

1211e		Product Information						<div>thermokon[®]</div> <div>asia pacific</div>					
CDI4- Series (H&T)		Duct Humidity and Temperature Active Sensor											
<div><div></div><div>The CDI4-Series (H&T) is designed to measure relative humidity and temperature in air ducts of heating, ventilation and air-conditioning systems. The humidity sensor output is active, the temperature sensor output can be active or passive.</div></div>													
Use	Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System												
	Relative humidity and temperature measurement in air ducts												
	Used in all common HVAC applications												
	Used in Commercial and Industrial Buildings												
Features	Sensor with active and passive outputs (optional)												
	Different immersion lengths for all common air duct sizes												
	Professional and practical product design, withstands rough environmental conditions												
	Easy to use, install and maintain												
Product Range		Sensor Output										Immersion	
		Temperature						Humidity		Length			
	Model	PT100	PT1000	NTC10k	NTC10k Pre	NTC20k	Ni1000	0-10V	4-20mA	0-10V	4-20mA	140mm	270mm
	CDI4.AA							•		•		•	
	CDI4.AJ	•						•		•		•	
	CDI4.AK		•					•		•		•	
	CDI4.AM			•				•		•		•	
	CDI4.AO				•			•		•		•	
	CDI4.AN					•		•		•		•	
	CDI4.AL						•	•		•		•	
	CDI4.AD								•		•	•	
	CDI4.AP	•							•		•	•	
	CDI4.AQ		•						•		•	•	
	CDI4.AS			•					•		•	•	
	CDI4.AV				•				•		•	•	
	CDI4.AT					•			•		•	•	
	CDI4.AR						•		•		•	•	
	CDI4.BA							•		•			•
	CDI4.BJ	•						•		•			•
	CDI4.BK		•					•		•			•
	CDI4.BM			•				•		•			•
	CDI4.BO				•			•		•			•
	CDI4.BN					•		•		•			•
	CDI4.BL						•	•		•			•
	CDI4.BD								•		•	•	
	CDI4.BP	•							•		•	•	
	CDI4.BQ		•						•		•	•	
	CDI4.BS			•					•		•	•	
	CDI4.BV				•				•		•	•	
	CDI4.BT					•			•		•	•	
	CDI4.BR						•		•		•	•	

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CDI4- Series (H&T) V1.2



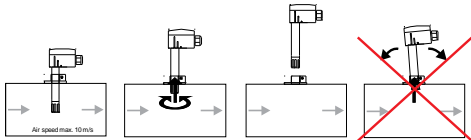


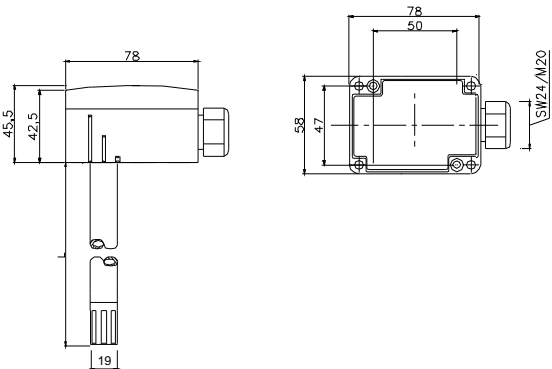
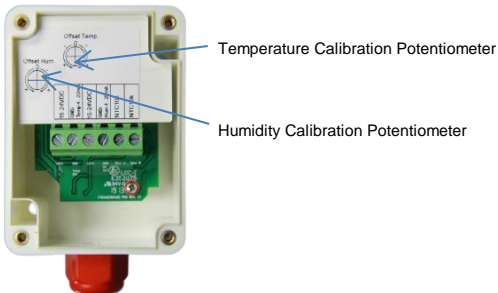
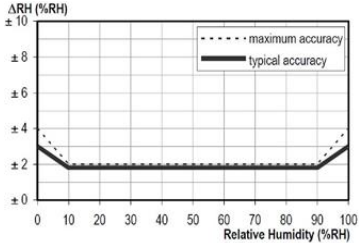
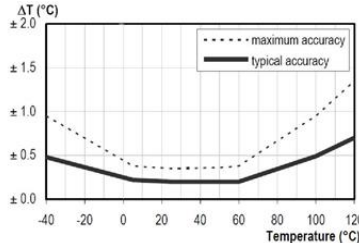
Thermokon Asia Pacific

