# **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	\$12.50	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	\$14.50	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	\$14.50	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	\$16.00	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	\$17.50	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	\$19.00	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	\$20.00	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	\$21.00	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	\$10.50	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	\$8.50	PDF	Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.			
GCX3135	Red	\$8.50	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	\$13.00	PDF	Twist-to-release actuator with one N.C. contact block, fits in 22mm dia. hole. 60mm dia. mushroom-style actuator.			
GCX3137	Red	\$10.50	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	\$8.50	PDF	Momentary action with one N.O. contact block, fits in 22mm dia. hole, has large 40mm dia. mushroom-style actuator.			
GCX3141	Red	\$15.50	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).			



GCX3137



GCX3141 (key operated)

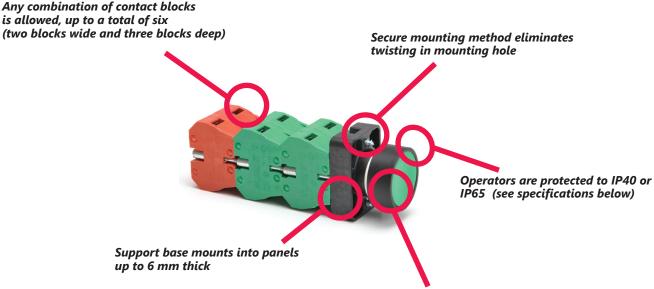


Note: Keyed switches come with two keys. All plastic 22mm keyed switches are keyed alike. Replacement keys are available. Order part no. <u>ECX1067-2</u> (pkg. of 2).

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

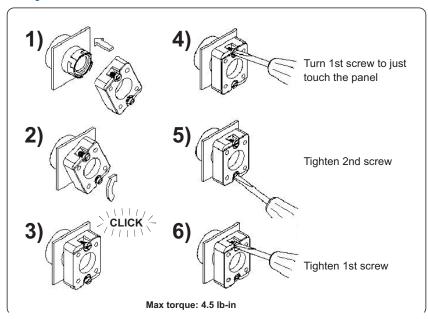
## **GCX Series 22mm Plastic Pilot Devices**

#### **Features**



Fiberglass reinforced thermoplastic bezel

#### **Easy installation**







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



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 www.AutomationDirect.com

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# Replacement Incandescent Bulbs



ECX1902-5

# Replacement LED Lamps



ECX1915-2

#### **Hole Plug**



ECX1490

# Protective Covers for Pushbuttons



ECX1703-5

#### **Knockout Punches**



**Replacement Keys** 



ECX1067-2

	Replacement Incandescent Bulbs							
Part Number	Quantity	Price	Rating	Description				
ECX1900-5	5	\$9.50	6V@ 200mA 1.2 watts	6V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4				
ECX1902-5	5	\$9.50	24V@ 80mA 2 watts	24V replacement bulb for 22mm switches and indicators. Miniature bayonet base T31/4				
ECX1904-5	5	\$20.00	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									
Part Number	Color	Quantity	Price	Rating	Description					
ECX1911-2	Red		\$17.50							
ECX1912-2	Green		\$22.00	0.000000						
ECX1913-2	Yellow		\$17.50	24V@26mA 0.6 watts						
ECX1914-2	Blue		\$23.50		LED replacement lamp for miniature bayonet bases Works with 22mm switches and indicators, but					
ECX1915-2	White	2	\$28.00		illumination will not be as even when used with the					
ECX1921-2	Red		\$17.50		ECX 22mm indicators					
ECX1922-2	Green		\$22.00	4001/05 4	Note: Will not replace sealed Cutler-Hammer monoblock LED indicators.					
ECX1923-2	Yellow		\$17.50	120V@5mA 0.6 watts	MONOBIOCK LED MUICA(OIS.					
ECX1924-2	Blue		\$23.50	0.0 Walls						
ECX1925-2	White		\$28.00							

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				
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								
Part Number	Color	Quantity	Price	Description					
ECX1700-5	Black		\$7.50						
ECX1701-5	Red		\$7.50	Silicone protective covers for use with 22mm standard-size flush					
ECX1702-5	Green		\$7.50	pushbuttons.					
ECX1703-5	Yellow		\$7.50	Will not work with Cutler-Hammer pushbuttons, 22mm plastic illuminated or extended pushbuttons, or 22mm plastic pushbuttons					
ECX1704-5	Blue	5	\$7.50	with 40mm actuator face.					
ECX1705-5	Clear		\$7.50						
ECX1706-5	Clear		\$13.00	Clear silicone protective covers for use with 22mm illuminated and extended pushbuttons only. Will not work with Cutler-Hammer pushbuttons or 22mm mushroom pushbuttons.					

