

FEATURES/BENEFITS

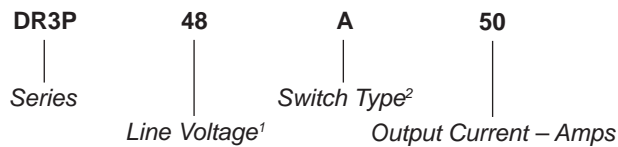
- Three-phase solid-state relay for resistive loads with integrated heat sink
- DIN rail or panel mounting
- 50A thyristors size with $I^2t > 1500A^2s^*$
- AC/DC control voltage with input status LED
- Internal protection by integrated snubber MOV
- IP20 touch proof
- Designed in conformity with UL (pending),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

*On request for model with I^2t 5000A²s up to 20000A²s



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

Part Number Explanation



NOTES

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

ELECTRICAL SPECIFICATIONS

(+20°C ambient temperature unless otherwise specified)

INPUT (CONTROL) SPECIFICATIONS

	Min	Max	Units
Control Range			
DR3P48A50 (DC)	90	240	Vdc
DR3P48A50 (AC)	90	240	Vac
Input Current Range			
DR3P48A50	4.5	11	mA
Must Turn-Off Voltage			
DR3P48A50	15		V
Input Resistance (Typical)			
DR3P48A50	21		KΩ
Reverse Voltage Protection		Polarity free	V

BLOCK DIAGRAM

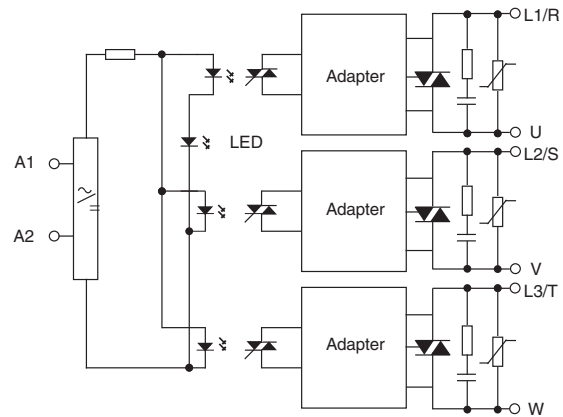


Figure 1

CONTROL CHARACTERISTICS

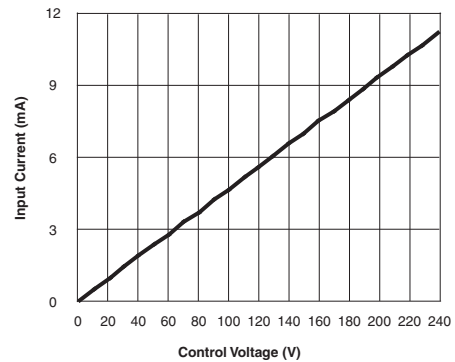


Figure 2b – DR3P48A50

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 ² t for Match Fusing (<8.3 ms)		1500	A ² s

GENERAL SPECIFICATIONS

(+20°C ambient temperature unless otherwise specified)

