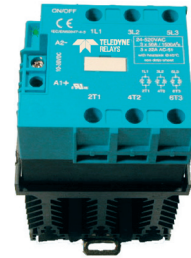


**FEATURES/BENEFITS**

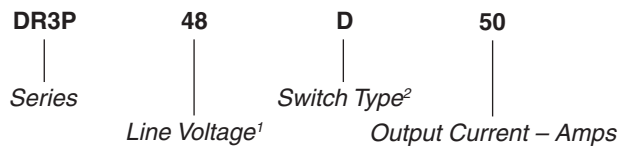
- Three-phase solid-state relay for resistive loads with integrated heat sink
- DIN rail or panel mounting
- 50A thyristors size with  $I^2t > 1500A^2s^*$
- AC/DC control voltage with input status LED
- Internal protection by integrated snubber MOV
- IP20 touch proof
- Designed in conformity with UL (pending), EN60950 and IEC60947-4-3

\*On request for model with  $I^2t$  5000A<sup>2</sup>s up to 20000A<sup>2</sup>s



Part Number	Description
DR3P48D50	50A, 520 Vac 3-Phase Solid-State Relay
DR3P48A50	50A, 520 Vac 3-Phase Solid-State Relay

**Part Number Explanation**



**NOTES**

- 1) Line Voltage (nominal): 48 = 480 Vac
- 2) Switch Type: D = Zero-cross turn-on; A = Zero-cross, AC control

**ELECTRICAL SPECIFICATIONS**

(+20°C ambient temperature unless otherwise specified)

**INPUT (CONTROL) SPECIFICATIONS**

	Min	Max	Units
<b>Control Range</b>			
DR3P48D50 (DC)	8.5	30	Vdc
DR3P48D50 (AC)	10	30	Vac
DR3P48A50 (DC)	90	240	Vdc
DR3P48A50 (AC)	90	240	Vac

**Input Current Range**

DR3P48D50	15	65	mA
DR3P48A50	4.5	11	mA

**Must Turn-Off Voltage**

DR3P48D50	4	V
DR3P48A50	15	V

**Input Resistance (Typical)**

DR3P48D50	410	Ω
DR3P48A50	21	KΩ

Reverse Voltage Protection      Polarity free      V

**BLOCK DIAGRAM**

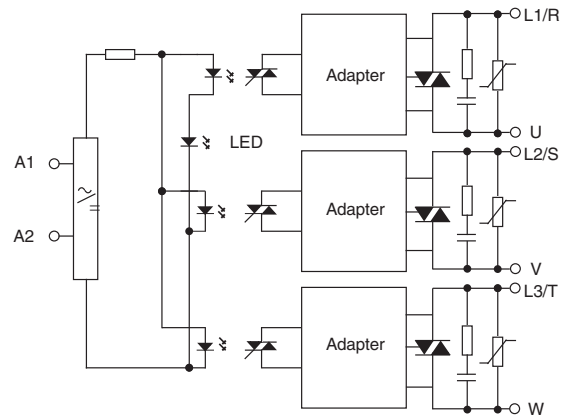


Figure 1

**CONTROL CHARACTERISTICS**

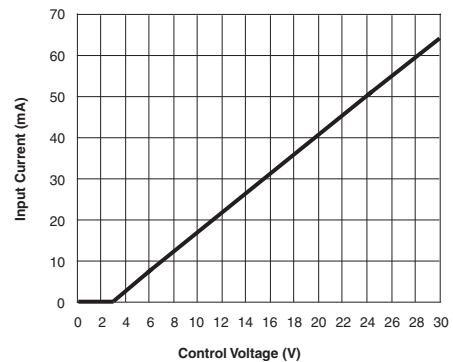


Figure 2a – DR3P48D50

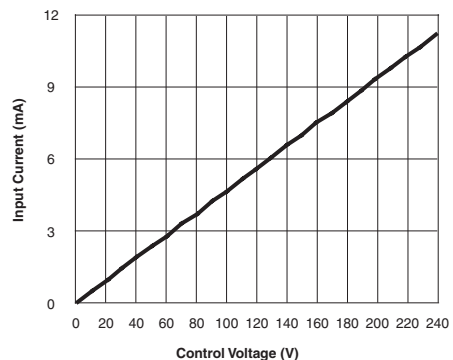


Figure 2b – DR3P48A50

**ELECTRICAL SPECIFICATIONS**

(+20°C ambient temperature unless otherwise specified)

**OUTPUT (LOAD) SPECIFICATIONS**

	Min	Max	Units
Operating Range	24	520	Vrms
Peak Voltage		1200	Vpeak
Output Current Range	.005	22	A
Maximum Surge Current Rating (Non-Repetitive)		550	A
On-State Voltage Drop		1.4	V
Zero-Cross Window (Typical)		35	V
Off-State Leakage Current (60 Hz)		1	mA
Turn-On Time (60 Hz)		24.9	ms
Turn-Off Time (60 Hz)		24.9	ms
Operating Frequency Range	10	400	Hz
Off-state dv/dt		500	V/μs
Maximum di/dt (Non-Repetitive)		50	A/μs
I <sup>2</sup> t for Match Fusing (<8.3 ms)		1500	A <sup>2</sup> s

**GENERAL SPECIFICATIONS**

(+20°C ambient temperature unless otherwise specified)

