



## 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

### Input

|                                |                          |
|--------------------------------|--------------------------|
| 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.)           |

### Performance

|                          |                   |
|--------------------------|-------------------|
| Sampling Rate            | 4 readings/second |
| Accuracy (-25 to +60°C): |                   |
| DMS-20PC-1/3-FM          | ±0.1Hz            |
| DMS-20PC-2-FM            | ±1.0Hz            |

### Mechanical

|                   |                                  |
|-------------------|----------------------------------|
| 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)         |

### 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.

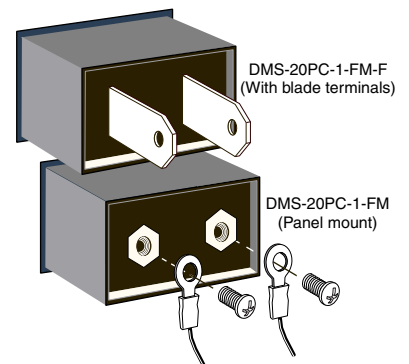


**US** E156931

**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.

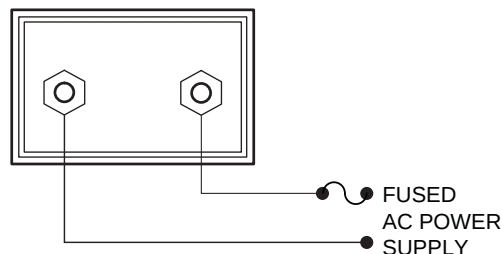
An ultra-stable, quartz-crystal-controlled, embedded microcomputer provides accuracies of ±0.1Hz (50/60Hz models) or ±1.0Hz (400Hz model) over the entire operating temperature range of -25 to +60°C. Epoxy encapsulated plastic packages provide excellent protection against the harsh environments normally 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

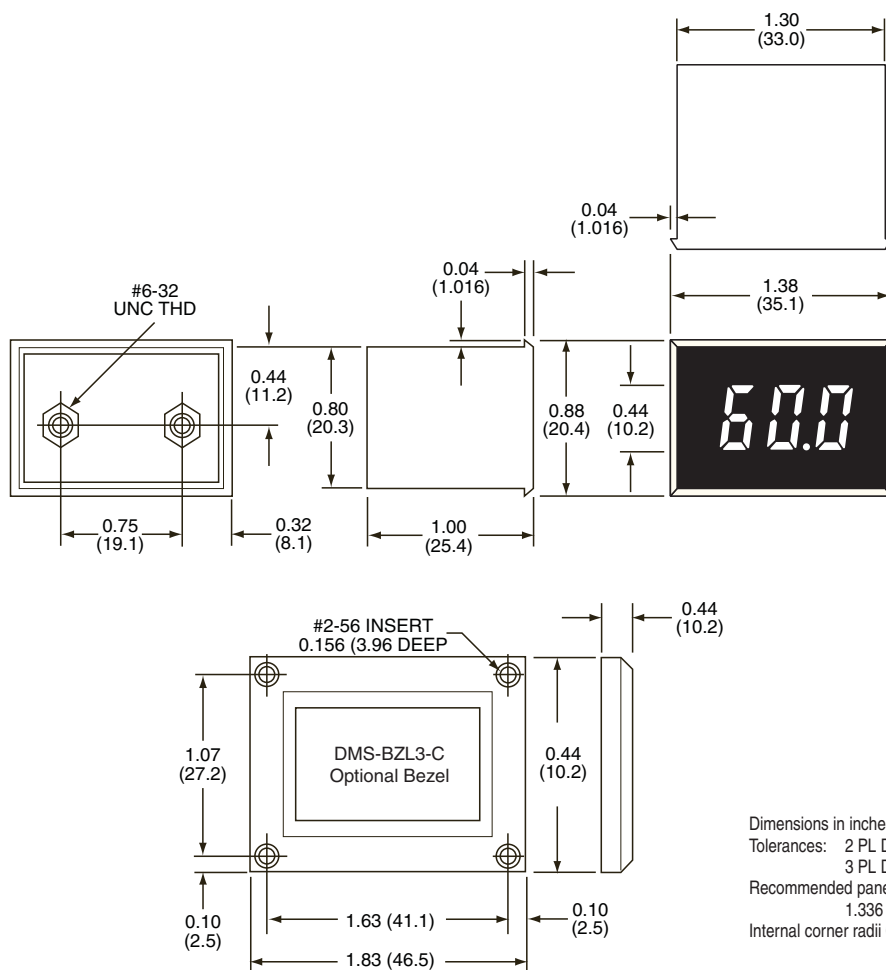
**Power Supply Polarity, Fusing, Wiring, and Grounding:** DMS-20PC-FM's two ac-supply terminals are not polarity sensitive, that is, they have no "AC LO" or "AC HI" designations. These units do not include nor require a connection to earth/chassis ground.

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  $\pm 0.02$  ( $\pm 0.51$ )  
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.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9