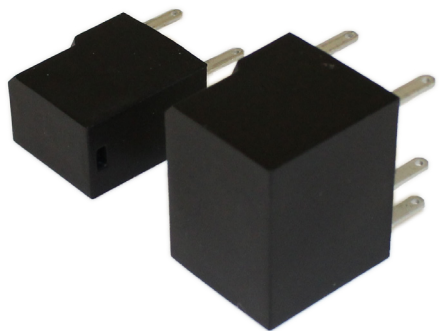


## MicroPlex® SSR18 AND SSR30

18A-30A • 12V DC • Micro 280 Form Factor



### Description

The MicroPlex® SSR18 and SSR30 are some of the smallest high power solid state relays in today's automotive industry. They are designed to interface seamlessly with the MicroPlex® family of controllers to create a smart and state-of-the-art multiplex system.

When the MicroPlex® SSRs are integrated with MicroPlex® controllers, the user is able to measure current (in terms of voltage proportional to the load current) through the current sense output pin (VIS). Users are also able to diagnose faults such as, short circuit to GND, over temperature, and open load, which will show as VIS = 0 V. Over current condition will show as VIS >> VIS @ SSR's rated current.

### Specifications

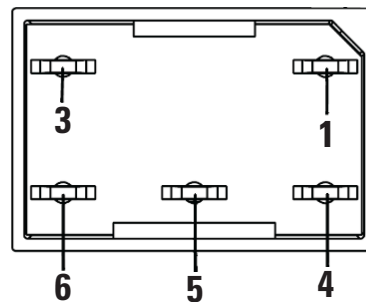
<b>Input Voltage Range:</b>	12V DC
<b>Current Rating:</b>	SSR18 - 18A SSR30 - 30A
<b>PWM-Capable:</b>	Frequency up to ~200 Hz
<b>Voltage Drop <math>V_{on}</math>:</b>	90 mV (Typical)
<b>Operating Temp:</b>	-40° to +85° C
<b>Output Type:</b>	N-Channel Power FET with Charge Pump for Direct Load Switching Application
<b>IP Class:</b>	IP67 when used with IP67 Micro 280 Fuse and Relay Box Housing
<b>Housing:</b>	PA66 - GF33
<b>Footprint:</b>	SSR18 - Micro 280 Relay Form Factor SSR30 - Side by side 2x Micro 280 Relay Form Factor
<b>Protection:</b>	Short Circuit, Battery Reverse Polarity, and Load Dump
<b>Dimensions:</b>	SSR18 - 22 x 15 x 36.36 mm SSR30 - 30.4 x 23.6 x 36.34 mm

### Web Resources

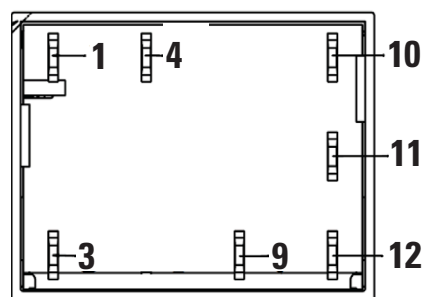
Download 2D print, 3D model and more at:  
[littelfuse.com/Microplex](http://littelfuse.com/Microplex)

\*MicroPlex® is a registered trademark.

