


1411e	Product Information	
COW4- Series (H&T)	Outdoor Humidity and Temperature Active Sensor	

The COW4-Series (H&T) is designed to measure relative humidity and temperature in outdoor areas, plant rooms, cold stores, greenhouses, production plants and warehouses. The humidity sensor output is active, the temperature sensor output can be active or passive.





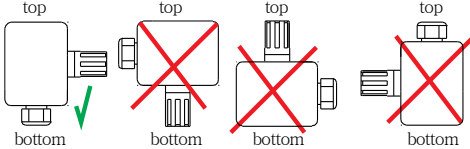


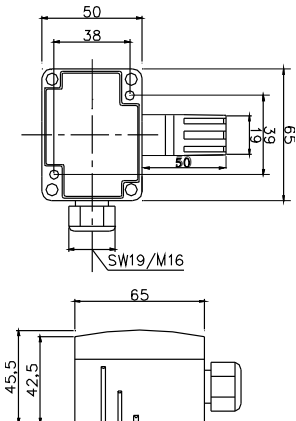
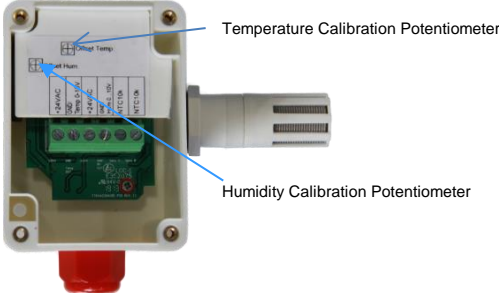
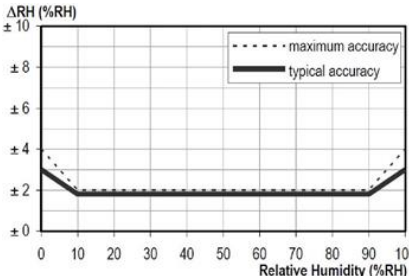
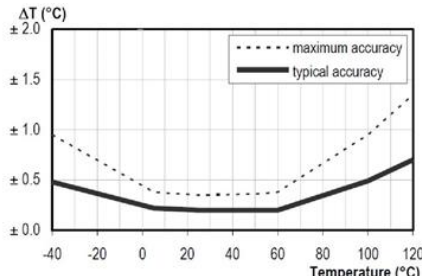
Use	<p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Relative humidity and temperature measuring in outdoor areas, stores, warehouses, production plants and greenhouses</p> <p>Used in all common HVAC applications</p> <p>Used in Commercial and Industrial Buildings</p>
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Features	<p>Sensor with active and passive outputs</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												
	Model	Sensor Output										Accuracy
		Temperature								Humidity		Humidity
		PT100	PT1000	NTC10k	NTC10k Pre	NTC20k	Ni1000	0-10V	4-20mA	0-10V	4-20mA	±2%
	COW4.AA							•		•		•
	COW4.AJ	•						•		•		•
	COW4.AK		•					•		•		•
	COW4.AM			•				•		•		•
	COW4.AO				•			•		•		•
	COW4.AN					•		•		•		•
	COW4.AL						•	•		•		•
	COW4.AD								•		•	•
	COW4.AP	•							•		•	•
	COW4.AQ		•						•		•	•
	COW4.AS			•					•		•	•
	COW4.AV				•				•		•	•
	COW4.AT					•			•		•	•
COW4.AR						•		•		•	•	

