

# ZIEGLER DPM F48/96 AK

## Digital Panel Meter

- Display range:  $\pm 1999$
- Simple configuration
- Rugged metal housing
- Supply Voltage: 230 V, 50 / 60 Hz, can be converted to 115 V, 50 / 60 Hz
- Also with 24 V DC supply voltage



### Applications

The digital panel meter *ZIEGLER DPM F48/96 AK* has been designed for industrial applications.

Measuring instrument is suited for one of the following measuring task :

- Frequency measurement to 199.9 / 500 Hz

### Description

Instruments are balanced at the factory.

The instrument requires a supply voltage of 230V, 50 / 60 Hz, which can be rewired within the device to 115V, 50 / 60 Hz. The measuring instrument is optionally available in a 24 V DC / AC version.

Measuring inputs are generally equipped with rugged screw terminal for instruments which are to be used in combination with current transformers. This version of the instrument can withstand 60-fold overloading for 1 second.

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### Characteristic Values

#### Display

|                  |                                |
|------------------|--------------------------------|
| Type             | 7 segment LED                  |
| Color            | red / option: green            |
| Character Height | 14 mm                          |
| Display Range    | max. $\pm 1999$                |
| Polarity         | "-" is displayed automatically |
| Decimal Point    | adjustable at front panel      |
| Overflow Display | "1 ...", if display > 1999     |

#### Input

|   |  |
|---|--|
| One Measuring Range<br>Depending upon Model | possible meas. ranges<br>see Order Information |
|---|--|

#### Balancing

Instruments are balanced at the factory.

#### Error Limits

|                 |   |
|-----------------|---|
| Intrinsic Error | $\pm (0.25 \% \text{ of range} + 5 \text{ digits})$ |
|-----------------|---|

#### Additional Error

|                                       |                     |
|---------------------------------------|---------------------|
| Temperature Coefficient               | < 190 ppm / K       |
| Zero Point Drift                      | max. 0.2 digits / K |
| Series-Mode Rejection<br>Ratio (SMRR) | > 50 dB at 50 Hz    |

#### Control Commands

|                       |                       |
|-----------------------|-----------------------|
| Display Value Storage | externally controlled |
| Segment Test          | externally controlled |

#### Supply Voltages

|                   |  |
|-------------------|--|
| Convertible to    | 230 V, 50 / 60 Hz + 10 % – 15 %<br>115 V, 50 / 60 Hz + 10 % – 15 % |
| Option:           | 18 ... 36 V DC / 24 V AC $\pm 10\%$                                |
| Power Consumption | approx. 3.5 W  |

#### A-D Conversion

|                         |  |
|-------------------------|--|
| Conversion Method       | dual slope   |
| Integration Time        | approx. 100 ms   |
| Measurements per Second | typically 3, response time for the<br>entire instrument is dependent<br>upon the measured quantity |

#### Ambient Conditions

|                             |                 |
|-----------------------------|-----------------|
| Operating Temperature Range | 0 ... + 50°C    |
| Storage Temperature Range   | - 20 ... + 70°C |
| Relative Humidity           | max. 85%        |

### Housing

|                    |                       |
|--------------------|-----------------------|
| Material           | metal half-shells     |
| Front Dimensions   | 96 x 48 mm            |
| Bezel Color        | black matt,           |
| Bezel Thickness    | 5 mm                  |
| Bezel Width        | 5 mm                  |
| Installation Depth | max. 125 mm           |
| Weight             | approx. 0.4 kg        |
| Mounting           | screw clamp           |
| Connectors         | screw terminal blocks |

### Compliance with Regulations

|                  |                             |
|------------------|-----------------------------|
| Protection       | IP 40, front panel          |
| Protection Class | I                           |
| Tested           | per EN 61010-1 / VDE 0411-1 |

