

GCX Series 22mm Metal Illuminated Pushbuttons

Mushroom-Style Illuminated Pushbuttons

All pushbuttons include operator, mounting adapter, chrome plated alloy bezel, indicating bulb (if applicable), and contact block. They are shipped unassembled. Legend plate is not included and must be ordered separately. All switches in this series use replacement contact block ECX1030 (Red, N.C.) or ECX1040 (Green, N.O.), sold separately in packages of two or five.



GCX1221-24

| Mushroom Style Illuminated Pushbuttons | | | | | |
|--|------------|-----------|----------------------------|--|--|
| Part Number | Lamp Color | Price | Drawing Link | Description | Replacement Bulbs |
| Incandescent | | | | | |
| <u>GCX1221-24</u> | Red | \$--0dii: | <u>PDF</u> | 22mm metal incandescent momentary pushbutton with incandescent illuminated 40mm mushroom actuator, 24VDC/VAC, one N.C. contact block | <u>ECX1902-5</u> 5/pk 80mA |
| <u>GCX1221-120</u> | Red | \$-0dih: | <u>PDF</u> | 22mm metal incandescent momentary pushbutton with incandescent illuminated 40mm mushroom actuator, 120VDC/VAC, one N.C. contact block | <u>ECX1904-5</u> , 5/pk 20mA |
| <u>GCX1226-24</u> | Red | \$-0dic: | <u>PDF</u> | 22mm metal incandescent pushbutton with incandescent illuminated 40mm mushroom twist-to-release actuator, 24VDC/VAC, one N.C. contact block | <u>ECX1902-5</u> 5/pk 80mA |
| <u>GCX1226-120</u> | Red | \$-0dib: | <u>PDF</u> | 22mm metal incandescent pushbutton with incandescent illuminated 40mm mushroom twist-to-release actuator, 120VDC/VAC, one N.C. contact block | <u>ECX1904-5</u> , 5/pk 20mA |
| LED | | | | | |
| <u>GCX1221-24L</u> | Red | \$-0dj8: | <u>PDF</u> | 22 mm metal momentary pushbutton with LED illuminated 40 mm mushroom actuator, 24VDC/VAC, one N.C. contact block | <u>ECX1911-2</u> 2/pk 26mA |
| <u>GCX1221-120L</u> | Red | \$-0dj7: | <u>PDF</u> | 22 mm metal momentary pushbutton with LED illuminated 40 mm mushroom actuator, 120VDC/VAC, one N.C. contact block | <u>ECX1921-2</u> 2/pk 5mA |
| <u>GCX1226-24L</u> | Red | \$-0dja: | <u>PDF</u> | 22 mm metal pushbutton with LED illuminated 40 mm mushroom twist-to-release actuator, 24VDC/VAC, one N.C. contact block | <u>ECX1911-2</u> 2/pk 26mA |
| <u>GCX1226-120L</u> | Red | \$-0dj9: | <u>PDF</u> | 22 mm metal pushbutton with LED illuminated 40 mm mushroom twist-to-release actuator, 120VDC/VAC, one N.C. contact block | <u>ECX1921-22</u> 2/pk 5mA |

Non-Illuminated Mushroom Pushbuttons

60mm dia. actuator and mounts in standard 22mm hole

| Non-Illuminated Mushroom Pushbuttons | | | | |
|--------------------------------------|--------|----------|----------------------------|--|
| Part Number | Color | Price | Drawing Link | Description |
| <u>GCX1131</u> | Red | \$-0di8: | <u>PDF</u> | Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. |
| <u>GCX1134</u> | Black | \$-0did: | <u>PDF</u> | Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. |
| <u>GCX1135</u> | Red | \$-0die: | <u>PDF</u> | Momentary action with one N.C. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. "Emergency" legend plate available (see Accessories). |
| <u>GCX1136</u> | Red | \$-0di9: | <u>PDF</u> | Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole. 60mm mushroom-style actuator. |
| <u>GCX1137</u> | Red | \$-0dif: | <u>PDF</u> | Momentary action with one N.C. contact block, fits in 22mm dia. hole, has large 60mm dia. mushroom-style. "Emergency" legend plate available (see Accessories). |
| <u>GCX1139</u> | Yellow | \$-0dig: | <u>PDF</u> | Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. |
| <u>GCX1141</u> | Red | \$-0dia: | <u>PDF</u> | Key operated release with one N.C. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator. "Emergency" legend plate available (see Accessories). |



GCX1137



GCX1141
(key operated)



Note: Keyed switches come with two keys. All metal 22mm keyed switches are keyed alike. Replacement keys are available.
Order part no. [ECX1067-2](#) (pkg. of 2).

