever. One N.O. contact block |



Dimensions: mm [inches]



Contact Closure Sequence for Two-Position Switch

Contact Closure Sequence - 2-Position Switch

| Contact Blocks | Contact Arrangement (viewed from front) | | Switch Position (viewed from front) | |
|----------------|---|-------|-------------------------------------|----------------|
| | Left | Right | Left (Note 1) | Right (Note 2) |
| 1 x NC | NC | | X | |
| | | NC | X | |
| 1 x NO | NO | | | X |
| | | NO | | X |
| 2 x NC | NC | NC | XX | |
| 2 x NO | NO | NO | | XX |

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

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

GCX Series 22mm Plastic Selector Switches

Three-position selector switches

| Part Number | Price | Description - 3-Position Switches |
|-------------------|---------|---|
| GCX3320-22 | \$14.00 | 22mm plastic selector switch, three-position maintained , black knob, Two N.O. and two N.C. contact blocks |
| GCX3330-22 | \$14.50 | 22mm plastic selector switch, three-position spring-return to center , black knob, Two N.O. and two N.C. contact blocks |
| GCX3370-22 | \$14.50 | 22mm plastic selector switch, three-position, maintained , black lever, Two N.O. and two N.C. contact blocks |
| GCX3380-22 | \$15.00 | 22mm plastic selector switch, three-position spring-return to center , black lever, Two N.O. and two N.C. contact blocks |



GCX3330-22 Knob version

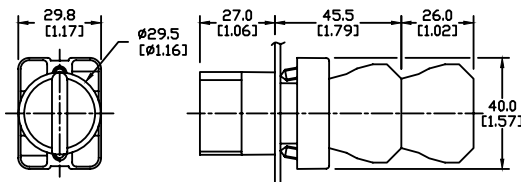


GCX3370-22 Lever version

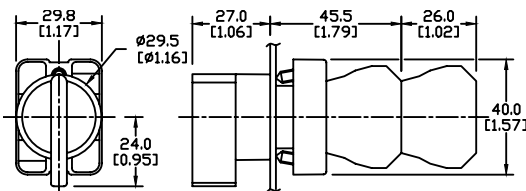


Note: When using switches having two-deep contact blocks with the 22mm plastic enclosures, be sure to use enclosures that are 74 mm deep; 51 mm-deep enclosures are too shallow and the switch body will not fit.

Dimensions: mm [inches]



Knob version



Lever version

Contact Closure Sequence for Three-Position Switch

| Contact Closure Sequence - 3-Position Switch | | | | | |
|--|---|-------|-------------------------------------|-----------------|----------------|
| Contact Blocks | Contact Arrangement (viewed from front) | | Switch Position (viewed from front) | | |
| | Left | Right | Left (Note 1) | Center (Note 2) | Right (Note 3) |
| 1 x NC | NC | | | X ——— X | |
| | | NC | X ——— X | | |
| 1 x NO | NO | | X | | |
| | | NO | | | X |
| 2 x NC | NC | NC | X ——— XX ——— X | | |
| 2 x NO | NO | NO | X | | X |

Note 1: Left switch position activates left side contacts (viewed from front).
Note 2: Center switch position deactivates all contacts.
Note 3: Right switch position activates right side contacts (viewed from front).

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

22mm Plastic Pilot Device Accessories

Replacement incandescent bulbs



ECX1902-5

| Replacement Incandescent Bulbs | | | | |
|--------------------------------|----------------|---------|------------------------|--|
| Part Number | Quantity | Price | Rating | Description |
| ECX1900-5 | Pkg of 5 bulbs | \$8.50 | 6V@ 200mA 1.2 watts | 6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4 |
| ECX1902-5 | Pkg of 5 bulbs | \$8.50 | 24V@ 80mA 2 watts | 24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4 |
| ECX1904-5 | Pkg of 5 bulbs | \$17.50 | 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 HT8LAMP TOOL.

