
 TI1180en	Technical Information	
CRP4- Series (H&T)	Pendulum Humidity and Temperature Sensor with Active Output	

The CRP4- Series (H&T) is designed to measure temperature, relative humidity,

absolute humidity, enthalpy or dew point in large rooms or areas

Professional design suitable for plant or utility rooms

The Sensor is field replaceable

The sensor outputs are active



Use	<p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Relative humidity, absolute humidity, enthalpy or dew point and temperature measurement in Rooms and Areas</p> <p>Used in all common HVAC applications</p> <p>Used in Commercial and Industrial Buildings</p>
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Features	<p>Sensor Outputs are active</p> <p>Sensor Output 0...10V or 4...20mA</p> <p>Multiple Temperature measuring ranges</p> <p>Field Replaceable sensor</p> <p>High Humidity accuracy</p> <p>Humidity and Temperature Field calibration potentiometer</p> <p>Modern and practical product design</p> <p>Easy to use, install and maintain</p>
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Product Range	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="172 1559 301 1736">Order Codes</th> <th data-bbox="301 1559 430 1736">Cable Length</th> <th data-bbox="430 1559 517 1736">Power Supply</th> <th data-bbox="517 1559 687 1736">Humidity / Temperature Output</th> <th data-bbox="687 1559 858 1736">Temp. Ranges</th> <th data-bbox="858 1559 1029 1736">Measuring Variable</th> <th data-bbox="1029 1559 1241 1736">Measuring Units</th> <th data-bbox="1241 1559 1372 1736">Accuracy Humidity</th> <th data-bbox="1372 1559 1501 1736">Cable Color</th> </tr> </thead> <tbody> <tr> <td data-bbox="172 1736 301 1912">CRP4.AE</td> <td data-bbox="301 1736 430 1912" style="text-align: center;">1m</td> <td data-bbox="430 1736 517 2092" rowspan="3" style="text-align: center; vertical-align: middle;">AC/ DC 24V (±10%)</td> <td data-bbox="517 1736 687 1912" style="text-align: center;">0...10V*</td> <td data-bbox="687 1736 858 1854" style="text-align: center;">-50...50°C</td> <td data-bbox="858 1736 1029 1854" style="text-align: center;">rel. humidity*</td> <td data-bbox="1029 1736 1241 1854" style="text-align: center;">0...100%</td> <td data-bbox="1241 1736 1372 2092" rowspan="3" style="text-align: center; vertical-align: middle;">± 2%, Full Scale</td> <td data-bbox="1372 1736 1501 2092" rowspan="3" style="text-align: center; vertical-align: middle;">black</td> </tr> <tr> <td data-bbox="172 1912 301 2092" rowspan="2">CRP4.BE</td> <td data-bbox="301 1912 430 2092" rowspan="2" style="text-align: center;">2m</td> <td data-bbox="517 1912 687 2092" style="text-align: center;">or</td> <td data-bbox="687 1854 858 1944" style="text-align: center;">0...50°C*</td> <td data-bbox="858 1854 1029 1944" style="text-align: center;">absolute humidity</td> <td data-bbox="1029 1854 1241 1944" style="text-align: center;">0...50gr/m3</td> </tr> <tr> <td data-bbox="517 1944 687 2092" style="text-align: center;">4...20mA</td> <td data-bbox="687 1944 858 2056" style="text-align: center;">-20...80°C</td> <td data-bbox="858 1944 1029 2056" style="text-align: center;">dew point</td> <td data-bbox="1029 1944 1241 2056" style="text-align: center;">-20...80°C</td> </tr> <tr> <td colspan="4"></td> <td data-bbox="687 2056 858 2092" style="text-align: center;">0...100°C</td> <td data-bbox="858 2056 1029 2092" style="text-align: center;">enthalpy</td> <td data-bbox="1029 2056 1241 2092" style="text-align: center;">0...85kJ/Kg</td> <td colspan="2"></td> </tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">* default setting</p>	Order Codes	Cable Length	Power Supply	Humidity / Temperature Output	Temp. Ranges	Measuring Variable	Measuring Units	Accuracy Humidity	Cable Color	CRP4.AE	1m	AC/ DC 24V (±10%)	0...10V*	-50...50°C	rel. humidity*	0...100%	± 2%, Full Scale	black	CRP4.BE	2m	or	0...50°C*	absolute humidity	0...50gr/m3	4...20mA	-20...80°C	dew point	-20...80°C					0...100°C	enthalpy	0...85kJ/Kg		
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All Information and technical data are subject to alteration

