

22mm Metal Pilot Device Accessories

Replacement incandescent bulbs

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



ECX1902-5

Note: Bulb removal tool available. Order part number HT8LAMPTOOL.

Replacement LED lamps

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				



ECX1915-2

Hole plug

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.



ECX1490

Pilot Light replacement lens

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



PL1170PR-5

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Protective covers for pushbuttons

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 2 mm illuminated and extended pushbuttons only. Will not work with Cutler-Hammer pushbuttons or 22mm mushroom pushbuttons.



ECX1703-5

Replacement 22mm support base

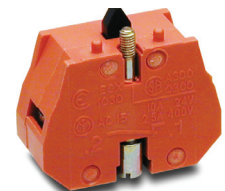
Replacement 22mm Support Base				
Part Number	Quantity	Price	Drawing Link	Description
ECX1029-2	1		PDF	22mm metal support base Note: This item is supplied as a replacement part and is not required with any switch assembly. Will not work with Cutler-Hammer 22mm switches sold by AutomationDirect



ECX1029-2

Replacement contact blocks

Replacement Contact Blocks					
Part Number	Quantity	Price	Drawing Link	Contacts	Description
ECX1030-2	2		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		PDF		
ECX1040-2	2		PDF	Green, normally-open (N.O.)	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.
ECX1040-5	5		PDF		
ECX1042-2	2		PDF	Brown, normally-open (N.O.), push-push	



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)		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.

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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

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.

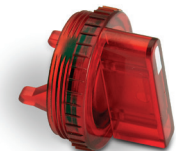
Note: Part number 109225 is recommended when punching holes for 22mm pilot devices.



109225

Two-position short lever operator

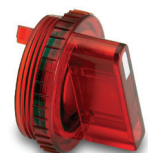
2-Position Short Lever Replacement Operator				
Part Number	Lamp Color	Price	2-Position	Use with
GR1172PR-5	Red		22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX124, GCX125 GCX324, GCX325
GR1172PV-5	Green		22mm 2-position selector switch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

Three-position short lever operator

3-Position Short Lever Replacement Operator				
Part Number	Lamp Color	Price	3-Position	Use with
GR1288PR-5	Red		22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX126, GCX128 GCX326, GCX328
GR1288PV-5	Green		22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PG-5	Yellow		22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PB-5	Blue		22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	
GR1288PN-5	Clear		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		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 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		PDF
Blank Plate	Black	-	Silver	ECX1670A-B		PDF
Blank Plate	Red	-	Silver	ECX1670A-R		PDF
CLAMP	Black	Black	Silver	ECX1670A-B24		PDF
CLOSE	Black	Black	Silver	ECX1670A-B01		PDF
DOWN	Black	Black	Silver	ECX1670A-B02		PDF
EMERG. STOP	Red	Red	Silver	ECX1670A-R03		PDF
EXTEND	Black	Black	Silver	ECX1670A-B51		PDF
FEEDER OFF	Black	Black	Silver	ECX1670A-B26		PDF
FEEDER ON	Black	Black	Silver	ECX1670A-B25		PDF
FOR OFF REV	Black	Black	Silver	ECX1670A-B19		PDF
FOR REV	Black	Black	Silver	ECX1670A-B13		PDF
FORWARD	Black	Black	Silver	ECX1670A-B04		PDF
GRIP	Black	Black	Silver	ECX1670A-B53		PDF
HAND-AUTO	Black	Black	Silver	ECX1670A-B14		PDF
HAND OFF AUTO	Black	Black	Silver	ECX1670A-B20		PDF
HIGH	Black	Black	Silver	ECX1670A-B27		PDF
HIGH LOW	Black	Black	Silver	ECX1670A-B43		PDF
IN	Black	Black	Silver	ECX1670A-B28		PDF
INCH	Black	Black	Silver	ECX1670A-B29		PDF
JOG	Black	Black	Silver	ECX1670A-B05		PDF
JOG FOR	Black	Black	Silver	ECX1670A-B30		PDF
JOG REV	Black	Black	Silver	ECX1670A-B31		PDF
JOG RUN	Black	Black	Silver	ECX1670A-B15		PDF
LOW	Black	Black	Silver	ECX1670A-B32		PDF
LOWER	Black	Black	Silver	ECX1670A-B33		PDF
MAN AUTO	Black	Black	Silver	ECX1670A-B44		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	ECX1670A-B47		PDF
MOTOR RUN	Black	Black	Silver	ECX1670A-B22		PDF
MOTOR STOP	Black	Black	Silver	ECX1670A-B23		PDF
OFF	Black	Black	Silver	ECX1670A-B34		PDF
OFF ON	Black	Black	Silver	ECX1670A-B16		PDF
ON	Black	Black	Silver	ECX1670A-B06		PDF
OPEN	Black	Black	Silver	ECX1670A-B07		PDF
OPEN OFF CLOSE	Black	Black	Silver	ECX1670A-B48		PDF
OPEN CLOSE	Black	Black	Silver	ECX1670A-B17		PDF
OUT	Black	Black	Silver	ECX1670A-B35		PDF
POWER ON	Black	Black	Silver	ECX1670A-B21		PDF
PULL ON PUSH OFF	Black	Black	Silver	ECX1670A-B50		PDF
RAISE	Black	Black	Silver	ECX1670A-B36		PDF
READY	Black	Black	Silver	ECX1670A-B37		PDF
RELEASE	Black	Black	Silver	ECX1670A-B54		PDF
RESET	Black	Black	Silver	ECX1670A-B38		PDF
RETRACT	Black	Black	Silver	ECX1670A-B52		PDF
REVERSE	Black	Black	Silver	ECX1670A-B08		PDF
RUN	Black	Black	Silver	ECX1670A-B09		PDF
SAFE RUN	Black	Black	Silver	ECX1670A-B45		PDF
START	Black	Black	Silver	ECX1670A-B10		PDF
STOP	Black	Black	Silver	ECX1670A-B11		PDF
STOP	Red	Red	Silver	ECX1670A-R11		PDF
TEST	Black	Black	Silver	ECX1670A-B39		PDF
TRANSFER	Black	Black	Silver	ECX1670A-B40		PDF
TRIP	Black	Black	Silver	ECX1670A-B41		PDF
UNCLAMP	Black	Black	Silver	ECX1670A-B42		PDF
UP	Black	Black	Silver	ECX1670A-B12		PDF
UP OFF DOWN	Black	Black	Silver	ECX1670A-B49		PDF
UP DOWN	Black	Black	Silver	ECX1670A-B18		PDF

