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

Contact Design	
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)
Contact Rating (120. 240 VAC)	
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
Mode of Operation	Direct/Inverse, factory set
Sensitivity	
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
Primary Voltage	24 VAC, 120 VAC, 240 VAC (+10%/-15%) 208/240: 187 V min. to 255 V max. VAC 50/60 Hz
Secondary Voltage	
Series 16M	12 VAC, 1.5 mA
Series 16HM	12 VDC
Series 16DM & 16VM	12 VAC, 1.5 mA
Temperature	-40°F to +150°F (-40°C to +65°C)
Approvals	U.L. 508 File #E44426
Terminal Style	Screw connector
Options	Time Delays

Series 16M/16HM

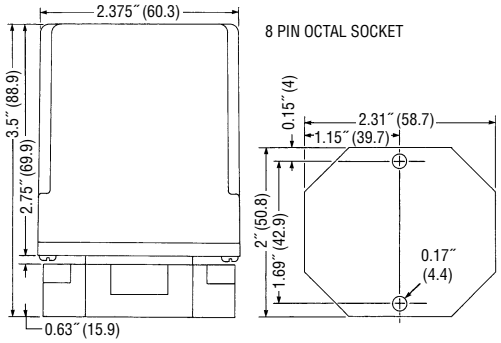
Series 16DM/16VM

Applications

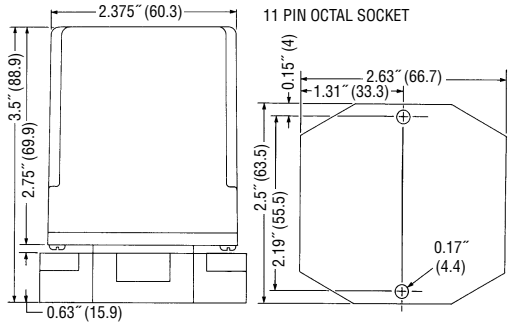
- Single-Level Service
- Point Level
- Valve Control
- Differential Service
- Alarms
- Pump Control

Dimensions

Series 16M & 16HM



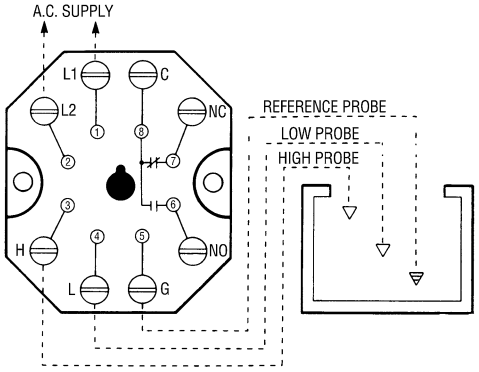
Series 16DM & 16VM



Note: Controls also available with DIN mount socket.

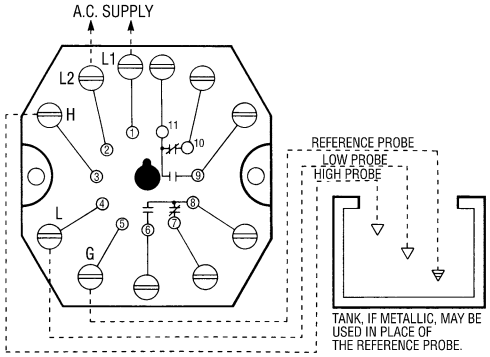
Wiring

Series 16M & 16HM

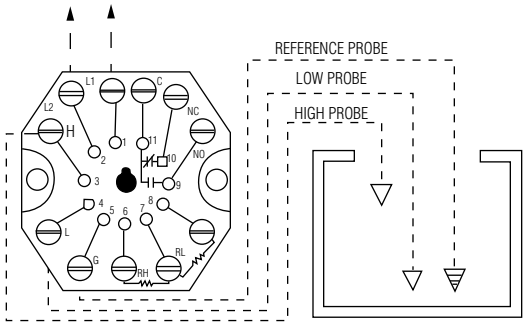


Note: For single level service, use "H" and "G" connections.

