



DS385en

Data Sheet



TPI2-Series (T)

Pipe Temperature Sensor
with Passive Output

The TPI2-Series (T) is designed to measure temperature directly, with integrated thermowell, in water pipes

The sensor with narrowed sensor tip is especially well suited if a fast response time is needed

Several length are available to cover all common duct sizes

The temperature sensor output is passive



Use

Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System

Used in heating or cooling applications with fast response time

Used in HVAC and Industrial Applications

Features

Active Sensor with narrowed sensor tip (4mm) for fast response of temperature changes

All Sensors with outstanding accuracy

Different immersion length for all common water pipe sizes

Cover/bottom housing connected with magnets and two screws

Professional and practical product design, withstands rough environmental conditions

Easy to use, install and maintain

Product Range

Order Code	Sensor Outputs*	Sensor Accuracy	Thermowell					Housing
			Length	max. flow	Rod size	Measuring TIP size	max. Pressure	Protection
TPI2G.HG	PT1000	±0.15 °C @ 0 °C DIN EN 60751 class A	50 mm	16 m/s	ø4 mm	N/A	PN40	IP65 to IEC60529
TPI2G.HP	NTC10K	±0.25 °C @ 25 °C						
TPI2G.IG	PT1000	±0.15 °C @ 0 °C DIN EN 60751 class A	100 mm	10 m/s	ø6 mm	ø4 mm x 20mm		
TPI2G.IP	NTC10K	±0.25 °C @ 25 °C						
TPI2G.KG	PT1000	±0.15 °C @ 0 °C DIN EN 60751 class A	150 mm	8 m/s				
TPI2G.KP	NTC10K	±0.25 °C @ 25 °C						
TPI2G.LG	PT1000	±0.15 °C @ 0 °C DIN EN 60751 class A	200 mm	8 m/s				
TPI2G.LP	NTC10K	±0.25 °C @ 25 °C						

*Other Sensors are available. Contact your Sales Manager for more information

Sensor Specifications	Sensor Specification	Measured	Temperature
		Sensor Characteristics	Passive
		Sensor Output (s)	PT, NTC
		Measuring Current	<1 mA
		Time Constant (TC)	30 s @ 2 m/s
		Accuracy	
		PT	±0.15 °C @ 0 °C DIN EN 60751, class A
		NTC	±0.25 °C @ 25 °C
		Standard Measuring Range	0 °C to +100 °C
		Total Measuring Range	-50 °C to +150 °C
Technical Information	Electrical Information	Terminal Clamp	Screw terminal, max. 1.5 mm ²
	Mechanical Information	Immersion Rod Diameter	See Product Range, Page 1
		Sensor TIP Lengths & Diameter	See Product Range, Page 1
		Cable Entry	M16, Ø6~Ø8 mm cables
		Sensing Element Position	External, top of the immersion rod
	Materials and Colours	Housing Cover	ABS, white RAL9001 (Cream White)
		Housing Bottom	ABS, white RAL9001 (Cream White)
		Lock Screws	US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301
		Lock Nuts	Brass
		Cable Gland	ABS, white RAL9010
		Gland Rubber Seal	TPS, natural
		Protection Caps	ABS, white RAL9001 (Cream White)
		Immersion Rod	US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301
		Cable	TPEE, black
	Environmental Conditions	Operation Temperature	-25 °C to +70 °C
		Operation Humidity	100 % RH, with condensation
		Transport Temperature	-35 °C to +70 °C
		Transport Humidity	<90 % RH
		Storage Temperature	-10 °C to +70 °C
		Storage Humidity	<85 % RH, no condensation
	Norms and Directives	IP-Rating	IP65 to IEC60529
		Product Safety	Safety class III, in accord. with EN IEC 60730-1
		Product Standard	Automatic electrical controls for household and similar use in accordance with EN IEC 60730-1:2022
	RoHS Compliance, in accordance with	Directive 2011/65/EU, as amended by (EU) 2015/863	
	Operation Climatic Condition	IEC 60 721-3-3	
	Operation Mechanical Condition	IEC 60 721-3-2 to class2M2	
	Transport to Climatic Condition	IEC 60 721-3-2	
	Transport Mechanical Condition	IEC 60 721-3-2 to class2M2	
	Storage Climatic Condition	IEC 60 721-3-1	
	Storage Mechanical Condition	IEC 60 721-3-1 to class2M2	
Miscellaneous	Accessories	Mounting Kit, included in delivery	none
	Shipping & Handling	Minimum Order	1 box with 2 pieces, multiple of 2 pieces
		Package Material	Rigid cardboard packaging
	Order Note	Order Code	See product range, page 1, e.g. TPI2G.HG

