

# Solid State Relays

## Industrial, 3-Phase SS

Models: **3PSS60A75 S** (Standard Din-rail)  
**3PSS60A75 R** (Retro Fit)



- 3-phase Solid State Relay
- Zero switching
- Rated operational current: 3 x 75 AMPS
- Rated operational voltage: 600 VAC
- Control voltage 24-50 VDC/24-275 VAC
- Integral snubber network
- Built-in varistor
- IP 10 back-of-hand protection
- LED indication of control input
- Heat Sink and 24 VDC Fan Included



### Product Description

A Solid State Relay family designed to switch various loads such as heating elements, motors and transformers. The relay is capable of switching high voltages up to 600 VAC rms.

The built-in varistor for heavy industrial applications. For higher reliability and load cycle capability three semiconductor power units are bonded directly to the substrate.

### Tested and Approved

3 Pole 50 AMP @ 480 VAC @ -30°C to 50°C 3-Phase  
 2 Pole 75 AMP @ 480 VAC @ -30°C to 50°C 3-Phase \*

51°C to 80°C derates @ 10 AMPS per decade

\*For 2 Pole usage, use L1 & L3

### General Specifications

Operational voltage range	42-660 VAC
Blocking voltage	1600 V <sub>p</sub>
Operational frequency range	45 to 65 Hz
Overvoltage category	III
Pollution degree	3
Heat Sink Fan requires	70 mA @ 24 VDC
Markings	

### Output Specifications

Rated operational current	
AC51 @ Ta=25°C	75 AMPS rms
AC53a @ Ta=25°C	20 AMPS rms
Minimum operational current	400 mA rms
Rep. overload current t=1 s	< 150 A rms
Non-rep. surge current t = 10 ms	1150 A <sub>p</sub>
Off-state leakage current	< 3 mA rms
I <sup>2</sup> t for fusing t = 10 ms	6600 A2s
On-state voltage drop	≤ 1.6 V rms
Critical dV/dt off-state	≥ 500 V/μs

### Thermal Specifications

Operating temperature	-30° to 80°C (-22° to 158°F)
Storage temperature	-40° to 100°C (-40° to 212°F)

### Isolation

Rated isolation voltage	
Input to output	≥ 4000 VAC rms
Output to case	≥ 4000 VAC rms

### Input Specifications

Control voltage range	24-275 VAC/24-50 VDC
Pick-up voltage	18 VAC/20 VDC
Drop-out voltage	9 VAC/DC
Input current	≤ 15 mA
Response time pick-up	
Power output = 50 Hz	20 ms
Response time drop-out	
Power output = 50 Hz	30 ms

