

Digital Panel Meter

DPM 24/96 - 40.000 MF

The **DPM 24/96-40.000 MF** are intelligent multifunction instruments for measuring of voltage, current (DC, AC, TRMS) and temperature with thermocouple and Pt 100 sensors. The instruments incorporate all measuring ranges and functions for easy adjustment by the user via the front keys or the interfaces (RS 232 C). A genuine 'wide-range' power supply unit enables the direct supply of the instrument with any direct and alternating voltages from 24 V to 230 V.

Service:

A separate, definite function can be assigned to each of the two keys. This function is triggered when one key is pressed in the normal measuring mode. Key programming can be inhibited by a code as a protection against unauthorized use. With keys the following parameters can be realized: Setting of the measuring type / Scaling of the measured value / Measured value scaling / Display format and display functions / Key function and CTrI Input Pin / Configuration of alarms / Digital filter and temperature scale / Serial interface / Cascading / Analogue output / DATAlogging / Loop mode / Init, Restart and factory-set configuration. The triangular LED indicators when activated, they indicate the trend or alarm states.

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

- DPM 48/96-40.000 MF** Correspond with DPM 24/96-40.000 MF, but in 48 mm x 96 mm DIN-standard housing.
- 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 48/96-40.000 MF/E1, but parallel BCD output, not RS 485 interface.

Technical data

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

Measuring ranges

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

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 (Microsil-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

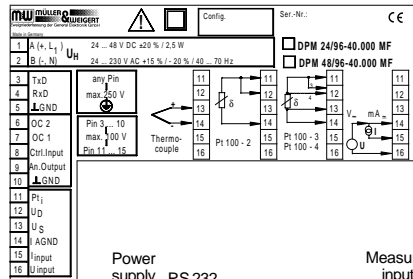
Power supply Direct voltage 19 ... 36 V DC 3 W approx.
or 19 ... 36 V DC and 115 / 230 V AC 8 W approx.

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

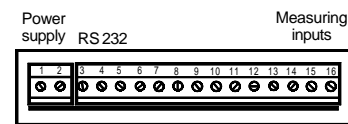
Sundry Connections Plug-in screw terminals blocks
Direct screw terminal for measuring input

Dimensions and weights Front bezel size 96 mm x 24 mm (DIN 43 718)
Panel cut-out 92 +0,8 mm x 22,2 +0,3 mm
Overall depth 143 mm
Weight < 270 g

Connections Rating plate

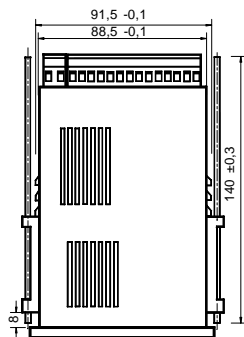


Connections

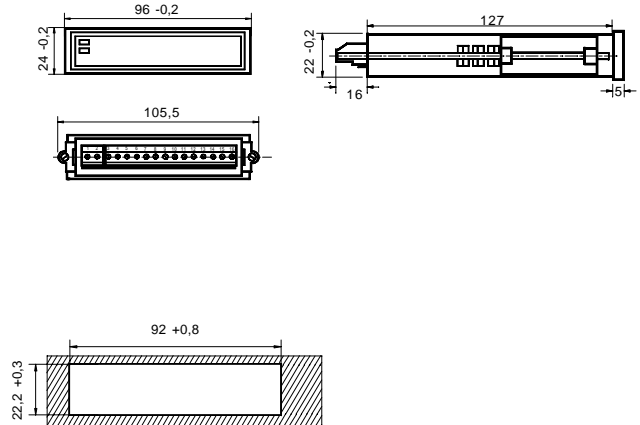


Outputs
discreet analogue

Design and installation



Panel cut-out



We reserve the right to make alterations!
III/98
Item no.: N60045e

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