Replacement LED lamps



ECX1915-2

| Replacement LED Lamps | | | | | |
|-----------------------|--------|--------------------|---------|-----------------------|--|
| Part Number | Color | Quantity | Price | Rating | Description |
| ECX1911-2 | Red | Pkg of 2 LED lamps | \$15.50 | 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. |
| ECX1912-2 | Green | | \$19.50 | | |
| ECX1913-2 | Yellow | | \$15.50 | | |
| ECX1914-2 | Blue | | \$21.00 | | |
| ECX1915-2 | White | | \$25.00 | | |
| ECX1921-2 | Red | | \$15.50 | | |
| ECX1922-2 | Green | | \$19.50 | | |
| ECX1923-2 | Yellow | | \$15.50 | | |
| ECX1924-2 | Blue | | \$21.00 | | |
| ECX1925-2 | White | | \$25.00 | | |

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



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. |

Protective covers for pushbuttons



ECX1703-5

| Protective Covers for Pushbuttons | | | | |
|-----------------------------------|--------|--------------------------|---------|---|
| Part Number | Color | Quantity | Price | Description |
| ECX1700-5 | Black | Pkg of 5 protective caps | \$6.50 | 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. |
| ECX1701-5 | Red | | \$6.50 | |
| ECX1702-5 | Green | | \$6.50 | |
| ECX1703-5 | Yellow | | \$6.50 | |
| ECX1704-5 | Blue | | \$6.50 | |
| ECX1705-5 | Clear | | \$6.50 | |
| ECX1706-5 | Clear | | \$11.50 | |

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. See the Tools section of the catalog for details.

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

Replacement keys



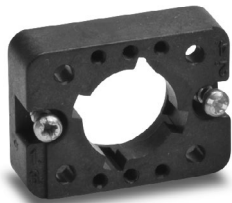
ECX1067-2

| Replacement Keys | | | |
|------------------|----------|--------|--|
| Part Number | Quantity | Price | Description |
| ECX1067-2 | Pkg of 2 | \$5.75 | 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. |

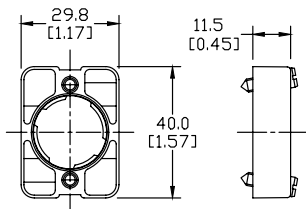
Note: All key-actuated 22mm plastic selector switches are keyed alike.

22mm Plastic Pilot Device Accessories

Replacement 22mm support base



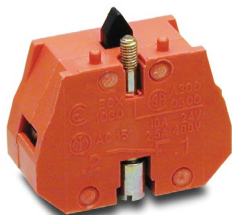
ECX3029-2



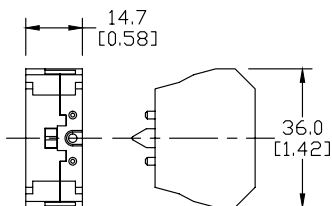
Dimensions: mm [inches]

| Replacement 22mm Support Base | | | |
|-------------------------------|----------|--------|---|
| Part Number | Quantity | Price | Description |
| ECX3029-2 | Pkg of 1 | \$1.75 | 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 |

Replacement contact blocks



ECX1030-2



Dimensions: mm [inches]

| Replacement Contact Blocks | | | | |
|----------------------------|----------|---------|--|--|
| Part Number | Quantity | Price | Contacts | Description |
| ECX1030-2 | Pkg of 2 | \$6.25 | 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 |
| ECX1030-5 | Pkg of 5 | \$15.00 | | |
| ECX1040-2 | Pkg of 2 | \$6.25 | Green, normally-open (N.O.) | Note: Will not work with Cutler-Hammer 22mm switches sold by AUTOMATIONDIRECT |
| ECX1040-5 | Pkg of 5 | \$15.00 | | |
| ECX1042-2 | Pkg of 2 | \$6.25 | Brown, normally-open (N.O.), push-push | Use on lighted Push-push button only |

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

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. |

Two-position short lever operator



GR1172PR-5

| Short Lever Replacement Operator | | | | |
|----------------------------------|------------|---------|---|---|
| Part Number | Lamp Color | Price | 2-Position | Use with |
| GR1172PR-5 | Red | \$14.50 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pkg | Part numbers starting with GCX124, GCX125, GCX324, GCX325 |
| GR1172PV-5 | Green | \$14.50 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pkg | |
| GR1172PG-5 | Yellow | \$14.50 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pkg | |
| GR1172PB-5 | Blue | \$14.50 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pkg | |
| GR1172PN-5 | Clear | \$14.50 | 22mm 2-position selector switch illuminated short lever replacement operator, 5/pkg | |

22mm Plastic Pilot Device Accessories

Three-position short lever operator



GR1288PR-5

| Short Lever Replacement Operator | | | | |
|----------------------------------|------------|---------|--|--|
| Part Number | Lamp Color | Price | 3-Position | Use with |
| GR1288PR-5 | Red | \$14.50 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | Part numbers starting with GCX126, GCX128 GCX326, GVX328 |
| GR1288PV-5 | Green | \$14.50 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1288PG-5 | Yellow | \$14.50 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1288PB-5 | Blue | \$14.50 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |
| GR1288PN-5 | Clear | \$14.50 | 22mm 3-position selector switch illuminated short lever replacement operator, 5/pk | |