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

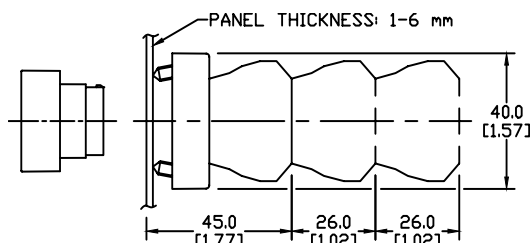
GCX Series 22mm Metal Pilot Devices

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

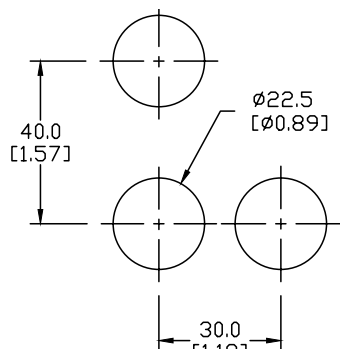


Dimensions: mm [inches]

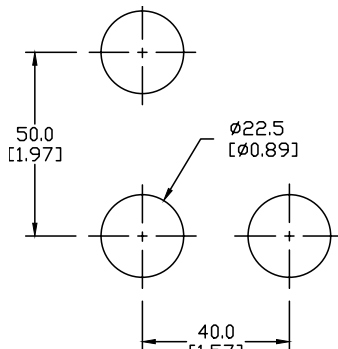
Illuminated pushbuttons and selector switches/pilot lights



Mounting



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

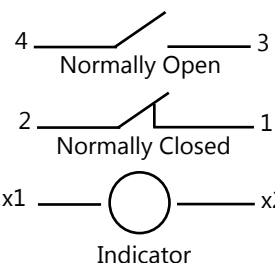


This layout is suitable if all switches are 400V or less and different polarity.

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 | 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) 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

| 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. 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: | 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. |
| ECX1706-5 | Clear | | \$;-04jf: | |



