

# S-Series

## S-Series

### ROCKER SWITCHES

S-Series rocker switches are designed for use in the enclosed cabs of today's trucks, with special focus afforded to the vehicle operator. With features including abbreviated travel ½ throw actuation, ergonomic rockers, illumination in up to three detent switch positions, and a non-teasable snap action circuit, these switches provide the driver with easily recognizable and simple to operate controls. Designers will appreciate the 10A, 24VDC rating, space saving compact envelope, clean bezel-less design, integrated low insertion force connector and polarized switch base for quick installation. Most any illumination and switch circuitry is easily accommodated with the S-Series 10 terminal base.



#### Product Highlights:

- ♦ Abbreviated travel ½ throw actuation
- ♦ Ergonomic rockers
- ♦ Recognizable and simple to operate controls
- ♦ Compact Design

#### Typical Applications:

- ♦ On-Highway Transportation Equipment
- ♦ Agricultural Equipment
- ♦ Construction Equipment
- ♦ Marine



**Electrical**

Contact Rating	10A@ 24VDC
Dielectric Strength	1500 Volts RMS between pole to pole
Insulation Resistance	50 Megaohms
Contact Resistance	10 milliohms max. @ 4VDC
Contact Bounce Life	<20 milliseconds 100,000 cycles maintained circuit, 50,000 cycles momentary circuit at rated voltage and current gold plated
Circuitry	SP, DP 2 & 3 position, 1/2 or full throw
Terminals	.110 Tabs, Silver Plated Brass

**Mechanical**

Endurance	250,000 cycles minimum
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**Physical**

Lighted	LED - rated 100,000 hours 1/2 life (LED is internally ballasted for voltages to 24VDC.)
Bracket	Acetal
Base	Nylon 66 GF
Rocker	Polycarbonate
Weight	25 gms max.

**Connector**

Amp/Tyco MCP 2.8 receptacle housing P/N 1418994-1 mates with Amp/Tyco MCP 2.8 flat type receptacle. Based on wire size, choose P/N below:

1-968880-1	20-24 awg wire
1-968849-1	17-20 awg wire
1-968851-1	13.5-17 awg wire

**Actuator Travel (Angular Displacement)**

2 position (1/2 throw)	12°
3 position (full throw)	12° from center

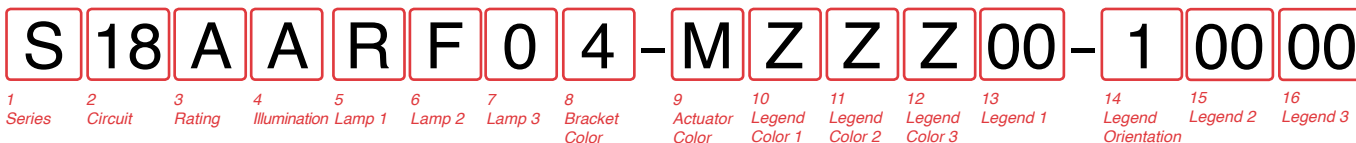
**Environmental**

Operating Temperature	-40°C to +85°C
Vibration	Per IEC 68-2.6 test Fc and 68-2.47 Test Criteria - no noise or contact chatter below 10ms.
Cold Test	Per IEC 68-2-1 -40°C for 72 hours Test Criteria - pre & post test contact resistance.
Dry Heat Test Criteria	Per IEC 68-2-2 + 85°C for 72 hours Test Criteria - no loss of circuit during test, pre & post test contact resistance.
Handling Shock times,	Drop from height of 1 meter, 3  4 sides. Test criteria - No loss of circuit during test, pre & post test contact resistance.
Thermal Shock	Per IEC 68-2-14, -40°C to +85°C. Test criteria - pre & post test contact resistance.

**Mounting Specifications**

Snap in Mount	40mm x 20mm keyed hole (see dimensional specifications for details.)
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\*Manufacturer reserves the right to change product specification without prior notice.



