



## PM67 SERIES NOVA22 3-PHASE AC OUTPUT PANEL MOUNT SOLID STATE RELAYS

PM67 Series 3-Phase Solid State Relays offer the advantages of semiconductor switching technology in a compact 67.5 mm industrial package. Read all installation instructions before using your panel mount Solid State Relay (SSR) and refer to the product datasheet for more information. For assistance, please contact Tech Support.

### INSTALLATION INSTRUCTIONS

#### Mounting on Heat Sink

- Select adequate heat sink (see thermal derating curves in product series datasheet).
- Be sure to use a thermal pad (part no. HSP-8) or equivalent thermal compound between the SSR and the selected heat sink.
- SSR housing mounting holes have a diameter of 0.341 in (8.66mm). Two screws are needed to mount the SSR onto a heat sink (See fig.1). Mounting screws are sold separately as HK8. 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

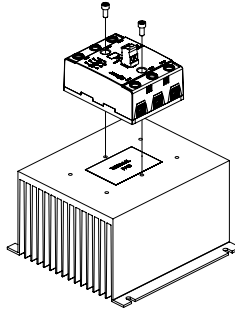


fig.1 SSR mounted on HS053 heat sink

#### 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 thermal pad HSP-8 or equivalent thermal compound 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

#### 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)
- Strip length for input terminals: Per manufacturer specifications
- Strip length for load terminals: 10mm min.
- Use only copper conductors rated for 75°C or higher

Table 1. Wire Size & Pull Out Strength			
Terminal Configuration	Recommended Wire Size (Solid/Stranded)	Wire Pull-Out Strength (lb)[N]*	
Output	1 x 18 AWG (1 mm <sup>2</sup> ) [minimum]	20 [88]	
	1 x 8 AWG (10 mm <sup>2</sup> )	75 [333]	
	2 x 8 AWG (10 mm <sup>2</sup> )	65 [289]	
	1 x 3 AWG (26.67 mm <sup>2</sup> ) <sup>(1)</sup>	90 [400]	
Input	Screw	30 AWG (0.05 mm <sup>2</sup> ) [minimum]	4.5 [20]
		12 AWG (3.3 mm <sup>2</sup> ) [maximum]	30 [133]
	Spring <sup>(2)</sup>	26 AWG (0.13 mm <sup>2</sup> ) [minimum]	5 [22]
		12 AWG (3.3 mm <sup>2</sup> ) [maximum]	5 [22]

\*Tests performed on Stranded wire

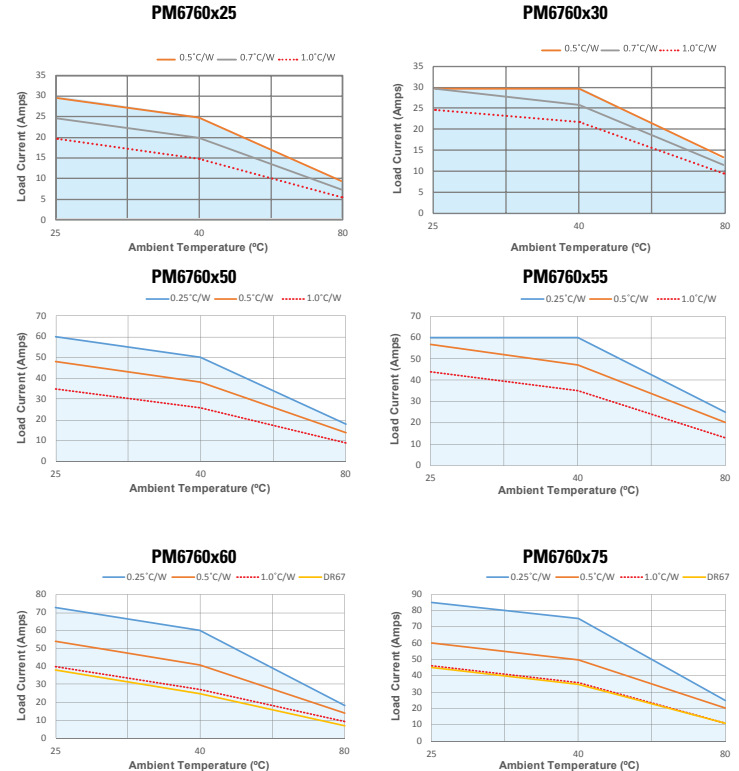
<sup>(1)</sup> Maximum wire size 1 x 2 AWG (35mm<sup>2</sup>)

<sup>(2)</sup> Applicable when using CP202 connector instead of supplied connector