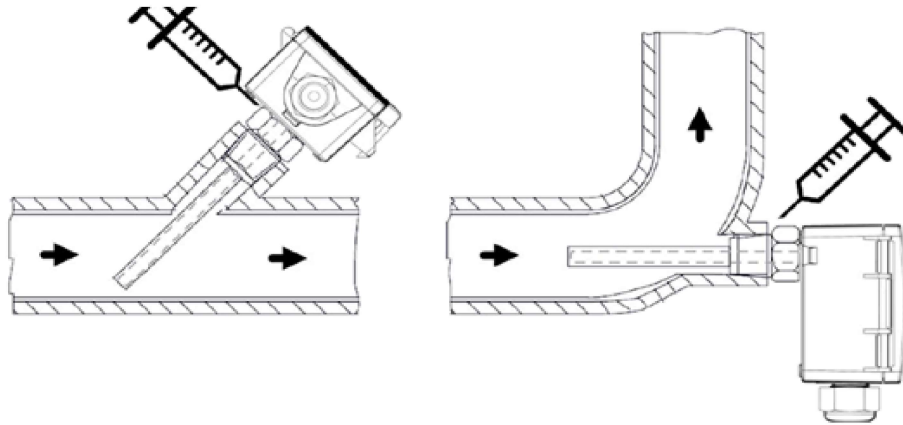
Installation Notes

Observe the following general regulation for engineering and installation:



- All relevant national and local electrical installation codes
- Other country-specific regulations
- Comply with all local safety regulations, schematics, cable listings, dispositions, specifications, and arrangements from the engineering office in charge
- Third-party specifications, e.g., general contractors' or constructors' notes

Mounting Advices



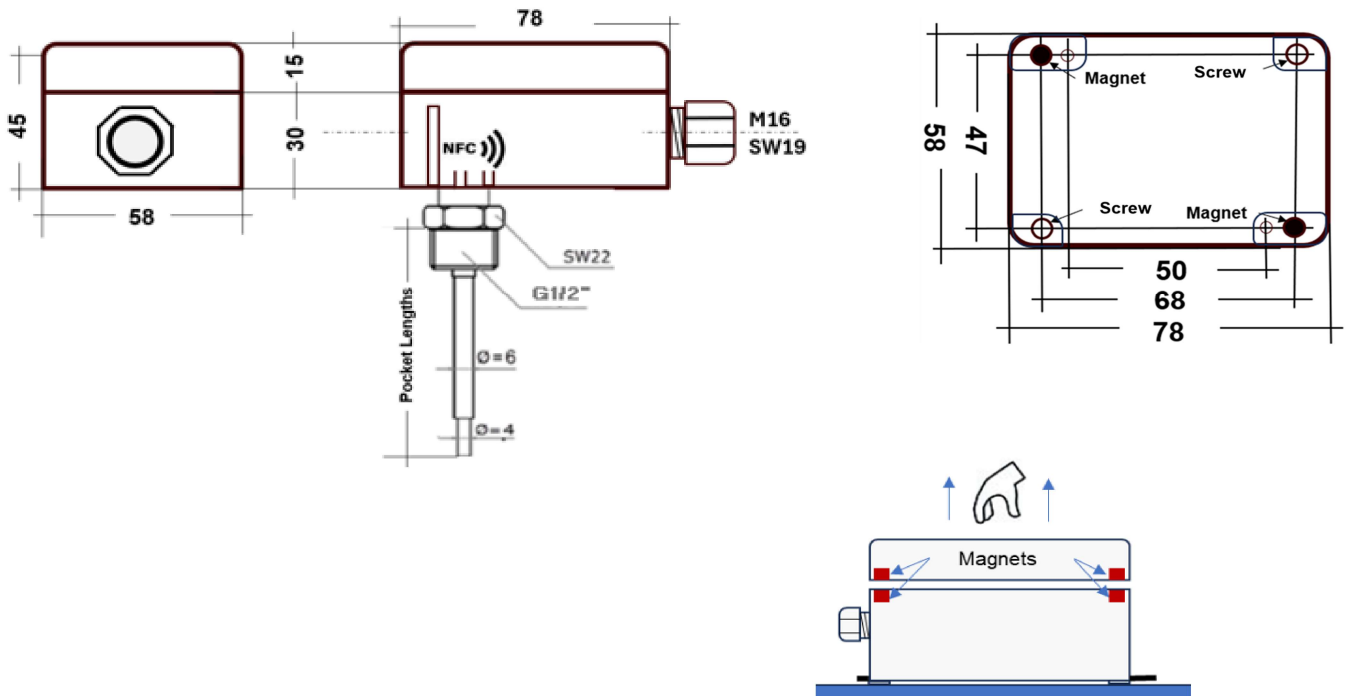
Disposal Notes

The device is considered an electronic device for disposal in terms of the European Directive 2012/19/EU



- The device may not be disposed as domestic garbage
- The device must be disposed through channels provided for this purpose
- It is mandatory to comply with local currently applying laws and regulations

Dimensional Drawing



Connections

1	1	2	2
Optional 3-wire	Sensor +	Sensor -	Optional 4-wire