

	TI385en	Technical Information	
TPI2- Series (T)	Pipe Temperature Sensor		
	with Passive Output		

The TPI2- Series (T) is designed to measure temperature directly, without thermowell, in water pipes

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

of temperature changes are required

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
	Temperature measuring in water pipes (without accessory)
	Used in heating or cooling applications with fast response time
	Temperature measuring in water pipes (without accessory)
Features	Used in HVAC and Industrial Applications

Features	Active Sensor with narrowed sensor tip for fast response of temperature changes
	All Sensors with upgraded accuracy
	Different immersion length for all common water pipe sizes
	Professional and practical product design, withstands rough environmental conditions
	Easy to use, install and maintain

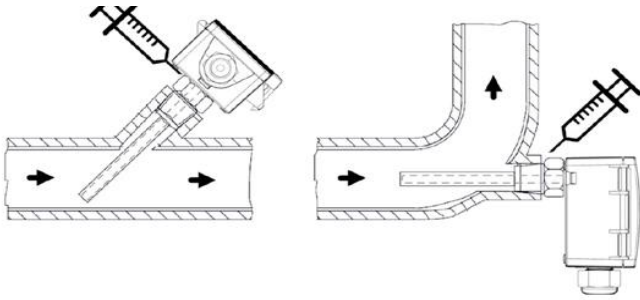
Product Range

Type Code	Sensor	Sensor Accuracy	Immersion Pocket					Housing	
	Output		Length	Diameter	TIP size	max. Pressure	max. flow	Protection	
TPI2.AF	PT100	± 0.15K @ 0°C DIN EN 60751, class A	50mm	ø4mm	r1/8	PN40	10m/s	IP65 to IE000529	
TPI2.AG	PT1000								
TPI2.AP	NTC10k	± 0.25K @ 25°C							
TPI2.AQ	NTC10k Fre								
TPI2.AR	NTC20k								
TPI2.AK	NI1000								
TPI2.AL	LG-NI1000	± 0.4K @ 0°C DIN EN 43760, class B							
TPI2.GF	PT100								
TPI2.GG	PT1000	± 0.15K @ 0°C DIN EN 60751, class A	100mm	ø4mm	ø4x20mm		8m/s		
TPI2.GP	NTC10k								
TPI2.GQ	NTC10k Fre	± 0.25K @ 25°C							
TPI2.GR	NTC20k								
TPI2.GL	LG-NI1000								± 0.4K @ 0°C DIN EN 43760, class B
TPI2.GK	NI1000								
TPI2.BF	PT100	± 0.15K @ 0°C DIN EN 60751, class A	150mm	ø4mm	ø4x20mm		8m/s		
TPI2.BG	PT1000								
TPI2.BP	NTC10k	± 0.25K @ 25°C							
TPI2.BQ	NTC10k Fre								
TPI2.BR	NTC20k								
TPI2.BK	NI1000								
TPI2.EL	LG-NI1000	± 0.4K @ 0°C DIN EN 43760, class B	200mm	ø4mm	ø4x20mm		8m/s		
TPI2.CF	PT100								
TPI2.CG	PT1000	± 0.15K @ 0°C DIN EN 60751, class A							
TPI2.CP	NTC10k								
TPI2.CQ	NTC10k Fre	± 0.25K @ 25°C							
TPI2.CR	NTC20k								
TPI2.CK	NI1000		± 0.4K @ 0°C DIN EN 43760, class B						
TPI2.CL	LG-NI1000								

All Information and technical data are subject to alteration

Sensor Specifications	Sensor Specification	Measured	Temperature
		Sensor Characteristics	Passive
		Sensor Output (s)	See Product Range, Page 1
		Measuring Current	<1mA
		Accuracy	
		PT100 / PT1000	± 0.15K @ 0°C DIN EN 60751, class A
		NTC	± 0.25K @ 25°C
		NI1000 / LG-Ni1000	± 0.4K @ 0°C DIN EN 43760, class B
		Standard Measuring Range	0°C...+100°C
		Total Measuring Range	-50°C...+150°C
Technical Information	Electrical Information	Terminal Clamp	Screw terminal, max. 1.5mm ²
	Mechanical Information	Immersion Rod Diameter	See Product Range, Page 1
		Sensor TIP Lengths & Diameter	See Product Range, Page 1
		Cable Entry	M16, Ø6...Ø8mm cables
		Sensing Element Posit	external, top of the immersion rod
	User Interface	None	
	Color and Materials	Housing Cover	White ABS, RAL9001 (Cream White)
		Housing Bottom	White ABS, 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	White ABS, RAL2002 (Vermilion)
		Gland Rubber Seal	White TBS, RAL9010 (Pure White)
		Protection Caps	White ABS, RAL2002 (Vermilion)
		Immersion Rod	US: AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301
		Cable	Black, TPEE
	Environmental Conditions	Operation Temperature	-25°C...+70°C
		Operation Humidity	100% r.h., with condensation
		Transport Temperature	-35°C...+70°C
		Transport Humidity	< 90% r.h.
		Storage Temperature	-10°C...+70°C
		Storage Humidity	< 85% r.h., no condensation
	Norms and Directives	IP- Rating	IP65 to IEC60529
		Safety Class	III to EN 60 730
		Product Standard 1	Automatic Electric. Controls for household and similar use
		RoHS Compatibility	RoHS 3, Directive 2015/863
		Operation Climatic Condition	IEC 60 721-3-3
		Operation Mechanical Condition	IEC 60 721-3-2 to class2M2
		Transport 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	UUK0.A
	Shipping & Handling	Minimum Order	1 box with 2 pieces, multiple of 2 pieces
		Package Material	Rigid Cardboards Packaging
		Order Code	See Product Range, Page 1, e.g. TPI2.AF

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Advices	Installation Notes  Observe the following general regulation for engineering and implementation: All relevant national and heavy power regulation Other country specific regulations Country-specific regulations Local electrical supply authority regulation Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge Third party specifications, e.g. general contractors or constructors								
	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.								
Connections	<table><tr><td>1</td><td>1</td><td>2</td><td>2</td></tr><tr><td>Optional 3-wire</td><td>Sensor +</td><td>Sensor -</td><td>Optional 4-wire</td></tr></table> 3- wire connection optional 2- wire connection standard 4- wire connection optional	1	1	2	2	Optional 3-wire	Sensor +	Sensor -	Optional 4-wire
1	1	2	2						
Optional 3-wire	Sensor +	Sensor -	Optional 4-wire						
Dimensional Drawing	