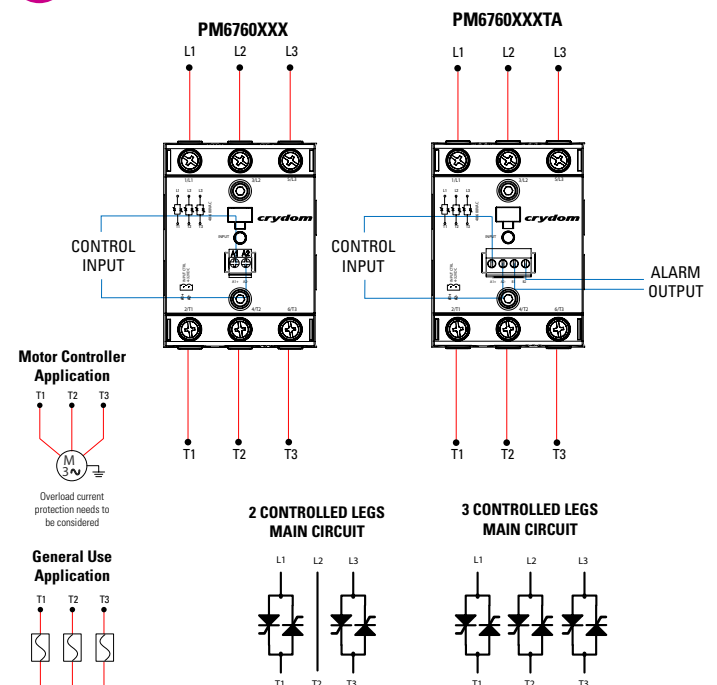
#### Important Considerations

- Be sure to use input and output voltages within operating ranges.
- On models without overtemperature protection LED indicates only input status. It does not represent output status.

### DERATING CURVES

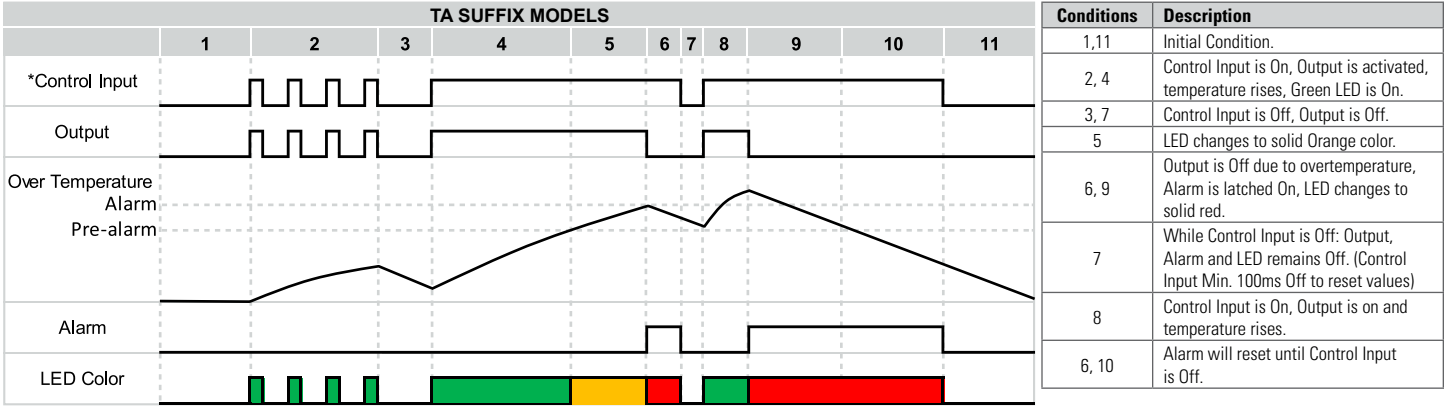


### WIRING DIAGRAM



# FUNCTIONAL DIAGRAMS

(only for models with overtemperature protection)



\* Max. 60 ms OFF when applying PWM on Control Input.

LED Color		Green	Output On
		Red	Alarm
		Yellow	Pre-Alarm

# ACCESSORIES

TABLE 2. Recommended Accessories

Connectors	ID Marker	Hardware Kit	Heat Sink		Thermal Pad
			Part No	Thermal Resistance [°C/W]	
CP201 CP202	CNLB CNLN CNL2	HK8	HS073 HS053 HS033 HS023	0.7 0.5 0.36 0.25	HSP-8

# WARNINGS



### RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- 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.**



### HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

**Failure to follow these instructions will result in death or serious injury.**

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