INSTALLATION GUIDE

Sensata Technologies

DR45 SERIES

AC SINGLE PHASE OUTPUT DIN RAIL MOUNT SSRS

NOVA22

Sensta | Crydom DR45 Series Solid State Relays were developed to offer the advantages of semiconductor switching technology in a standard 45 mm industrial package. Quick and easy installation is coupled with low drive power requirements and an efficient and reliable power SCR output. This compact new design offers up to 60 Amps in ambient temperatures of 40ºC.
Read all installation instructions before using your DIN Rail Mount Solid State Relay (SSR) and refer to the product datasheet for more information. For assistance, please contact Tech Support.

INSTALLATION INSTRUCTIONS(A)

Mounting on DIN Rail

- Locate rail and align with non moveable end of DR45 DIN clip.
- Using reasonable force, push DR45 in the direction of the arrow (as shown in fig.1).
- For removal pull release tag in direction of arrow using blade of screwdriver and pull it away from DIN rail.

Mounting on Panel

- Locate the panel section on which the DR45 SSR will be mounted on (as shown in fig.2)
- DIN clip includes tabs for this type of mounting. Tab holes have a diameter of 4.5 mm. You will need three screws (not included) no larger than that to mount the SSR onto panel.
- Align SSR tabs with panel surface and screw both top and bottom sides. Recommended torque is 12 in-lbs (1.36 Nm).

Wiring Instructions

- Recommended wire sizes as shown in TABLE 1
- Maximum terminal screw torque input terminal 5 lb-in (0.5 Nm) (screw terminal only)
- Maximum terminal screw torque load terminal 18-20 lb-in (2.0-2.2 Nm)
- If multiple units are installed be sure to follow derating curves

WARNING! Latching system could be damaged if product is removed incorrectly out of the DIN rail.

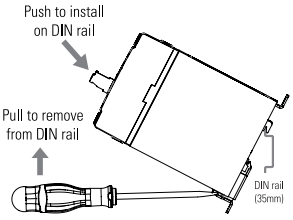


fig. 1 SSR mounted on DIN rail

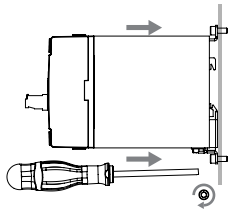
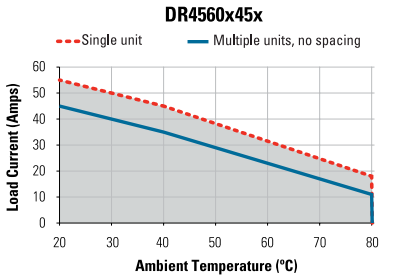


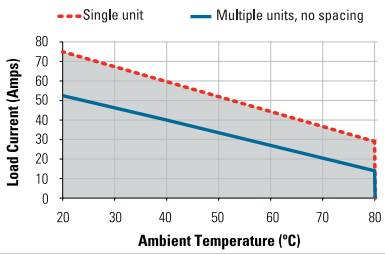
fig. 2 SSR mounted on Panel Mount

TABLE 1. Wire Size & Pull Out Strenght			
Terminal Type		**Recommended Wire Size (Solid / Stranded)**	**Wire Pull-Out Strength (lb)[N]***
Output		1 x 18 AWG (1 mm2) [minimum]	20 [88]
		1 x 8 AWG (10 mm2) [maximum]	90 [400]
		2 x 8 AWG (10 mm2) [maximum]	80 [355]
		1 x 3 AWG (26.67 mm2) [maximum]	90 [400]
Input	**Screw**	30 AWG (0.05 mm2) [minimum]	4.5 [20]
		12 AWG (3.3 mm2) [maximum]	30 [133]
	Spring	26 AWG (0.13 mm2) [minimum]	5 [22]
		12 AWG (3.3 mm2) [maximum]	5 [22]

