

# Series 16 Modules Controls – Solid State Plug-In Modules

- ▶ Compact Size
- ▶ Modular Plug-in Design
- ▶ Various Time Delays
- ▶ Low Voltage Sensor
- ▶ Solid State Reliability
- ▶ LED Monitoring
- ▶ U.L. “Motor Control”

## Series 16M – General Purpose Control

- New Microprocessor Design

Designed for either differential or single-level service. U.L. “Motor Controller” listing, 8 pin socket with screw-type connections make the unit easy to install and service. Sensitivity of up to 1 million ohm/cm.

## Series 16HM – High Sensitivity Control

Series 16HM is similar to Series 16M but provides higher sensitivity up to 5.5 million ohm/cm. Probe voltage is 12 VDC for applications with low conductive media.

## Series 16DM – DPDT Load Contact

Similar to Series 16M but with DPDT load contacts. Eliminates the need for slave relays. 11 pin octal plugs. Requires little panel space. General purpose single-level or differential applications. U.L. listed.

## Series 16VM – Field Selectable Sensitivity

Similar to Series 16M but with the added flexibility of field adjustable sensitivity, made possible through external setpoint resistors. Uses 11pin octal socket. U.L. listed.

## Specifications

<b>Contact Design</b>	
Series 16M & 16HM	1 N.O. & 1 N.C. (1 form C)
Series 16DM	2 N.O. & 2 N.C. (2 form C)
Series 16VM	1 N.O. & 1 N.C. (1 form C)
<b>Contact Rating (120. 240 VAC)</b>	
Series 16M & 16HM	10 amp Resistive 1/3 hp
Series 16DM	5 amp Resistive 1/10 hp
Series 16VM	10 amp Resistive 1/3 hp
<b>Mode of Operation</b>	Direct/Inverse, factory set
<b>Sensitivity</b>	
Series 16M	0-1M ohm, factory set
Series 16HM	0-5.5M ohm, factory set
Series 16DM	0-1M ohm, factory set
Series 16VM	0-1M ohm, field adjustable
<b>Primary Voltage</b>	24 VAC, 120 VAC, 240 VAC (+10%/-15%) 208/240: 187 V min. to 255 V max. VAC 50/60 Hz
<b>Secondary Voltage</b>	
Series 16M	12 VAC, 1.5 mA
Series 16HM	12 VDC
Series 16DM & 16VM	12 VAC, 1.5 mA
<b>Temperature</b>	-40°F to +150°F (-40°C to +65°C)
<b>Approvals</b>	U.L. 508 File #E44426
<b>Terminal Style</b>	Screw connector
<b>Options</b>	Time Delays



Series 16M/16HM

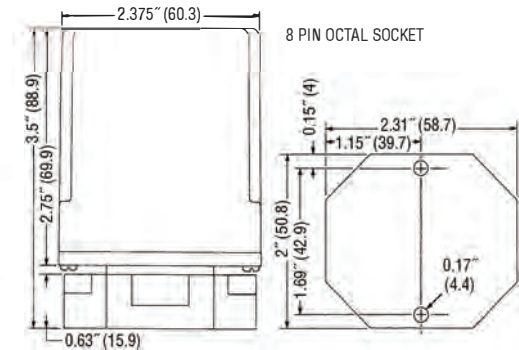
Series 16DM/16VM

## Applications

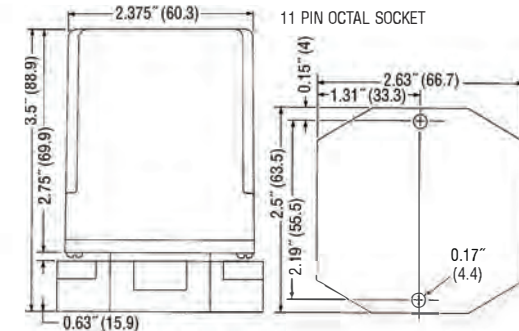
- Single-Level Service
- Point Level
- Valve Control
- Differential Service
- Alarms
- Pump Control

## Dimensions

### Series 16M & 16HM



### Series 16DM & 16VM

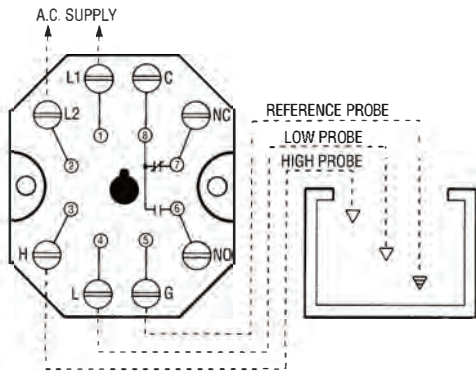


Note: Controls also available with DIN mount socket.

WARRICK CONDUCTIVITY SENSORS

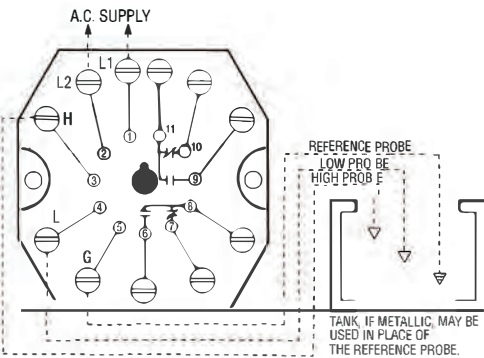
**Wiring**

**Series 16M & 16HM**



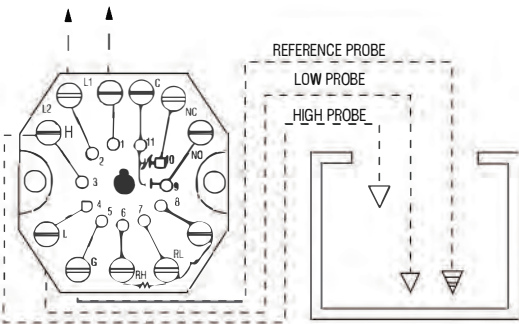
Note: For single level service, use "H" and "G" connections.