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Sensor Specification	Sensor Specification	Measured Sensor Characteristics Sensor Output (s) Output Load Type CDi4.AJ/AK/AM/AO/AN/AL/AA/BJ/BK/BM/BO/BN/BL/BA Type CDi4.AP/AQ/AS/AV/AT/AR/AD/BP/BQ/BS/BV/BT/BR/BD Measuring Current Accuracy Type CDi4.AJ/AK/AP/AQ/BJ/BK/BP/BQ Type CDi4.AM/AO/AN/AS/AV/AT/BM/BO/BN/BS/BV/BT Type CDi4.AL/AR/BL/BR Type CDi4.AA/AD/BA/BD Repeatability Long Term Drift Measuring Range (s)	Temperature & Humidity Passive; Active See Product Range, Page 1 Min. load 5kΩ @ AC/DC 24V Max. load 500Ω @ DC 24V <1mA ± 0.8°C between -20C..80C ; ± 0.3K @ 0°C, class B ; ± 2% between 10...90% r.h. ± 0.8°C between -20C..80C ; ± 0.5K @ 25°C ; ± 2% between 10...90% r.h. ± 0.8°C between -20C..80C ; ± 0.4K @ 0°C ; ± 2% within 10...90% r.h. ± 0.8°C between -20C..80C ; ± 2% within 10-90% r.h. ±0.1C ; ±0.1% r.h. < 0.04C / year ; < 0.5% r.h. / year -20°C...80°C Active / -40°C...150°C Passive / 0...100% r.h.																																																
	Electrical Information Mechanical Information User Interface Color and Materials Environmental Conditions Norms and Directives	Power Supply Type CDi4.AJ/AK/AM/AO/AN/AL/AA/BJ/BK/BM/BO/BN/BL/BA Type CDi4.AP/AQ/AS/AV/AT/AR/AD/BP/BQ/BS/BV/BT/BR/BD Frequency Terminal Clamp Power Consumption Type CDi4.AJ/AK/AM/AO/AN/AL/AA/BJ/BK/BM/BO/BN/BL/BA Type CDi4.AP/AQ/AS/AV/AT/AR/AD/BP/BQ/BS/BV/BT/BR/BD Immersion Rod Diameter Immersion Rod Length Cable Entry Sensing Element Position Temperature Recalibration Humidity Recalibration Housing Cover Housing Bottom Lock Screws Cable Gland Gland Rubber Seal Immersion Rod Filter Operation Temperature Operation Humidity Transport Temperature Transport Humidity Storage Temperature Storage Humidity IP- Rating Safety Class Product Standard 1 Product Standard 2 CE Conformities to CE Electromagnetic Compatibility Emitted Interference CE Electromagnetic Compatibility Interference resistance RoHS Compatibility Operation Climatic Condition Operation Mechanical Condition Transport to Climatic Condition Transport Mechanical Condition Storage Climatic Condition Storage Mechanical Condition	DC 15-24V (±10%) or AC 24V (±10%) DC 15-24V (±10%) 50 / 60 Hz at AC 24V Screw terminal, max. 1.5mm² ≤ 0.5W / AC 24V; ≤ 1.7VA / DC 24V ≤ 40mA / DC 24V Ø19mm See Product Range, Page 1 M16, Ø6...Ø8mm cables external, top of the immersion rod ±3K ±4% r.h. White PA6, RAL9001 (Cream White) White PA6, RAL9001 (Cream White) Zinc ZLO410, Fast Connectors 90° White PA6, RAL9001 (Cream White) White TBS, RAL9010 (Pure White) Black PVC, RAL 9017 (Traffic Black) US:AISI 304; EU:EN X 6 CrNi 18 10; GER: W.N. 1.301, Stainless Steel -25°C...+70°C 100% r.h., with condensation -35°C...+70°C < 90% r.h. -10°C...+70°C < 85% r.h., no condensation IP65 to IEC60529 III to EN 60 730 Automatic Electric. Controls for household and similar use 2009/EN 60 730-1 2004/108/EG Electromagnetic Compatibility EMV 2000/EN60730-1 Emitted Interference 2000/EN60730-1 Interference Resistance RoHS 2011/65/EC IEC 60 721-3-3 IEC 60 721-3-2 to class2M2 IEC 60 721-3-2 IEC 60 721-3-2 to class2M2 IEC 60 721-3-1 IEC 60 721-3-1 to class2M2																																																
Connection	Terminal Connection	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>OutTemp 0...10V</td><td>Out Hum 0...10V</td><td>15-24VDC/ 24VAC</td><td>GND</td><td>Passive sensor</td><td>Passive sensor</td></tr></table> Type CDi4.AJ/AK/AM/AO/AN/AL/AJ/BK/BM/BO/BN/BL <table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>15-24VDC</td><td>OutTemp 4...20mA</td><td>15-24VDC</td><td>Out Hum 4...20mA</td><td>Passive sensor</td><td>Passive sensor</td></tr></table> Type CDi4.AP/AQ/AS/AV/AT/AR/BP/BQ/BS/BV/BT/BR/BA	1	2	3	4	5	6	OutTemp 0...10V	Out Hum 0...10V	15-24VDC/ 24VAC	GND	Passive sensor	Passive sensor	1	2	3	4	5	6	15-24VDC	OutTemp 4...20mA	15-24VDC	Out Hum 4...20mA	Passive sensor	Passive sensor	<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>OutTemp 0...10V</td><td>Out Hum 0...10V</td><td>15-24VDC/ 24VAC</td><td>GND</td><td></td><td></td></tr></table> Type CDi4.AA/BA <table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr><tr><td>15-24VDC</td><td>OutTemp 4...20mA</td><td>15-24VDC</td><td>OutHum 4...20mA</td><td></td><td></td></tr></table> Type CDi4.AD/BD	1	2	3	4	5	6	OutTemp 0...10V	Out Hum 0...10V	15-24VDC/ 24VAC	GND			1	2	3	4	5	6	15-24VDC	OutTemp 4...20mA	15-24VDC	OutHum 4...20mA		
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Miscellanies	Accessories Shipping & Handling Order Notes	Mounting Kit, Included in delivery Minimum Order Product Dimension (L x W x H) / Weight Transport and Storage dimension (L x W x H) / ~Weight Packaging Material Order Code	Duct Mounting Kit, HDK0.A 1 box with 2 pieces, multiple of 2 pieces 186mm x 85mm x 50mm / 102gr. 316mm x 85mm x 50mm / 152gr. 195mm x 95mm x 65mm / 270gr. 330mm x 95mm x 65mm / 405gr. Rigid Cardboards Packaging See Product Range, Page 1, e.g. CDi4.AJ																																																