All data specified at Ta=25°C

### Total Weight

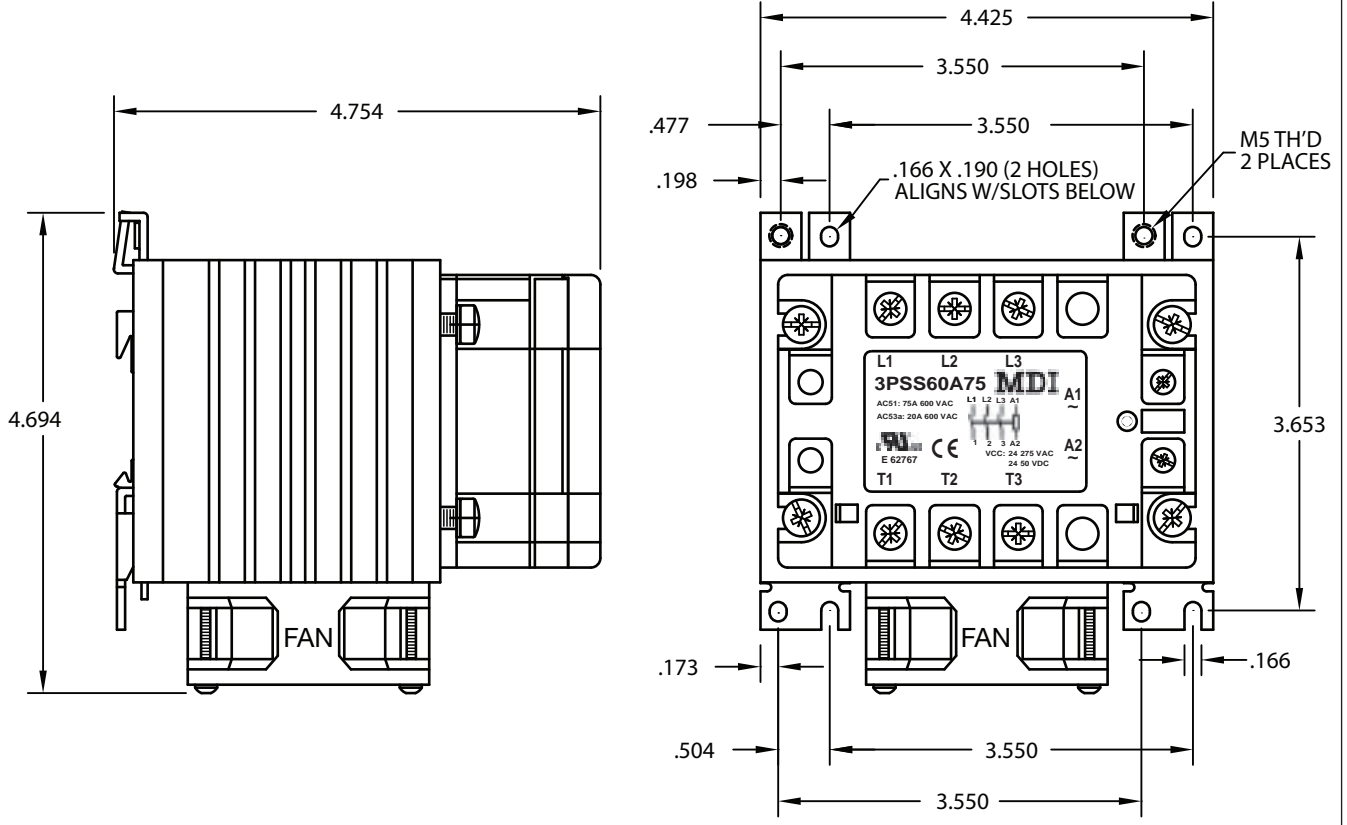
	S	R
Grams	1,370	1,473
Ounces	48.3	52

### Housing Specifications

Material	Noryl
Base plate	Copper, nickel-plated
Potting compound	Polyurethane
Power terminal	
Mounting screws	M5
Mounting torque	≤ 2.5 Nm (22 in lbs)
Wire size	Max. 2 x 6 mm <sup>2</sup> (AWG 8)
	Min. 2 x 1 mm <sup>2</sup>
Relay	
Mounting screws	M5
Mounting torque	≤ 1.5 Nm (13 in lbs)
Control terminal	
Mounting screws	M4
Mounting torque	≤ 0.5 Nm (5 in lbs)
Wire size	Max. 2 x 2.5 mm <sup>2</sup> (AWG 14)
	Min. 2 x 1 mm <sup>2</sup>

# Dimensions

## Model S

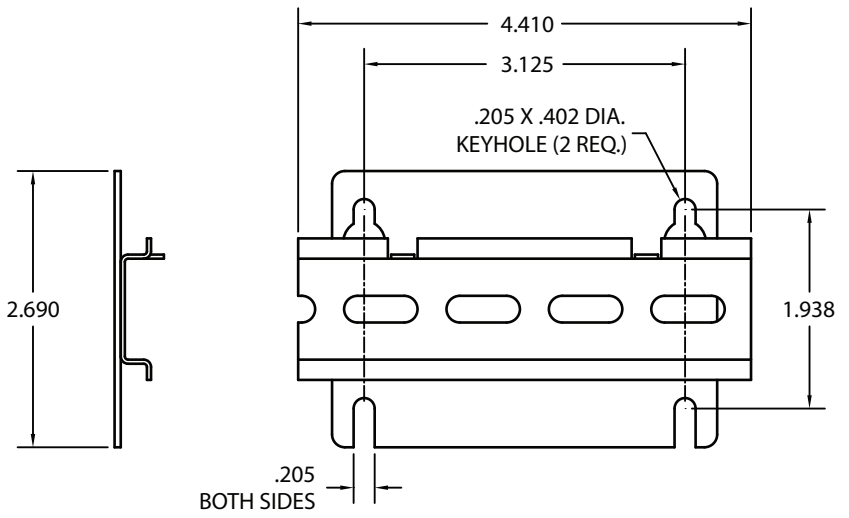


## Model R

Includes Retro-Fit Back Plate

For direct replacement with standard 2 & 3 pole Mercury Relays. Using the same mounting holes.

Bracket adds 3/16" to depth



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