



### FEATURES

- Self-powered, no external supplies required
- 3 models:
 

|                          |
|--------------------------|
| 47.0-99.0Hz (85-140Vac)  |
| 47.0-99.0Hz (170-264Vac) |
| 350-450Hz (85-140Vac)    |
- Screw terminals simplify panel mounting
- Ideal for emergency power equipment
- Small 1.38" x 0.88" x 1.0" packages
- Epoxy encapsulated for harsh environments
- Large (0.40"/10.2mm) red LED displays

### Functional Specifications

|                                  |                          |
|----------------------------------|--------------------------|
| <b>Input</b>                     |                          |
| Freq. Range (Voltage Range): ①   |                          |
| DMS-20PC-1-FM                    | 47.0-99.0Hz (85-140Vac)  |
| DMS-20PC-2-FM                    | 350-450Hz (85-140Vac)    |
| DMS-20PC-3-FM                    | 47.0-99.0Hz (170-264Vac) |
| Current Consumption              |                          |
| 50mArms (max.)                   |                          |
| Overvoltage Protection:          |                          |
| DMS-20PC-1/2-FM                  | 200Vrms (max.)           |
| DMS-20PC-3-FM                    | 300Vrms (max.)           |
| <b>Performance</b>               |                          |
| Sampling Rate                    |                          |
| 4 readings/second                |                          |
| Accuracy (-25 to +60°C):         |                          |
| DMS-20PC-1/3-FM                  | ±0.1Hz                   |
| DMS-20PC-2-FM                    | ±1.0Hz                   |
| <b>Mechanical</b>                |                          |
| Dimensions                       |                          |
| 1.38" x 0.88" x 1.00"            |                          |
| Display Type                     |                          |
| 3 digit, red LED,<br>0.4"/10.2mm |                          |
| 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 these ranges are not specified.

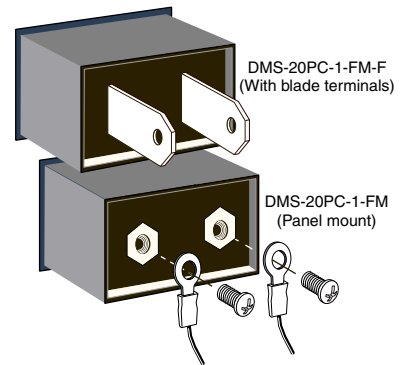


**US E156931**

**DATEL**

DATEL's new DMS-20PC-FM Series are the world's smallest, self-powered, ac frequency meters. Simply connect the ac line to the two rear input terminals, and the unit is fully operational with no additional components or auxiliary power required! Two, 50/60Hz models operate over input voltage ranges of 85-140Vac or 170-264Vac. A third, 400Hz model operates over an input voltage range of 85-140Vac. Despite their small size (1.38" x 0.88" x 1.0"), DMS-20PC-FM meters feature large 0.40"/10.2mm red LED's that can be read easily from 15 feet away.

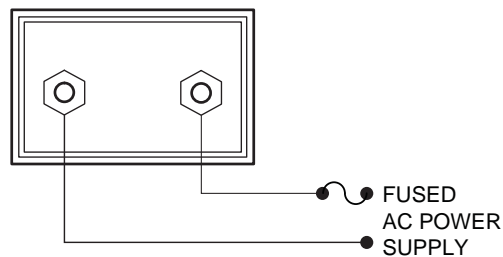
An ultra-stable, quartz-crystal-controlled, embedded microcomputer provides accuracies of ±0.1Hz (50/60Hz models) or ±1.0Hz (400Hz model) over the entire operating temperature range of -25 to +60°C. Epoxy encapsulated plastic packages provide excellent protection against the harsh environments normally encountered by emergency backup power generators. DMS-20PC-FM meters are the exact same size as DATEL's popular AC Line Voltage Monitors (models DMS-20PC-X-LM).