[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 |
| <u>ECX1030-2</u> | 2 | \$dg3: | <u>PDF</u> | 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. |
| <u>ECX1030-5</u> | 5 | \$0dg4: | <u>PDF</u> | | |
| <u>ECX1040-2</u> | 2 | \$dg5: | <u>PDF</u> | Green, normally-open (N.O.) | |
| <u>ECX1040-5</u> | 5 | \$0dg6: | <u>PDF</u> | | |
| <u>ECX1042-2</u> | 2 | \$dg7: | <u>PDF</u> | 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) | \$;6uj: | 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 | \$;0del: | 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 |
| <u>PL1171PR-5</u> | Red | \$;dfi: | 22mm, illuminated momentary Mushroom switch replacement operator, red, 5/pk | Part numbers starting with GCX1221, GCX3221 mushroom-style illuminated pushbuttons |
| <u>PL1298P-5</u> | Red | \$;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 |
| <u>GR1168PR-5</u> | Red | \$;0dej: | 22mm illuminated flush pushbutton replacement operator, 5/pk | Part numbers starting with GCX119, GCX120 GCX319, GCX320 |
| <u>GR1168PV-5</u> | Green | \$0de_: | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| <u>GR1168PG-5</u> | Yellow | \$0dez: | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| <u>GR1168PB-5</u> | Blue | \$0dey: | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| <u>GR1168PN-5</u> | Clear | \$;0dej: | 22mm illuminated flush pushbutton replacement operator, 5/pk | |
| <u>GR1168PW-5</u> | 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 |
| <u>PL1308PR-5</u> | Red | \$;dfs: | 22mm illuminated extended pushbutton, replacement operator, 5/pk | Part numbers starting with GCX121, GCX321 |
| <u>PL1308PV-5</u> | Green | \$;;dft: | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| <u>PL1308PG-5</u> | Yellow | \$;dfp: | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| <u>PL1308PB-5</u> | Blue | \$;dfo: | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| <u>PL1308PN-5</u> | Clear | \$;dfq: | 22mm illuminated extended pushbutton, replacement operator, 5/pk | |
| <u>PL1308PW-5</u> | 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 | <u>ECX1670A-B47</u> | \$,3,1y: | <u>PDF</u> |
| MOTOR RUN | Black | Black | Silver | <u>ECX1670A-B22</u> | \$,3,16: | <u>PDF</u> |
| MOTOR STOP | Black | Black | Silver | <u>ECX1670A-B23</u> | \$,3,17: | <u>PDF</u> |
| OFF | Black | Black | Silver | <u>ECX1670A-B34</u> | \$,-3,1i: | <u>PDF</u> |
| OFF ON | Black | Black | Silver | <u>ECX1670A-B16</u> | \$,3,10: | <u>PDF</u> |
| ON | Black | Black | Silver | <u>ECX1670A-B06</u> | \$,3,0q: | <u>PDF</u> |
| OPEN | Black | Black | Silver | <u>ECX1670A-B07</u> | \$,3,0s: | <u>PDF</u> |
| OPEN OFF CLOSE | Black | Black | Silver | <u>ECX1670A-B48</u> | \$,3,1z: | <u>PDF</u> |
| OPEN CLOSE | Black | Black | Silver | <u>ECX1670A-B17</u> | \$,3,11: | <u>PDF</u> |
| OUT | Black | Black | Silver | <u>ECX1670A-B35</u> | \$,-3,1j: | <u>PDF</u> |
| POWER ON | Black | Black | Silver | <u>ECX1670A-B21</u> | \$,3,15: | <u>PDF</u> |
| PULL ON PUSH OFF | Black | Black | Silver | <u>ECX1670A-B50</u> | \$,-3,1[: | <u>PDF</u> |
| RAISE | Black | Black | Silver | <u>ECX1670A-B36</u> | \$,3,1k: | <u>PDF</u> |
| READY | Black | Black | Silver | <u>ECX1670A-B37</u> | \$,-3,1l: | <u>PDF</u> |
| RELEASE | Black | Black | Silver | <u>ECX1670A-B54</u> | \$,3,1?: | <u>PDF</u> |
| RESET | Black | Black | Silver | <u>ECX1670A-B38</u> | \$,3,1n: | <u>PDF</u> |
| RETRACT | Black | Black | Silver | <u>ECX1670A-B52</u> | \$,3,1#: | <u>PDF</u> |
| REVERSE | Black | Black | Silver | <u>ECX1670A-B08</u> | \$,-3,0t: | <u>PDF</u> |
| RUN | Black | Black | Silver | <u>ECX1670A-B09</u> | \$,3,0u: | <u>PDF</u> |
| SAFE RUN | Black | Black | Silver | <u>ECX1670A-B45</u> | \$,3,1v: | <u>PDF</u> |
| START | Black | Black | Silver | <u>ECX1670A-B10</u> | \$,3,0v: | <u>PDF</u> |
| STOP | Black | Black | Silver | <u>ECX1670A-B11</u> | \$,3,0_: | <u>PDF</u> |
| STOP | Red | Red | Silver | <u>ECX1670A-R11</u> | \$,3,21: | <u>PDF</u> |
| TEST | Black | Black | Silver | <u>ECX1670A-B39</u> | \$,3,1o: | <u>PDF</u> |
| TRANSFER | Black | Black | Silver | <u>ECX1670A-B40</u> | \$,3,1p: | <u>PDF</u> |
| TRIP | Black | Black | Silver | <u>ECX1670A-B41</u> | \$,3,1q: | <u>PDF</u> |
| UNCLAMP | Black | Black | Silver | <u>ECX1670A-B42</u> | \$,3,1s: | <u>PDF</u> |
| UP | Black | Black | Silver | <u>ECX1670A-B12</u> | \$,3,0#: | <u>PDF</u> |
| UP OFF DOWN | Black | Black | Silver | <u>ECX1670A-B49</u> | \$,-3,1]: | <u>PDF</u> |
| UP DOWN | Black | Black | Silver | <u>ECX1670A-B18</u> | \$,3,12: | <u>PDF</u> |

