

# 645RT Series - Solid State Reversing

## 10 - 40 Amp



The 645RT series of solid state relays uses triacs for reversing phases on three phase loads. The most typical use is motor reversing. Inputs are 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.



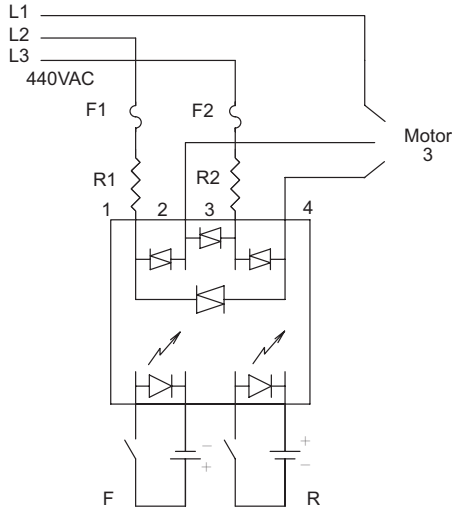
### GENERAL SPECIFICATIONS (@ 25° C)

<b>Input Characteristics</b>	<b>DC Input</b>		
Input Voltage	4 - 32VDC		
Must Release Voltage	1VDC / 8VDC		
Maximum Input Current	80mA		
Reverse Polarity Protection	Yes		
<b>Output Characteristics</b>	<b>10 Amp</b>	<b>25 Amp</b>	<b>40 Amp</b>
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	0.5°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		

# Motor Relays

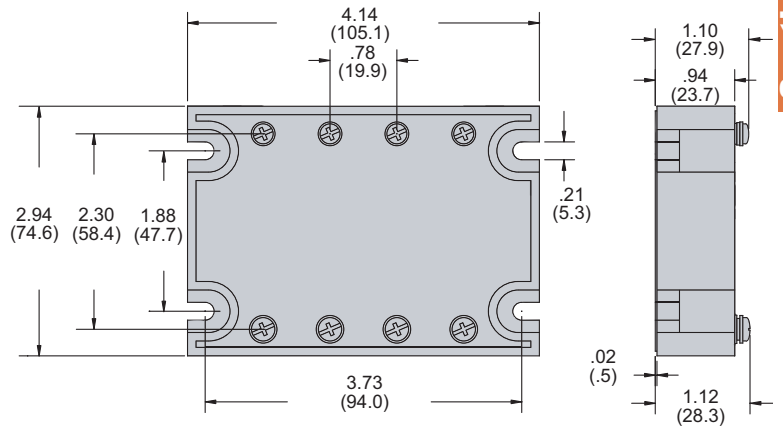
## 15 - 75 Amp

**Foward / Reverse Motor Control Wire Diagram**



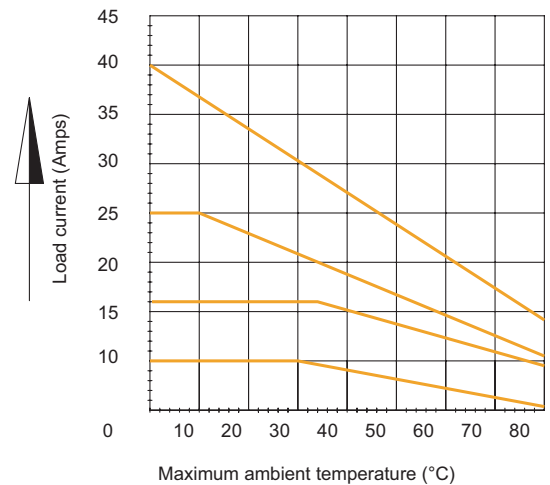
**Outline Dimensions**

Dimensions Shown in inches & (millimeters)



Section 3

**Derating Curve**



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

**Series**  
645

**Switching**  
Triac - CODE T

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

**Load Voltage**  
480VAC - CODE 4

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

**Input Voltage**  
4-32VDC