**Series 16DM**

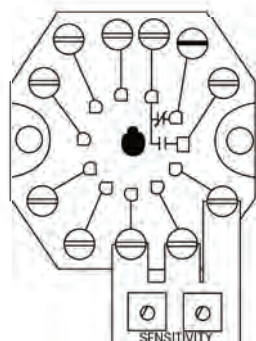


TANK IF METALLIC, MAY BE USED IN PLACE OF THE REFERENCE PROBE.

**Series 16VM**



**Variable Sensitivity Option**



Part number 16Z1VG Potentiometer Board available for 16VM only. Consult factory.

**How to Order**

Use the **Bold** characters from the chart below to construct a product code.

**16M Series – Microprocessor Version**

	<b>16M</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>XX</b>	<b>XX</b>
1. Series	_____							
	<b>16M</b> General Purpose;							
2. Mode of Operation	_____							
	<b>Direct</b>		<b>Inverse</b>					
	<b>A</b> – 4.7K	<b>E</b> – 100K	<b>K</b> – 4.7K	<b>P</b> – 100K				
	<b>B</b> – 10K	<b>F</b> – 470K	<b>L</b> – 10K	<b>R</b> – 470K				
	<b>C</b> – 26K	<b>G</b> – 1M	<b>M</b> – 26K	<b>S</b> – 1M				
	<b>D</b> – 50K		<b>N</b> – 50K					
3. Supply Voltage	_____							
	<b>1</b> 120 VAC; <b>2</b> 240 VAC; <b>3</b> 24 VAC; <b>8</b> 208/240 VAC							
4. Socket Style*	_____							
	<b>A</b> 8 Pin Octal		<b>M</b> Module Only					
	<b>B</b> 8 Pin DIN							
5. Enclosure	_____							
	<b>0</b> None; <b>1</b> NEMA 1; <b>4</b> NEMA 4							
6. Time Delay (increasing level) Option	_____							
	<b>00-90</b> seconds							
	<b>Blank</b> 0 seconds							
7. Time Delay (decreasing level) Option	_____							
	<b>00-90</b> seconds							
	<b>Blank</b> 0 seconds							
8. Time Out Option	_____							
	See page E-11, Chart A							

\*See page E-11 for descriptions.

**16 HM, 16DM or 16VM Series**

	<b>16HM</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>XX</b>	<b>XX</b>
1. Series	_____						
	<b>16HM</b> High Sensitivity;						
	<b>16DM</b> DPDT Load Contact;						
	<b>16VM</b> Field Selectable Sensitivity <sup>1</sup>						
2. Mode of Operation <sup>2</sup>	_____						
	<b>Direct</b>		<b>Inverse</b>				
	<b>A</b> – 4.7K <sup>4</sup>	<b>F</b> – 470K <sup>4</sup>	<b>K</b> – 4.7K <sup>4</sup>	<b>R</b> – 470K <sup>4</sup>			
	<b>B</b> – 10K <sup>4</sup>	<b>G</b> – 1M <sup>4</sup>	<b>L</b> – 10K <sup>4</sup>	<b>S</b> – 1M <sup>4</sup>			
	<b>C</b> – 26K <sup>4</sup>	<b>H</b> – 3M <sup>3</sup>	<b>M</b> – 26K <sup>4</sup>	<b>T</b> – 3M <sup>3</sup>			
	<b>D</b> – 50K <sup>4</sup>	<b>J</b> – 5.5M <sup>3</sup>	<b>N</b> – 50K <sup>4</sup>	<b>W</b> – 5.5M <sup>3</sup>			
	<b>E</b> – 100K <sup>4</sup>	<b>Y</b> – 0-700K <sup>5,7</sup>	<b>P</b> – 100K <sup>4</sup>	<b>Z</b> – 0-700K <sup>5,7</sup>			
3. Supply Voltage	_____						
	<b>1</b> 120 VAC; <b>2</b> 240 VAC; <b>3</b> 24 VAC; <b>8</b> 208/240 VAC						
4. Socket Style	_____						
	<b>A</b> 8 Pin Octal (16M & 16HM), 11 Pin Octal (16DM & 16VM);						
	<b>B</b> DIN Mount; <b>M</b> None, Module Only <sup>6</sup>						
5. Enclosure	_____						
	<b>0</b> None; <b>1</b> NEMA 1; <b>4</b> NEMA 4						
6. Time Delay (increasing level) Option	_____						
	<b>01-20</b> seconds; <b>0V</b> variable (16VM only)						
7. Time Delay (decreasing level) Option	_____						
	<b>01-20</b> seconds; <b>0V</b> variable (16VM only)						

Notes:

- 16VM select modes **A**, **K**, **Y** or **Z** only.
- 16HM & 16DM only. Series 16VM includes full set of the resistors listed above. Specify a sensitivity to determine mode of operation.
- 16VM only.
- All Series except 16HM.
- 16VM only.
- Socket style M requires enclosure **0** – None.
- Mounting style A (11 pin octal only)

Socket Details and Option Availability are located on web site.