

# 645T Series - Solid State On / Off

## 10 - 40 Amp



The 645T series of solid state relays uses triacs for on/off control of three phase loads. Operation is three pole normally open. Inputs can be AC or DC operated. Load currents can range from 10 to 40 amps and up to a nominal voltage of 480VAC. Both random turn on or zero cross is available.



### GENERAL SPECIFICATIONS (@ 25° C)

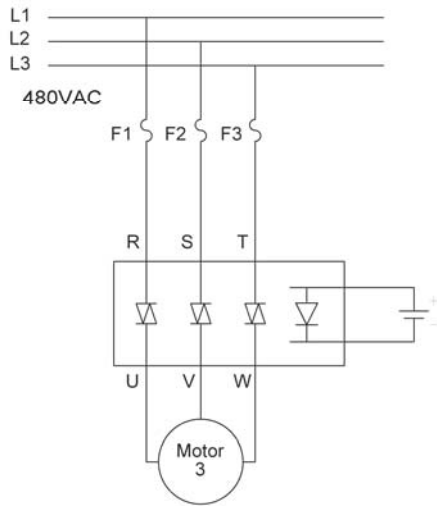
<b>Input Characteristics</b>	DC Input	AC Input
Input Voltage	3 - 32VDC	90 - 280 VAC
Must Release Voltage	1VDC	10VAC
Maximum Input Current	80mA	30 mA
Reverse Polarity Protection	Yes	N/A

<b>Output Characteristics</b>	10 Amp	25 Amp	40 Amp
Min. Load current to maintain on	100mA	120mA	250mA
Non-Repetitive Surge Current (1 cycle)	100A	250A	300A
Maximum I <sup>2</sup> T for Fusing (Asquared sec)	50A <sup>2</sup> S	312A <sup>2</sup> S	450A <sup>2</sup> S
Suggested Heatsink °C/W	1.0°C/W	0.14°C/W	0.14°C/W+FAN
Load Voltage Range	50 to 480VAC	50 to 480VAC	50 to 480VAC
Frequency Range	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz
Peak Blocking Voltage	800 to 1200	800 to 1200	800 to 1200
Maximum Rate of Rise Off State Voltage (dv/dt)	250V/uS	250V/uS	250V/uS
Max. Off state leakage current (rms)	10mA	10mA	10mA
Max. On State Voltage Drop	1.6VAC	1.6VAC	1.6VAC
Maximum Turn-On Time @ 60 Hz	8.3mS	8.3mS	8.3mS
Maximum Turn-Off Time @ 60 Hz	8.3mS	8.3mS	8.3mS
<b>Miscellaneous Characteristics</b>			
Dielectric Strength - I or O to case	4000Vrms		
Operating Temperature Range	-30 to 80°C		
Storage Temperature Range	-40 to 100°C		
Weight	320g		
Input Terminal Size	M3.5		
Output Terminal Size	M4		

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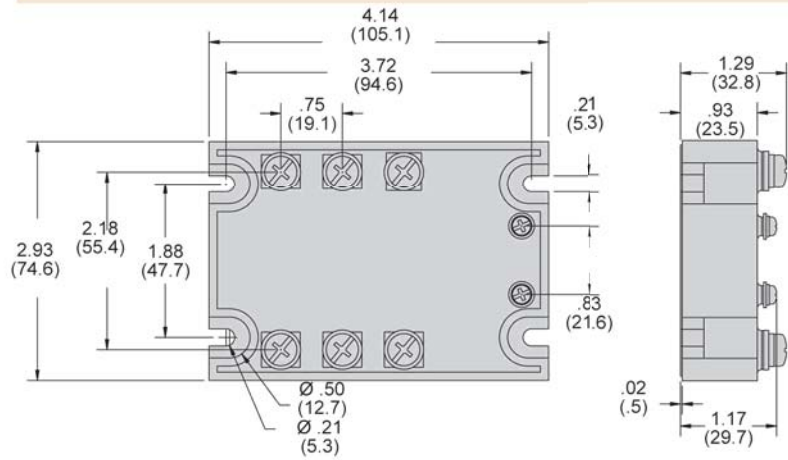
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**Solid State On/Off Wire Diagram**

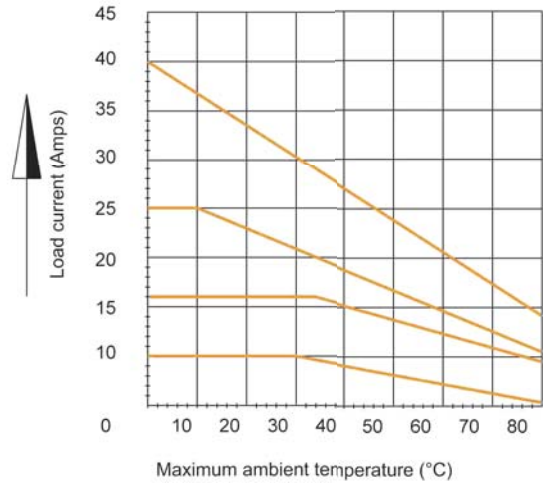


**Outline Dimensions**

Dimensions Shown in inches & (millimeters)



**Derating Curve**



**Ordering Code** 645 T Z or R 4 10 3-32VDC

**Series**  
645

**Switching**  
Triac - CODE T

**Turn on**  
Zero cross - CODE Z  
Random turn on CODE R

**Load Voltage**  
480VAC - CODE 4

**Maximum Load Current**  
10, 25, 40 (Amp)

**Input Voltage**  
3-32VDC  
90-280VAC