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					
Part Number Quantity Price Description					
ECX1067-2	2	\$6.50	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.

#### **Replacement 22mm Support Base**

Replacement 22mm Support Base					
Part Number Quantity Price Drawing Link Description					
ECX3029-2	1	\$1.75	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	\$7.25	PDF	Red,	Replacement contact block for 22mm pushbuttons and					
ECX1030-5	5	\$17.00	PDF	normally-closed (N.C.)	selector switches. Tightening Torque, terminal screw: 0.8 N⋅m max					
ECX1040-2	2	\$7.25	PDF	Green,	mounting screw: 0.5 N·m max Note: Will not work with Cutler-Hammer 22mm switches					
ECX1040-5	5	\$17.00	PDF	normally-open (N.O.)	sold by AutomationDirect					
ECX1042-2	2	\$7.25	<u>PDF</u>	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	\$2.75	PDF	Oversize yellow circular EMERGENCY STOP legend plate for 22mm E-stop type mushroom pushbuttons, 60mm outside diameter.		



ECX1651

## **Two-Position Short Lever Pperator**

Short Lever Replacement Operator								
Part Number	Lamp Color	Price	2-Position	Use with				
<u>GR1172PR-5</u>	Red	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk					
<u>GR1172PV-5</u>	Green	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with				
GR1172PG-5	Yellow	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	GCX124, GCX125				
GR1172PB-5	Blue	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk	GCX324, GCX325				
GR1172PN-5	Clear	\$16.50	22mm 2-position selector switch illuminated short lever replacement operator, 5/pk					



GR1172PR-5

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#### **Three-Position Short Lever Operator**

	Short Lever Replacement Operator							
Part Number	Lamp Color	Price	3-Position	Use with				
<u>GR1288PR-5</u>	Red	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk					
GR1288PV-5	Green	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk					
GR1288PG-5	Yellow	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	Part numbers starting with GCX126, GCX128				
GR1288PB-5	Blue	\$16.50	22mm 3-position selector switch illuminated short lever replacement operator, 5/pk	GCX326, GVX328				
GR1288PN-5	Clear	\$16.50	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	Price Description					
<u>PL1171PR-5</u>	Red	\$7.25	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	\$7.25	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

	Flush Pushbutton Replacement Operator								
Part Number	Lamp Color	Description	Use with						
<u>GR1168PR-5</u>	Red	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk						
<u>GR1168PV-5</u>	Green	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk						
<u>GR1168PG-5</u>	Yellow	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	Part numbers starting with					
GR1168PB-5	Blue	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk	GCX119, GCX120 GCX319, GCX320					
GR1168PN-5	Clear	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk						
<u>GR1168PW-5</u>	White	\$9.00	22mm illuminated flush pushbutton replacement operator, 5/pk						



## **Extended Pushbutton Replacement Operator**

Extended Pushbutton Replacement Operator							
Part Number	Lamo		Use with				
PL1308PR-5	Red	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk				
PL1308PV-5	Green	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk				
PL1308PG-5	Yellow	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	Part numbers starting with			
PL1308PB-5	Blue	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk	GCX121, GCX321			
PL1308PN-5	Clear	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk				
PL1308PW-5	White	\$7.00	22mm illuminated extended pushbutton, replacement operator, 5/pk				