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	ECX1680A-B		PDF
Blank Plate	Red	-	Silver	ECX1680A-R		PDF
EMERG. STOP	Red	Red	Silver	ECX1680A-R03		PDF
HAND OFF AUTO	Black	Black	Silver	ECX1680A-B20		PDF
JOG	Black	Black	Silver	ECX1680A-B05		PDF
OFF ON	Black	Black	Silver	ECX1680A-B16		PDF
OPEN CLOSE	Black	Black	Silver	ECX1680A-B17		PDF
POWER ON	Black	Black	Silver	ECX1680A-B21		PDF
START	Black	Black	Silver	ECX1680A-B10		PDF
STOP	Red	Red	Silver	ECX1680A-R11		PDF

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	P9XPVNG10N0	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 P9CPNVGN10NO 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 Plastic Pilot Devices Specifications

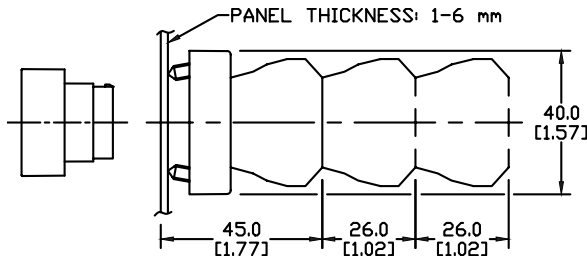
Assembly information

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.

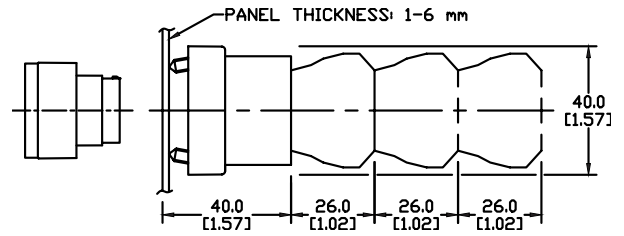
Dimensions

mm
[inches]

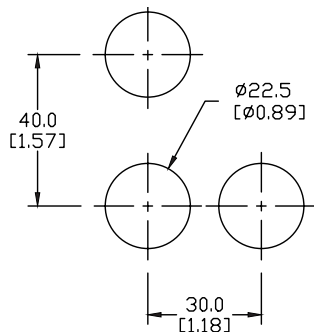
Pushbuttons and selector switches



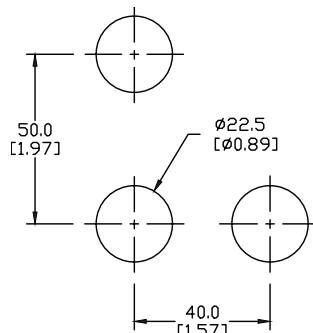
Illuminated pushbuttons and selector switches/indicator lights



Mounting



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

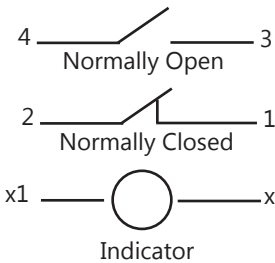


This layout is suitable if all switches are 400V or less and different polarity.

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