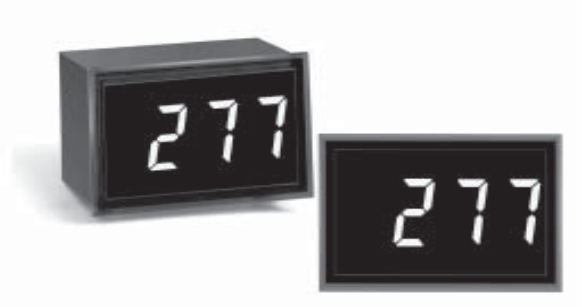
DMS-20PC-2-LM

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



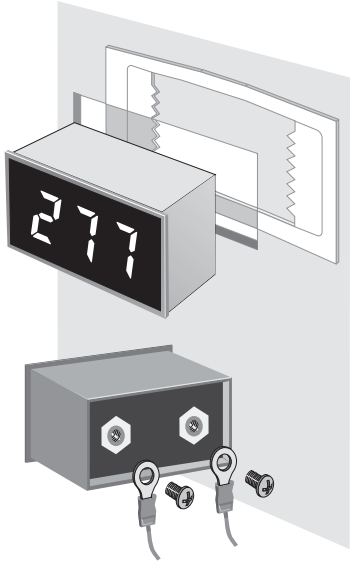
FEATURES

- 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

DATEL's 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)

Functional Specifications

Input	
Voltage Range ①	240-310Vrms (47-99Hz) 85-140Vrms (350-450Hz)
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 this range are not specified.

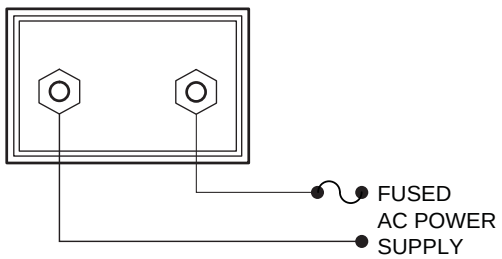
RoHS COMPLIANT 2002/95/EC

For full details go to
www.murata-ps.com/rohs

Ordering Information

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

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



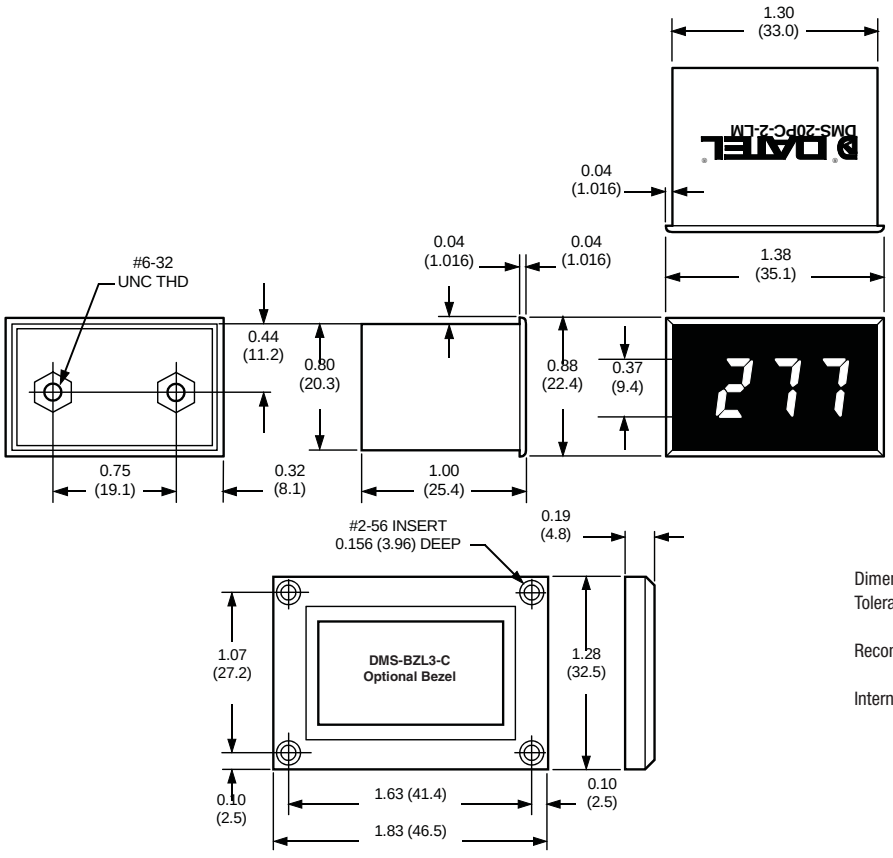
Typical Connection Diagram

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 internal 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^2 to 0.52mm^2) 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 ±0.02 (±0.51)
3 PL Dec ±0.010 (±0.254)
Recommended panel cutout dimensions:
1.336 (33.93)W × 0.838 (21.29)H
Internal corner radii 0.032 (0.81) Max.

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