
 TI1115en	Product Information	
CRF4- Series (H&T)	Room Humidity and Temperature Sensor with Active Outputs	

The CRF4- Series (H&T) is designed to measure relative humidity and temperature

in rooms or areas

Sensor available with Touch- LED display, showing actual room rel. humidity and temperature

values, day and time

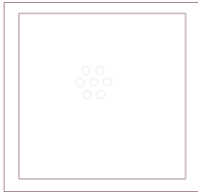
Sensor can be field calibrated

The sensor operates with low power supply

The sensor outputs are active



CRF4.Ax



CRF4.Cx

USE	<div>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</div> <div>Relative Humidity and Temperature measurement in Rooms and Areas</div> <div>Flush mounted 2.4" Sensor, with or without display, room sensor</div> <div>Used in all common HVAC applications</div> <div>Used in Commercial and Industrial Buildings</div>																																	
Features	<div>Sensor Outputs are active</div> <div>Sensor Output 0...10V or 4...20mA</div> <div>Temperature & Humidity filed calibration</div> <div>High Humidity accuracy</div> <div>Modern and practical product design</div> <div>Easy to use, install and maintain</div>																																	
Product Range	<table><tr><th>Order Codes</th><th>Power Supply</th><th>Display</th><th>Temperature Output</th><th>Humidity Output</th><th>Measuring Ranges</th><th>Humidity / Temperature Accuracy</th><th>Housing Color</th></tr><tr><td>CRF4.AA</td><td rowspan="4">AC/DC 24V (±10%)</td><td>Full screen LCD</td><td rowspan="2">0...10V</td><td rowspan="2">0...10V</td><td rowspan="2">0...100%, rh</td><td rowspan="2">± 2% within 0-100% r.h.</td><td rowspan="4">Signal White RAL 9003*</td></tr><tr><td>CRF4.CA</td><td>n/a</td></tr><tr><td>CRF4.AD</td><td>Full screen LCD</td><td rowspan="2">4...20mA</td><td rowspan="2">4...20mA</td><td rowspan="2">0...50°C, temp.</td><td rowspan="2">± 0.5°C</td></tr><tr><td>CRF4.CD</td><td>n/a</td></tr></table>								Order Codes	Power Supply	Display	Temperature Output	Humidity Output	Measuring Ranges	Humidity / Temperature Accuracy	Housing Color	CRF4.AA	AC/DC 24V (±10%)	Full screen LCD	0...10V	0...10V	0...100%, rh	± 2% within 0-100% r.h.	Signal White RAL 9003*	CRF4.CA	n/a	CRF4.AD	Full screen LCD	4...20mA	4...20mA	0...50°C, temp.	± 0.5°C	CRF4.CD	n/a
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All Information and technical data are subject to alteration

Sensor Specification	Sensor Specification	Measured	Temperature & Humidity
		Sensor Characteristics H/T	Active
		Sensor Outputs H/T CRF4.AA / CRF4.CA	0...10V ; 0...10V
		Sensor Outputs H/T CRF4.AD / CRF4.CD	4...20mA ; 4...20mA
		Output Load	
		0...10V	Min. load 10kΩ @ AC/DC 24V
		4...20mA	Max. load 500Ω @ DC 24V
		Measuring Current	<1mA
		Accuracy	
		Relative Humidity	± 2% within 0...100% r.h.
		Temperature	± 0.5°C
		Repeatability	
		Relative Humidity	0.21% r.h.
		Temperature	0.15°C
		Response time (t63)	
		Relative Humidity	8 seconds
		Temperature	>2 seconds
Technical Information	Electrical Information	Measuring Range (H)	0...100%
		Measuring Range (T)	0°C...50°C
		Power Supply	AC/DC 24V (±10%)
		Frequency	50 / 60 Hz at AC 24V
		Terminal Clamp	Screw terminal, max. 1.5mm ²
		Power Consumption	
	Mechanical Information	0...10V outputs	≤ 0.4W / AC 24V; ≤ 0.85VA / DC 24V
		4...20mA outputs	≤ 20mA / DC 24V
		Cable Connection	terminals with max. 1.5mm ² backside of the housing
		Sensing Element Position	Inside the housing
		Display CRF4.AA / CRF4.AD	Touch-LCD with LED-Illumination
		User Interface CRF4.AA / CRF4.AD	5 Touch buttons
	Colour and Materials	Housing Cover CRF4.AA / CRF4.AD	ABS, screech resistant acrylic class, white frame
		Housing Cover CRF4.CA / CRF4.CD	ABS, RAL9003 (Signal White)
		Housing Bottom	ABS, RAL9005 (Traffic Black)
	Environmental Conditions	Operation Temperature	-25°C...+70°C
		Operation Humidity	<85% r.h., no 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	IP20 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 60 721-3-3
		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
Miscellanies	Accessories	non	
	Shipping & Handling	Minimum Order	1 box with 1 piece
		Product Dimension (L x W x H) / ~Weight	86mm x 86mm x 45mm / 120gr.
		Transport and Storage dimension (L x W x H) / ~Weight	110mm x 10mm x 65mm / 140gr.
		Package Material	Rigid Cardboards Packaging
	Order Notes	Order Code	CRF4.AA

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Commissioning / Date Screen

Actual Time

Actual Room Temperature

Commission Button



Actual Room Humidity


Value Button (-)

Date / Time Button

Value Button (+)

Screen ON/OFF Button






Entering the Commissioning Screen:

Press  for approximately 5 sec, until the commissioning screen appears.