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Advices	<p>Security Advice</p> <p> Caution</p> <p>The installation and assembly of electrical equipment may only be performed by a skilled electrician.</p> <p>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 of people, animals or real values.</p>
	<p>Mounting Advices</p> <p> Caution</p> <p>The sensor can be mounted on the air duct by a mounting flange or by screws.</p> <p>For risk of condensate permeation in the sensor tube respectively in the immersion pocket, the sensor must be installed that occurred condensate can run off.</p> 
	<p>Installation Notes</p> <p> Caution</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.</p> <p>Due to the self-heating, the wire current should not exceed 1mA.</p> <p>Due to air circulations dirt and dust particles can be piled up in the course of time on the sintered filter which is protecting the sensor. The filter can be cleaned by blowing it out with oil-free and filtered compressed air, super-clean air or nitrogen or by washing it out with distilled water.</p>
	<p>Commissioning Notes</p> <p> Caution</p> <p>Sensing devices with transducers should in principle be operated in the middle of the measuring range.</p> <p>The ambient temperature of the transducer electronics should be kept constant.</p> <p>When switching the supply voltage on/off, power surges must be avoided on site.</p> <p>With normal environmental conditions we recommend a recalibration interval of around 1 year to maintain the indicated accuracy.</p> <p>Refrain from touching the sensitive sensor. Any touch of the same will result in an expiration of the warranty.</p> <p>At high ambient temperatures and high humidity, or when use the sensor in aggressive gases, an early recalibration or a change of the sensor can become necessarily.</p> <p>Such a recalibration or a probable sensor change may not come under the general warranty.</p>
Dimensional Drawing	
Calibration diagram	
Accuracy Curves	<div style="display: flex; justify-content: space-around;"> <div> <p>ΔRH (%RH)</p>  <p>Relative Humidity (%RH)</p> </div> <div> <p>ΔT (°C)</p>  <p>Temperature (°C)</p> </div> </div> <p style="text-align: right;">Active Sensor Output</p>
<p style="text-align: center;">All Information and technical data are subject to alteration</p>	