### Ordering Information

|                   |  |
|-------------------|--|
| DMS-20PC-1-FM-C   | 47-99Hz / 120Vac frequency monitor with threaded standoffs ②   |
| DMS-20PC-1-FM-F-C | 47-99Hz / 120Vac frequency monitor with blade terminals        |
| DMS-20PC-2-FM-C   | 350-450Hz / 120Vac frequency monitor with threaded standoffs ② |
| DMS-20PC-3-FM-C   | 47-99Hz / 220Vac frequency monitor with threaded standoffs ②   |
| DMS-20-CP         | Optional panel cutout punch                                    |
| DMS-BZL3-C        | Optional panel mount bezel                                     |
| DMS-BZL4-C        | Optional panel mount bezel with sealing gasket                 |

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



Typical Connection Diagram

# DMS-20PC-FM Series

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

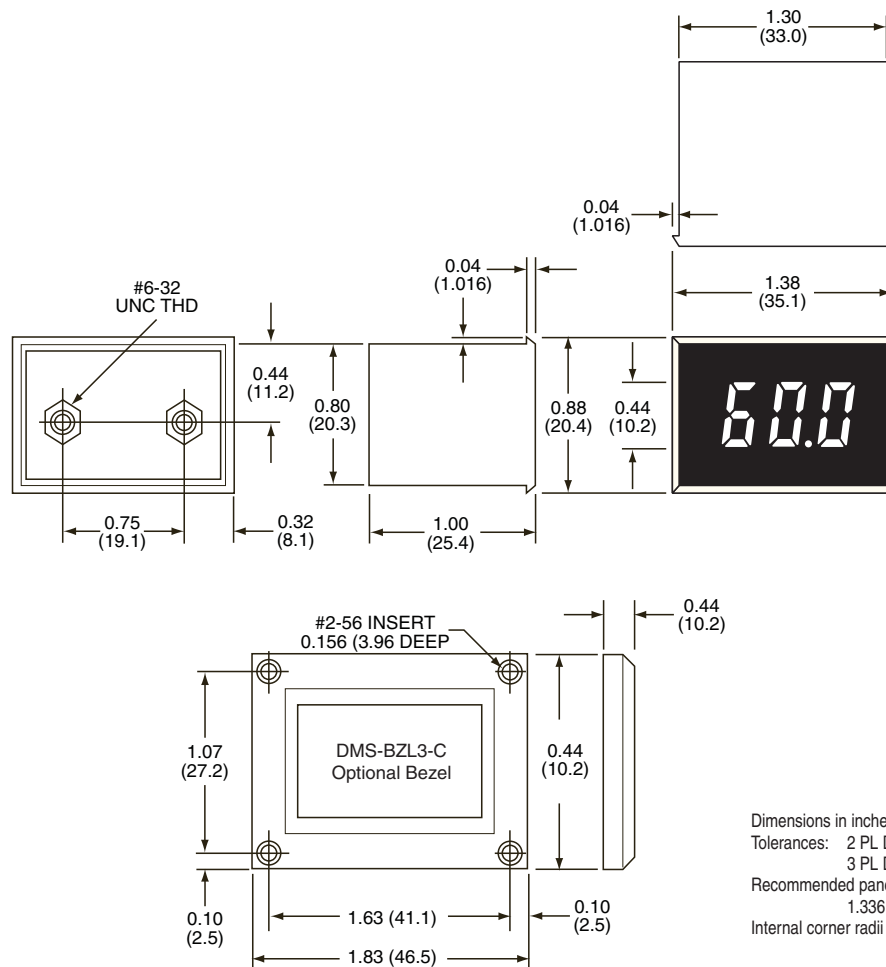
**Power Supply Polarity, Fusing, Wiring, and Grounding:** DMS-20PC-FM's two ac-supply terminals are not polarity sensitive, that is, they have no "AC LO" or "AC HI" designations. These units do not include nor require a connection to earth/chassis ground.

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-FM ac frequency meters are not internally fused. The rear threaded standoff input-terminals are to be used only for powering the meter'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 meters 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 ±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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- Оперативные сроки поставки под заказ (от 5 рабочих дней);
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- Защита от снятия компонента с производства.



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