

200e	Product Information	thermokon asia pacific
TDI1- Series (T)	Duct Temperature Active Sensor	

The TDI1-Series is designed to measure temperature in air ducts or water pipes. The temperature sensor output is active. Several lengths are available to cover all common duct sizes.



Use	<p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Temperature measuring in air ducts and water pipes (with accessory)</p> <p>Used in all common HVAC applications</p> <p>Used in Commercial and Industrial Buildings</p>
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Features	<p>Sensor with active output</p> <p>Different immersion lengths for all common air duct and water pipe sizes</p> <p>Professional and practical product design, withstands rough environmental conditions</p> <p>Easy to use, install and maintain</p>
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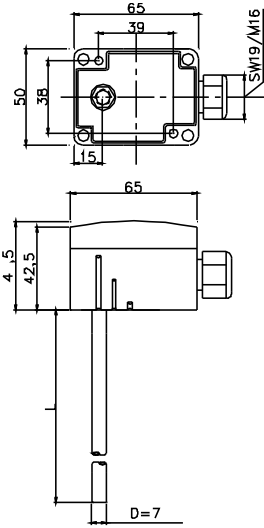
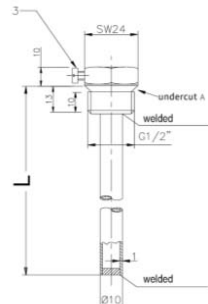
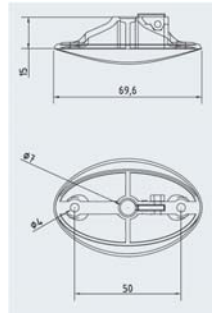
Product Range	<table border="1"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="2">Sensor Output</th> <th colspan="6">Pocket Length</th> </tr> <tr> <th>0...10V</th> <th>4...20mA</th> <th>62mm</th> <th>135mm</th> <th>192mm</th> <th>240mm</th> <th>320mm</th> <th>465mm</th> </tr> </thead> <tbody> <tr> <td>TDI1.AA</td> <td>•</td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TDI1.AD</td> <td></td> <td>•</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TDI1.BA</td> <td>•</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TDI2.BD</td> <td></td> <td>•</td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TDI1.CA</td> <td>•</td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TDI1.CD</td> <td></td> <td>•</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TDI1.FA</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> </tr> <tr> <td>TDI1.FD</td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> </tr> <tr> <td>TDI1.DA</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> </tr> <tr> <td>TDI1.DD</td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> </tr> <tr> <td>TDI1.EA</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> </tr> <tr> <td>TDI1.ED</td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> </tr> </tbody> </table>								Model	Sensor Output		Pocket Length						0...10V	4...20mA	62mm	135mm	192mm	240mm	320mm	465mm	TDI1.AA	•		•						TDI1.AD		•	•						TDI1.BA	•			•					TDI2.BD		•		•					TDI1.CA	•				•				TDI1.CD		•			•				TDI1.FA	•					•			TDI1.FD		•				•			TDI1.DA	•						•		TDI1.DD		•					•		TDI1.EA	•							•	TDI1.ED		•						•
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Sensor Specification	Sensor Specification	<p>Measured</p> <p>Sensor Characteristics</p> <p>Sensor Output (s)</p> <p>Output Load</p> <p style="padding-left: 20px;">Type TD11.AA/BA/CA/DA/EA/FA</p> <p style="padding-left: 20px;">Type TD11.AD/BD/CD/DD/ED/FD</p> <p>Accuracy</p> <p>Measuring Range (s)</p> <p>Optional Measuring Range (s)</p>	<p>Temperature</p> <p>Active</p> <p>See Product Range, Page 1</p> <p>Min. load 5kΩ @ AC/DC 24V</p> <p>Max. load 500Ω @ DC 24V</p> <p>± 1K over full measuring range</p> <p>0°C...+150°C</p> <p>-15°C...+35°C; 0°C...50°C</p>									