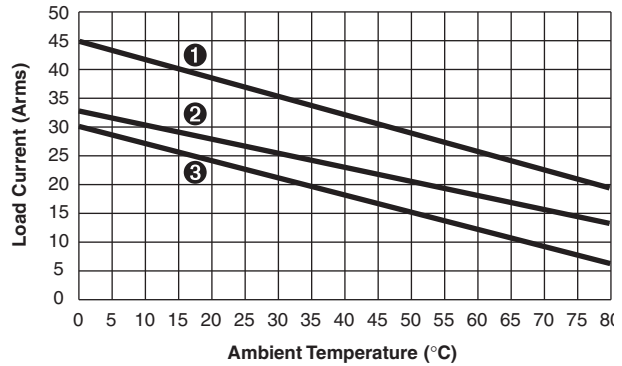
**ENVIRONMENTAL SPECIFICATIONS**

	Min	Max	Units
Operating Temperature	-40	+80	°C
Storage Temperature	-40	+100	°C
Input-Output Isolation	4000		Vrms
Output-Case Isolation	3300		Vrms

**NOTES**

1. For additional/custom options, contact factory.

**THERMAL CHARACTERISTICS**



- ① With ventilation in the heat sink (>1m/s)
- ② Working in normal conditions with natural convection
- ③ According with IEC60947-4-2 in a closed cabinet without ventilation

Figure 3

**SURGE CURRENT**

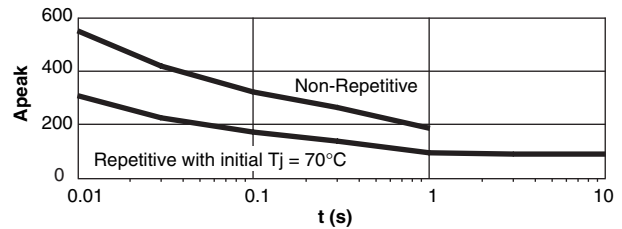


Figure 4

**TYPICAL APPLICATION**

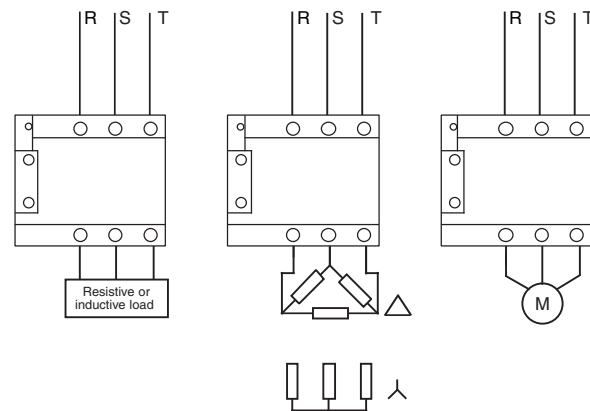
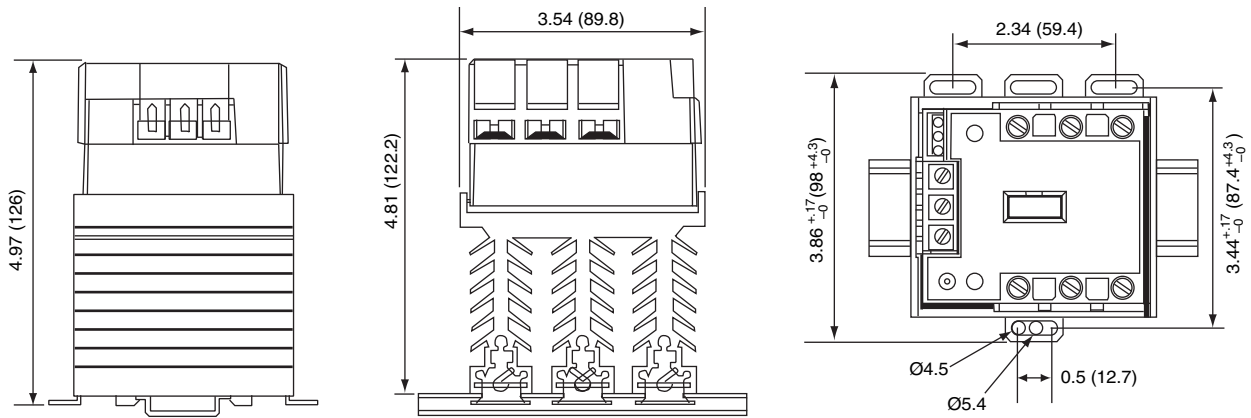


Figure 5

**MECHANICAL SPECIFICATION**



WEIGHT: 35.27 oz. (1000g)

Figure 6

**CONTROL WIRING**

Number of Wires				Screwdriver Type	Recommended Torque
1		2			
Solid (no ferrule)	Fine Stranded (with ferrule)	Solid (no ferrule)	Fine Stranded (with ferrule)		N.m
AWG18...AWG14	AWG18...AWG14	AWG18...AWG14	AWG18...AWG14	Pozidriv 2	1.2

**POWER WIRING**

Number of Wires				Screwdriver Type	Recommended Torque
1		2			
Solid (no ferrule)	Fine Stranded (with ferrule)	Solid (no ferrule)	Fine Stranded (with ferrule)		N.m
AWG16...AWG8	AWG16...AWG10	AWG16...AWG8	AWG16...AWG10	Pozidriv 2	1.8

**DIN RAIL MOUNTING**

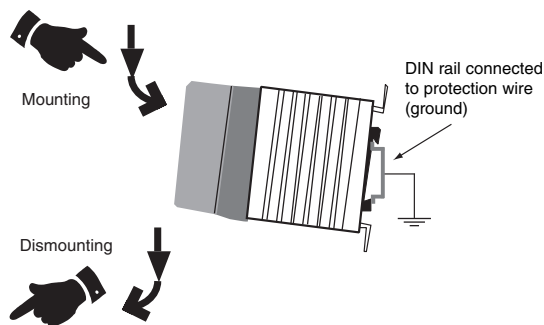


Figure 7