1 Series 2 Circuit 3 Rating 4 Illumination Lamp 1 5 Lamp 2 6 Lamp 3 7 Bracket Color 8 Actuator Color 9 Legend Color 1 10 Legend Color 2 11 Legend Color 3 12 Legend 1 13 Legend 2 Orientation 14 Legend 3 Orientation 15 Legend 3 Orientation 16 Legend 3 Orientation

**1 SERIES**  
**S**

**2 CIRCUIT**  
Terminal Connections as viewed from bottom of switch: ( ) - momentary  
1 - - 2 SP - single pole uses terminals 3, 5 & 7. DP - double pole uses terminals 3 - - 4 5, 7 & 4, 6, 8.  
5 - - 6  
7 - - 8  
9 - - 10

<b>Position:</b>	<b>1</b>	<b>2</b>	<b>3</b>
SP DP	5 & 7, 6 & 8	Connected Terminals	3 & 5, 4 & 6
16 26	ON	OFF	ON
18 28	(ON)	OFF	(ON)

**SPECIAL CIRCUITS**

31	(6 & 8)	4, 5, 6, 7	OFF
41 51	ON	OFF	NONE 1
42 52	(ON)	OFF	NONE 1
43 53	(ON)	3 & 5	NONE 1
44 54	ON	3 & 5	NONE 1
45 55	(ON)	OFF	ON
46 56	NONE	5 & 7	ON
47 57	NONE	5 & 7	(ON)
75	(5 & 7, 3 & 6)	5 & 7, 4 & 6	(3 & 5, 4 & 6)
98 2	(5 & 7, 2 & 6)	5 & 7, 4 & 6	(5 & 9, 4 & 6)

**5,6,7 LAMP (SAME CODING FOR ALL 3 SELECTIONS)**  
Selection 5: specifies lamp 1 located above terminals 1 (+) & 2 (-).  
Selection 6: specifies lamp 2 located in center of rocker.  
Selection 7: specifies lamp 3 located above terminals 9 (+) & 10 (-).

No lamp	<b>0</b>	Red	Orange	Yellow	Green
LED	<b>A</b>	<b>C</b>	<b>E</b>	<b>H</b>	
12VDC	<b>B</b>	<b>D</b>	<b>F</b>	<b>J</b>	
24VDC					

**8 BRACKET COLOR**  
1 Black  
4 Dark Carbon

**9 ACTUATOR**  
Standard Rocker, Laser Etched

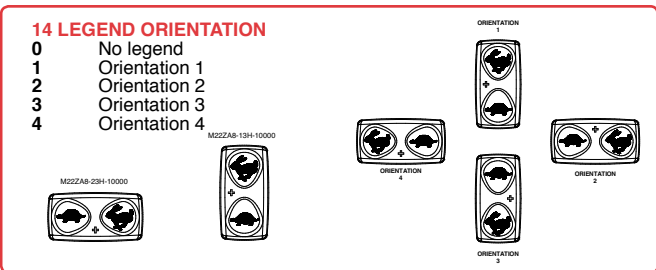
	Black	Titan Gray	Dark Carbon
	<b>M</b>	<b>N</b>	<b>R</b>

**10, 11, 12 LEGEND COLOR**  
Z No Legend  
1 Clear

**13 LEGEND 1 5**  
00 No Legend

**3 RATING**

1	0.4VA 28VDC Resistive
A 3	10.5mA 1.5A 28VDC, 5A 28V 50A Inrush Lamp Load
B 4	3.5A 28VDC, 18A Inrush
C 3	10mA 10A 28VDC
D 3	20mA 10A 14VDC



