

Digital Panel Meter

DPM 48/96 - 40.000 MF

The **DPM 48/96-40.000 MF** are intelligent multifunction digital panel instruments for measurement of voltage, current and temperature. The instruments incorporate all measuring ranges and functions for easy adjustment by the user via the front keys or the interfaces. A genuine wide range power supply unit enables the direct supply of the instrument with any direct and alternating voltages starting from 19 V to 230 V.

Service:

The 2 front keys can be used to configure all the instrument parameters. A separate, definite function can be assigned to each of the 2 keys. This function is triggered when the key is pressed in the normal measuring mode. Key programming can be inhibited by a code as a protection against unauthorized use. The front keys can be used to configure all the instrument parameters: Setting of the measuring type / Scaling of the measured value / Valuation of the measured value / Display format and display functions / Key function and Ctrl Input Pin / Alarms configuration / Digital filter and temperature scale / Serial interface / Cascading / Analogue output / Datalogging / LOOP service / Init, Restart and factory-set configuration. When the LED triangular is activated, they indicate the trend or Alarms.

Further **DPM xx/96-40.000 MF** versions from the range:

| | |
|--------------------------------|---|
| DPM 24/96-40.000 MF | Correspond with DPM 48/96-40.000 MF, but in 24 mm x 96 mm DIN-standard housing and 2 LEDs and 2 front buttons. |
| DPM 48/96-40.000 MF/ R2 | Correspond with DPM 48/96-40.000 MF, but with 2 relays outputs and not open collector output. |
| DPM 48/96-40.000 MF/ E1 | Correspond with DPM 48/96-40.000 MF, but with 4 relays, RS-485 interface and analogue output, 4 keys, 9 additional status LEDs, |
| DPM 48/96-40.000 MF/ E2 | Correspond with DPM-24/96-40.000 MF/E1, but parallel BCD output, not RS-485 interface. |

Technical data:

| | | |
|----------------|-----------------------------|--|
| Display | A/D conversion range | -19999 to +40000 |
| | Display range | -19999 to +99999, free scalable |
| | Display of | direct measured, or internally scaled value or values from the interface |
| | Display memory | Min., Max. or display HOLD value |
| | Decimal point position | programmable |
| | Negative display indication | "-" (to -19999) |
| | Digit height | 14 mm / 7-segment digits |
| | Overload indication | programmable, flashing |
| | LED indicators | 2 programmable LED (trend or alarms) |

Measuring ranges

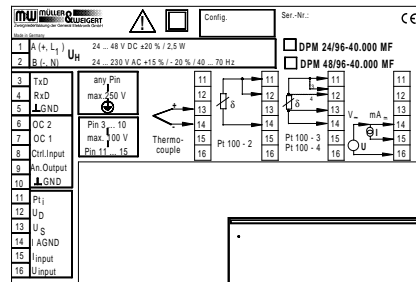
| | | |
|--|---|--|
| Voltage DC Measuring range Accuracy | 200 / 400 mV 0,05 % f.s. plus 4 digit | 2 / 4 / 20 / 40 / 200 / 400 / 650 V 0,03 % f.s. plus 3 digit |
| Input resistance Temperature coefficient | > 100 MΩ | > 2 MΩ < 50 ppm / °C |
| Current DC Measuring range Current shunt Accuracy | 20 / 40 mA 10 Ω 0,04 % plus 3 digit | |
| Temperature coefficient | < 100 ppm / °C | |
| Voltage AC Measuring range Accuracy | 500 / 1000 mV 0,2 % f.s. plus 4 digit | 2 / 4 / 20 / 40 / 200 / 400 / 650 V 0,03 % f.s. plus 3 digit |
| Input resistance Frequency influence (typ) 40 - 400 Hz Temperature coefficient | > 100 MΩ 2 % | > 2 MΩ 0,1 % < 100 ppm / °C |
| Current AC Measuring range Current shunt Accuracy | 20 / 40 mA 10 Ω 0,04 % plus 3 digit | |
| Frequency influence (typ) 40 - 400 Hz Temperaturkoeffizient | 0,1 % < 125 ppm / °C | |
| Temperature Measuring range Sensor current Resolution Temperature coefficient Broken sensor indication Conductor resistance Lead resistance | Pt 100 -200 ... 850 °C < 1 mA 0,1 °C < 80 ppm / °C '99999' flashes 2-L: 10 Ω 3-L: < 500 Ω symmetrical 4-L: < 50 Ω | Thermocouple -260 ... 1820 °C < 100 ppm / °C (except 4L) < 1,5 μV / 10 Ω |
| Internal reference junction error | | < 1 °C (0 ... 50 °C) |

