Sensata Technologies

DRH SERIES

DIN RAIL MOUNT 3-PHASE SOLID STATE CONTACTORS

This installation sheet includes detailed mounting and wiring instructions which apply for Crydom DRH 3 Phase Solid State Contactors. Be sure to visit the product series' datasheet available at the Crydom website to complement this information. If you have questions or need additional information please contact Sensata Tech Support.

INSTALLATION INSTRUCTIONS (A, B)

Please read all installation instructions before using DRH Series Solid State Contactor

- Install the contactor on the DIN rail (as shown in fig.1).
- Wire the contactor to the input side. AWG #18 (0.8 mm²) minimum, AWG #12 (3.3 mm²) x 2 maximum.
- Wire the contactor to the output side. AWG #18 (0.8 mm²) minimum, AWG #10 (5.3 mm²) x 2 (stranded/solid) maximum.
- Use copper conductors with at least a 75ºC insulation rating.
- Recommended strip length is 10 mm maximum.
- Maximum recommended terminal screw torque input 12 lb-in (1.36 Nm) & output 15 lb-in (1.7 Nm).
- If multiple units are installed be sure to follow derating curves

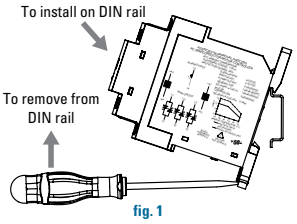


fig. 1

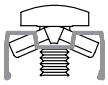


fig. 2 Terminal screw type. Top/Bottom view.

WARNING! Removing product from 35 mm rail incorrectly by not using the appropriate tool could damage the latching system.

TABLE 1. HP Ratings at Nominal Voltage	
Ambient Temperature	**DRH @ 480 VAC**
40ºC	5 HP / 3.7 kW
60ºC	3 HP / 2.2 kW
80ºC	1.5 HP / 1.1 kW

ORDERING OPTIONS

DRH - 3P - 60 - A - 18 - R

Series

DRH

Function

3P: Contactor

Operating Voltage

60: 48-600 VAC

Control Voltage

A: 90-280 VAC/VDC
D: 4-32 VDC

Rated Load Current

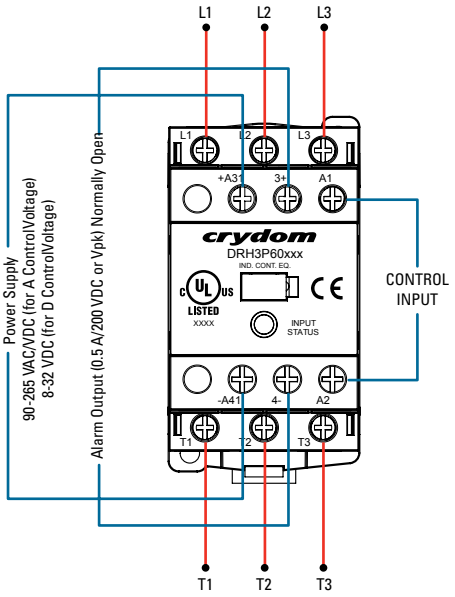
18: 18 Amps (3 Controlled legs)
20: 20 Amps (2 Controlled legs)

Switching Type

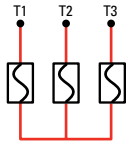
Blank: Zero Voltage Turn-On
R: Instantaneous Turn-On

— Required for valid part number
☐ For options only and not required for valid part number

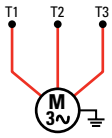
WIRING DIAGRAM (C)



General Use / AC-51 Application



Motor Controller / AC-53a Application



Overload current protection needs to be considered

Important Considerations

Be sure to use input and output voltages within operating ranges. LED indicates input and alarm status. It does not represent output status. To achieve maximum ratings, there must be a minimum spacing of 0.9 in (22 mm) between the devices in free air. (See fig. 3)

