Sensata
Technologies

|PM22 SERIES
PANEL MOUNT SOLID STATE RELAYS

Crydom PM22 Series Solid State Relays were developed to offer the advantages of semiconductor switching technology in a standard 22.5 mm industrial package. Quick and easy installation is coupled with low drive power requirements and efficient, reliable power SCR output. This compact new design offers up to 95 A_{RMS} in ambient temperatures of 40ºC. [A]

Be sure to visit the product series datasheet available at the Sensata website to complement this information. If you have questions or need additional information please contact Sensata Tech Support.

Please read all instructions before using your Panel Mount Solid State Relay (SSR).

MOUNTING INSTRUCTIONS

Choose one of the two mounting options and follow the instructions.

Mounting on Heat Sink
- Select adequate heat sink (see thermal derating curves in product series datasheet).
- Be sure to use a thermal pad or thermal compound (0.006-0.008 in layer thickness recommended) between the SSR and the selected heat sink.
- SSR housing mounting holes have a diameter of 0.341in (8.66mm). Two screws are needed to mount the SSR onto a heat sink (See fig.1). Mounting screws are sold separately as HK8 and are suitable for all Crydom heat sinks. Otherwise, recommended screw size is 8-32 (socket) using an allen wrench (9/64 in) for the installation. Choose screw length considering mounting surface hole depth and SSR baseplate thickness of 0.125 in (3.2 mm).
- Before applying full torque tighten down both screws until they contact the baseplate.Then, tighten them to 20 lb-in (2.2 Nm) min.
- For optimal thermal performance heat sink fins should be oriented vertically to promote natural convection airflow.
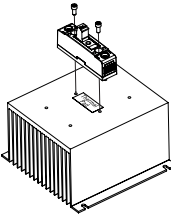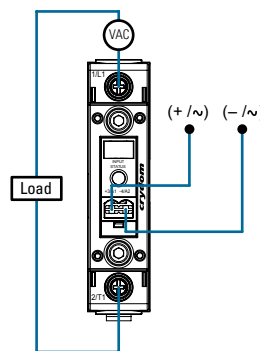
fig. 1 SSR mounted on HS053 heat sink

Mounting on Panel
- Locate the panel section on which the SSR will be mounted. Panel mount surface must provide adequate heat sinking capability, uncoated, clean, flat (0.004 in/in recommended) and preferably aluminum.
- Be sure to use a thermal pad or thermal compound (0.006-0.008 in layer thickness recommended) between the SSR and the panel.
- SSR housing mounting slots have a diameter of 0.341 in (8.66 mm). Two screws are needed (not included) to mount the SSR onto a panel. Mounting screws are sold separately as HK8. Otherwise, recommended screw size is 8-32 (socket) using allen wrench (9/64 in) for the installation. Choose screw length considering the mounting surface and that the SSR baseplate thickness is 0.125 in (3.2 mm).
- Before applying full torque tighten down both screws until they contact the baseplate. Then, tighten them to 20 lb-in (2.2 Nm) min.

TABLE 1. Recommended Wire Sizes		
Terminal Type	Wire Size (Solid / Stranded)	Wire Pull-Out Strength (lb)[N]
Output	20 AWG (0.75 mm²) [minimum]	25 [111]
Output	2 x 10 AWG (6 mm²)	80 [355]
Output	2 x 8 AWG (10 mm²) [maximum]	90 [400]
Input — Screw	30 AWG (0.05 mm²) [minimum]	4.5 [20]
Input — Screw	12 AWG (3.3 mm²) [maximum]	30 [133]
Input — Spring	26 AWG (0.13 mm²) [minimum]	5 [22]
Input — Spring	12 AWG (3.3 mm²) [maximum]	5 [22]

ORDERING OPTIONS

PM22 - 60 - A - 25 - V - R - J - H

Series
PM22

Operating Voltage
60: 48-600 VAC

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

Rated Load Current
25: 25 Amps
50: 50 Amps
95: 95 Amps [High I²t]

Terminal Layout
V: Contactor Configuration

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

Input Connector
Blank: Screw Terminal
J: Spring Terminal

Thermal Pad
Blank: Not Included
H: Included

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

WIRING DIAGRAM
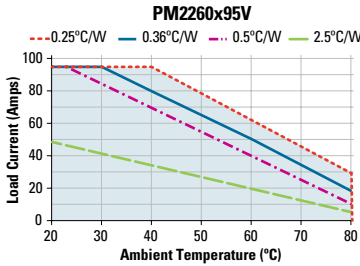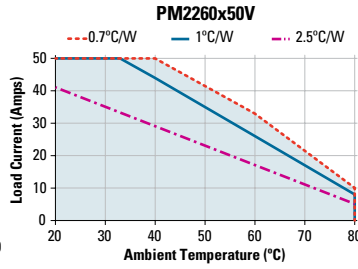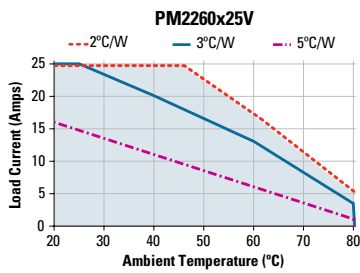
VAC

1/L1

(+ /∼)   (– /∼)

Load

2/T1

Terminals
Maximum recommended terminal screw torque input terminal: 5 lb-in (0.5 Nm)
Maximum recommended terminal screw torque load terminal: 18-20 lb-in (2.0-2.2 Nm)
Recommended wire sizes as shown in TABLE 1.

Important Considerations
Be sure to use input and output voltages within operating ranges.
LED indicates only input status. It does not represent output status.

www.sensata.com

crydom

DERATING CURVES[B]

PM2260x25V

- - - 2ºC/W   — 3ºC/W   — · — 5ºC/W

Load Current (Amps) vs Ambient Temperature (ºC)

PM2260x50V

- - - 0.7ºC/W   — 1ºC/W   — · — 2.5ºC/W

Load Current (Amps) vs Ambient Temperature (ºC)

PM2260x95V

- - - 0.25ºC/W   — 0.36ºC/W   — · — 0.5ºC/W   — — 2.5ºC/W

Load Current (Amps) vs Ambient Temperature (ºC)

ACCESSORIES

TABLE 2. Recommended Accessories					
Connectors	ID Marker	Hardware Kit	Heat Sink Part No	Thermal Resistance [ºC/W]	Thermal Pad
CP201 CP202	CNLB CNLN CNL2	HK8	HS259DR HS073 HS072 HS053 HS033 HS023	2.5 0.7 0.7 0.5 0.36 0.25	HSP-7

GENERAL NOTES

[A] Heat sink required, see Derating Curves.

[B] AC input models operating range is -20 to 60 ºC.

CONTACT US

Americas
+1 (800) 350 2727
sensors@sensata.com
Europe, Middle East & Africa
+33 (3) 88 20 8080
position-info.eu@sensata.com
Asia Pacific
sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006
ext 2808

Specification No.: Rev. 11/12/18

www.sensata.com