	Technical Information	<p>Electrical Information</p> <p>Power Supply</p> <p style="padding-left: 20px;">Type TD11.AA/BA/CA/DA/EA/FA</p> <p style="padding-left: 20px;">Type TD11.AD/BD/CD/DD/ED/FD</p> <p>Frequency</p> <p>Terminal Clamp</p> <p>Power Consumption</p> <p style="padding-left: 20px;">Type TD11.AA/BA/CA/DA/EA/FA</p> <p style="padding-left: 20px;">Type TD11.AD/BD/CD/DD/ED/FD</p> <p>Mechanical Information</p> <p>Immersion Rod Diameter</p> <p>Immersion Rod Length</p> <p>Cable Entry</p> <p>Sensing Element Position</p> <p>User Interface</p> <p>Color and Materials</p> <p>Housing Cover</p> <p>Housing Bottom</p> <p>Lock Screws</p> <p>Lock Nuts</p> <p>Cable Gland</p> <p>Gland Rubber Seal</p> <p>Protection Caps</p> <p>Immersion Rod</p> <p>Cable</p> <p>Environmental Condition</p> <p>Operation Temperature</p> <p>Operation Humidity</p> <p>Transport Temperature</p> <p>Transport Humidity</p> <p>Storage Temperature</p> <p>Storage Humidity</p> <p>Norms and Directives</p> <p>IP- Rating</p> <p>Safety Class</p> <p>Product Standard 1</p> <p>Product Standard 2</p> <p>CE Conformities to</p> <p>CE Electromagnetic Compatibility Emitted Interference</p> <p>CE Electromagnetic Compatibility Interference resistance</p> <p>RoHS Compatibility</p> <p>Operation Climatic Condition</p> <p>Operation Mechanical Condition</p> <p>Transport to Climatic Condition</p> <p>Transport Mechanical Condition</p> <p>Storage Climatic Condition</p> <p>Storage Mechanical Condition</p>	<p>AC 15-24V (±10%) or DC 24V (±10%)</p> <p>DC 15-24V (±10%)</p> <p>50 / 60 Hz at AC 24V</p> <p>Screw terminal, max. 1.5mm²</p> <p>≤ 0.4W / AC 24V; ≤ 0.85VA / DC 24V</p> <p>≤ 20mA / DC 24V</p> <p>Ø7mm</p> <p>See Product Range, Page 1</p> <p>M16, Ø6...Ø8mm cables</p> <p>external, top of the immersion rod</p> <p>White ABS, RAL9001 (Cream White)</p> <p>White ABS, RAL9001 (Cream White)</p> <p>US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301</p> <p>Brass</p> <p>Red ABS, RAL2002 (Vermilion)</p> <p>White TBS, RAL9010 (Pure White)</p> <p>Red ABS, RAL2002 (Vermilion)</p> <p>US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301</p> <p>Silicon, RAL 3001 (Signal Red)</p> <p>-25°C...+70°C</p> <p>100% r.h., with condensation</p> <p>-35°C...+70°C</p> <p>< 90% r.h.</p> <p>-10°C...+70°C</p> <p>< 85% r.h., no condensation</p> <p>IP65 to IEC60529</p> <p>III to EN 60 730</p> <p>Automatic Electric. Controls for household and similar use</p> <p>2009/EN 60 730-1</p> <p>2004/108/EG Electromagnetic Compatibility EMV</p> <p>2000/EN60730-1 Emitted Interference</p> <p>2000/EN60730-1 Interference Resistance</p> <p>RoHS 2011/65/EC</p> <p>IEC 60 721-3-3</p> <p>IEC 60 721-3-2 to class2M2</p> <p>IEC 60 721-3-2</p> <p>IEC 60 721-3-2 to class2M2</p> <p>IEC 60 721-3-1</p> <p>IEC 60 721-3-1 to class2M2</p>									
Connection	<p>Terminal Connection</p> <table border="1" style="margin: 10px auto;"> <tr> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>Out Temp 0...10V</td> <td>24V AC/DC</td> <td>GND</td> </tr> </table> <p style="text-align: center;">TD11.AA/BA/AD/AD/AD/AD</p> <table border="1" style="margin: 10px auto;"> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>24V DC</td> <td>Out Temp 4 ...20mA /GND</td> </tr> </table> <p style="text-align: center;">TD11.AD/BD/CD/DD/ED/FD</p>	1	2	3	Out Temp 0...10V	24V AC/DC	GND	1	2	24V DC	Out Temp 4 ...20mA /GND	
1	2	3										
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1	2											
24V DC	Out Temp 4 ...20mA /GND											
Miscellanies	<p>Accessories</p> <p>Mounting Kit, included in delivery</p> <p>Accessory not included in delivery</p> <p>Shipping & Handling</p> <p>Minimum Order</p> <p>Product Dimension (L x W x H) / ~Weight</p> <p>Transport and Storage dimension (L x W x H) / ~Weight</p> <p>Package Material</p> <p>Order Notes</p> <p>Order Code</p>	<p>TDA0.H</p> <p>Immersion Pocket TPAO.G for TD11.AA/AD</p> <p>Immersion Pocket TPAO.H for TD11.BA/BD</p> <p>Immersion Pocket TPAO.I for TD11.CA/CD</p> <p>Immersion Pocket TPAO.K for TD11.FA/FD</p> <p>Immersion Pocket TPAO.L for TD11.DA/DD</p> <p>Immersion Pocket TPAO.N for TD11.EA/ED</p> <p>1 box with 2 pieces, multiple of 2 pieces</p> <p>see page 3, Shipping & Handling</p> <p>see page 3, Shipping & Handling</p> <p>Rigid Cardboards Packaging</p> <p>See Product Range, Page 1, e.g. TD11.AA</p>										