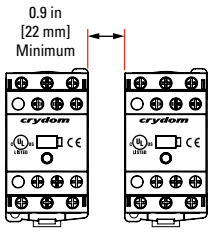
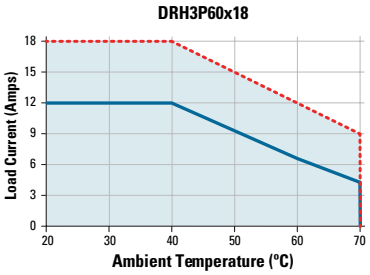
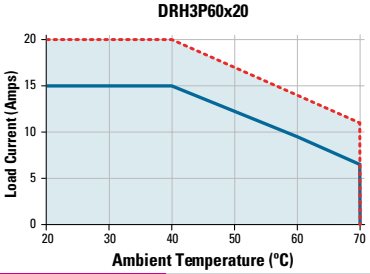


fig. 3 Multiple units mounting for maximum ratings

DERATING CURVES





Single unit, or multiple units with spacing greater than minimum (see **fig. 3**)

Multiple units, no minimum spacing between components (see **fig. 3**)

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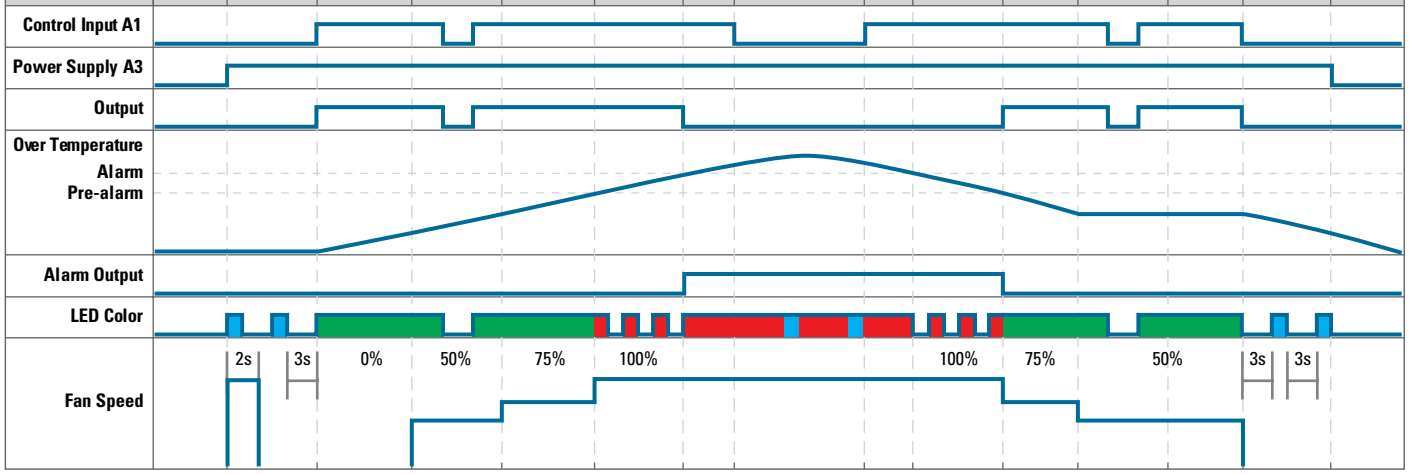
TABLE 2. Status Chart



LED Color

Blue Green Red

Step	Description
1, 15	Initial Condition
2, 14	Stand by condition. LED is blinking Blue. Fan is activated at full speed for 2 seconds after power is applied to A3
3	A1 is On, Output is activated, temperature rises. LED is Green
4, 12	Fan is activated at 50% speed. If A1 is disabled, LED changes to blinking Blue
5, 11	Fan is at 75% speed
6, 10	LED changes to blinking Red, fan is at full speed
7	Output is Off, Alarm Output is On, LED changes to solid Red
8	If A1 is disabled while alarm output is active, LED alternates between Blue and Red
9	LED is solid Red, temperature starts to fall
13	Fan is activated at 50% speed, temperature is steady

GENERAL NOTES

[A] See compatible accessories in corresponding datasheet.
[B] For optimal thermal performance, contactor vents should be aligned vertically to maximize airflow.
[C] On models with 2 controlled legs, L2 and T2 are linked internally

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