

## DRA Series Contactors

### DC Motor Reversing Contactors

DRA series DC Motor Reversing Contactors utilize Crydom's advanced solid state DC switching technology to provide an integrated "H Bridge" type DC switching contactor for DC motor reversing applications. These ready-to-use contactors feature logic compatible DC input control with status indicator and interlock and provide a simple and easy to use control solution for DC motor reversing. For complete specifications, see DRA Series DC Motor Reversing Contactors datasheet at [www.crydom.com](http://www.crydom.com).

#### FEATURES

- 54 mm motor reversing DIN rail mountable contactor package
- 90 VDC & 180 VDC Operating Voltage
- 5 to 15 VDC & 15 to 32 VDC Input Control Voltage options available
- Convenient FET switches in H-bridge configuration for Motor Reversing applications
- Protective Forward/Reverse interlock built-in function
- UL ratings for Resistive & Motor loads
- LED Status indicator for Input Control Voltage
- No heat sink required & cage style screw terminals for easy installation & reliable wire connection

#### INSTALLATION INSTRUCTIONS

Please read all installation instructions before using DRA Series DC Motor Reversing Contactors.

- Install the contactor on the DIN rail as shown in fig. 1. Vertical mounting operation is recommended.
- Wire the contactor to the input control side following the wiring diagram (fig. 3). 24 AWG minimum, 12 AWG maximum (IEC 0.5-2.5 mm<sup>2</sup>), choose wire gauge according to load current. Maximum recommended terminal screw torque input 4.3 lbs in (0.5 Nm).
- Wire the contactor to the DC Line side (+ & -) and to the Load side (M1 & M2). 24 AWG minimum, 12 AWG maximum (IEC 0.5-2.5 mm<sup>2</sup>), choose wire gauge according to load current. Maximum recommended terminal screw torque output 4.3 lbs in (0.5 Nm).
- If multiple units are installed be sure to follow derating curve (fig. 2).

#### PART NUMBER NOMENCLATURE

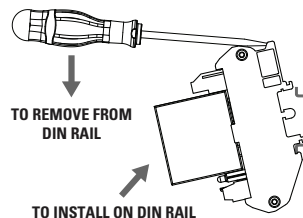
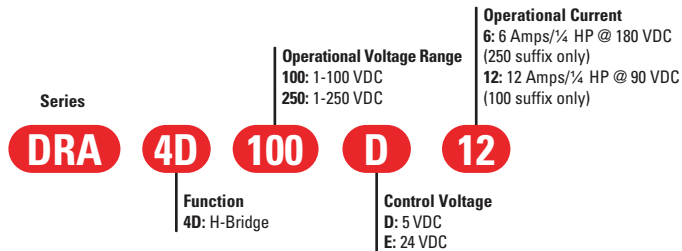
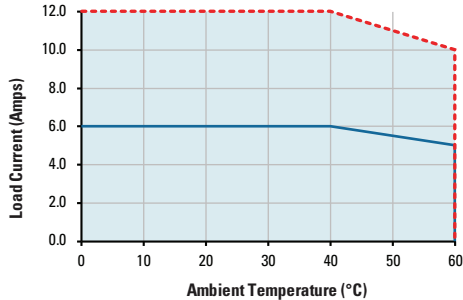


fig. 1 Mounting/Dismounting contactor on DIN rail.

## DERATING CURVE (A, B)



--- DRA4D100x12  
— DRA4D250x6

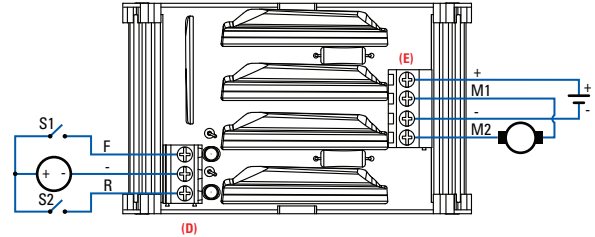
fig. 2 Derating Curve for DC Motor Reversing Contactor.

Temp.	DRA4D100x12	DRA4D250x6
40°C	¼ HP 4 FLA @ 90 VDC	¼ HP 2 FLA @ 180 VDC
60°C	¼ HP 3 FLA @ 90 VDC	¼ HP 1 FLA @ 180 VDC

- (A) Unless otherwise noted, all ratings are at 0 mm air gap for adjacent similar parts.
- (B) Resistive Load Current rating for DRA4D250x6 is 5.5 A @ 0 mm air gap. For maximum ratings use 45 mm air gap
- (C) No grounding wire required. DC inductive loads must be diode suppressed
- (D) 3 Input control terminal screws M2.5 Slotted Drive
- (E) 4 Output terminal screws (+ & -/M1 & M2) M2.5 Combo Drive
- (F) Minimum wire strip length 0.197 in [5 mm], maximum 0.235 in [6 mm] for input and output terminals

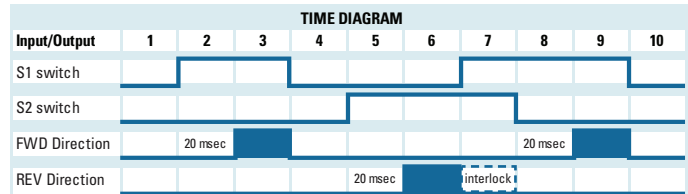
<b>WARNING</b>	<b>DANGER</b>
<b>RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE</b> • The product's side panels may be hot, allow the product to cool before touching. • Follow proper mounting instructions including torque values. • Do not allow liquids or foreign objects to enter this product. Failure to follow these instructions can result in serious injury, or equipment damage.	<b>HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH</b> • Turn off power supply before working on this equipment. Failure to follow these instructions will result in death or serious injury.

## WIRING DIAGRAM (C, F)



S1	S2	Forward	Reverse
Open	Open	Off	Off
Closed	Open	On	Off
Open	Closed	Off	On
Closed	Closed	Off	Off

fig. 3 Wiring Diagram for DC Motor Reversing Contactor.



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