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SM-TPS2-Series

Pipe Surface Temperature Passive Sensor

Features

- Sensor with passive output
- Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System
- Universal temperature measurement in air and water applications
- Different pocket and cable lengths for all common HVAC applications
- High performance, silicon cables
- Professional and practical product design, withstands rough environmental conditions
- Used in Commercial and Industrial Buildings

Use

The TPS2-Series is designed to measure temperature on pipe surfaces. Several mounting lengths are available to fit all common sizes. The sensor output is passive.

Product Range

Model	Sensor Output						Sensor Shape		Cable Length	
	PT100	PT1000	Ni1000	NTC10k	NTC10k Pre	NTC20k	Copper plate (30x34mm,R=23mm)	Aluminium plate (10x35x6mm)	1M	2M
TPS2.BF	•						•		•	
TPS2.BG		•					•		•	
TPS2.BK			•				•		•	
TPS2.BP				•			•		•	
TPS2.BQ					•		•		•	
TPS2.BR						•	•		•	
TPS2.CF	•						•			•
TPS2.CG		•					•			•
TPS2.CK			•				•			•
TPS2.CP				•			•			•
TPS2.CQ					•		•			•
TPS2.CR						•	•			•
TPS2.IF	•							•	•	
TPS2.IG		•						•	•	
TPS2.IK			•					•	•	
TPS2.IP				•				•	•	
TPS2.IQ					•			•	•	
TPS2.IR						•		•	•	
TPS2.KF	•							•		•
TPS2.KG		•						•		•
TPS2.KK			•					•		•
TPS2.KP				•				•		•
TPS2.KQ					•			•		•
TPS2.KR						•		•		•

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Sensor Specification

Sensor Specification	Measured	Temperature
	Sensor Characteristics	Passive
	Sensor Output (s)	See Product Range, Page 1,
	Measuring Current	<1mA
	Accuracy	
	Type TPS2.xF/xG	± 0.3K @ 0°C DIN EN 60751, class B
	Type TPS2.xP/xQ/xR	± 0.5K @ 25°C
	Type TPS2.xK	± 0.4K @ 0°C DIN EN 43760, class B
	Measuring Range (s)	-40°C...+150°C

Technical Information

Electrical Information	Terminal Clamp	Screw terminal, max. 1.5mm²
Mechanical Information	Cable Entry	M16, Ø6...Ø8mm cables
	Sensing Element Position	external, bottom of the housing
User Interface	None	
Color and Materials	Housing Cover	White PA6, RAL 9001 (Cream White)
	Housing Bottom	White PA6, RAL 9001 (Cream White)
	Lock Screws	Zinc ZLO410, Fast Connectors 90
	Cable Gland	White PA6, RAL 9001 (Cream White)
	Gland Rubber Seal	White TBS, RAL 9010 (Pure White)
	Clamp Fastener	US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301
	Sensor Packet	Brass
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	IP30 to IEC60529
	Safety Class	III to EN 60 730
	Product Standard 1	Automatic Electric. Controls for household and similar use
	RoHS Compatibility	RoHS 2011/65/EC
	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

Connection

Terminal Connection

2-wire
standart

3-wire
optional

4-wire
optional

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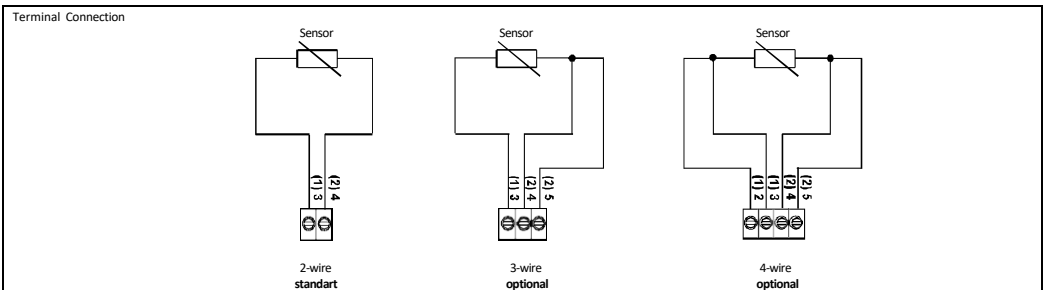
Miscellanies

Accessories	Accessory not included in delivery	TPA0.B for DN15.. DN50 or TPA0.A for DN65...DN800
Shipping & Handling	Minimum Order	1 box with 1 pieces
	Product Dimension (L x W x H) / ~Weight	90mm x 65mm x 50mm / 80gr.
	Transport and Storage dimension (L x W x H) / ~Weight	195mm x 95mm x 65mm / 205gr.
	Package Material	Rigid Cardboards Packaging
Order Notes	Order Code	See Product Range, Page 1, e.g. TPS2.AF

Advices

Security Advice ⚠ Caution	The installation and assembly of electrical equipment may only be performed by a skilled electrician. The products must not be used in any relation with equipment that supports, directly or indirectly, human health, life or with applications that canresult in danger for people, animals or real value.	
Mounting Advices ⚠ Caution	Mounted with a tightening strap to the pipe. Use contact fluid for better heat transfer between sensor and measuring medium. To avoid permeation of condensate, mount sensor on top of the tube, if possible.	
Installation Notes ⚠ Caution	The product must be installed at a suitable place and within the range of validity of the local electrical installation laws and regulations.Due to the self-heating, the wire current should not exceed 1mA.	
Commissioning Notes ⚠ Caution	Sensing devices with transducers should in principle be operated in the middle of the measuring range.The ambient temperature of the transducer electronics should be kept constant.	

Dimensional Drawing