



Operating Manual

Digital Panel Meter

DPM 24x96 - 2000 S

The **DPM 24x96-2000 S** are digital panel instruments for measurement of current DC and voltage DC with 9 measuring ranges. 3 ranges for power supply are available.

Service:

The measuring ranges and zero point selectable using jumpers at the back. The choice of many factory pre-set measuring ranges is included, with user adjustments available for the zero and full scale values.

Technical data:

Display	Display range	1999		
	Decimal point position	selectable		
	Negative display indication	"-"		
	Digit height	14 mm / 7 segment digits		
	Overload indication	last 3 digits blank		
	Setting time	< 1 s (0 ... 99 %)		
Measuring ranges	Direct current (Voltage drop < 600 mV)	0 ... 1 mA		
		0 ... 20 mA		
		0 ... 200 mA		
	Direct voltage (input current < 300 µA)	0 ... 0.2 V	(1 V)	
		0 ... 1 V	(5 V)	
		0 ... 5 V	(25 V)	
		0 ... 25 V	(100 V)	
		0 ... 100 V	(300 V)	
		0 ... 300 V		
	Range adjustment span	from 20 % to 100 %		
Zero offset (suppression)	up to -1000			
Accuracy	< 0,2 % + 1 digit			
Temperature coefficient	100 ppm / K plus 100 ppm / K zero point drift			
Digital input	HOLD (option)	„0“		
Options	Brightness adjustment			
	Zero point adjustment			
	Hold input			
Power supply	Direct voltage DC common mode voltage	5 V ±5 %	max. 0,6 W not isolated	
		-0,5 V ... 1,5 V max.		
	Alternating voltage AC (47 - 60 Hz)	21 ... 30 V ±15 %	4,0 W approx.	
		230 V +10 %, -15 %	1,3 W approx.	
Environmental 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			
Dimensions and weights	Front frame	24 mm x 96 mm to DIN 43 718		
	Panel cut-out	22,2 +0,3 mm x 92 +0,8 mm		
	Overall depth	72 mm		
	Weight	approx. 90 g (210 g if power supply >5 V DC)		
	Sundry	Connections	Plug-in screw terminal blocks	

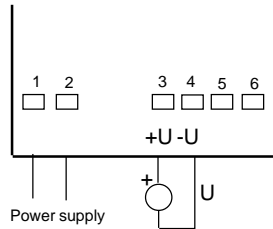
Connections

Rating plate

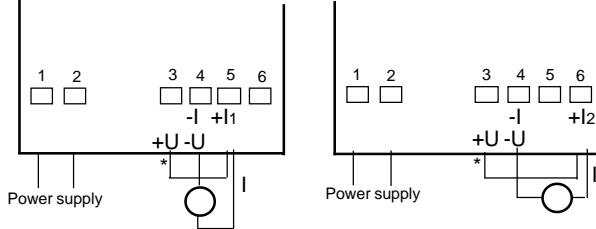
<input type="checkbox"/> DPM 24/96-2000 S <input type="checkbox"/> DPM 48/96-2000 S 14 <input type="checkbox"/> DPM 48/96-2000 S 20		Range: U_H : DC AC <input type="checkbox"/> 5V \pm 5% / 200mA <input type="checkbox"/> 24V <input type="checkbox"/> 21...30V / 100mA <input type="checkbox"/> 115V } +10%/ -15% <input type="checkbox"/> 230V	
Full-Scale = 1999		Full-Scale = 1999	
Auto Zero 0,2.....1V 1.....5V 5.....25V 25.....100V 100.....300V	Jumper 2 3 4 5 6	Input i_{in} : 1,0.....4,0 mA 4,0.....16,0 mA 16,0.....64,0 mA 64,0.....100,0 mA 100,0.....300,0 mA	Jumper 2 3 2,8 2
ϕ - Adj (Live Zero): <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6			
U_H L1 N		Input -U -1 +1 +2	

Measuring input

Voltage measurement



Current measurement



(1 mA... 100 mA)

(100 mA... 300 mA)

*) For current measurement, the user has to externally link terminals 3 (+U) and 5 (+I1), or terminals 3 (+U) and 6 (+I2).

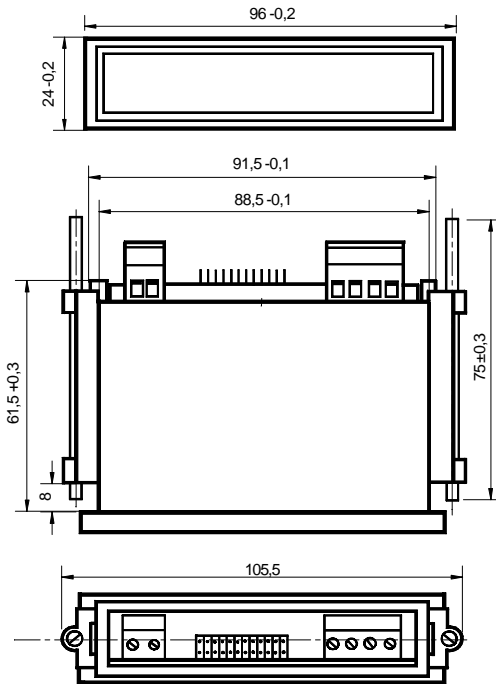
Note:

In order to avoid errors or an unstable readout, the measuring circuits be shielded or at least twisted.

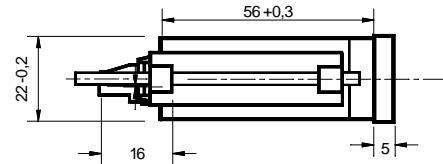
Operation

To set the basic range, first remove the safety cover over the pin connector at the rear of the instrument. To set the basic range and decimal point, plug in jumpers according to the assignment table. A zero shift is possible up to 25 % of the full-scale range.

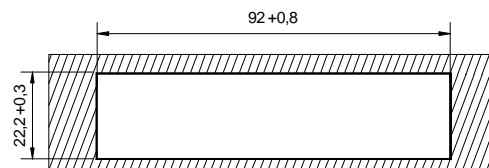
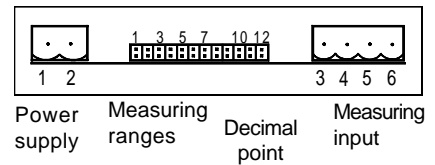
Design and installation



Panel cut-out



Connections



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