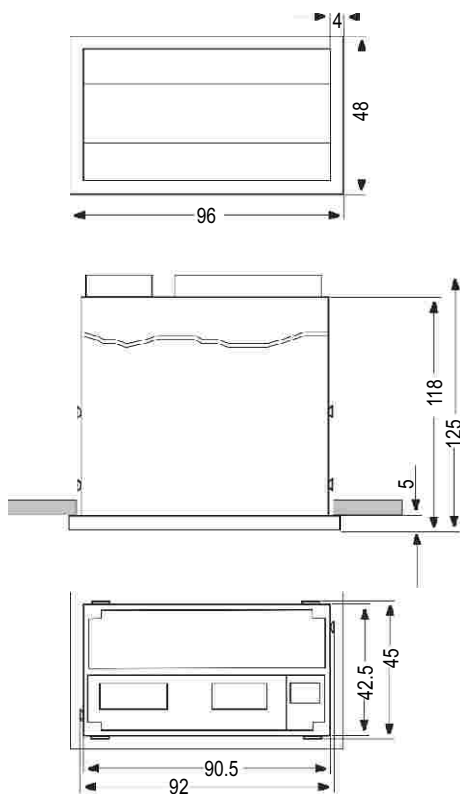
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## Digital Panel Meter

### Dimensional Drawing

Connectors: Tab Connectors, A 2.8 - 0.8

Panel Cutout  $45^{+0.6} \times 92^{+0.8}$  mm

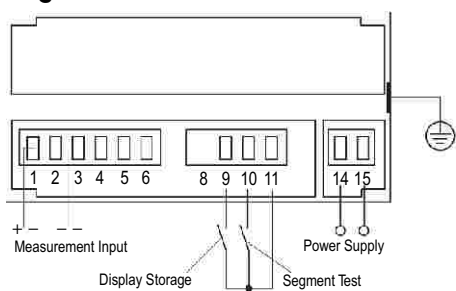


Dimensions in millimeter

### Order Information

| Features  |                      | ID Number  |
|---|----------------------|------------|
| ZIEGLER DPM   | Measuring Instrument | F 48/96 AK |
| LED Display   | red (standard)       | •          |
| <b>Input Quantity</b>   |                      |            |
| Line frequency  |                      |            |
| 12... 199.9 Hz (80... 700 V)  |                      | D80        |
| 12... 500 Hz (80... 700 V)  |                      | D81        |
| <b>Display Range</b>  |                      |            |
| Standard balancing preset to upper range value : 1000 <sup>1)</sup> |                      |            |
| Same as measuring range with maximum resolution                     |                      |            |
| 0... xxx, as requested (max. 1999)                                  |                      |            |
| Upper range value, preset to approx. 1000                           |                      |            |
| Offset adjustment possible (-100... +300 digits)                    |                      |            |
| <b>Decimal point</b>  |                      |            |
| Same as measuring range   |                      |            |
| no decimal point  |                      |            |
| xxx.X   |                      |            |
| xx.XX   |                      |            |
| x.XXX   |                      |            |
| <b>Measuring quantity designation</b>                               |                      |            |
| Same as measuring range   |                      |            |
| <b>Supply voltage</b>   |                      |            |
| 230 V, 50 / 60 Hz   |                      |            |
| 110 V, 50 / 60 Hz   |                      |            |
| 24 V DC / AC  |                      |            |
| <b>Bezel</b>  |                      |            |
| Black matt (standard)   |                      |            |
| <b>Front panel</b>  |                      |            |
| <b>Terminals</b>  |                      |            |
| Screw terminal blocks   |                      |            |
| R2  |                      |            |
| <b>Mounting</b>   |                      |            |
| DIN screw clamp   |                      |            |
| •   |                      |            |

### Terminal Assignments



Terminals 8, 9 and 10 are electrically connected to the measurement input.

Measurement input voltage from external switching elements must be isolated from earth.

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Subject to change without notice.

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**ZIEGLER INSTRUMENTS**

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