

GCX Series 22mm Plastic Illuminated Pushbuttons

Mushroom-style illuminated pushbuttons

All pushbuttons include operator, support base, 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.



GCX3221-24

Mushroom-style Illuminated Pushbuttons						
Part Number	Lamp Color	Price	Drawing Link	Description	Replacement Incandescent Bulb [5 per pack]	Replacement LED Lamp [2 per pack]
Incandescent						
GCX3221-24	Red		PDF	22mm plastic momentary pushbutton with incandescent illuminated 40mm mushroom actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5 80mA	ECX1911-2 26mA
GCX3221-120	Red		PDF	22mm plastic momentary pushbutton with incandescent illuminated 40mm mushroom actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5 20mA	ECX1921-2 5mA
GCX3226-24	Red		PDF	22mm plastic pushbutton with incandescent illuminated 40mm mushroom twist-to-release actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5 80mA	ECX1911-2 26mA
GCX3226-120	Red		PDF	22mm plastic pushbutton with incandescent illuminated 40mm mushroom twist-to-release actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5 20mA	ECX1921-2 5mA
LED						
GCX3221-24L	Red		PDF	22mm plastic momentary pushbutton with LED illuminated 40mm mushroom actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5 80mA	ECX1911-2 26mA
GCX3221-120L	Red		PDF	22mm plastic momentary pushbutton with LED illuminated 40mm mushroom actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5 20mA	ECX1921-2 5mA
GCX3226-24L	Red		PDF	22mm plastic pushbutton with LED illuminated 40mm mushroom twist-to-release actuator, 24VDC/VAC, one N.C. contact block	ECX1902-5 80mA	ECX1911-2 26mA
GCX3226-120L	Red		PDF	22mm plastic pushbutton with LED illuminated 40mm mushroom twist-to-release actuator, 120VDC/VAC, one N.C. contact block	ECX1904-5 20mA	ECX1921-2 5mA

Non-illuminated mushroom pushbuttons

Feature large 60mm dia. actuator and mount in standard 22mm hole.

Non-illuminated Mushroom Pushbuttons				
Part Number	Color	Price	Drawing Link	Description
GCX3131	Red		PDF	Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole. Has large 40mm dia. mushroom-style actuator.
GCX3134	Black		PDF	Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.
GCX3135	Red		PDF	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).
GCX3136	Red		PDF	Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole. 60mm dia. mushroom-style actuator.
GCX3137	Red		PDF	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).
GCX3139	Yellow		PDF	Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.
GCX3141	Red		PDF	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).

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



GCX3137



GCX3141
(key operated)



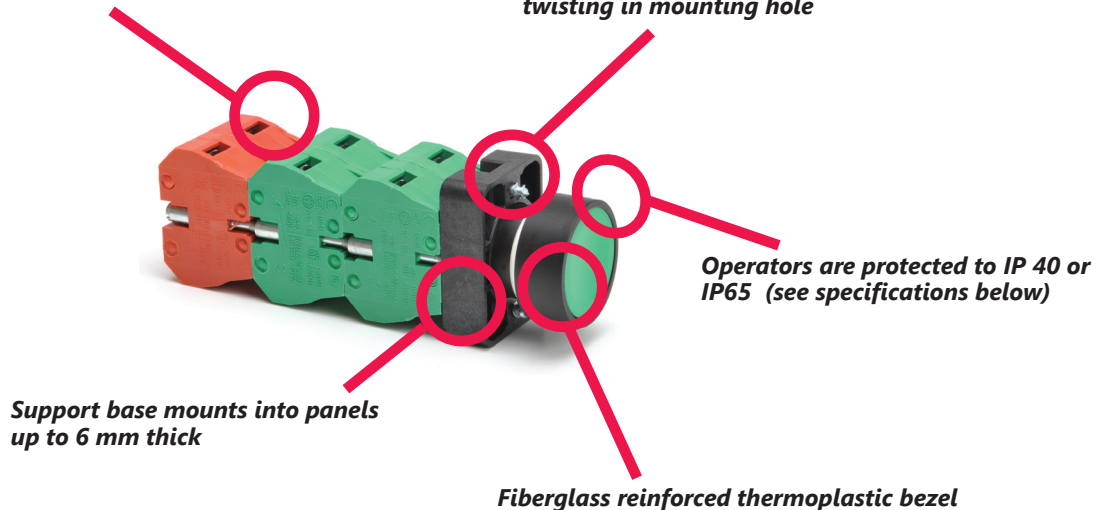
Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed alike. Replacement keys are available. Order part no. ECX1067-2 (pkg. of 2).