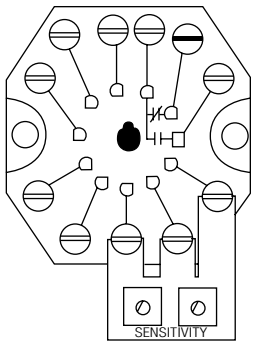
Series 16DM



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

16M X X X X X XX XX

1. Series
   16M General Purpose;
2. Mode of Operation

Direct		Inverse	
A – 4.7K	**E** – 100K	**K** – 4.7K	**P** – 100K
B – 10K	**F** – 470K	**L** – 10K	**R** – 470K
C – 26K	**G** – 1M	**M** – 26K	**S** – 1M
D – 50K		**N** – 50K	

3. Supply Voltage
   1 120 VAC; **2** 240 VAC; **3** 24 VAC; **8** 208/240 VAC
4. Socket Style*
   A 8 Pin Octal **M** Module Only
   B 8 Pin DIN
5. Enclosure
   0 None; **1** NEMA 1; **4** NEMA 4
6. Time Delay (increasing level) Option
   00-90 seconds
   Blank 0 seconds
7. Time Delay (decreasing level) Option
   00-90 seconds
   Blank 0 seconds
8. Time Out Option
   See page E-11, Chart A

*See page E-11 for descriptions.

16 HM, 16DM or 16VM Series

16HM X X X X XX XX

1. Series
   16HM High Sensitivity;
   16DM DPDT Load Contact;
   16VM Field Selectable Sensitivity[1]
2. Mode of Operation[2]

Direct		Inverse	
A – 4.7K[4]	**F** – 470K[4]	**K** – 4.7K[4]	**R** – 470K[4]
B – 10K[4]	**G** – 1M[4]	**L** – 10K[4]	**S** – 1M[4]
C – 26K[4]	**H** – 3M[3]	**M** – 26K[4]	**T** – 3M[3]
D – 50K[4]	**J** – 5.5M[3]	**N** – 50K[4]	**W** – 5.5M[3]
E – 100K[4]	**Y** – 0-700K[5, 7]	**P** – 100K[4]	**Z** – 0-700K[5, 7]

3. Supply Voltage
   1 120 VAC; **2** 240 VAC; **3** 24 VAC; **8** 208/240 VAC
4. Socket Style
   A 8 Pin Octal (16M & 16HM), 11 Pin Octal (16DM & 16VM);
   B DIN Mount; **M** None, Module Only[6]
5. Enclosure
   0 None; **1** NEMA 1; **4** NEMA 4
6. Time Delay (increasing level) Option
   01-20 seconds; **0V** variable (16VM only)
7. Time Delay (decreasing level) Option
   01-20 seconds; **0V** variable (16VM only)

Notes:
1. 16VM select modes **A**, **K**, **Y** or **Z** only.
2. 16HM & 16DM only. Series 16VM includes full set of the resistors listed above. Specify a sensitivity to determine mode of operation.
3. 16VM only.
4. All Series except 16HM.
5. 16VM only.
6. Socket style M requires enclosure **0** – None.
7. Mounting style A (11 pin octal only)

Socket Details and Option Availability are located on web site.

Series 16 – Open Circuit Board Controls

- Solid State Reliability
- Spade Terminals
- Time Delays Available
- U.L. "Motor Control"
- Optional Dirty Electrode Detection*
- AC Current Minimizes Electrolysis
- Compact Size
- Low-Voltage Sensor
- LED Monitoring

Series 16 – General Purpose Control

• New Microprocessor Design

Engineered for general purpose single-level or differential applications, these economy priced controls have spade terminals for easy wiring and provide sensitivities up to 1 million ohm/cm.

