

# S-Series 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  $\frac{1}{2}$  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. These great features, combined with over 1,000 available laser etched or pad-printed legends, allow the S-Series to be seamlessly incorporated into just about any cab interior environment.

**Applications:**

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

**Features:**

- ♦ Abbreviated travel  $\frac{1}{2}$  throw actuation
- ♦ Ergonomic rockers
- ♦ Recognizable and simple to operate controls
- ♦ Compact Design



## 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	<20 milliseconds
Life	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 grms 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	Drop from height of 1 meter, 3 times, 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.

<b>S</b>	<b>18</b>	<b>A</b>	<b>A</b>	<b>R</b>	<b>F</b>	<b>0</b>	<b>4</b>	-	<b>M</b>	<b>Z</b>	<b>Z</b>	<b>Z</b>	<b>00</b>	-	<b>1</b>	<b>00</b>	<b>00</b>
1 Series	2 Circuit	3 Rating	4 Illumination	5 Lamp 1	6 Lamp 2	7 Lamp 3	8 Bracket Color		9 Actuator Color	10 Legend Color 1	11 Legend Color 2	12 Legend Color 3	13 Legend 1		14 Legend Orientation	15 Legend 2	16 Legend 3

**1 SERIES**

**S**

**2 CIRCUIT**

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

Position:	1	2	3
SP DP	5 & 7, 6 & 8	Connected Terminals	3 & 5, 4 & 6
<b>16</b> <b>26</b>	ON	OFF	ON
<b>18</b> <b>28</b>	(ON)	OFF	(ON)
<b>SPECIAL CIRCUITS</b>			
<b>31</b>	(6 & 8)	4, 5, 6, 7	OFF
<b>41</b> <b>51</b>	ON	OFF	NONE <sup>1</sup>
<b>42</b> <b>52</b>	(ON)	OFF	NONE <sup>1</sup>
<b>43</b> <b>53</b>	(ON)	3 & 5	NONE <sup>1</sup>
<b>44</b> <b>54</b>	ON	3 & 5	NONE <sup>1</sup>
<b>45</b> <b>55</b>	(ON)	OFF	ON
<b>46</b> <b>56</b>	NONE	5 & 7	ON
<b>47</b> <b>57</b>	NONE	5 & 7	(ON)
<b>75</b>	(5 & 7, 3 & 6)	5 & 7, 4 & 6	(3 & 5, 4 & 6)
<b>98<sup>2</sup></b>	(5 & 7, 2 & 6)	5 & 7, 4 & 6	(5 & 9, 4 & 6)

**3 RATING**

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

**4 ILLUMINATION**

Lamps	Illumination Type	Lamp wired to Terminals
<b>S</b> NONE	INDEPENDENT	-
<b>A</b> 1	INDEPENDENT	1 (+) 2 (-)
<b>C</b> 1	INDEPENDENT	1 (+) 2 (-)
<b>D</b> 1	INDEPENDENT	9 (+) 2 (-)
<b>E</b> 1	INDEPENDENT	1 (+) 2 (-)
<b>F</b> 1	INDEPENDENT	1 (+) 2 (-)
<b>G</b> 1 & 2	INDEPENDENT	1 (+) 10 (-)
<b>H</b> 1 & 2	DEPENDENT	9 (+) 2 (-)
<b>J</b> 1, 2 & 3	DEPENDENT	1 (+) 10 (-)
<b>K</b> 1 & 2	DEPENDENT	9 (+) 10 (-)
	INDEPENDENT	1 (+) 2 (-)
	INDEPENDENT	9 (+) 10 (-)
	INDEPENDENT	3.3K RESISTOR IN PARALLEL

**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>			
LED	<b>A</b>	Red	Orange	Yellow
12VDC	<b>C</b>			Green
24VDC	<b>B</b>			<b>H</b>
		<b>D</b>	<b>F</b>	<b>J</b>

**8 BRACKET COLOR**

<b>1</b>	Black
<b>4</b>	Dark Carbon

**9 ACTUATOR**

Standard Rocker, Laser Etched	<b>M</b> Black	<b>N</b> Titan Gray	<b>R</b> Dark Carbon
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**10, 11, 12 LEGEND COLOR**

<b>Z</b>	No Legend
<b>1</b>	Clear

**13 LEGEND 1<sup>5</sup>**

<b>00</b>	No Legend
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**14 LEGEND ORIENTATION**

<b>0</b>	No legend
<b>1</b>	Orientation 1
<b>2</b>	Orientation 2
<b>3</b>	Orientation 3
<b>4</b>	Orientation 4



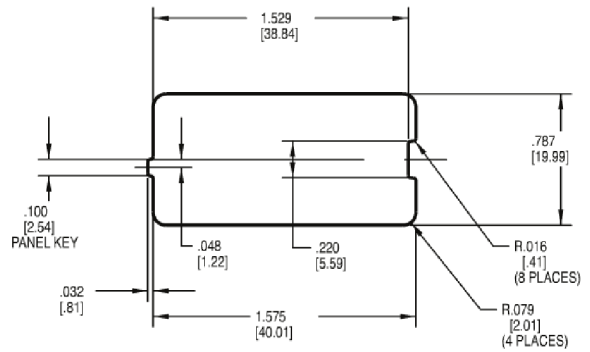
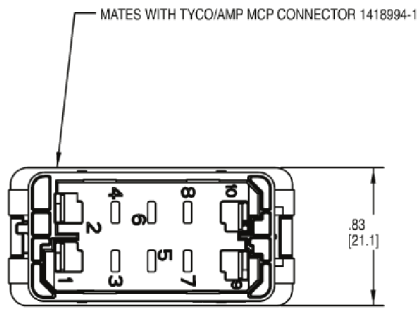
**15,16 LEGEND 2,3<sup>6</sup>**

<b>00</b>	No legend
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Notes:

- Indicates 1/2 travel for actuator.
- Snap-Action Contact Mechanism
- Not available with circuit 98.
- Available with circuit 98 only.
- Located over T1-2.
- 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

