

SM-TD12-Series

Duct Temperature Passive Sensor

Features

- Sensor with passive output
- Different immersion lengths for all common air duct and water pipe sizes
- Professional and practical product design, withstands rough environmental conditions
- Easy to use, install and maintain
- Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System
- Temperature measuring in air ducts and water pipes (with accessory)
- Used in Commercial and Industrial Buildings



Use

The SM-TD12-Series is designed to measure temperature in air ducts or water pipes. The temperature sensor output is passive. Several lengths are available to cover all common duct sizes.

Product Range

Model	Sensor Type						Pocket Length					
	PT100	PT1000	NTC10k	NTC10k Pre	NTC20k	Ni1000	62mm	135mm	192mm	240mm	320mm	465 mm
TD12.AF	•						•					
TD12.AG		•					•					
TD12.AP			•				•					
TD12.AQ				•			•					
TD12.AR					•		•					
TD12.AK						•	•					
TD12.BF	•							•				
TD12.BG		•						•				
TD12.BP			•					•				
TD12.BQ				•				•				
TD12.BR					•			•				
TD12.BK						•		•				
TD12.CF	•								•			
TD12.CG		•							•			
TD12.CP			•						•			
TD12.CQ				•					•			
TD12.CR					•				•			
TD12.CK						•			•			
TD12.FF	•									•		
TD12.FG		•								•		
TD12.FP			•							•		
TD12.FQ				•						•		
TD12.FR					•					•		
TD12.FK						•				•		
TD12.DF	•										•	
TD12.DG		•									•	
TD12.DP			•								•	
TD12.DQ				•							•	
TD12.DR					•						•	
TD12.DK						•					•	
TD12.EF	•											•
TD12.EG		•										•
TD12.EP			•									•
TD12.EQ				•								•
TD12.ER					•							•
TD12.EK						•						•

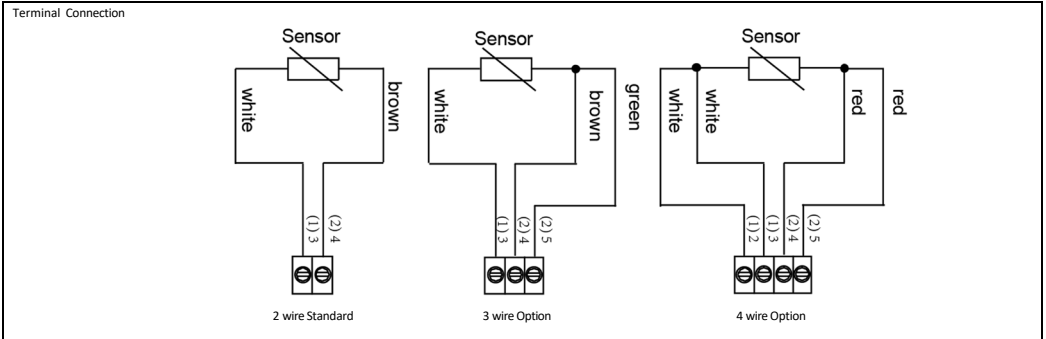
Sensor Specification

Sensor Specification	Measured	Temperature
	Sensor Characteristics	Passive
	Sensor Output (s)	See Product Range, Page 1
	Measuring Current	<1mA
	Accuracy	
	Type TD12.AF/AG/BF/BG/CF/CG/ DF/DG/EF/EG/FF/FG	± 0.3K @ 0°C DIN EN 60751, class B
	Type TD12.AP/AQ/AR/BP/BQ/BR/CP/CQ/CR /DP/DQ/DR/EP/EQ/ER/FP/FQ/FR	± 0.5K @ 0°C
	Type TD12.AK/BK/CK/DK/EK/FK	± 0.4K @ 0°C DIN EN 43760, class B
	Standard Measuring Range	0°C... + 100°C
	Total Measuring Range	-40°C... + 150°C

Technical Information

Electrical Information	Terminal Clamp	Screw terminal, max. 1.5mm ²
Mechanical Information	Sensor Pocket Diameter	Ø7mm
	Sensor Pocket Length	62mm
	Cable Entry	M16, Ø6...Ø8mm cables
	Sensing Element Position	external, top of the immersion rod
	None	
	Housing Cover	White ABS, RAL9001 (Cream White)
	Housing Bottom	White ABS, RAL9001 (Cream White)
User Interface	Lock Screws	US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N.
Color and Materials	Look Nuts	Brass
	Cable Gland	Red ABS, RAL2002 (Vermilion)
	Gland Rubber Seal	White TBS, RAL9010 (Pure White)
	Protection Caps	Red ABS, RAL2002 (Vermilion)
	Immersion Rod	US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301
	Cable	Silicon, RAL 3001 (Signal Red)
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
	IP- Rating	IP65 to IEC60529
	Safety Class	III to EN 60 730
Norms and Directives	Product Standard 1	Automatic Electric. Controls for household and similar use
	RoHS Compatibility 5	RoHS 2011/65/EC
	Operation Climatic Condition	IEC 60 721-3-4I
	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