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 | <u>ECX1680A-B</u> | \$;-3,3j: | <u>PDF</u> |
| Blank Plate | Red | - | Silver | <u>ECX1680A-R</u> | \$;-3,3s: | <u>PDF</u> |
| EMERG. STOP | Red | Red | Silver | <u>ECX1680A-R03</u> | \$;-3,3t: | <u>PDF</u> |
| HAND OFF AUTO | Black | Black | Silver | <u>ECX1680A-B20</u> | \$;-3,3p: | <u>PDF</u> |
| JOG | Black | Black | Silver | <u>ECX1680A-B05</u> | \$;-3,3k: | <u>PDF</u> |
| OFF ON | Black | Black | Silver | <u>ECX1680A-B16</u> | \$;-3,3n: | <u>PDF</u> |
| OPEN CLOSE | Black | Black | Silver | <u>ECX1680A-B17</u> | \$;-3,3o: | <u>PDF</u> |
| POWER ON | Black | Black | Silver | <u>ECX1680A-B21</u> | \$;-3,3q: | <u>PDF</u> |
| START | Black | Black | Silver | <u>ECX1680A-B10</u> | \$;-3,3l: | <u>PDF</u> |
| STOP | Red | Red | Silver | <u>ECX1680A-R11</u> | \$;-3,3u: | <u>PDF</u> |

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 800E3LX10 | ZA2BA2 ZA2BZ101 | P9XPNG10N0 | 3SB1000-0AB01 3SB02-CBH 3SB1400-0B |
| E22PB3A | 800EPF3 800E3LX10 | ZA2BA3 ZA2BZ101 | P9XPNVG10N0 | 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

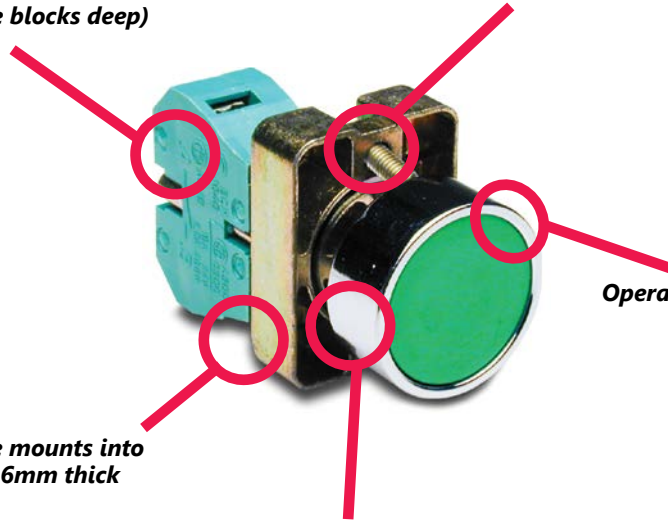
Any combination of contact blocks is allowed, up to a total of six (two blocks wide and three blocks deep)

Secure mounting method eliminates twisting in mounting hole

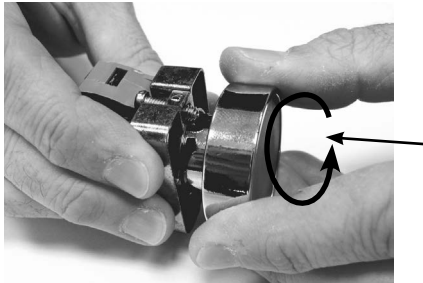
Operators are protected to IP65

Support base mounts into panels up to 6mm thick

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



Easy installation

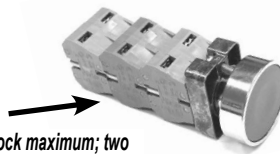


To remove operator, press toward support base and twist counterclockwise.



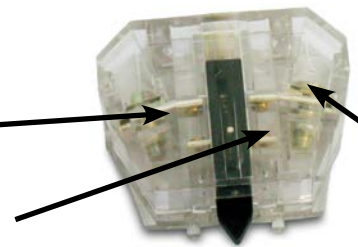
To install switch, place support base against rear of panel (not shown here), insert the operator and twist clockwise until it clicks into place. Carefully tighten the securing screws. Do not over-tighten.