| Thermocouple type | Type | Range [°C] | Accuracy [°C] |
|-------------------|--------------------|---------------|---------------|
| | J (Fe-CuNi) | -210 ... 1200 | 1,5 |
| | L (Fe-CuNi) | -200 ... 900 | 1 |
| | T (Cu-CuNi) | -260 ... 400 | 1 |
| | U (Cu-CuNi) | -200 ... 900 | 1 |
| | K (NiCr-NiAl) | -260 ... -150 | 2 |
| | | -150 ... 1370 | 1 |
| | E NiCr-CuNi) | -260 ... 1000 | 1 |
| | N (Nicrosil-Nisil) | -260 ... -50 | 2 |
| | | -50 ... 0 | 1,5 |
| | | 0 ... 1000 | 1 |
| | R (Pt13Rh-Pt) | -50 ... 1230 | 1,5 |
| | | 1230 ... 1770 | 2 |
| | S (Pt10Rh-Pt) | -50 ... 1340 | 1,5 |
| | | 1340 ... 1770 | 2 |
| | B (Pt30) | 400 ... 1820 | 2 |

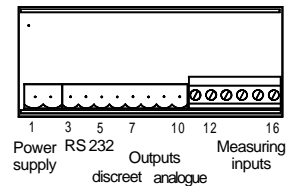
| | | | |
|-------------------------------|---------------------------|---|---|
| Limit | Number | max. 2; | settable over the measuring range, as required. settable output quantities, as required. |
| Output signals | Open collectors | 2 | |
| | Analogue output | 1 | |
| | Resolution | > 2000 steps f.s. (0 ... 20 mA) > 1600 steps f.s. (4 ... 20 mA) | |
| | Accuracy | 0,5 % f.s. | |
| | Load | < 250 Ω max. (5 V min.) | |
| Digital signals | Interface | RS 232 C | |
| Power supply | Direct voltage | 19 ... 36 V DC | 3 W approx. |
| | or | 19 ... 36 V DC and 115 / 230 V AC | 8 W approx. |
| Ambient conditions | Climatic class | Class 2 to VDE / DIN 3540 | |
| | Operating temperature | 0 ... 50 °C | |
| | Storage temperature | -40 °C ... +80 °C | |
| | Safety class | II to IEC 348 / VDE 0411 | |
| | Protection class | IP 20 to IEC EN 60 529 | |
| | front | IP 54 (IP 65 on request) | |
| | Device safety | corresp. IEC EN 61 010 | |
| | EMC immunity | corresp. DIN EN 61 000-4-1 to 4 | |
| | EMC radiated interference | corresp. DIN EN 50 081 class B | |
| Sundry | Connections | Plug-in screw terminals blocks Direct screw terminal for measuring input | |
| Dimensions and weights | Front bezel size | 96 mm x 48 mm (DIN 43 718) | |
| | Panel cut-out | 92 +0,8 mm x 45 +0,6 mm | |
| | Overall depth | 143 mm | |
| | Weight | < 300 g | |

Connections

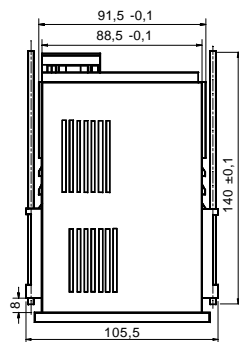
Rating plate



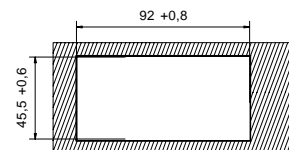
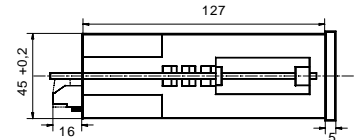
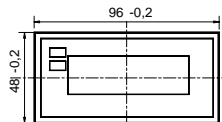
Connections



Design and installation



Panel cut-out



We reserve the right to make alterations !
III/99
Item no.:



Made in Germany

GOSSEN Mueller & Weigert
Kleinreuther Weg 88
D-90408 Nuernberg

Tel.: +49(0)911 3502-0 Fax: +49(0)911 3502-307
E-Mail: info@g-mw.de http://www.g-mw.de