## **Legend Plates**

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





Plastic Legend Plates						
Legend	Color of Field	Part Number	Price	Drawing Link		
AUTO OFF HAND	Black	ECX1670-B46	\$3.75	PDF		
Blank Plate	Black	ECX1670-B	\$3.00	PDF		
Blank Plate	Red	ECX1670-R	\$3.00	PDF		
CLAMP	Black	ECX1670-B24	\$3.75	PDF		
CLOSE	Black	ECX1670-B01	\$3.00	PDF		
DOWN	Black	ECX1670-B02	\$3.00	PDF		
EMERG. STOP	Red	ECX1670-R03	\$3.00	PDF		
EXTEND	Black	ECX1670-B51	\$3.75	PDF		
FEEDER OFF	Black	ECX1670-B26	\$3.75	PDF		
FEEDER ON	Black	ECX1670-B25	\$3.75	PDF		
FOR OFF REV	Black	ECX1670-B19	\$3.00	PDF		
FOR-REV	Black	ECX1670-B13	\$3.00	PDF		
FORWARD	Black	ECX1670-B04	\$3.00	PDF		
GRIP	Black	ECX1670-B53	\$3.75	PDF		
HAND-AUTO	Black	ECX1670-B14	\$3.00	PDF		
HAND OFF AUTO	Black	ECX1670-B20	\$3.00	PDF		
HIGH	Black	ECX1670-B27	\$3.75	PDF		
HIGH LOW	Black	ECX1670-B43	\$3.75	PDF		
IN	Black	ECX1670-B28	\$3.75	PDF		
INCH	Black	ECX1670-B29	\$3.75	PDF		
JOG	Black	ECX1670-B05	\$3.00	PDF		
JOG FOR	Black	ECX1670-B30	\$3.75	PDF		
JOG REV	Black	ECX1670-B31	\$3.75	PDF		
JOG-RUN	Black	ECX1670-B15	\$3.00	PDF		
LOW	Black	ECX1670-B32	\$3.75	PDF		
LOWER	Black	ECX1670-B33	\$3.75	<u>PDF</u>		

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Plastic Legend Plates						
Legend	Color of Field	Part Number	Price	Drawing Link		
MAN AUTO	Black	ECX1670-B44	\$3.75	PDF		
MAN OFF AUTO	Black	ECX1670-B47	\$3.75	PDF		
MOTOR RUN	Black	ECX1670-B22	\$3.00	PDF		
MOTOR STOP	Black	ECX1670-B23	\$3.00	PDF		
OFF	Black	ECX1670-B34	\$3.75	PDF		
OFF-ON	Black	ECX1670-B16	\$3.00	PDF		
ON	Black	ECX1670-B06	\$3.00	PDF		
OPEN	Black	ECX1670-B07	\$3.00	PDF		
OPEN OFF CLOSE	Black	ECX1670-B48	\$3.75	PDF		
OPEN-CLOSE	Black	ECX1670-B17	\$3.00	PDF		
OUT	Black	ECX1670-B35	\$3.75	PDF		
POWER ON	Black	ECX1670-B21	\$3.00	PDF		
PULL ON PUSH OFF	Black	ECX1670-B50	\$3.75	PDF		
RAISE	Black	ECX1670-B36	\$3.75	PDF		
READY	Black	ECX1670-B37	\$3.75	<u>PDF</u>		
RELEASE	Black	ECX1670-B54	\$3.75	PDF		
RESET	Black	ECX1670-B38	\$3.75	PDF		
RETRACT	Black	ECX1670-B52	\$3.75	PDF		
REVERSE	Black	ECX1670-B08	\$3.00	PDF		
RUN	Black	ECX1670-B09	\$3.00	<u>PDF</u>		
SAFE RUN	Black	ECX1670-B45	\$3.75	PDF		
START	Black	ECX1670-B10	\$3.00	PDF		
STOP	Black	ECX1670-B11	\$3.00	PDF		
STOP	Red	ECX1670-R11	\$3.00	PDF		
TEST	Black	ECX1670-B39	\$3.75	PDF		
TRANSFER	Black	ECX1670-B40	\$3.75	PDF		
TRIP	Black	ECX1670-B41	\$3.75	PDF		
UNCLAMP	Black	ECX1670-B42	\$3.75	PDF		
UP	Black	ECX1670-B12	\$3.00	PDF		
UP OFF DOWN	Black	ECX1670-B49	\$3.75	PDF		
UP-DOWN	Black	ECX1670-B18	\$3.00	PDF		