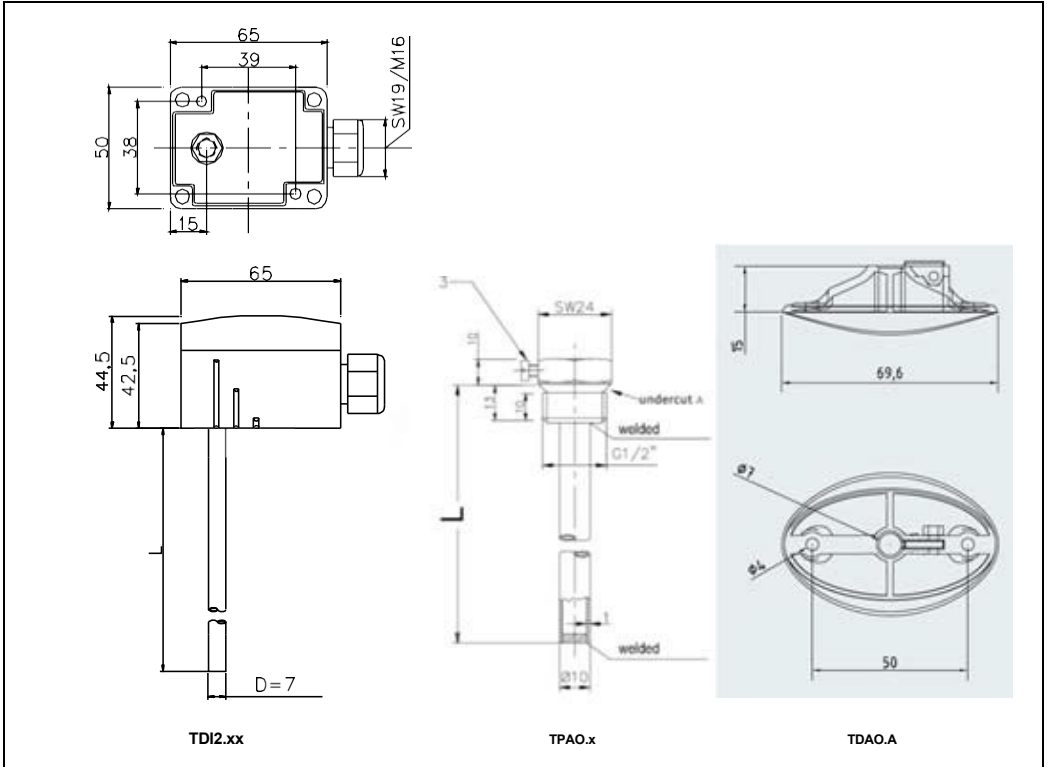
Miscellanies

Accessories	<p>Mounting Kit, included in delivery Accessory not included in delivery</p>	<p>TDA0.A Immersion Pocket TPAO.G for TD12.AA/AD Immersion Pocket TPAO.H for TD12.BA/BD Immersion Pocket TPAO.I for TD2.CA/CD Immersion Pocket TPAO.K for TD12.FA/FD Immersion Pocket TPAO.L for TD12.DA/DD Immersion Pocket TPAO.N for TD12.EA/ED</p>
Shipping & Handling	<p>Minimum Order Product Dimension (L x W x H)/~Weight Package Material Transport and Storage dimension (L x W x H)/~Weight</p>	<p>1 box with 2 pieces, multiple of 2 pieces see page 3, Shipping & Handling see page 3, Shipping & Handling Rigid Cardboards Packaging</p>
Order Notes	Order Code	See Product Range, Page 1, e.g. TD12.AA

Advices

<p>Security Advice</p>	<p>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 can result in danger for people, animals or real value.</p>
<p>Mounting Advices</p>	<p>The model can be mounted on the ventilation duct either by a mounting flange or by screws. For risk of condensate permeation in the sensor tube respectively in the immersion pocket, the bushing must be installed in that way, that occurred condensate can run off.</p>
<p>Installation Notes</p>	<p>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.</p>
<p>Commissioning Notes</p>	<p>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..</p>

Dimensional Drawing



Shipping & Handling

Product Dimension (L x W x H) / Weight	TD12.Ax	Product Dimension (L x W x H) / Weight	110mm x 65mm x 50mm / 65gr.	Immersion lengths 62mm
	TD12.Dx	Product Dimension (L x W x H) / Weight	180mm x 65mm x 50mm / 75gr.	Immersion lengths 135mm
	TD12.Cx	Product Dimension (L x W x H) / Weight	235mm x 65mm x 50mm / 84gr.	Immersion lengths 192mm
	TD12.Fx	Product Dimension (L x W x H) / Weight	285mm x 65mm x 50mm / 96gr.	Immersion lengths 240mm
	TD12.Dx	Product Dimension (L x W x H) / Weight	355mm x 65mm x 50mm / 108gr.	Immersion lengths 320mm
	TD12.Ex	Product Dimension (L x W x H) / Weight	500mm x 90mm x 60mm / 125gr.	Immersion lengths 465mm
Transport and Storage Dimension (L x W x H) / Weight	TD12.Ax	Transport and Storage dimension (L x W x H) / Weight	195mm x 95mm x 65mm / 120gr.	Immersion lengths 62mm
	TD12.Dx	Transport and Storage dimension (L x W x H) / Weight	195mm x 95mm x 65mm / 170gr.	Immersion lengths 135mm
	TD12.Cx	Transport and Storage dimension (L x W x H) / Weight	320mm x 90mm x 60mm / 190gr.	Immersion lengths 192mm
	TD12.Fx	Transport and Storage dimension (L x W x H) / Weight	320mm x 90mm x 60mm / 210gr.	Immersion lengths 240mm
	TD12.Dx	Transport and Storage dimension (L x W x H) / Weight	355mm x 90mm x 60mm / 240gr.	Immersion lengths 320mm
	TD12.Ex	Transport and Storage dimension (L x W x H) / Weight	500mm x 90mm x 60mm / 270gr.	Immersion lengths 465mm