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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### DMS-20PC-2-LM

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



#### **FEATURES**

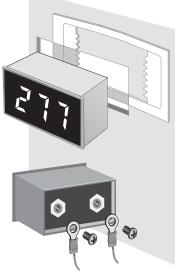
- Self-powered, two-terminal operation
- Dual operating ranges: 240-310Vac at 50/60Hz or 85-140Vac at 400Hz
- Half-wave averaging, rms calibrated
- Large, easy-to-read, bright red LED display
- Rugged, epoxy-encapsulated construction
- Built-in bezel for panel mounting
- Reliable screw terminals for 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.)

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**Performance** 

Sampling Rate 2.5 readings/second
Measurement Type Half-wave average, rms

calibrated for sinusoidal input

Accuracy @  $+25^{\circ}$ C  $\pm 1V$  (typ.),  $\pm 2V$  (max.)

Temperature Drift

 $(-25 \text{ to } +60^{\circ}\text{C})$   $\pm 0.15 \text{ Volts/°C (max.)}$ 

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** 

 $\begin{array}{ll} \text{Operating Temperature} & -25 \text{ to } +60^{\circ}\text{C} \\ \text{Storage Temperature} & -40 \text{ to } +75^{\circ}\text{C} \\ \text{Humidity (Non-condensing)} & 0 \text{ to } 95\% \\ \end{array}$ 

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





#### **Ordering Information**

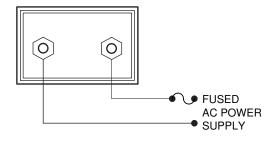
DMS-20PC-2-LM-C High-voltage ac line monitor with screw terminals and screws

**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

### DMS-20PC-2-LM

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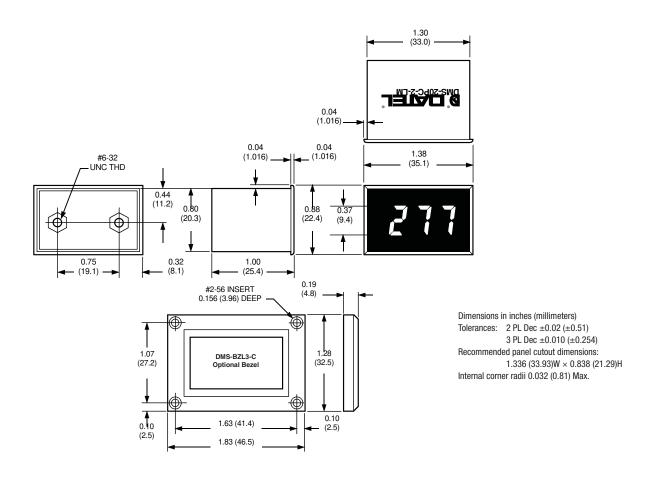
**Power Supply Polarity, Fusing, Wiring, and Grounding:** DMS-20PC-2-LM's two ac-supply terminals are not polarity sensitive, that is, they have no "AC LO" or "AC HI" designations. These units do not include nor require a connection to earth/chassis ground.

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 (1.31mm² to 0.52mm²) 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).



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