Commissioning Screen



Change Commissioning Parameters

- 1) Press  until the desired Parameter number appears
- 2) Press  or  until desired value appears
- 3) Press  to confirm the selected value,
the program goes to the next Parameter
or press  the button to leave the Commissioning Screen









Entering the Date/Time Screen:

Press  for approximately 5 sec. until the Date / Time screen appears.

Date / Time Screen



Change Date / Time

- 1) Press  or  until the desired Weekday appears
 - 2) Press  to confirm the selected day
 - 3) Press  or  until the desired hour appears
 - 4) Press  to confirm the selected hour
 - 5) Press  or  until the desired minute appears
- Date / Time screen will disappear and the standard display will appear

Comfort Alarm

PARA	Name	Parameter	Description	Default
P01	Display standard setting	1	Standard Display	1
		2	Only Temperaure & Humidity Values	
P02	Display during Screen saver operation	1	Temperature & Humidity values & ON/OFF button (50%)	1
		2	ON/OFF button only (50%)	
P03	Screen Saver Mode	1	Screen Saver not active	10
		2...60	Screen Saver delay time (2...60min)	
P04	Displayed Temperature Unit	1	Displayed Unit °C	1
		2	Displayed Unit °F	
P05	Time Format	1	European Time Format	1
		2	American Time Format	
P07	Room Humidity Calibration	-5...+5	Adjustment of room temperature sensor value (-5...5% rel. humidity)	0
P08	Room Temperature Calibration	-3...+3	Adjustment of room temperature sensor value (-5...5K)	0

Advices	<div><div>Installation Notes</div><div><div><div><div><div></div><div>Caution</div></div></div></div></div><div><div>Observe the following general regulation for engineering and implementation:</div><div><div>All relevant national and heavy power regulation</div><div>Other country specific regulations</div><div>Country-specific regulations</div><div>Local electrical supply authority regulation</div><div>Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge</div><div>Third party specifications, e.g. general contractors or constructors</div></div></div></div>												
	<div><div>Mounting Advices</div><div><div><div><div><div></div><div>Caution</div></div></div></div></div><div><div><div><div><div><div></div><div>50 cm</div><div>150 cm</div></div></div><div><div><div><div></div><div></div><div></div></div></div><div><div><div><div></div><div></div><div></div></div></div><div><div><div><div></div><div></div><div></div></div></div></div></div><div><div><div>Under normal environmental conditions we recommend a recalibration interval of 2 year to maintain the indicated accuracy.</div><div>Refrain from touching the sensitive sensor. Any touch of the same will result in an expiration of the warranty.</div><div>At high ambient temperatures and high humidity, or when use the sensor in aggressive gases,</div><div>an early recalibration or a change of the sensor can become necessarily.</div><div>Such a recalibration or a probable sensor change may not come under the general warranty</div></div></div></div></div></div></div></div>												
	<div><div>Disposal Notes</div><div><div><div><div></div></div></div></div><div><div>The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.</div><div>The Device may not be disposed as domestic garbage.</div><div>The device must be disposed through channels provided for this purpose.</div><div>It is mandatory to complying with local currently applying laws and regulations.</div></div></div>												
Connection	<table><tr><th colspan="2">Power Supply</th><th colspan="2">Sensor Outputs</th></tr><tr><td>24V AC/DC</td><td>G</td><td>Temperature</td><td>Humidity</td></tr><tr><td>T1</td><td>T2</td><td>T3</td><td>T4</td></tr></table>	Power Supply		Sensor Outputs		24V AC/DC	G	Temperature	Humidity	T1	T2	T3	T4
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Dimensional Drawing / Mounting Instruction	<div><div><div><div><div></div><div>86</div></div><div><div></div><div>86</div></div></div><div><div><div><div></div><div>10,5</div></div><div><div></div><div>34,5</div></div></div></div><div><div><div><div><div></div><div></div><div></div></div></div><div><div><div><div></div><div></div><div></div></div></div></div></div></div></div></div>												
Accuracy	<div><div><div><div><div>Humidity Accuracy</div><div><div><div><div><div></div><div>3</div><div>2.5</div><div>2</div><div>1.5</div><div>1</div></div><div>(±) max. Error (% r.H.)</div><div><div>0</div><div>20</div><div>40</div><div>60</div><div>80</div><div>100</div></div><div>Measuring Range (% r.H.)</div></div></div><div><div><div>0V 4mA</div><div>5V 12mA</div><div>10V 20mA</div></div></div></div></div><div><div><div><div><div>Temperature Accuracy</div><div><div><div><div></div><div>1</div><div>0.9</div><div>0.8</div><div>0.7</div><div>0.6</div><div>0.5</div><div>0.4</div><div>0.3</div><div>0.2</div><div>0.1</div><div>0</div></div><div>(±) max. Error (°C)</div><div><div>0</div><div>10</div><div>20</div><div>25</div><div>30</div><div>40</div><div>50</div></div><div>Measuring Range (°C)</div></div></div><div><div><div>0V 4mA</div><div>5V 12mA</div><div>10V 20mA</div></div></div></div></div></div><div><div><div>All Information and technical data are subject to alteration</div><div>CRW4- Series (H&T) V20.1</div></div><div>Page 5/5</div></div></div></div></div></div>												