GCX Series 22mm Plastic Pilot Devices

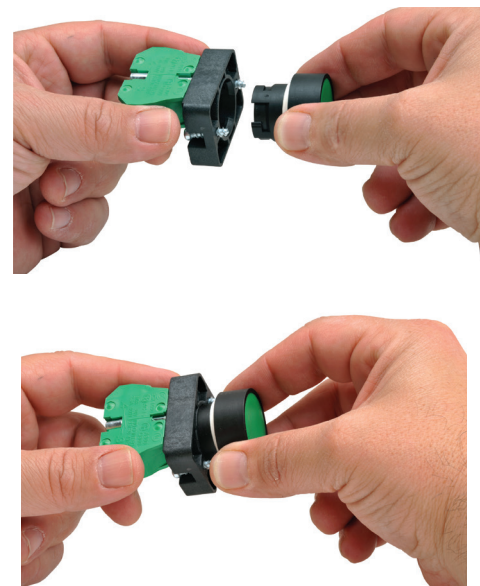
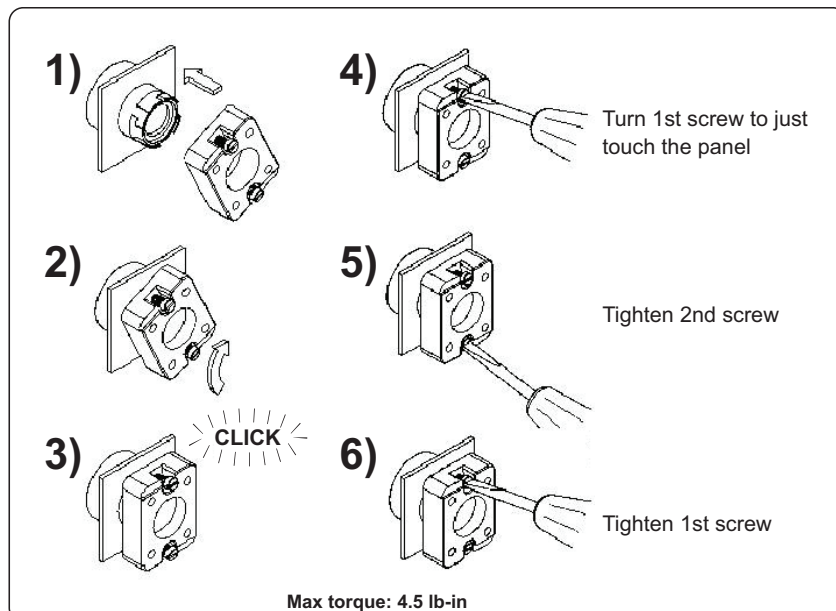
Features

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

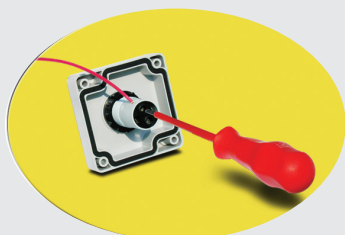
Secure mounting method eliminates twisting in mounting hole



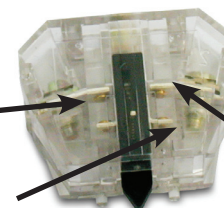
Easy installation



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



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



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

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

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

22mm Plastic Pilot Device Accessories

Replacement incandescent bulbs



ECX1902-5

Replacement Incandescent Bulbs				
Part Number	Quantity	Price	Rating	Description
ECX1900-5	5		6V@ 200mA 1.2 watts	6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
ECX1902-5	5		24V@ 80mA 2 watts	24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4
ECX1904-5	5		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	2		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				
ECX1913-2	Yellow				
ECX1914-2	Blue				
ECX1915-2	White				
ECX1921-2	Red			120V@5mA 0.6 watts	
ECX1922-2	Green				
ECX1923-2	Yellow				
ECX1924-2	Blue				
ECX1925-2	White				

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		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	5		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			
ECX1702-5	Green			
ECX1703-5	Yellow			
ECX1704-5	Blue			
ECX1705-5	Clear			
ECX1706-5	Clear			Clear silicone protective covers for use with 22mm illuminated and extended pushbuttons only. Will not work with Cutler-Hammer pushbuttons or 22mm mushroom pushbuttons.

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

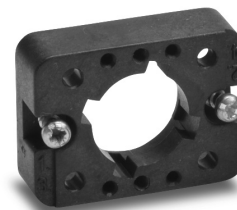
Replacement Keys			
Part Number	Quantity	Price	Description
ECX1067-2	2		Replacement key for GCX series key-actuated selector switches, pack of 2 sets (2 keys each). NOTE: Will not work with Cutler-Hammer 22mm switches.