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)**

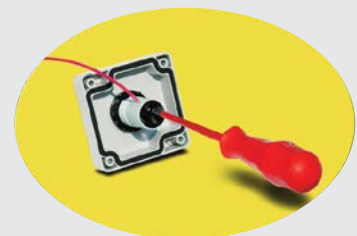


Pressure plate wiring terminals for easy, secure wiring, accepting up to 14 AWG wire

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

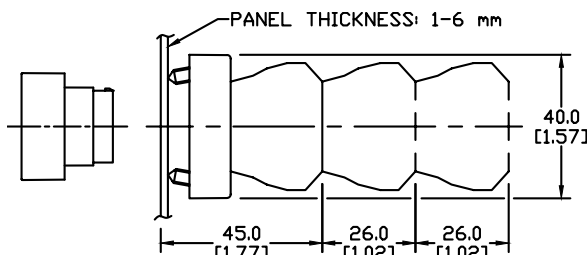
Assembly information

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.

Dimensions

mm
[inches]

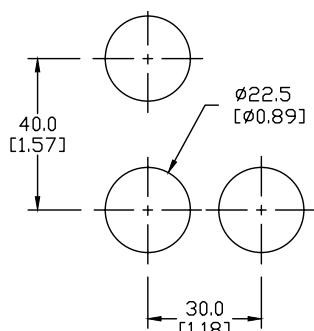
Pushbuttons and selector switches



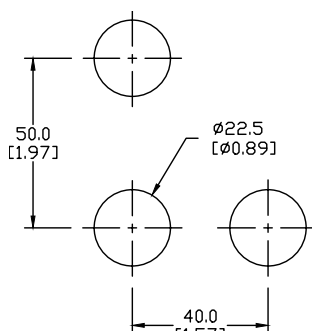
Illuminated pushbuttons and selector switches/indicator lights



Mounting



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

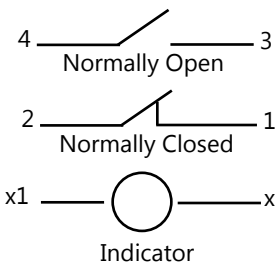


This layout is suitable if all switches are 400V or less and different polarity.

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



Typical Wiring



Specifications

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

| Physical Specifications | | Electrical Specifications | |
|-----------------------------------|--|--|---|
| Standards Reference | CEI EN 60947-5-1, CSA C22-2 n.14 | Rated Thermal Current (contact block) | A300, Q300 (Refer to E22 Series mounting/contact rating section for details) |
| Approvals | UL File E189258, IMQ (where specified) | Rated Insulation Voltage | Ui 660V according to CEI EN 60947-5-1, 300V according to CSA C22-2 n.14 and UL 508 |
| Enclosure Material | Fiberglass reinforced thermoplastic | Dielectric Strength | 3kV (1 second) |
| Contacts Material | Silver | Insulation Resistance | 2MΩ min. (500VDC) |
| Protection Degree | IP40 for GCX3151-24, GCX3151-120, GCX3153-24 and GCX3153-120. IP65 for all others. (See Appendix of this catalog for explanation of IP ratings according to IEC 144 CEI 70-1.) | Initial Contact Resistance | ≤ 25mΩ |
| Electric Shock Protection | IEC 536, Class II | Short-Circuit Protection* | Cartridge fuses gl 10 A-500V 10, 3x38/1 100 KA |
| Temperature Ratings | Storage: -40 to 80°C (-40 to 176° F) Operating: -25° to +70°C (-13° to 158° F) | Terminal Markings | According to CENELEC EN 50013 |
| Working Positions | All working positions are allowed | Connections | Single screw with non-loosening plate clamp, 14AWG max., Tighten to 0.8Nm max |
| Mechanical Life | Pushbuttons, selector switches, joy stick switches: 1,000,000 operations Emergency mushrooms and push-push pushbuttons: 300,000 operations | Contacts Operation | Self-cleaning types EN01 (N.C.) EN 10 (N.O.) slow-action, positive opening |
| Positive Opening Operation | (according to IEC 947-5-1) All functions incorporating an NC contact are positive opening operation | Operation Frequency | 3600 operations per hour max. |
| | | Utilization Category | AC15 (Control of AC electromagnetic loads) 24 volts AC at 10 amps 130 volts AC at 6.5 amps DC13 (Control of DC electromagnetic loads) 24 volts DC at 1.5 amps 110 volts DC at 0.5 amps |

*Note: Recommended, not supplied