**4 ILLUMINATION**

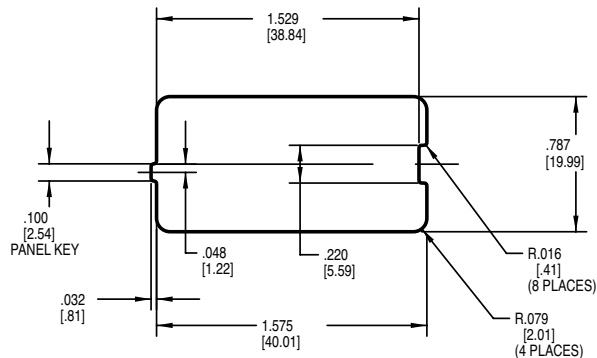
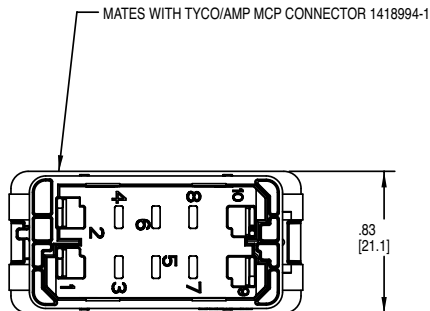
S	Lamps	Illumination Type	Lamp wired to Terminals
NONE		INDEPENDENT	-
A 1	1	INDEPENDENT	1 (+) 2 (-)
C 1	1	INDEPENDENT	1 (+) 2 (-)
2		INDEPENDENT	9 (+) 2 (-)
D 1	1	INDEPENDENT	1 (+) 2 (-)
2		INDEPENDENT	9 (+) 10 (-)
E 1 & 3		INDEPENDENT	1 (+) 2 (-)
		PARALLEL	
F 1		INDEPENDENT	1 (+) 10 (-)
		SNAP	
G 1 & 2		INDEPENDENT	1 (+) 10 (-)
		DEPENDENT	9 (+) 2 (-)
H 1 & 2		INDEPENDENT	1 (+) 2 (-)
		DEPENDENT	9 (+) 10 (-)
J 1, 2 & 3		INDEPENDENT	1 (+) 2 (-)
		DEPENDENT	5 (+) 10 (-)
		INDEPENDENT	1 (+) 2 (-)
K 1 & 2		INDEPENDENT	1 (+) 2 (-)
		INDEPENDENT	9 (+) 10 (-)

3.3K RESISTOR IN PARALLEL

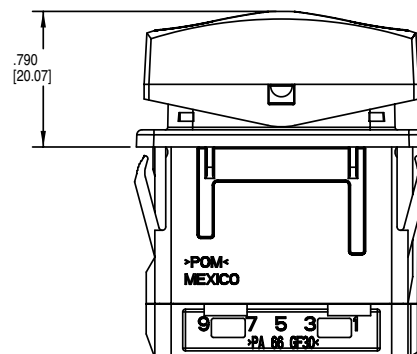
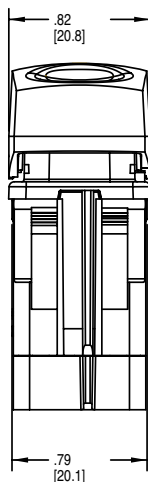
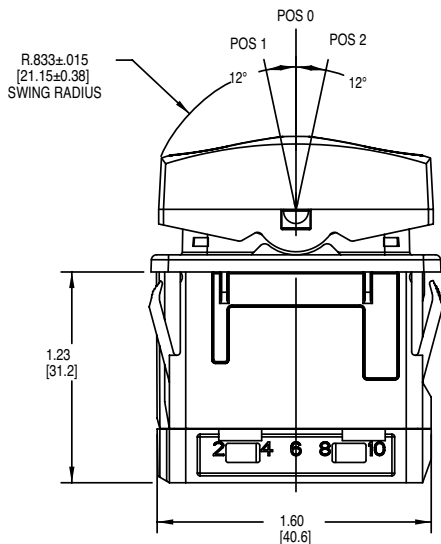
**15,16 LEGEND 2,3 6**  
00 No legend

Notes:  
1 Indicates 1/2 travel for actuator.  
2 Snap-Action Contact Mechanism  
3 Not available with circuit 98.  
4 Available with circuit 98 only.  
5 Located over T1-2.  
6 Legend 2 located in center of rocker, Legend 3 located over T9-10. Legend 2 options are limited due to a very small marking area. Consult factory for specifics.

Dimensional Specifications: in. [mm]



PANEL THICKNESS: 2.5±0.1mm  
 PANEL OPENING CLEARANCE: ±5°  
 SCALE 2.000



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