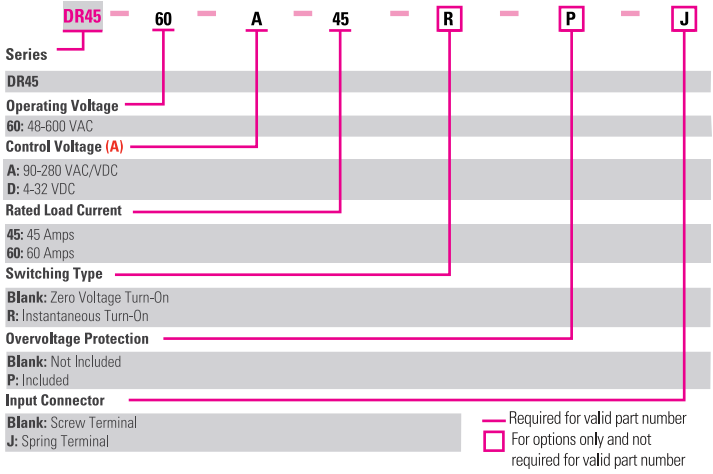
* Tests performed on Stranded wire

DERATING CURVES

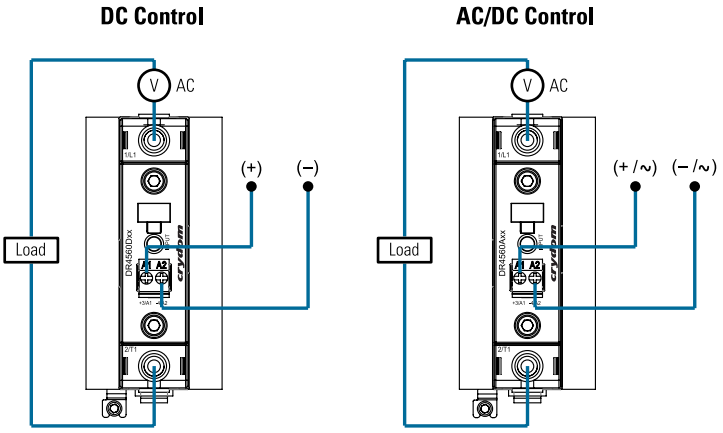




ORDERING OPTIONS



WIRING DIAGRAMS (B)



Important Considerations

- Be sure to use input and output voltages within operating ranges.
- LED indicates only input status. It does not represent output status.
- To achieve maximum ratings, there must be a minimum spacing of 0.89 in (22.5 mm) between the devices in free air (as shown in fig.2).
- For optimal thermal performance the SSR must be installed vertically on a sidewall to maximize natural convection air flow.
- Protective earth (PE) screw type recommended is 10-32 UNC standard, not provided with SSR. Through the use of a DIN rail ground (protective conductor) terminal block, the DIN rail itself can be used as the grounding bus bar. In this case, the zinc plated steel material used for the DIN rail clip of DR45 models, permits a secure path to ground and avoid the need of a further PE connection (see fig.3).

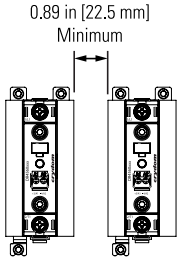


fig. 2 Multiple units mounting for maximum ratings

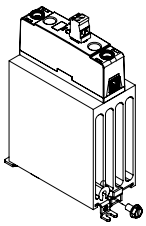


fig. 3 DR45 model with protective earth screw

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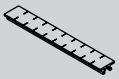
ACCESSORIES

TABLE 2. Recommended Accessories	
 **Connectors**	 **ID Marker**
CP201 Screw Terminal CP202 Spring Terminal	CNLB Blank Strips CNLN Numbered 1 to 10 Strips CNL2 Numbered 11 to 20 Strips

GENERAL NOTES

(A) Control voltage 18-52 VAC/VDC is available upon request.
(B) Load can be wired to either terminal 1/L1 or terminal 2/T1. Proper polarity must be observed all the time for the DC control power supply, with terminal +3/A1 being positive with respect to terminal -4/A2.

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