

# 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.

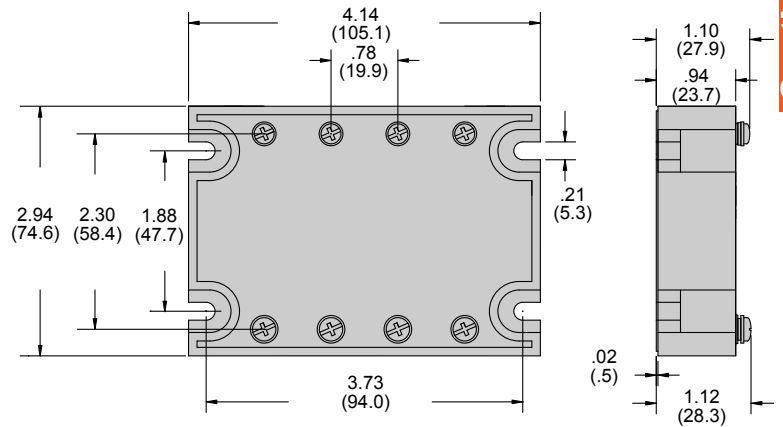


### GENERAL SPECIFICATIONS (@ 25° C)

| <b>Input Characteristics</b>                       |                    | DC Input            |                     |  |
|----------------------------------------------------|--------------------|---------------------|---------------------|--|
| 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                  |                     |  |

## Section 3

Dimensions Shown in inches & (millimeters)



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From: Brian Miller [mailto:bmiller@struthers-dunn.com]

Sent: Thursday, December 02, 2010 9:38 AM

To: Kevin Jackson

Subject: RE: Need Product Information

Hello Kevin,

On our 645 series when looking at the ordering code the first R is assumed. Please just add the T and R options to complete the part description.

I have attached our website PDF file to this email for you to review the options again. If this does not answer your question please email me back.

Thanks,

Brian Miller

Inside Sales Representative

Struthers-Dunn, LLC