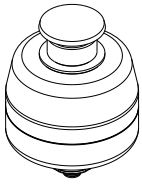
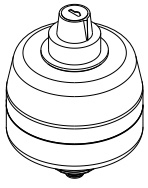
OS80 Operator Stations

Datasheet

Key Operated Selector Switches and Mushroom Push Buttons in an 80 mm Lighted Housing



Push Button



Key Operated Selector Switch

- Bright, large illuminated window for increased visibility
- Rugged, cost-effective and easy-to-install solutions for non-safety run start, stop, and bypass
- Easy actuation, tactile buttons and key operated selector switches provide a clear indication of actuation
- 12 V dc to 30 V dc operation
- Can be actuated with bare hands or any glove type, without worry of false tripping
- FDA-grade silicone cover withstands high pressure, high temperature washdown, and increases the product rating to IEC IP59; the cover is ECOLAB® certified to withstand aggressive cleaning procedures with chemicals used in the food processing industry

WARNING: Not To Be Used for Personnel Protection

Never use this device as a sensing device for personnel protection. Doing so could lead to serious injury or death. This device does not include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

Models

Key Operated Selector Switch Operator Stations

2 Position Switch					
Model	Operator	Illumination		Contacts	Output
		Color 1	Color 2		
OS80K2MX1GRQ	2 Position, Off-Momentary	Green (not activated)	Red (activated)	1 NO	Color 1 active when input is active Actuation activates Color 2 and output and overrides Color 1
OS80K2MX1GYQ	2 Position, Off-Momentary	Green (not activated)	Yellow (activated)		
OS80K2LX1GRQ	2 Position, Off-On	Green (not activated)	Red (activated)		
OS80K2LX1GYQ	2 Position, Off-On	Green (not activated)	Yellow (activated)		

3 Position Switch					
Model	Operator	Illumination		Contacts	Output
		Color 1	Color 2		
OS80K3MX1GYQ	3 Position, On-Off-Momentary	Green (not activated)	Yellow (activated)	2 NO	Color 1 active when input is active Actuation activates Color 2 and output and overrides Color 1
OS80K3MX1GRQ	3 Position, On-Off-Momentary	Green (not activated)	Red (activated)	2 NO	
OS80K3MX3GYQ	3 Position, On-Off-Momentary	Green (not activated)	Yellow (activated)	1 NC/1 NO	
OS80K3MX3GRQ	3 Position, On-Off-Momentary	Green (not activated)	Red (activated)	1 NC/1 NO	

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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Push Button Operator Stations

Model	Operator	Illumination		Contacts	Output
		Color 1	Color 2		
OS80PMMW1XWQ	White, Momentary, Spring Return	N/A	White (activated)	1 NO	Color 1 active when input is active Actuation activates Color 2 and output and overrides Color 1
OS80PMMG1XGQ	Green, Momentary, Spring Return	N/A	Green (activated)		
OS80PMMB1XBQ	Blue, Momentary, Spring Return	N/A	Blue (activated)		
OS80PMMY1XYQ	Yellow, Momentary, Spring Return	N/A	Yellow (activated)		
OS80PMMR1GRQ	Red, Momentary, Spring Return	Green (not activated)	Red (activated)		
OS80PMMY1GYQ	Yellow, Momentary, Spring Return	Green (not activated)	Yellow (activated)		
OS80PMLW1XWQ	White, Latching, Pull to release	N/A	White (activated)		
OS80PMLG1XGQ	Green, Latching, Pull to release	N/A	Green (activated)		
OS80PMLB1XBQ	Blue, Latching, Pull to release	N/A	Blue (activated)		
OS80PMLY1XYQ	Yellow, Latching, Pull to release	N/A	Yellow (activated)		
OS80PMLR1GRQ	Red, Latching, Pull to release	Green (not activated)	Red (activated)		
OS80PMLY1GYQ	Yellow, Latching, Pull to release	Green (not activated)	Yellow (activated)		

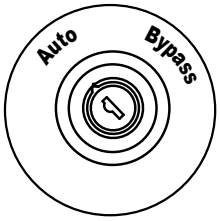
Wiring

Pin	Single Output Function	Dual Output Function
1 (Brown)	+ V dc	+ V dc
2 (White)	Color 1 PNP Input	Color 1 PNP Input
3 (Blue)	0 V dc	0 V dc
4 (Black)	NO or NC PNP Output*	NO or NC PNP Output*
5 (Gray)	Not Used	NO or NC PNP Output*