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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. Change the bonding jumpers to make the adjustment of the measuring ranges. The output value in the new measuring range is available after approx. 2 seconds.</p>

Dimensional Drawing	 <p style="text-align: center;">TDI1.xx</p>	 <p style="text-align: center;">TPAO.x</p>	 <p style="text-align: center;">TDAO.A</p>
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Shipping & Handling	Product Dimension (L x W x H) / Weight	TDI1.Ax	Product Dimension (L x W x H) / Weight	110mm x 65mm x 50mm / 55gr.	Immersion lengths 62mm
		TDI1.Bx	Product Dimension (L x W x H) / Weight	180mm x 65mm x 50mm / 65gr.	Immersion lengths 135mm
		TDI1.Cx	Product Dimension (L x W x H) / Weight	235mm x 65mm x 50mm / 74gr.	Immersion lengths 192mm
		TDI1.Fx	Product Dimension (L x W x H) / Weight	285mm x 65mm x 50mm / 86gr.	Immersion lengths 240mm
		TDI1.Dx	Product Dimension (L x W x H) / Weight	355mm x 65mm x 50mm / 98gr.	Immersion lengths 320mm
		TDI1.Ex	Product Dimension (L x W x H) / Weight	500mm x 50mm x 510mm / 115gr.	Immersion lengths 465mm
	Transport and Storage dimension (L x W x H) / Weight	TDI1.Ax	Transport and Storage dimension (L x W x H) / Weight	195mm x 95mm x 65mm / 130gr.	Immersion lengths 62mm
		TDI1.Dx	Transport and Storage dimension (L x W x H) / Weight	195mm x 95mm x 65mm / 150gr.	Immersion lengths 135mm
		TDI1.Cx	Transport and Storage dimension (L x W x H) / Weight	320mm x 90mm x 60mm / 170gr.	Immersion lengths 192mm
		TDI1.Fx	Transport and Storage dimension (L x W x H) / Weight	320mm x 90mm x 60mm / 190gr.	Immersion lengths 240mm
		TDI1.Dx	Transport and Storage dimension (L x W x H) / Weight	355mm x 90mm x 60mm / 220gr.	Immersion lengths 320mm
		TDI1.Ex	Transport and Storage dimension (L x W x H) / Weight	500mm x 90mm x 60mm / 250gr.	Immersion lengths 465mm

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