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DATA SHEET

TEPK-M

Produal

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TEPK-M - Modbus strap-on temperature transmitter



TEPK-M Modbus temperature transmitters are designed for pipe strap-on installations. Transmitters can be used for measuring and controlling temperature. The sensor is mounted on the pipe by using the heat resistance cable tie.

The temperature is detected by a Pt1000 sensor element. The sensor element resistance information is converted to a 0...10 V signal and it can be read via Modbus. The temperature range can be chosen at the commissioning.

The transmitter settings can be changed by using the ML-SER commissioning tool. The tool can be used to make one point field calibration and to change the temperature output to controller output.

The transmitter can be equipped with a display that has resolution of 0.1 °C.

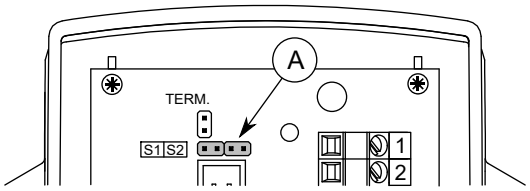
Technical specifications

Property	Value
Supply	24 Vac/dc, < 1 VA
Temperature measurement	
Sensor	Pt1000 EN 60751B
Range	0...50 °C / *0...100 °C / -50...50 °C / -50...150 °C
Accuracy (25 °C)	±0.5 °C
Time constant	Approx. 5 seconds
Output	0...10 Vdc, 2 mA (temperature or controller)
Communication	Modbus RTU (RS-485)
Bus speed	9600*/19200/38400/56000/57600/76800/115200 bit/s
Data bits	8
Parity	none*/odd/even
Stop bits	1
Unit load	1/4 UL
Probe	
Cable	Ø3.2 mm x 2 m, LIYY 2 x 0.14
Material	Zinc cast
Mounting	with a plastic band on the pipe (Ø10...100 mm)

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Property	Value
Dimensions (w x h x d)	41 x 15 x 6 mm
Housing	
Protection class	IP54, cable entry downwards
Material	PC plastic
Cable gland	M16
Mounting	With screws, external lugs
Dimensions (w x h x d)	105 x 102 x 46 mm
Operating conditions	
Temperature	-30...60 °C
Humidity	0...90 %rH (non-condensing)
	* factory default

Temperature measurement range selection



A. Measurement range selection jumpers

	0...50 °C	*0...100 °C	-50...50 °C	-50...150 °C
S1	■	■	• •	• •
S2	• •	■	■	• •

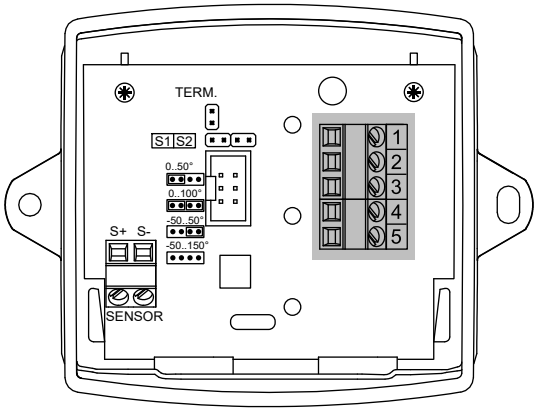
* factory default

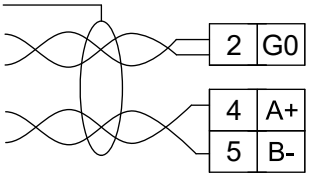
Wiring

WARNING: Device wiring and commissioning can only be carried out by qualified professionals. Always make the device wirings in de-energised electricity network.

WARNING: This product is appliance class III product according to IEC 60664-1. The product may only be connected to SELV (safety extra low voltage) electricity network.

CAUTION: The product may only be connected to overvoltage category I, II or III electricity network according to IEC 60664-1.



1	Supply, 24 Vac/dc, < 1 VA
2	0 V
3	Voltage output (temperature or controller), 0...10 / 2...10 / 0...5 Vdc, < 2 mA
4 *5*	 Modbus RTU, RS-485

The nominal wire terminal screw tightening torque is 0.6 Nm.

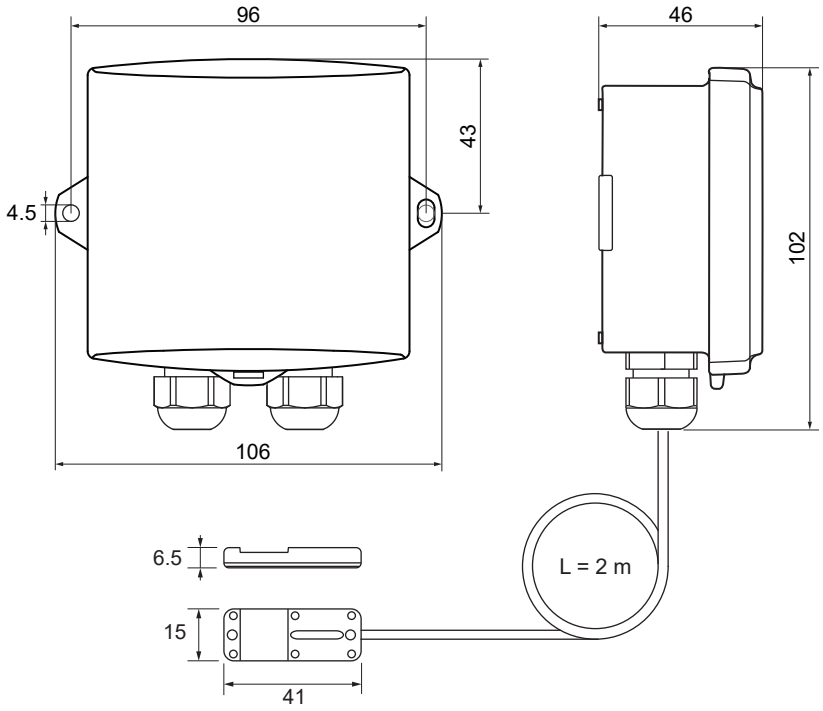
Important: Don't use excessive force when tightening the wiring terminal screws.

CAUTION: Ensure that all covers are closed before connecting supply voltage to the product. Don't remove the covers when the supply voltage is connected.

Ordering information

	Model	Product number	Description
	TEPK-M	117Z240	Modbus strap-on temperature transmitter, 0...10 V
	TEU-N V2	1170270	Cover with a display
	ML-SER	1139010	Transmitter commissioning tool

Dimensions



Supported standards, directives and regulations

Standard	Description
2014/30/EU	Electromagnetic Compatibility (EMC).
2011/65/EU	Restriction of Hazardous Substances (RoHS2) Directive.
(EU) 2015/863	Commission Delegated Directive, amending Annex II to Directive 2011/65/EU.
S.I. 2016 No. 1091	Electromagnetic compatibility regulations
S.I. 2012 No. 3032	The restriction of the use of certain hazardous substances in electrical and electronic equipment regulations
EN 61000-6-3:2007/ A1:2011	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.
EN 61000-6-2:2019	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments.

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