

4-digit measuring instruments for temperature and resistance

DSM 96 Pt/W 4-digit

Application	DSM 96 Pt measuring instruments are used to measure temperature in conjunction with a Pt 100 resistance thermometer. Type DSM 96 W is used to measure resistances.	
Function	Measured values are converted into DC voltages in an evaluation circuit and sent to a 4-digit A/D converter. Values are converted in accordance with the "dual slope" principle and displayed via 7-segment low-voltage LEDs. The display will flash in the event of an open circuit on the Pt100. Two-wire or three-wire measurement systems can be used. A hold function can be achieved by connecting two terminals. Zero point adjustment is automatic. Decimal points, blanking of the last digit, zero point and the display range can be modified by removing the front panel.	
Technical data	Display	7-segment low-voltage LED, 13 mm high, red, 4 digits
	Decimal points	Can be adjusted via DIP switch on the front panel
	Blanking	Of last digit via DIP switch on the front panel
	Sensor current	Max. 3 mA
	Sensor voltage	Max. 4 V
	Two-wire system	Max. lead wire resistance 10 Ohm (adjusted with "ZERO" potentiometer)
	Three-wire system	Max. 100 Ohm lead wire resistance symmetrical
	Polarity	Via minus (-) display
	Overflow	Display flashes
	Resolution	Maximum display +/- 9999
	Meas. rate	Approx. 3 measurements per second
	Meas. principle	Dual slope integration
	Accuracy	0.2 %, +/- 1 digit of measuring value
	Hold function	By connecting terminals 1 + 4
	Temperature range	-15 °C to +20 °C to +30 °C to +55 °C
	Temperature influence	< 0.05 % at 10 K
	Test voltage	4 kV between meas. input and aux. voltage
Regulations	EMC	DIN EN 61 326
	Mechanical strength	DIN EN 61 010 Part 1
	Electrical safety	DIN EN 61 010 Part 1, totally insulated housing, at a working voltage up to 300V (network to neutral conductor) degree of pollution 2, overvoltage category CAT III
	Accuracy, overload	DIN EN 60 688
	Isolation	DIN EN 61 010 Part 1, 3.52 kV 50 Hz 10 sec
	Creepages and clearances	DIN EN 61 010 Part 1
	Degree of protection	DIN EN 60 529, housing IP 50, terminals IP 10
Auxiliary voltage	AC	230 V AC +/-20 %, 45-65 Hz, 3 VA
	Options	24 V DC, -15 % to +25 %, 2.5 W, (EMC DIN EN 61 326 Class A) 6-30 V AC + DC or 36-265 V AC + DC, 2.5 VA, (EMC DIN EN 61 326 Class A)
Weight		350 g

Technical data for possible meas. ranges:

Type DSM 96 Pt	Meas. range	Display
Pt100 temperature measurement	-60 to +850 °C	-60.0 to 850.0 °C
Type DSM 96 W		
Resistance measurement		
3-wire:	Any value between 0 and 100 Ohm	
	to 0 – 10 kOhm	+/- 1000 to 9999
2-wire:	0 - 100 Ohm	+/- 1000 to 9999
	0 - 1 kOhm	+/- 1000 to 9999
	0 - 10 kOhm	+/- 1000 to 9999

Please indicate whether you will be using a 2-wire or 3-wire circuit when placing your order!

Please ask about other ranges.

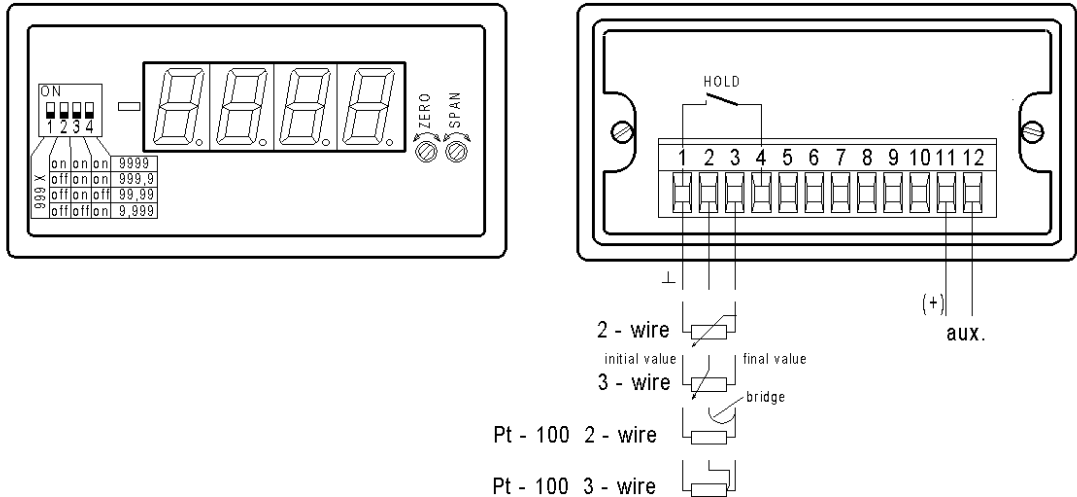


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Remove the front frame and front panel and use the DIP switch to modify the settings for decimal points and blanking of the last digit. The zero point and the display range can be modified by inserting a screwdriver into the bore holes labelled "ZERO" und "SPAN" and turning the spindle potentiometers.

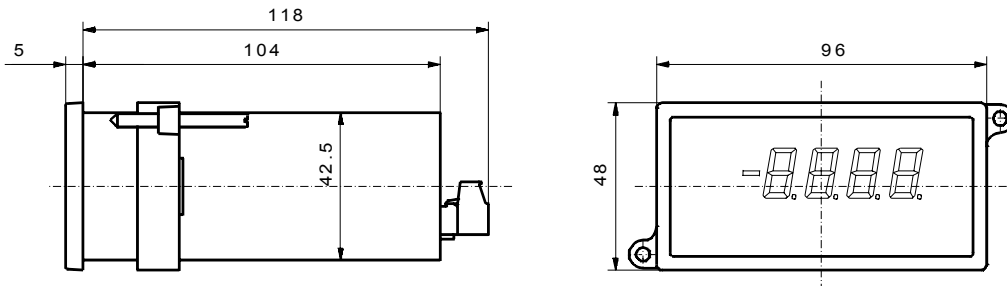


Electrical

Connection Via a plug-in 12-pin terminal strip, screw connection max. 2.5 mm²

Connect the earth terminal (terminal 1) to terminal 4 to save the last measured value (hold function). A new measured value will only be displayed once following disconnection of this link. If you are using cables longer than 0.5 m, we recommend that shielded cables (shield on terminal 1) are used for the hold function. The connection to earth for measurements should be made using an isolated cable. Note the polarity when connecting a DC type auxiliary voltage!

Dimensions



panel cutout 92 x 45 mm

Fusing

The devices are fitted with short-circuit-proof transformers; an overvoltage protection device is not required for the auxiliary voltage.



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