



### FEATURES

- Plugs directly into USA-style wall outlets
- Screw terminals for panel mounting
- Small 1.38" x 0.88" x 1.0" packages
- Large, easy-to-read, red, blue or green LED displays
- Fully encapsulated for harsh environments
- Half-wave averaging, rms calibrated
- UL, CSA and IEC1010-1 certified
- Very low cost!

### Functional Specifications

#### Input

Voltage Range ①	85-264Vrms
Overvoltage Protection	300Vrms (Overvoltage category II)
Frequency Range ①	47-63Hz
Current Consumption	50mArms (max.)

#### Performance

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.)

#### Mechanical

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)

#### Environmental

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 these ranges are not specified.



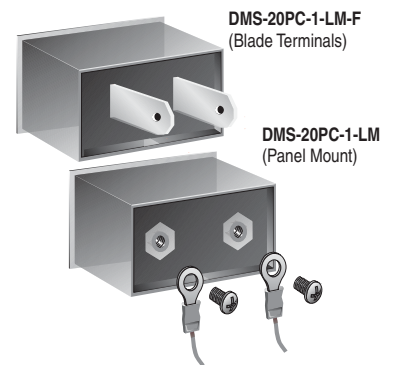
For full details go to  
[www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)



Murata Power Solution's DMS-20PC-1-LM is a component-size, self-contained, low-cost ac voltmeter for true line measurements. It requires no additional components or auxiliary power. Simply plug it into any wall outlet and instantly read voltages from 85 to 264Vac (47-63Hz). The large (0.37"/9.4mm), bright red, blue or green LED display makes the DMS-20PC-1-LM easily readable under any lighting conditions.

DMS-20PC-1-LM employs half-wave sinusoidal averaging (rms calibrated) and has a display resolution of 1Vac over its full input range. Packaged in a red-filter case with built-in bezel, the meter is fully encapsulated for ruggedness. All units are overvoltage protected to 300Vac.

This low-cost meter is ideal for industrial, laboratory, office and field-service applications. Its miniature size is perfect for design into high-end consumer electronics, laboratory instrumentation and other products requiring accurate ac line monitoring.

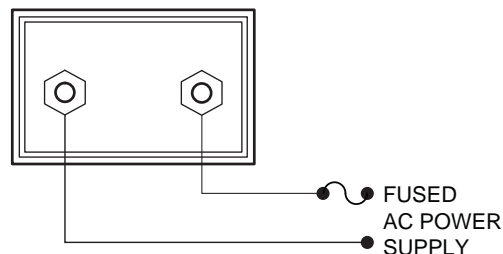


Suggested wiring (user supplied)

### Ordering Information

<b>DMS-20PC-1-LM-C</b>	<b>Red LED with threaded standoffs ②</b>
<b>DMS-20PC-1-LM-B-C</b>	<b>Blue LED with threaded standoffs ②</b>
<b>DMS-20PC-1-LM-G-C</b>	<b>Green LED with threaded standoffs ②</b>
<b>DMS-20PC-1-LM-F-C</b>	<b>Red LED with blade terminals</b>
<b>DMS-20PC-1-LM-BF-C</b>	<b>Blue LED with blade terminals</b>
<b>DMS-20PC-1-LM-GF-C</b>	<b>Green LED with blade terminals</b>
<b>DMS-20-CP</b>	<b>Optional panel cutout punch</b>
<b>DMS-BZL3-C</b>	<b>Optional panel mount bezel</b>
<b>DMS-BZL4-C</b>	<b>Optional panel mount bezel with sealing gasket</b>

② Brass screws (6-32 thread) and a panel-mount retaining clip are supplied with meter.



Typical Connection Diagram

## Self-Powered 3 Digit, LED Display AC Line Voltage Monitors

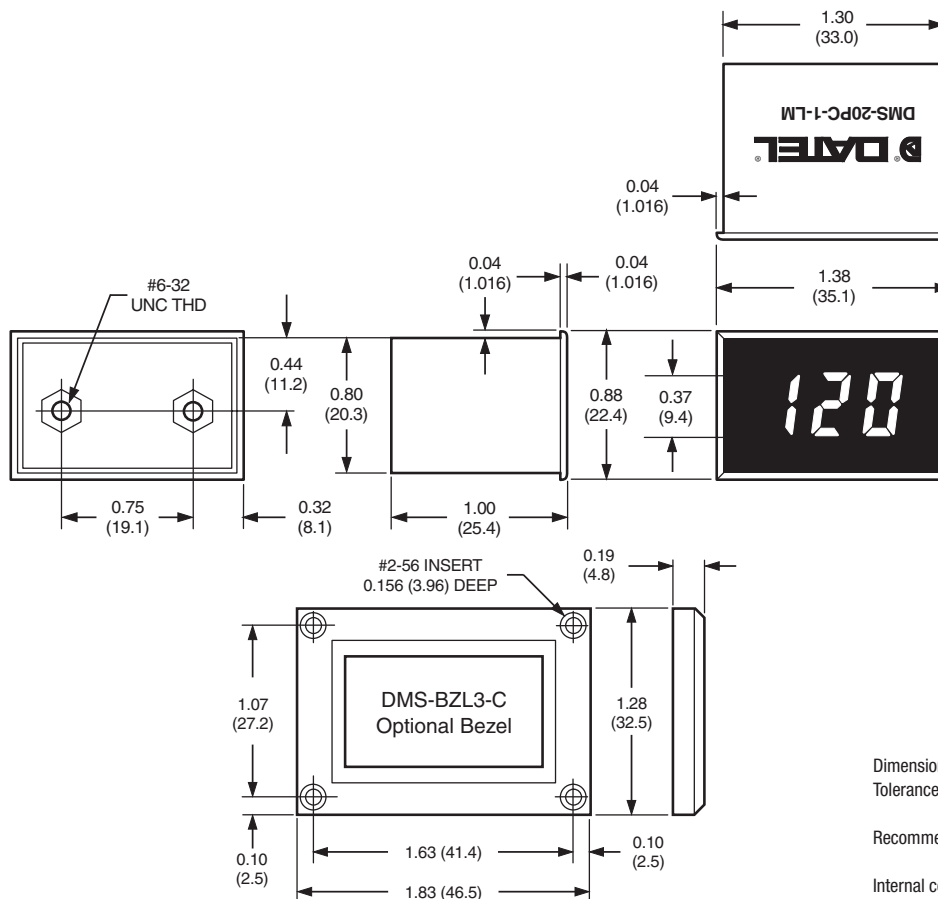
**Power Supply Polarity, Fusing, Wiring, and Grounding:** DMS-20PC-1-LM's two ac-supply terminals are not polarity sensitive, that is, they have no "AC LO" or "AC HI" designations. These units do not include nor require a connection to earth/chassis ground.

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-1-LM ac voltmeters are not internally fused. The rear threaded standoff input-terminals are to be used only for powering the voltmeter's

internal circuitry; they must not be used to supply power to external loads. Except for plug-in models with blade terminals, which must be protected by an external system circuit breaker or fuse, the supply wires feeding these voltmeters must be fused with a 0.25A/250V 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).



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

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