

Front view

Precision temperature sensors



TRK277/7 PLUS, TRK277/5ST-PLUS, TRK277/7ST-PLUS



TRK-EEV, TRK-EEV/7ST



TRK277/G2



TRK277/ESF-7

Features

- Temperature sensor with high measuring precision
- NTC resistor

Types

For cold rooms and refrigeration units	
TRK277/7 PLUS	Precision temperature sensor with 7m connecting cable and cable end sleeve, metal sleeve
TRK277/5ST-PLUS	Precision temperature sensor with 5m connection cable and connection plug for FKD003 and FKE003, metal sleeve
TRK277/7ST-PLUS	Precision temperature sensor with 7m connection cable and connection plug for FKD003 and FKE003, metal sleeve
For EEV applications	
TRK-EEV	Precision temperature sensor for suction gas/EEV with 7m connection cable and wire connection, metal sleeve
TRK-EEV/7ST	Precision temperature sensor for suction gas/EEV with 7m connection cable and connection plug for FKD003, FKE003 and EEV module, metal sleeve
For room temperature	
TRK277/G2	Precision temperature sensor in wall housing with 2m connecting cable and cable end sleeve
Temperature penetration sensor	
TRK277/ESF-7	Temperature penetration sensor, 150 x 4, metal tip with 7m connection cable and wire connection, lancet sensor with engraved depth scale (13cm) and plastic grip

Writing conventions

Symbol	Meaning
 CAUTION	Avoid the described hazard: otherwise minor or medium physical injury or damage to property will result.
 WARNING	Avoid the described hazard: otherwise there is danger from electric voltage that could lead to death or serious physical injury.

For your safety

For safe operation and to avoid personal injury and equipment damage through operating error, always read these instructions, become familiar with the device, and follow all safety instructions on the product and in this document, as well as the safety guidelines of Wurm GmbH & Co. KG Elektronische Systeme. Keep these instructions ready to hand for quick reference and pass them on with the device if the product is sold.

Wurm GmbH & Co. KG Elektronische Systeme accepts no liability in case of improper use or use for other than the intended purpose.

Target group	These instructions are intended for "service technicians".
Intended use	The TRK277 is a universal precision temperature sensor with high measuring accuracy.



WARNING

Danger to life from electric shock and/or fire!

- Do not open the device.
- Do not repair the device yourself! If required, send it in for repair with an exact description of the fault.

	Wurm Infocenter 	paperless info 
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Validity of the documentation

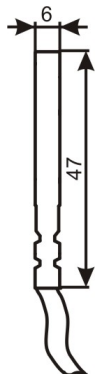
Date	
2021-10	Documentation status

This document automatically ceases to be valid if a new technical description is issued.

Manufacturer: Wurm GmbH & Co. KG Elektronische Systeme, Morsbachtalstraße 30, D-42857 Remscheid

For further information, see our website at www.wurm.de

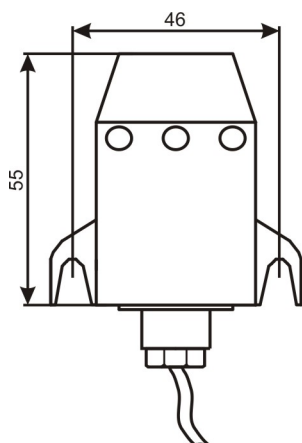
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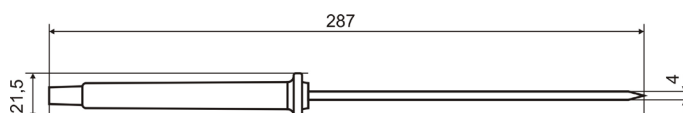
TRK277/I7 PLUS, TRK277/5ST-PLUS,
TRK277/I7ST-PLUS



TRK-EEV, TRK-EEV/I7ST



TRK277/I2



TRK277/ESF-7

For sensor extensions, it is recommended that sheathed cable be laid.

Cable length	Cross section
up to 100m	0.75mm ²
up to 400m	1.5mm ²



NOTE

- Please pay attention to sharp edges when laying the sensor cable. Damage to the cable insulation can result in leakage and therefore water penetration, thus causing incorrect measurements.
- Avoid pulling forces on the sensor sleeve. These can also result in leakage.

Characteristics curves

T °C	R Ohm	T °C	R Ohm	T °C	R Ohm	T °C	R Ohm	T °C	R Ohm	T °C	R Ohm
-40	19673	-29	10568	-18	5930	-7	3462	4	2095	15	1310
-39	18557	-28	10010	-17	5638	-6	3303	5	2005	16	1257
-38	17511	-27	9484	-16	5362	-5	3152	6	1919	17	1207
-37	16530	-26	8990	-15	5101	-4	3009	7	1837	18	1159
-36	15611	-25	8524	-14	4855	-3	2873	8	1760	19	1113
-35	14748	-24	8085	-13	4622	-2	2744	9	1686	20	1069
-34	13938	-23	7672	-12	4401	-1	2621	10	1615	21	1027
-33	13178	-22	7282	-11	4192	0	2505	11	1548	22	987
-32	12463	-21	6914	-10	3995	1	2395	12	1484	23	949
-31	11792	-20	6567	-9	3807	2	2290	13	1423	24	912
-30	11161	-19	6239	-8	3630	3	2190	14	1365	25	877

Technical data

Ambient temperature	-45...+65°C
Degree of protection	IP65
Measurement cell	NTC resistor
Measuring precision	Better than ±0.5K at -20°C, corresponding to 6567Ω ±0.2K at 0°C, corresponding to 2505Ω ±0.5K at 15°C, corresponding to 1310Ω
Time constant	Approx. 130s in still air (TRK277/7 PLUS) Approx. 40s in still air (TRK-EEV)
Insulation	Insulation resistance >1MΩ, test voltage 1000V, test duration 1s
Weight of TRK277/7 PLUS Weight TRK277/5ST-PLUS Weight TRK277/7ST-PLUS Weight of TRK-EEV Weight TRK-EEV/7ST Weight of TRK277/G2 Weight TRK277/ESF-7	About 200g About 147g About 200g About 67g About 67g About 92g About 62g
	RoHS II
	CE

i	NOTE - Please also observe the technical documentation of the measurement or control electronics used. - To calibrate the measured section, please refer to the instructions in the documentation for the device.
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