*Dependent on model

Key Switch Positions

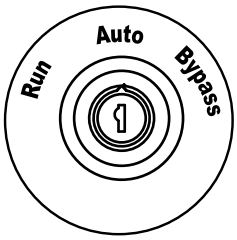
2 Positions



Key

Auto: Off
Bypass: Momentary or Latching

3 Positions



Key

Bypass: Latching
Auto: Off
Run: Momentary

Keyswitch/Pushbutton Functionality

2-Position, 2-Color Lighted Keyswitch with 1 N.O. Output

Note: Keyswitch is either OFF/Momentary or OFF/ON

Input (White)	Switch Position	Output (Black)	Light Function
Not Active	OFF	Not Conducting	OFF
Not Active	ON / Momentary	Conducting	Color 2 ON
Active	OFF	Not Conducting	Color 1 ON
Active	ON / Momentary	Conducting	Color 2 ON

3-Position, 2-Color Lighted Keyswitch with 2 N.O. Outputs

Note: Keyswitch is Momentary/OFF/ON

Input (White)	Switch Position	Output (Black)	Output (Gray)	Light Function
Not Active	OFF	Not Conducting	Not Conducting	OFF
Not Active	ON	Conducting	Not Conducting	Color 2 ON
Not Active	Momentary	Not Conducting	Conducting	Color 2 ON
Active	OFF	Not Conducting	Not Conducting	Color 1 ON
Active	ON	Conducting	Not Conducting	Color 2 ON
Active	Momentary	Not Conducting	Conducting	Color 2 ON

3-Position, 2-Color Lighted Keyswitch with 1 N.O. and 1 N.C. Output

Note: Keyswitch is Momentary/OFF/ON

Input (White)	Switch Position	Output (Black)	Output (Gray)	Light Function
Not Active	OFF	Not Conducting	Conducting	OFF
Not Active	ON	Conducting	Conducting	Color 2 ON
Not Active	Momentary	Not Conducting	Not Conducting	Color 2 ON
Active	OFF	Not Conducting	Conducting	Color 1 ON
Active	ON	Conducting	Conducting	Color 2 ON
Active	Momentary	Not Conducting	Not Conducting	Color 2 ON

2-Color Lighted Pushbutton with 1 N.O. Output

Note: Pushbutton is either Momentary with Spring Return or Momentary with Latching and Pull to Release

Input (White)	Pushbutton Position	Output (Black)	Light Function
Not Active	Not Depressed	Not Conducting	OFF
Not Active	Depressed	Conducting	Color 2 ON
Active	Not Depressed	Not Conducting	Color 1 ON
Active	Depressed	Conducting	Color 2 ON

1-Color Lighted Pushbutton with 1 N.O. Output

Note: Pushbutton is either Momentary with Spring Return or Momentary with Latching and Pull to Release

Input (White)	Pushbutton Position	Output (Black)	Light Function
Not Active	Not Depressed	Not Conducting	OFF
Not Active	Depressed	Conducting	Color 2 ON

Input (White)	Pushbutton Position	Output (Black)	Light Function
Active	Not Depressed	Not Conducting	OFF
Active	Depressed	Conducting	Color 2 ON

Installing the Silicone Cover

To properly install the FDA-grade silicone cover and achieve a IEC IP59 rating, follow these instructions.

1. Turn the cover inside-out, except for the top portion the button fits into.
2. Place the cover on the top of the push button.
3. Roll the cover onto the push button.
4. Continue rolling the cover down, around the base of the push button, until the entire button is covered.
5. Mount the push button and cover assembly to a bracket wide enough to cover the base of the assembly. The cover should be clamped firmly between the push button and the bracket.

Specifications

Supply Voltage and Current
12 V dc to 30 V dc
135 mA per color; exclusive of load

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Output Rating
4 Amps at 12 to 24 V dc; 2.6 Amps at 30 V dc

Output Response Time
50 milliseconds On and Off

Electrical Life
Contacts rated for 1 million cycles

Mechanical Life
Push buttons and key switches rated for 1 million cycles

Power-Up Delay
300 milliseconds

Construction
Housing: Polycarbonate
Button and Key Operated Selector Switch: Polyamide

Operating Conditions
–25 °C to +55 °C (–13 °F to +131 °F)
45% to 85% RH (no condensation)
Storage Temperature: –40 °C to +70 °C (–40 °F to +158 °F)

Environmental Rating
IEC IP40

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.
Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
Supply wiring leads < 24 AWG shall not be spliced.
For additional product support, go to *www.bannerengineering.com*.

Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

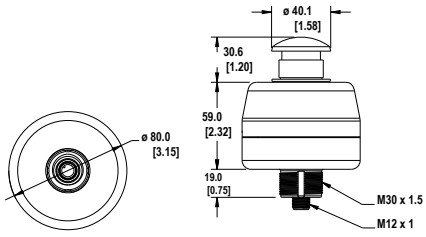
Mounting
M30 by 1.5 threaded base maximum torque 4.5 N·m (40 in·lbf)

Connections
Integral 5-pin M12/Euro-style quick disconnect

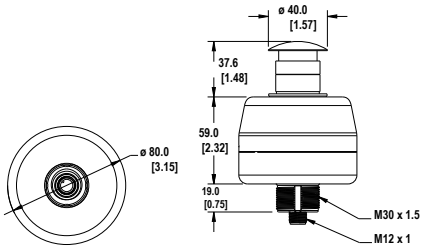
Certifications

Dimensions

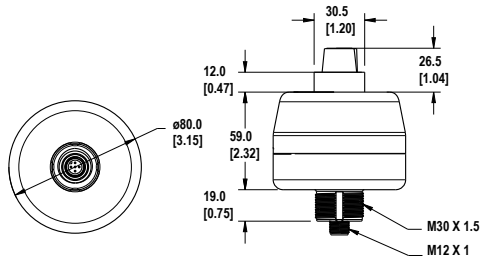
Push Button – Momentary



Push Button – Latching



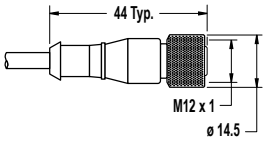
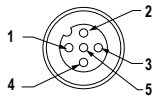
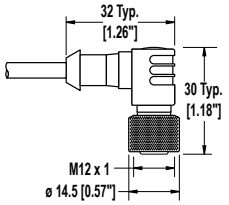
Key Operator Selector Switch



All measurements are listed in millimeters [inches], unless noted otherwise.

Accessories

Cordsets

5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC1-501.5	0.50 m (1.5 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)			
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

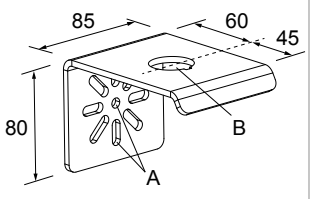
All measurements are listed in millimeters [inches], unless noted otherwise.

Mounting Brackets

SSA-MBK-EEC1

- Single 30 mm hole
- 8 gauge steel, black finish (powder coat)
- Front surface for customer applied labels

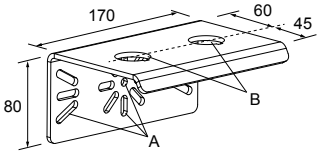
Hole size: A = ø 7 , B = ø 30



SSA-MBK-EEC2

- Two 30 mm holes
- 8 gauge steel, black finish (powder coat)
- Front surface for customer applied labels

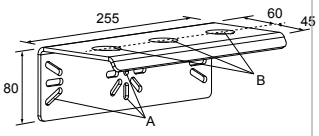
Hole size: A = ø 7 , B = ø 30



SSA-MBK-EEC3

- Three 30 mm holes
- 8 gauge steel, black finish (powder coat)
- Front surface for customer applied labels

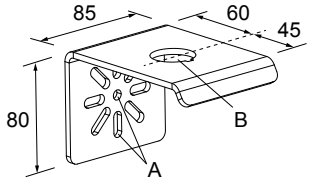
Hole size: A = ø 7 , B = ø 30



SSA-MBK-EEC1-SS

- Single 30 mm hole
- 8 gauge 316 stainless steel
- Front surface for customer applied labels

Hole size: A = ø 7 , B = ø 30



The SSA-MBK-EECx brackets offer:

- Horizontal and vertical (post) mounting
- Interchangeable positions of mounted devices (e.g. OTB/STB/VTB, E-Stop, K50s)

Washdown Cover

Model	For Push Button Models	Description
SSA-EB1P-ECWC	Push Button – Mushroom	FDA-grade silicone cover

Keys

Model	Description
ACC-OS80-SPARE Keys	10 Pack

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For patent information, see *www.bannerengineering.com/patents*.

FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.

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