



### FEATURES

- Self-powered, two-terminal operation
- Dual operating ranges: 240-310Vac at 50/60Hz or 85-140Vac at 400Hz
- Half-wave averaging, rms calibrated
- Large, easy-to-read, bright red LED display
- Rugged, epoxy-encapsulated construction
- Built-in bezel for panel mounting
- Reliable screw terminals for easy installation
- Small 1.38" x 0.88" x 1.0" package
- Approvals to UL/cUL/IEC/61010-1

### Functional Specifications

<b>Input</b>	
Voltage Range ①	240-310Vrms (47-99Hz) 85-140Vrms (350-450Hz)
Current Consumption	50mArms (max.)
<b>UL/IEC61010-1</b>	Measurement category II
<b>Performance</b>	
Sampling Rate	2.5 readings/second
Measurement Type	Half-wave average, rms calibrated for sinusoidal input
Accuracy @ +25°C	±1V (typ.), ±2V (max.)
Temperature Drift (-25 to +60°C)	±0.15 Volts/°C (max.)
<b>Mechanical</b>	
Dimensions	1.38" x 0.88" x 1.00"
Display Type	3 digit, red LED, 0.37"/9.4mm
Weight	1 ounce (28 grams)
Case Material	Polycarbonate
6-32 screw torque	6-8 in-lb (0.7 – 0.9N-m)
<b>Environmental</b>	
Operating Temperature	-25 to +60°C
Storage Temperature	-40 to +75°C
Humidity (Non-condensing)	0 to 95%

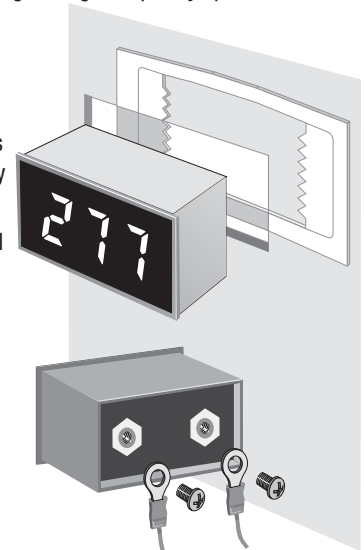
① Operation and accuracy at inputs above or below this range are not specified.



Murata Power Solutions' DMS-20PC-2-LM is a component-size, self-contained, low-cost ac voltmeter specifically designed for high-voltage or high-frequency operation. The DMS-20PC-2-LM's unique power-supply circuitry allows a single model to operate from either 240 to 310Vac with 50/60Hz inputs or from 85 to 140Vac with 400Hz inputs. The meter requires no external components or auxiliary power for full operation! Its large, 0.37"/9.4mm, bright red LED display is easily readable under virtually all lighting conditions.

DMS-20PC-2-LM employs half-wave sinusoidal averaging (rms calibrated) to achieve a display resolution of 1Vac over its full operating range. Packaged in a red-filter case with a built-in bezel, the meter is epoxy encapsulated for ruggedness.

This low-cost, extremely versatile digital voltmeter is ideal for use in emergency power equipment, 277Vac fluorescent lighting systems, 400Hz aircraft installations, and any other application requiring accurate, high-voltage or high-frequency, ac line monitoring.

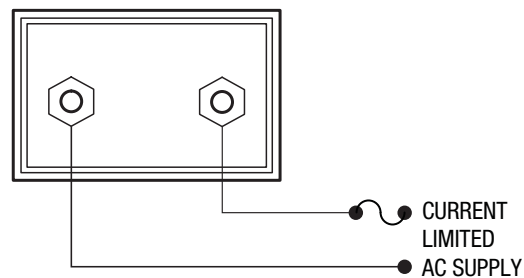


Typical panel mount installation  
Suggested wiring (user supplied)

### Ordering Information

<b>DMS-20PC-2-LM-C</b>	High-voltage ac line monitor with screw terminals and screws
<b>DMS-BZL3-C</b>	Panel mount bezel
<b>DMS-BZL4-C</b>	Panel mount bezel with sealing gasket
<b>DMS-20-CP</b>	Panel cutout punch

Brass screws (6-32 thread) and a panel-mount retaining clip are supplied with each meter



Typical Connection Diagram

## Self-Powered LED Display High-Voltage, 50/60/400Hz AC Line Monitor

**Power Supply Polarity, Fusing, Wiring, and Grounding:** DMS-20PC-2-LM's two ac-supply terminals are not polarity sensitive, that is, they have no "AC LO" or "AC HI" designations. These units do not include nor require a connection to earth/chassis ground.