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

22mm Plastic Pilot Device Accessories

Replacement 22mm support base

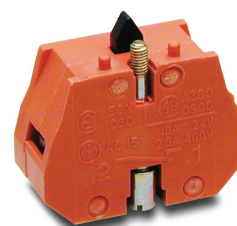
Replacement 22mm Support Base				
Part Number	Quantity	Price	Drawing Link	Description
ECX3029-2	1		PDF	22mm plastic support base Note: This item is supplied as a replacement part and is not required with any switch assembly. Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect



ECX3029-2

Replacement contact blocks

Replacement Contact Blocks					
Part Number	Quantity	Price	Drawing Link	Contacts	Description
ECX1030-2	2		PDF	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 Note: Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect
ECX1030-5	5		PDF		
ECX1040-2	2		PDF	Green, normally-open (N.O.)	Note: Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect
ECX1040-5	5		PDF		
ECX1042-2	2		PDF	Brown, normally-open (N.O.), push-push	Use on lighted Push-push button only



ECX1030-2

Note: See electrical specifications on GCX Series 22mm Plastic Pilot Devices

EMERGENCY STOP legend plate

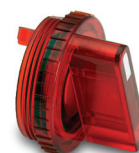
EMERGENCY STOP Legend Plate				
Part Number	Quantity	Price	Drawing Link	Description
ECX1651	1		PDF	Oversize yellow circular EMERGENCY STOP legend plate for 22mm E-stop type mushroom pushbuttons, 60mm outside diameter.



ECX1651

Two-position short lever operator

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

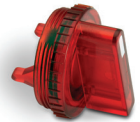


GR1172PR-5

22mm Plastic Pilot Device Accessories

Three-position short lever operator

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



GR1288PR-5

Mushroom switch replacement operator

Mushroom Switch Replacement Operator				
Part Number	Lamp Color	Price	Description	Use with
<u>PL1171PR-5</u>	Red		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		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		22mm illuminated flush pushbutton replacement operator, 5/pk	Part numbers starting with GCX119, GCX120, GCX319, GCX320
<u>GR1168PV-5</u>	Green		22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PG-5</u>	Yellow		22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PB-5</u>	Blue		22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PN-5</u>	Clear		22mm illuminated flush pushbutton replacement operator, 5/pk	
<u>GR1168PW-5</u>	White		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		22mm illuminated extended pushbutton, replacement operator, 5/pk	Part numbers starting with GCX121, GCX321
<u>PL1308PV-5</u>	Green		22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PG-5</u>	Yellow		22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PB-5</u>	Blue		22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PN-5</u>	Clear		22mm illuminated extended pushbutton, replacement operator, 5/pk	
<u>PL1308PW-5</u>	White		22mm illuminated extended pushbutton, replacement operator, 5/pk	



PL1308PR-5

22mm Plastic Pilot Device Accessories

Legend plates

Plastic legend plates for use with 22mm pilot devices. White engraved text on colored background. O-ring included.



ECX1670-B07



ECX1670-R03

Plastic Legend Plates				
Legend	Color of Field	Part Number	Price	Drawing Link
AUTO OFF HAND	Black	ECX1670-B46		PDF
Blank Plate	Black	ECX1670-B		PDF
Blank Plate	Red	ECX1670-R		PDF
CLAMP	Black	ECX1670-B24		PDF
CLOSE	Black	ECX1670-B01		PDF
DOWN	Black	ECX1670-B02		PDF
EMERG. STOP	Red	ECX1670-R03		PDF
EXTEND	Black	ECX1670-B51		PDF
FEEDER OFF	Black	ECX1670-B26		PDF
FEEDER ON	Black	ECX1670-B25		PDF
FOR OFF REV	Black	ECX1670-B19		PDF
FOR-REV	Black	ECX1670-B13		PDF
FORWARD	Black	ECX1670-B04		PDF
GRIP	Black	ECX1670-B53		PDF
HAND-AUTO	Black	ECX1670-B14		PDF
HAND OFF AUTO	Black	ECX1670-B20		PDF
HIGH	Black	ECX1670-B27		PDF
HIGH LOW	Black	ECX1670-B43		PDF
IN	Black	ECX1670-B28		PDF
INCH	Black	ECX1670-B29		PDF
JOG	Black	ECX1670-B05		PDF
JOG FOR	Black	ECX1670-B30		PDF
JOG REV	Black	ECX1670-B31		PDF
JOG-RUN	Black	ECX1670-B15		PDF
LOW	Black	ECX1670-B32		PDF
LOWER	Black	ECX1670-B33		PDF