All Information and technical data are subject to alteration

Sensor Specification	Sensor Specification		Measured	Temperature & Humidity																									
	Sensor Characteristics		Passive; Active																										
Technical Information	Sensor Output (s)		See Product Range, Page 1																										
	Output Load																												
	Type COW4.AJ/AK/AM/AN/AO/AL/AA		Min. load 10kΩ @ AC/DC 24V																										
	Type COW4.AP/AQ/AS/AV/AT/AR/AD		Max. load 500Ω @ DC 24V																										
	Measuring Current		<1mA																										
	Accuracy																												
	Type COW4.AJ/AK/AP/AQ		± 0.8°C between -20C..80C ; ± 0.3K @ 0°C, class B ; ± 2% between 10...90% r.h.																										
	Type COW4.AM/AO/AN/AS/AV/AT		± 0.8°C between -20C..80C ; ± 0.5K @ 0°C ; ± 2% between 10...90% r.h.																										
	Type COW4.AL/AR		± 0.8°C between -20C..80C ; ± 0.4K @ 0°C ; ± 2% within 10-90% r.h.																										
	Type COW4.AA/AD		± 0.8°C between -20C..80C ; ± 2% within 10-90% r.h.																										
	Repeatability		±0.1C ; ±0.1% r.h.																										
	Long Term Drift		< 0.04C / year ; < 0.5% r.h. / year																										
	Measuring Range (s)		-20°C...80°C Active / -40°C...150°C Passive / 0...100% r.h.																										
	Electrical Information	Power Supply		DC 15-24V (±10%) or AC 24V (±10%)																									
		Type COW4.AJ/AK/AM/AO/AN/AL/AA		DC 15-24V (±10%)																									
		Type COW4.AP/AQ/AS/AV/AT/AR/AD		50 / 60 Hz at AC 24V																									
		Frequency		Screw terminal, max. 1.5mm²																									
		Terminal Clamp																											
		Power Consumption																											
		Type COW4.AJ/AK/AM/AO/AN/AL/AA		≤ 0.3W / AC 24V; ≤ 0.5VA / DC 24V																									
Type COW4.AP/AQ/AS/AV/AT/AR/AD		≤ 20mA / DC 24V																											
Mechanical Information		Sensor Pocket Diameter		19mm																									
		Sensor Pocket Length		50mm																									
		Cable Entry		M16, Ø6...Ø8mm cables																									
		Sensing Element Position		external, top on sensor pocket																									
User Interface		Humidity Recalibration		±4% r.h.																									
		Temperature Recalibration		±3K																									
Color and Materials		Housing Cover		White PA6, RAL9010 (Pure White)																									
		Housing Bottom		White PA6, RAL9010 (Pure White)																									
		Lock Screws		Zinc ZLO410, Fast Connectors 90°																									
		Cable Gland		White PA6, RAL9010 (Pure White)																									
		Gland Rubber Seal		White TBS, RAL9010 (Pure White)																									
		Sensor Pocket		White PVC, RAL 9010 (Pure White)																									
		Filter		US:AISI 304; EU:EN X 6 CrNi 18 10; GER: W.N. 1.301, Stainless Steel																									
		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																									
		Product Standard 2		2009/EN 60 730-1																									
		CE Conformities to		2004/108/EG Electromagnetic Compatibility EMV																									
		CE Electromagnetic Compatibility Emitted Interference		2000/EN60730-1 Emitted Interference																									
		CE Electromagnetic Compatibility Interference resistance		2000/EN60730-1 Interference Resistance																									
		RoHS Compatibility		RoHS 2011/65/EC																									
		Operation Climatic Condition		IEC 60 721-3-4																									
	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																											
		<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>		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>15-24VDC</td><td>OutTemp 4...20mA</td><td>15-24VDC</td><td>Out Hum 4...20mA</td><td></td><td></td></tr></table>		1	2	3	4	5	6	15-24VDC	OutTemp 4...20mA	15-24VDC	Out Hum 4...20mA		
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Type COW4.AJ/AK/AM/AO/AN/AL		Type COW4.AA																											
Miscellanies	Accessories		None																										
	Shipping & Handling		Minimum Order																										
			Product Dimension (L x W x H) / ~Weight																										
			Transport and Storage dimension (L x W x H) / ~Weight																										
			Package Material																										
Order Notes		Order Code																											
		See Product Range, Page 1, e.g. COW4.AJ																											
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COW4- Series (H&T) V1.1																													
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Advices	<p><b>Security Advice</b></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><b>Mounting Advices</b></p>  <p>In case of outdoor installation avoid direct rain and sun exposure. For avoiding the risk of condensation permeation in the sensor pocket, the sensor must be installed that occurring condensate can run off.</p> 
	<p><b>Installation Notes</b></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 self-heating, the wire current should not exceed 1mA. 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><b>Commissioning Notes</b></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. When switching the supply voltage on/off, power surges must be avoided on site. With normal environmental conditions we recommend a recalibration interval of around 1 year to maintain the indicated accuracy. Refrain from touching the sensitive sensor. Any touch of the same will result in an expiration of the warranty. 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. Such a recalibration or a probable sensor change may not come under the general warranty.</p>
Dimensional Drawing	
Calibration diagram	
Accuracy Curves	<div>  </div> <div>  </div> <p style="text-align: right;">Active Temperature Output</p>
<p style="text-align: center;">All Information and technical data are subject to alteration</p>	
<div> <div>Thermokon Asia Pacific</div> <div>COW4- Series (H&amp;T) V1.1</div> <div>Page 3/3</div> </div>	