Mushroom switch replacement operator



PL1298P-5

| Mushroom Switch Replacement Operator | | | | |
|--------------------------------------|------------|--------|--|--|
| Part Number | Lamp Color | Price | Description | Use with |
| PL1171PR-5 | Red | \$6.25 | 22mm, illuminated momentary Mushroom switch replacement operator, red, 5/pk | Part numbers starting with GCX1221, GCX3221 mushroom-style illuminated pushbuttons |
| PL1298P-5 | Red | \$6.25 | 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 | \$8.00 | 22mm illuminated flush pushbutton replacement operator, 5/pk | Part numbers starting with GCX119, GCX120 GCX319, GCX320 |
| GR1168PV-5 | Green | \$8.00 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PG-5 | Yellow | \$8.00 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PB-5 | Blue | \$8.00 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PN-5 | Clear | \$8.00 | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| GR1168PW-5 | White | \$8.00 | 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 | \$6.00 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | Part numbers starting with GCX121, GCX321 |
| PL1308PV-5 | Green | \$6.00 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PG-5 | Yellow | \$6.00 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PB-5 | Blue | \$6.00 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PN-5 | Clear | \$6.00 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| PL1308PW-5 | White | \$6.00 | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |

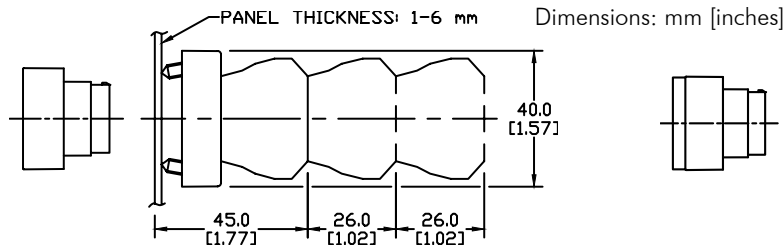
Note: All dimensions are in inches [millimeters].

GCX Series 22mm Plastic Pilot Devices Specifications

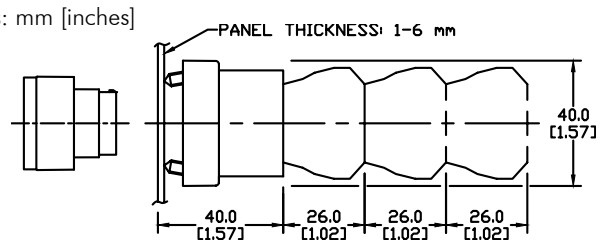
Assembly information

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.

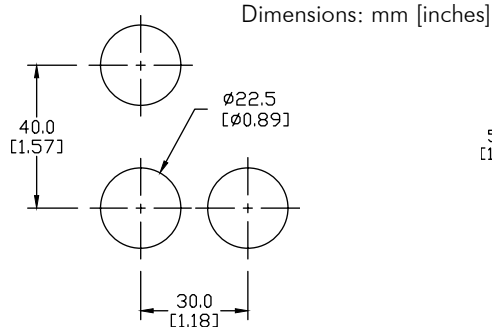
Pushbuttons and selector switches



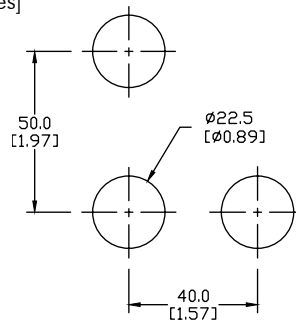
Illuminated pushbuttons and selector switches/indicator lights



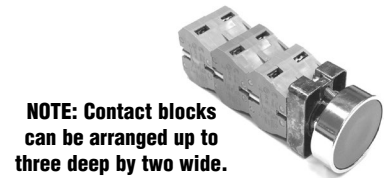
Mounting



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

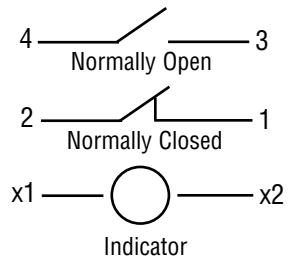


This layout is suitable if all switches are 400V or less and different polarity.



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.