Note: Legend plate text is 3mm in height

Plastic Legend Plates				
Legend	Color of Field	Part Number	Price	Drawing Link
MAN AUTO	Black	ECX1670-B44		PDF
MAN OFF AUTO	Black	ECX1670-B47		PDF
MOTOR RUN	Black	ECX1670-B22		PDF
MOTOR STOP	Black	ECX1670-B23		PDF
OFF	Black	ECX1670-B34		PDF
OFF-ON	Black	ECX1670-B16		PDF
ON	Black	ECX1670-B06		PDF
OPEN	Black	ECX1670-B07		PDF
OPEN OFF CLOSE	Black	ECX1670-B48		PDF
OPEN-CLOSE	Black	ECX1670-B17		PDF
OUT	Black	ECX1670-B35		PDF
POWER ON	Black	ECX1670-B21		PDF
PULL ON PUSH OFF	Black	ECX1670-B50		PDF
RAISE	Black	ECX1670-B36		PDF
READY	Black	ECX1670-B37		PDF
RELEASE	Black	ECX1670-B54		PDF
RESET	Black	ECX1670-B38		PDF
RETRACT	Black	ECX1670-B52		PDF
REVERSE	Black	ECX1670-B08		PDF
RUN	Black	ECX1670-B09		PDF
SAFE RUN	Black	ECX1670-B45		PDF
START	Black	ECX1670-B10		PDF
STOP	Black	ECX1670-B11		PDF
STOP	Red	ECX1670-R11		PDF
TEST	Black	ECX1670-B39		PDF
TRANSFER	Black	ECX1670-B40		PDF
TRIP	Black	ECX1670-B41		PDF
UNCLAMP	Black	ECX1670-B42		PDF
UP	Black	ECX1670-B12		PDF
UP OFF DOWN	Black	ECX1670-B49		PDF
UP-DOWN	Black	ECX1670-B18		PDF

22mm Plastic Pilot Device Accessories



ECX1690-B16



ECX1690-R11

Jumbo Plastic Legend Plates				
Legend	Color of Field	Part Number	Price	Drawing Link
Blank Plate	Black	ECX1690-B		PDF
Blank Plate	Red	ECX1690-R		PDF
EMERG. STOP	Red	ECX1690-R03		PDF
HAND-OFF-AUTO	Black	ECX1690-B20		PDF
JOG	Black	ECX1690-B05		PDF
OFF-ON	Black	ECX1690-B16		PDF
OPEN-CLOSE	Black	ECX1690-B17		PDF
POWER ON	Black	ECX1690-B21		PDF
START	Black	ECX1690-B10		PDF
STOP	Red	ECX1690-R11		PDF

Note: Legend plate text is 3mm in height

GCX Series 22mm Plastic Pilot Devices Specifications

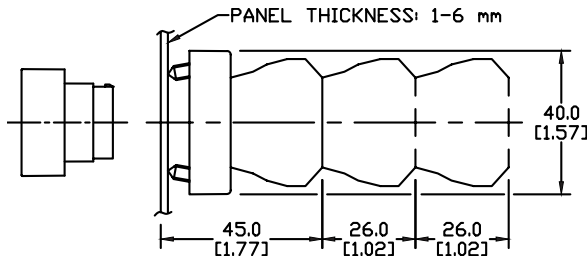
Assembly information

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.

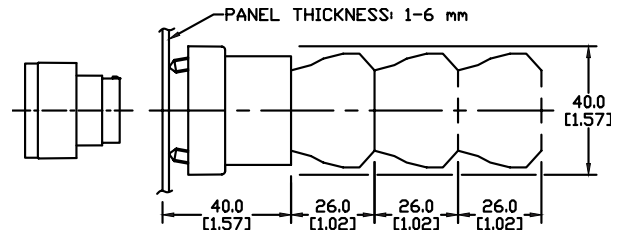
Dimensions

mm
[inches]

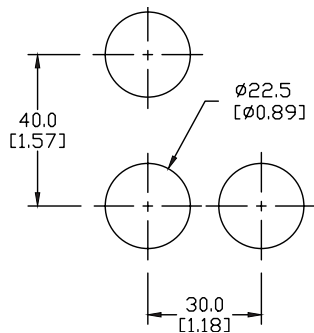
Pushbuttons and selector switches



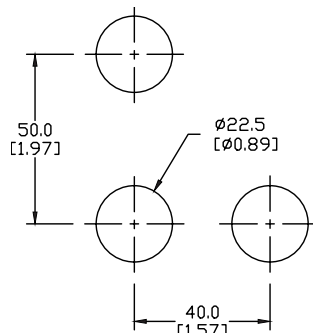
Illuminated pushbuttons and selector switches/ indicator lights



Mounting



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

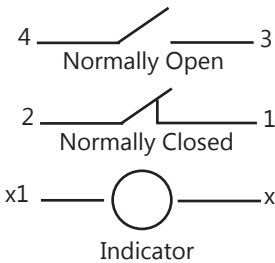


This layout is suitable if all switches are 400V or less and different polarity.

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	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, 3x3811 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