All ac-supply wiring must be rated for the voltages and currents they will conduct and comply with any code or application-mandated requirements pertaining to the user's specific installation. 300V UL rated wire suitable for the intended application is required.

DMS-20PC-2-LM ac voltmeters are not internally fused. The rear threaded standoff input-terminals are to be used only for powering the voltmeter's inter-

nal circuitry; they must not be used to supply power to external loads. Depending on the ac supply line-voltage in the user's installation, the supply wires feeding these voltmeters must be fused with a 0.25A/250V or a 0.25A/600V time delay/time lag fuse, in accordance with applicable regulatory codes.

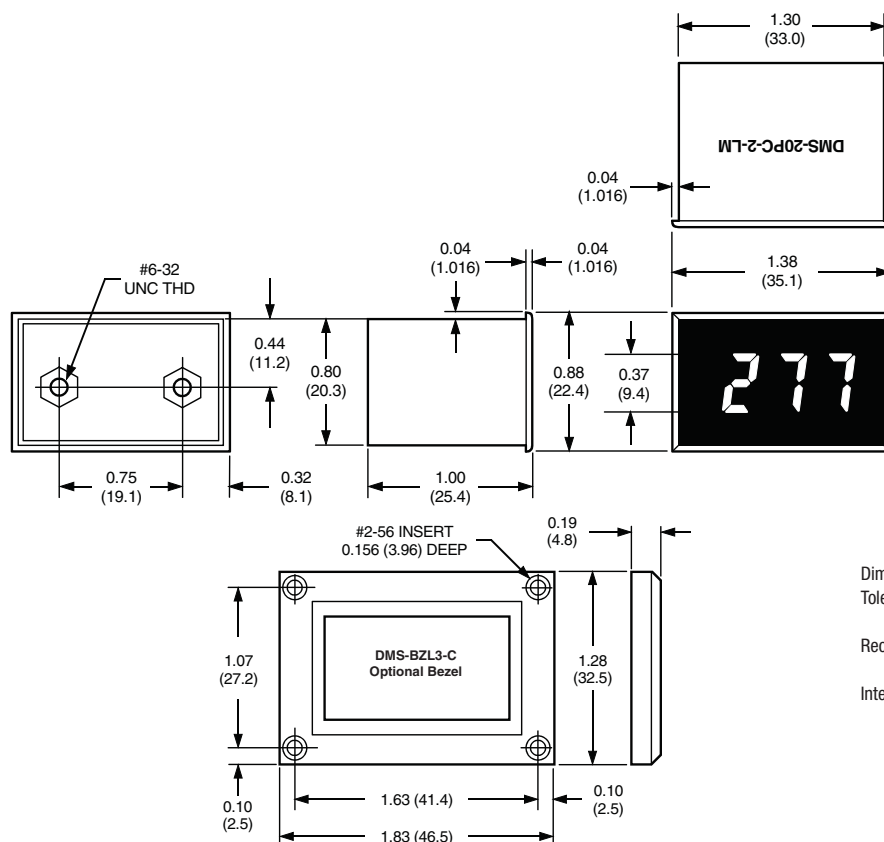
The recommended wire size is 16AWG to 20AWG (1.31mm<sup>2</sup> to 0.52mm<sup>2</sup>) stranded copper wire. Wires must be properly stripped and attached to the threaded standoffs such that their insulation is not pinched by the supplied 6-32 screws. Rated tightening torque for the 6-32 screws is 7 to 8 pound-inches (0.8 to 0.9N-m).

### 1. Description of safety marks:

-  Caution, risk of electrical shock
-  Caution, risk of danger
-  Equipment is protected throughout by double or reinforced insulation

### 2. Cleaning Instructions: Gently clean with dry cloth only.

### 3. Caution: if the equipment is used in a manner not specified by Murata Power Solutions, the protection provided by the equipment may be impaired.



Dimensions in inches (millimeters)  
Tolerances: 2 PL Dec  $\pm 0.02$  ( $\pm 0.51$ )  
3 PL Dec  $\pm 0.010$  ( $\pm 0.254$ )  
Recommended panel cutout dimensions:  
1.336 (33.93)W  $\times$  0.838 (21.29)H  
Internal corner radii 0.032 (0.81) Max.

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ISO 9001 and 14001 REGISTERED



**This product is subject to the following operating requirements and the Life and Safety Critical Application Sales Policy:**  
Refer to: <http://www.murata-ps.com/requirements/>

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