### Inputs Overview

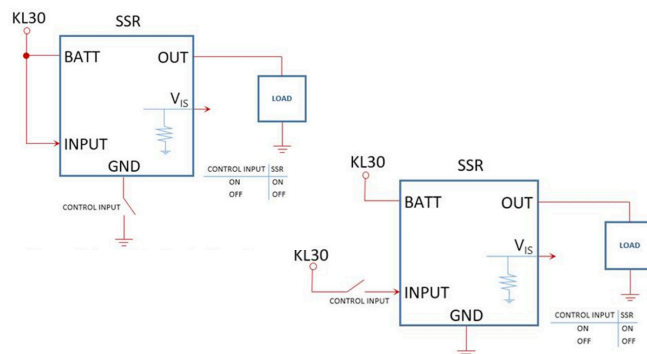


MicroPlex® SSR18	
INPUT	DESCRIPTION
1	GND
3	BATT
4	OUT
5	$V_{IS}$
6	INPUT



MicroPlex® SSR30	
INPUT	DESCRIPTION
1	GND
3	BATT
4	OUT
9	BATT
10	OUT
11	$V_{IS}$
12	INPUT

### Connection Diagram

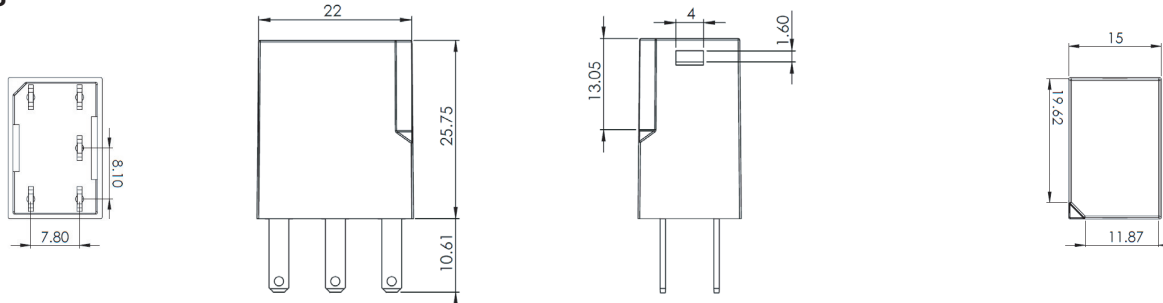


PART NUMBER	DESCRIPTION
LFMCRPLX004	Solid State Relay SSR18
LFMCRPLX005	Solid State Relay SSR30

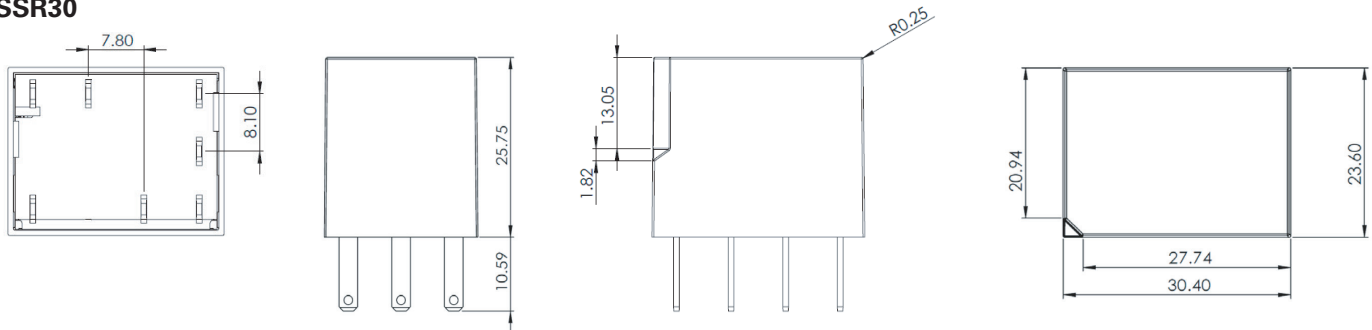
# MicroPlex® SSR18 AND SSR30

## Dimensions in millimeters

### SSR18



### SSR30

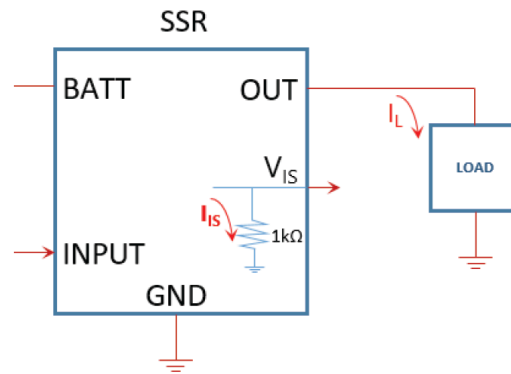
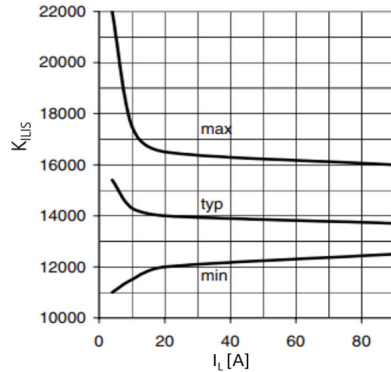


## Load Current Calculation

$$I_L = I_{IS} (K_{ILIS})$$

Where  $I_{IS} = V_{IS} / 1k\Omega$   
 $K_{ILIS} = 14000$  typical

Current sense ratio:  
 $K_{ILIS} = f(I_L), T_J = 25\text{ }^\circ\text{C}$

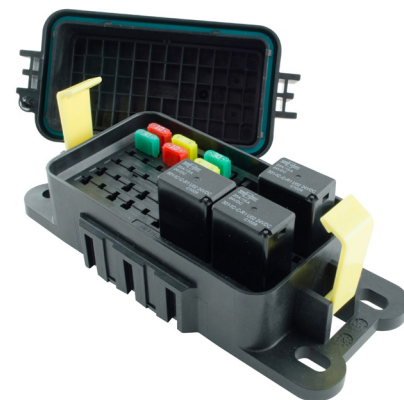


## Related Products

### HWB60 AL

The Littelfuse HWB60-AL Hard-Wired Box is the perfect fit for accessory circuits and overflow circuits from your main Power Distribution Module. For smaller vehicles, this unit is an ideal solution as a main vehicle module. It features durable construction, and IP67 Rating and a compact size. With the elimination of internal bussing the user can customize their own circuitry utilizing direct wire-to-component connections.

Learn more at: [littelfuse.com/HWB60-AL](http://littelfuse.com/HWB60-AL)



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