DTM5080

Functional Description

Cost-effective digital temperature logging module for the RS232 and USB interface for sensing devices with temperature resistance sensors

The DTM5080 temperature-logging module is simply inserted into the serial RS 232 interface of a PC. For use of the computer's USB connection a variant with a USB adapter can be obtained (specify on ordering). It is suitable for the logging of temperature resistance sensors such as Pt100/1000, Ni100/1000, as well as other resistance sensors up to a maximum value of 2.5 k. The corresponding temperature or resistance value is output. The data-logging program that is also supplied validates the measured values and stores them as required. By means of control via simple ASCII characters data logging using programming languages such as C or Visual Basic is no problem, two. The module stands out primarily in terms of its very high accuracy, simplicity of operation, and a very favourable price. It has been designed for accurate measurements over a wide range of temperatures. When the sensor is connected up using 4-lead technology a high overall accuracy of the device can be achieved when used in conjunction with a high-precision sensor. The resolution of the device is 0.01°C.
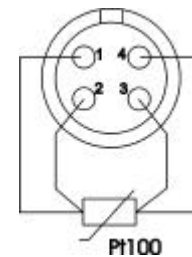
The DTM5080 temperature-logging module is supplied with a standard Pt100 cable sensing device, Class B, 3.5x30mm, 1m cable, and a 2m extension cable for the RS 232 interface. For particular measurement problems we can also manufacture cost-effective, customer-specific sensing devices following your specifications.

Technical Data

Input:	Pt100/1000, Ni100/1000
	as well other resistance sensors
Type of connection:	4-wire circuit
Measurement range:	Pt100 -200...845°C
	Pt1000 -50...400°C
	Ni100 -60...230°C
	Ni1000 -60...230°C
	range of resistance 1 0...380Ohm
	range of resistance 2 0...2,500 Kohm
Resolution:	0.01°C
Measurement rate:	approx. 3 per second
Accuracy of linearisation:	+/- 0.02°C
Typical system accuracy (without sensor):	<0.06°C
Connection socket:	Binder 719, 4-wire
Operating temp. range:	0..70°C
Power supply:	6mA (from the interface)
Dimensions:	32x58x16mm (WxHxD)
Weight:	appr.. 23g
Warranty	2 years

Connection layout of the resistance sensor

Connection layout for the RS232-interface (9-pole)

2	TxD	
3	RxD	
5	GND	
4	DTR	Power supply
7	RTS	Power supply

Subject to modifications arising from errors or technical advancements.