Sensor Specification	Sensor Specification	Measured Sensor Characteristics H/T Outputs Temperature OFF-set Potentiometer (R) Humidity OFF-set Potentiometer (R2) Output Load 0...10V 4...20mA Measuring Current Accuracy relative humidity absolute humidity enthalpy dew point Temperature IP- Rating sensor element Repeatability (H) Long Term Drift (H) Measuring Range (H) Measuring Range (T) (default) Measuring Ranges (T) (optional, on board)	Temperature & Humidity Active 0...10V ; 0...10V or 4...20mA ; 4...20mA ± 3k ± 5% Min. load 10kΩ @ AC/DC 24V Max. load 500Ω @ DC 24V <1mA ± 2% within 0...100% r.h. ± 2% within 0..100% r.h. ± 2% within 0..100% r.h. ± 2% within 0..100% r.h. see temperature chart, page 3 IP67 to IEC60529 ±0.1°C ; ±0.1% r.h. < 0.04°C / year ; < 0.5% r.h. 0...100% 0°C...50°C -20°C...80°C ; -50°C...+50°C ; 0°C...+100°C
Technical Information	Electrical Information	Power Supply Frequency Terminal Clamp Power Consumption 0...10V output 4...20mA output	AC/DC 24V (±10%) 50 / 60 Hz at AC 24V Screw terminal, max. 1.5mm ² ≤ 0.4W / AC 24V; ≤ 0.85VA / DC 24V ≤ 0.6W / AC 24V; ≤ 1VA / DC 24V
Mechanical Information	Cable Length Cable Lead Diameter Cable Diameter Sensor Pocket Lengths Sensor Pocket Diameter Sensing Element Position Sensor / Housing connection	1m or 2m Ø0.25mm 4.6mm 100mm Ø15mm external, top of the sensor pocket M12 crew-on connection	
Color and Materials	Housing Cover Housing Bottom Lock Screws Lock Nuts Sensor / Housing connection Cable Gland Gland Rubber Seal Protection Caps sensor Pocket	White ABS, RAL9001 (Cream White) White ABS, RAL9001 (Cream White) US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301 Brass Zink alloy - Nickel plated White ABS, RAL2002 (Vermilion) White TBS, RAL9010 (Pure White) White ABS, RAL2002 (Vermilion) US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301	
Environmental Conditions	Cable Operation Temperature Operation Humidity Transport Temperature Transport Humidity	Black PVC 0°C...+50°C <85 % r.h., no condensation -35°C...+70°C < 90% r.h.	
Norms and Directives	Storage Humidity IP- Rating Safety Class 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	< 85% r.h., no condensation IP65 to IEC60529 III to EN 60 730 2004/108/EG Electromagnetic Compatibility EMV 2000/EN60730-1 Emitted Interference 2000/EN60730-1 Interference Resistance RoHS 3, Directive 2015/863 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	
Miscellaneous	Accessories	n/a	n/a
	Shipping & Handling	Minimum Order Packaging	1 box with 1 piece Rigid Cardboards
	Order Notes	Order Code	CRP4.AE

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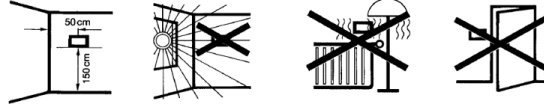
Installation Notes



Observe the following general regulation for engineering and implementation:

- All relevant national and heavy power regulations
- Other country specific regulations
- Country-specific regulations
- Local electrical supply authority regulation
- Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge
- Third party specifications, e.g. general contractors or constructors

Mounting Advices



Under normal environmental conditions we recommend a recalibration interval of 2 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 necessary.

Such a recalibration or a probable sensor change may not come under the general warranty

Disposal Notes



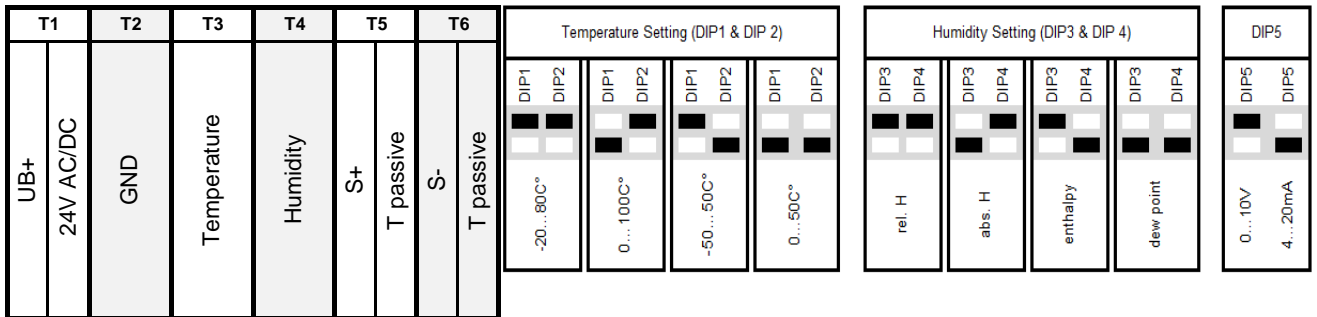
The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.

The device may not be disposed as domestic garbage.

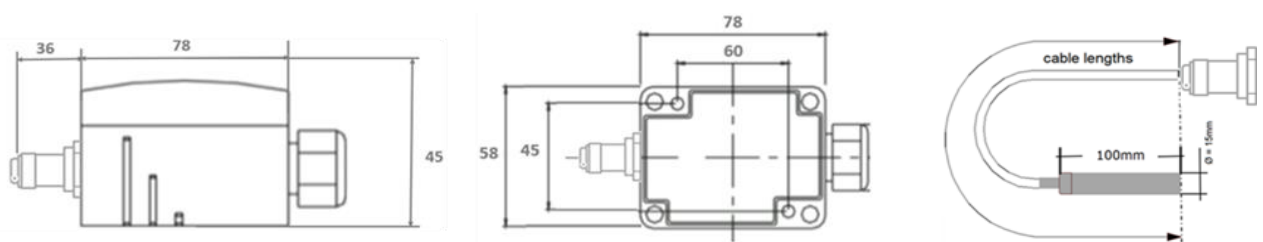
The device must be disposed through channels provided for this purpose.

It is mandatory to comply with local currently applying laws and regulations.

Connections & Settings



Dimensional Drawing / Mounting Instruction



Accuracy Curves