Series 16D – DPDT Load Contacts

Same features and specifications as Series 16, but these controls also have DPDT load contacts to eliminate the need for slave relays.

Series 16

Specifications

Contact Design	
Series 16	1 N.O. & 1 N.C. (1 form C)*
Series 16D	2 N.O. & 2 N.C. (2 form C)
Contact Rating (120, 240 VAC)	
Series 16	10 amp Resistive 1/3 hp*
Series 16D	5 amp Resistive 1/10 hp
Mode of Operation	Direct/Inverse, factory set
Sensitivity	0-1M ohm, factory set
Primary Voltage	120 VAC, 240 VAC, 24 VAC, 208 VAC (+10%/-15%) 50/60 Hz 208/240: 187 V min. to 255 V max. VAC 50/60 Hz
Secondary Voltage	12 VAC, 1.5 mA
Temperature	-40°F to +150°F (-40°C to +65°C)
Approvals	U.L. 508 File # E44426
Terminal Style	Spade connection
Options	Time Delays, Retrofit Plate, Time Out. See page E-11 for descriptions.

How to Order

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

16 X X X X X XX XX X

1. Series
   16 General Purpose;*
   16D DPDT Load Contacts
2. Mode of Operation

Direct		Inverse	
A – 4.7K	**E** – 100K	**K** – 4.7K	**P** – 100K
B – 10K	**F** – 470K	**L** – 10K	**R** – 470K
C – 26K	**G** – 1M	**M** – 26K	**S** – 1M
D – 50K		**N** – 50K	

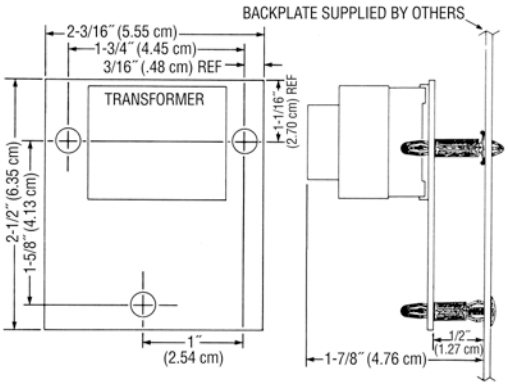
3. Supply Voltage
   1 120 VAC; **2** 240 VAC; **3** 24 VAC; **8** 208/240 VAC
4. Standoff Style
   A 1/16˝ Panel **C** Screw Mount
   B 1/8˝ Panel **D** Retrofit
5. Enclosure
   0 None; **1** NEMA 1; **4** NEMA 4
6. Retrofit Plate Option
   R Yes; **Blank** No
7. Time Delay (increasing level) Option
   01-20 seconds (Series 16D only)
   00-90 seconds; **Blank** 0 seconds (Series 16 only)
8. Time Delay (decreasing level) Option
   01-20 seconds (Series 16M only)
   00-90 seconds; **Blank** 0 seconds (Series 16 only)
9. Time Out Option*
   See page E-11, Chart A

* New Series 16 Microprocessor Design only.

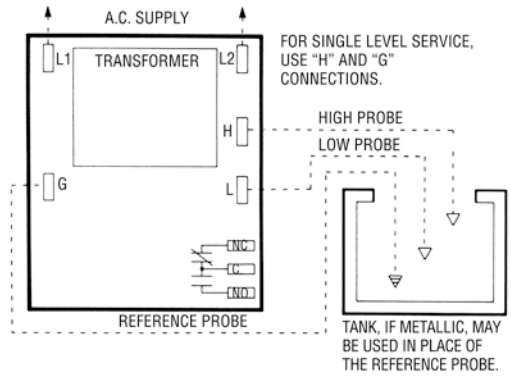
Applications

- Single-Level Service
- Point Level
- Valve Control
- Low-Water Cutoff
- Differential Service
- Alarms
- Pump Control

Dimensions



Wiring



Note: Series 16D similar to Series 16, but with DPDT load contacts.