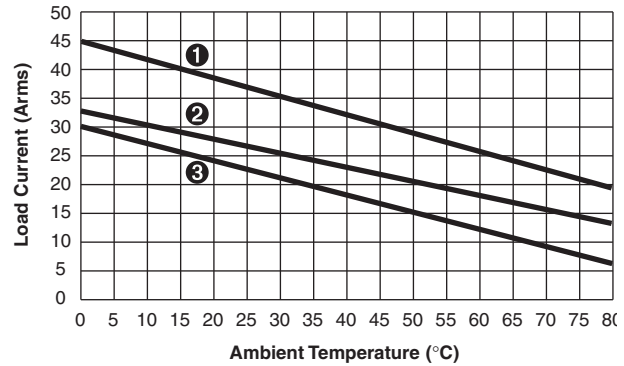
ENVIRONMENTAL SPECIFICATIONS

	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

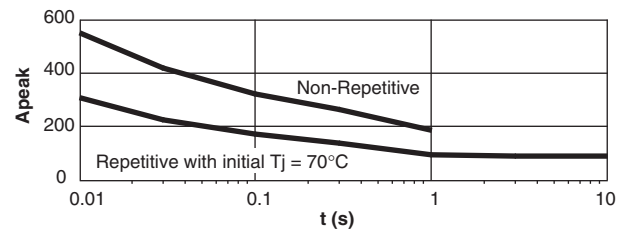


Figure 4

TYPICAL APPLICATION

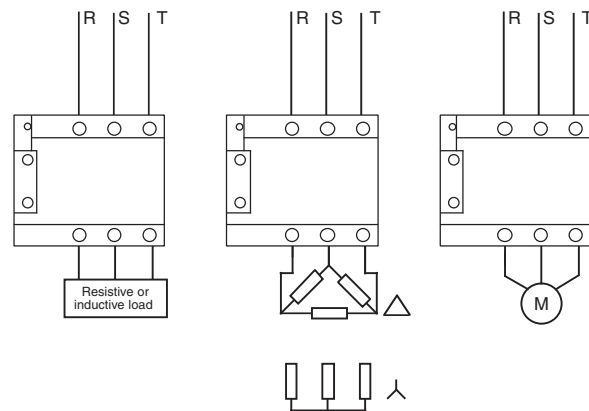
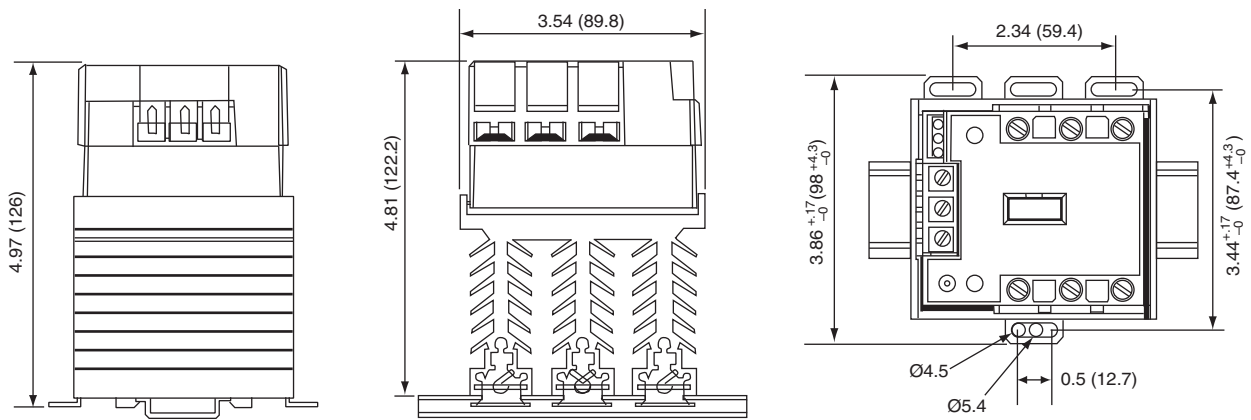


Figure 5


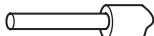
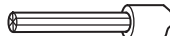
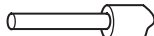
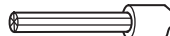
MECHANICAL SPECIFICATION




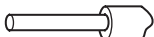
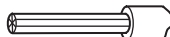
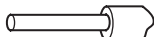
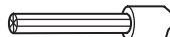
WEIGHT: 35.27 oz. (1000g)

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		

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		

DIN RAIL MOUNTING

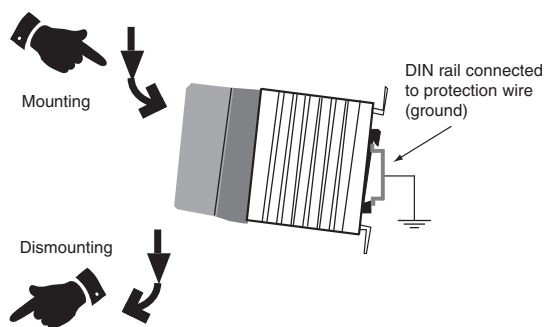


Figure 7