



# M&S Series Power Controllers

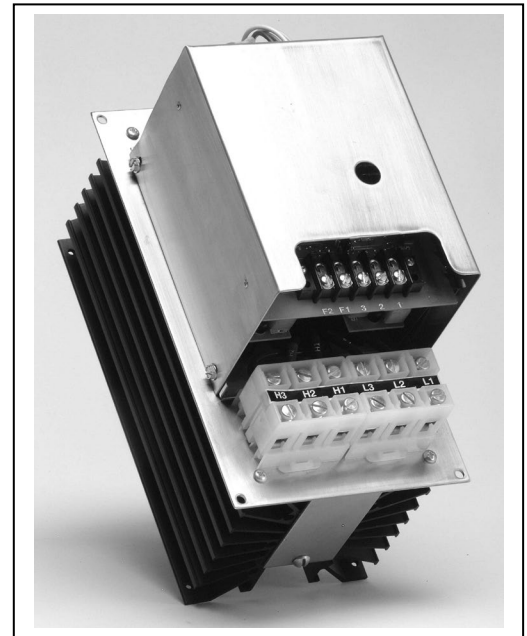
## Operation

The M&S Series can be used to replace earlier models of H&J Series and D&E Series power controllers. Contact the factory for additional information and cross-referencing.

M&S Series power controllers are solid-state, zero-cross fired, proportional devices. Line voltage is switched 0-100% linearly, with respect to the input range. A 4 second time-base controls power to the load. For example, a 5VDC signal to a 0-10VDC input will cycle the output full on for 2.0 seconds and full off for 2.0 seconds. Line voltage is used to power the electronics. An external transformer is not required.

Features of these controllers include an LED to indicate when the output should be on. Also, the output will be shut off if the input signal is disconnected or the input is shorted.

Masters can operate alone or can drive numerous slaves to control multiple loads. Slaves can be driven from other controllers with a pulsing-DC type output (see specifications).



## Catalog and Part Numbers:

**1 0 1 - M 3 - 4 8 0 - 5 0 - E - W**

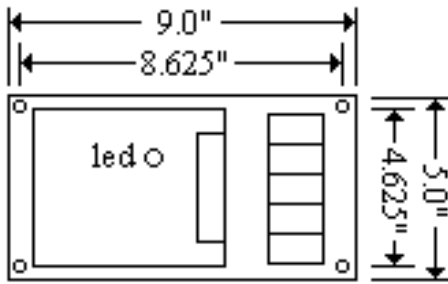
| Mounting            | Type  | AC Voltage   | Max Current                  | Input Code  | Gasket Kit                     |
|---------------------|---|--|------------------------------|---|--------------------------------|
| 101 = through panel | M = master<br>S = slave                       | 120 = 120VAC<br>208 = 208VAC<br>240 = 240VAC<br>277 = 277VAC<br>480 = 480VAC<br>600 = 600VAC | 50 = 50 amps<br>70 = 70 amps | A = 2200 ohm<br>C = 135 ohm<br>D = 6-9VDC<br>E = 4-20mA<br>L = 0-10VDC<br>blank = slave | W = included<br>blank = (none) |
|                     | <b>AC Phase</b><br>1 = 1 phase<br>3 = 3 phase |  |                              |   |                                |

**Note:** Input boards can be changed in the field to reconfigure the power controller. Some models, i.e. 440VAC, have a separate 120VAC transformer for the electronics. Contact the factory for other catalog and part numbers not shown above.

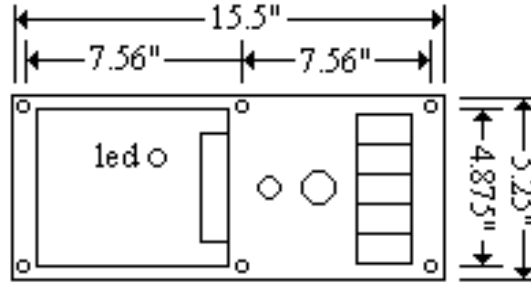
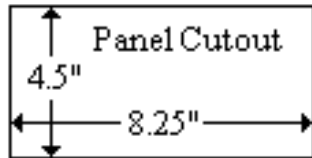
## Specifications

Storage Temp: -40° to 190°F  
Operating Temp: -40°F to 132°F  
UL Recognized: File E52105 Guide XAPX2  
Isolation: 2500Vrms input to output  
Isolation: 2500Vrms output to heatsink  
Line Voltage: +/- 10% of AC Voltage rating  
Frequency: 47 to 63 Hertz, sinewave only

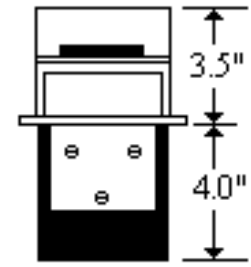
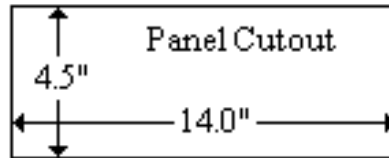
Load Current: 0.5A to Max Current rating  
Load Wire Range: 2-18 AWG, copper only  
Input Impedance: 250Ω (mA), 47KΩ (VDC)  
Input Wire Range: 16-22 AWG, copper only  
Slave Input: 3.0-12VDC, 270KΩ impedance  
UL Type 4X with option "W" gaskets.  
Panel gasket and screws shipped loose.