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ECX1690-B16

ECX1690-R11

Jumbo Plastic Legend Plates						
Legend	Color of Field	Part Number	Price	Drawing Link		
Blank Plate	Black	ECX1690-B	\$3.75	PDF		
Blank Plate	Red	ECX1690-R	\$3.75	<u>PDF</u>		
EMERG. STOP	Red	ECX1690-R03	\$3.75	PDF		
HAND-OFF-AUTO	Black	ECX1690-B20	\$3.75	PDF		
JOG	Black	ECX1690-B05	\$3.75	<u>PDF</u>		
OFF-ON	Black	ECX1690-B16	\$3.75	PDF		
OPEN-CLOSE	Black	ECX1690-B17	\$3.75	PDF		
POWER ON	Black	ECX1690-B21	\$3.75	PDF		
START	Black	ECX1690-B10	\$3.75	<u>PDF</u>		
STOP	Red	ECX1690-R11	\$3.75	PDF		

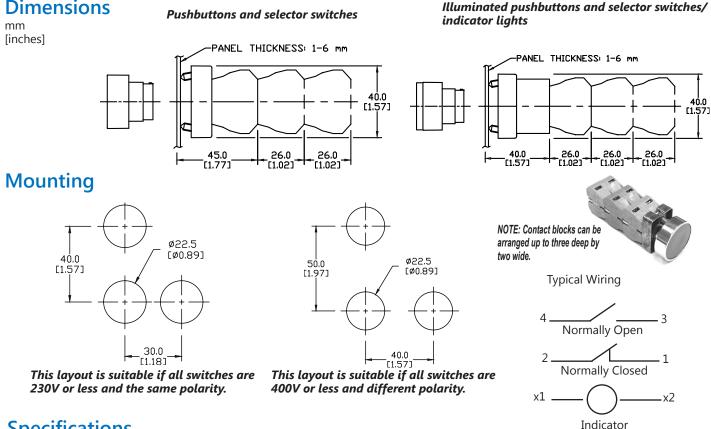
Note: Legend plate text is 3mm in height

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# **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.



#### **Specifications**

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

Physical Specifications					
Standards Reference	CEI EN 60947-5-1, CSA C22-2 n.14				
Approvals	UL File E189258, IMQ (where specified)				
Enclosure Material	Fiberglass reinforced thermoplastic				
Contacts Material	Silver				
Protection Degree	IP40 for GCX3151-24, GCX3151-120, GCX3153-24 and GCX3153-120. IP65 for all others.(See Appendix of this catalog for explanation of IP ratings according to IEC 144 CEI 70-1.)				
Electric Shock Protection	IEC 536, Class II				
Temperature Ratings	Storage: -40 -to 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 Emergency mushrooms and push-push pushbuttons: 300,000 operations				
Positive Opening Operation	(according to IEC 947-5-1) All functions incorporating an NC contact are positive opening operation				

Electrical Specifications					
Rated Thermal Current (contact block)	A300, Q300 (Refer to E22 Series mounting/contact rating section for details)				
Rated Insulation Voltage	Ui 660V according to CEI EN 60947-5-1, 300V according to CSA C22-2 n.14 and UL 508				
Dielectric Strength	3kV (1 second)				
Insulation Resistance	2MΩ min. (500VDC)				
Initial Contact Resistance	≤ 25mΩ				
Short-Circuit Protection*	Cartridge fuses gl 10 A-500V 10, 3x38l1 100 KA				
Terminal Markings	According to CENELEC EN 50013				
Connections	Single screw with non-loosening plate clamp,14AWG max.,Tighten to 0.8Nm max				
Contacts Operation	Self-cleaning types EN01 (N.C.) EN 10 (N.O.) slow-action, positive opening				
Operation Frequency	3600 operations per hour max.				
Utilization Category	AC15 (Control of AC electromagnetic loads) 24 volts AC at 10 amps 130 volts AC at 6.5 amps DC13 (Control of DC electromagnetic loads) 24 volts DC at 1.5 amps 110 volts DC at 0.5 amps				

\*Note: Recommended, not supplied

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