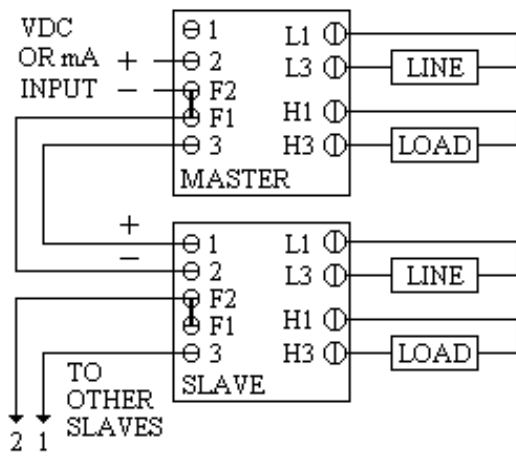
50 Amp Models



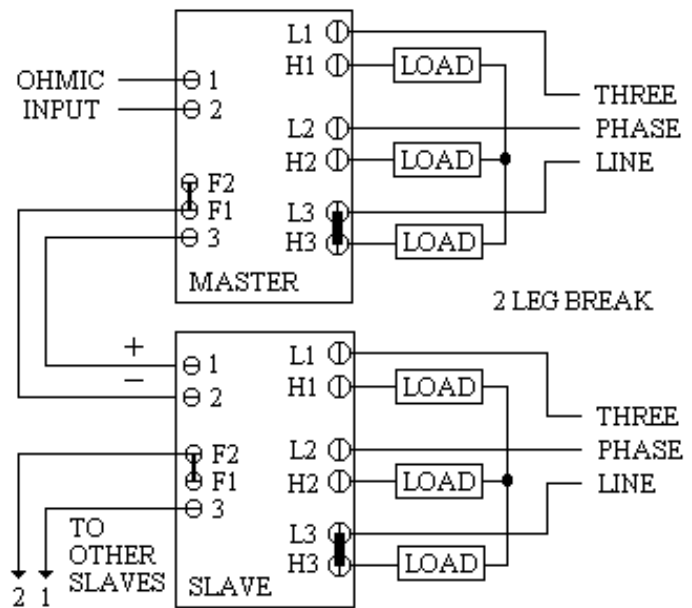
70 Amp Models



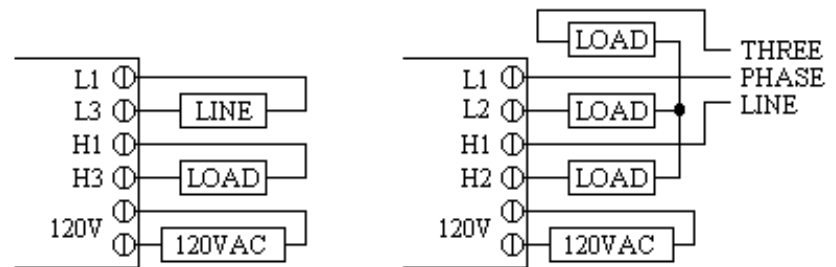
**Physical Dimensions**



**Wiring Diagrams:**  
*1 phase and 3 phase units*



**Wiring Diagrams:**  
*120VAC Electronics Transformer*



**INDEECO CONTROLS**  
425 Hanley Industrial Ct  
St. Louis, MO 63144

phone: 314-644-4300  
fax: 314-644-5332  
[www.indeeco.com](http://www.indeeco.com)

**Input Board Specifications**

| Input Code    | Full Off  | Full On   | Board Part # |
|---------------|-----------|-----------|--------------|
| A = 2200 ohms | 2150 ohms | 2250 ohms | 110-B50M-A   |
| C = 135 ohms  | 20 ohms   | 120 ohms  | 110 B50M-C   |
| D = 6-9 VDC   | 6.5 VDC   | 8.5 VDC   | 110-B50M-D   |
| E = 4-20mA    | 5.6 mA    | 18.4 mA   | 110-B50M-E   |
| L = 0-10VDC   | 1.0 VDC   | 9.0 VDC   | 110-B50M-L   |
| S = slave     | < 3.0 VDC | >3.0 VDC  | 110-B50S     |