1111e	Product Information	thermokon asia pacific
CRW4- Series (T&H)	Room Humidity and Temperature Active Sensor	

The CRW4-Series (H&T) is designed to measure relative humidity and temperature in rooms or areas. The humidity sensor output is active, the temperature sensor output can be active or passive.

Use

Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System

Relative humidity and temperature measurement in rooms or spaces

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active and passive outputs (optional)

Professional and practical product design, withstands rough environmental conditions

Easy to use, install and maintain

Product Range

	Sensor Output										Display
	Temperature								Humidity		LCD
Model	PT100	PT1000	NTC10k	NTC10k Pre	NTC20k	Ni1000	0-10V	4-20mA	0-10V	4-20mA	Display
CRW4.BA							●		●		●
CRW4.AA							●		●		
CRW4.AJ	●						●		●		
CRW4.AK		●					●		●		
CRW4.AM			●				●		●		
CRW4.AO				●			●		●		
CRW4.AN					●		●		●		
CRW4.AL						●	●		●		
CRW4.AD								●		●	
CRW4.AP	●							●		●	
CRW4.AQ		●						●		●	
CRW4.AS			●					●		●	
CRW4.AV				●				●		●	
CRW4.AT					●			●		●	
CRW4.AR						●		●		●	

Sensor Specification

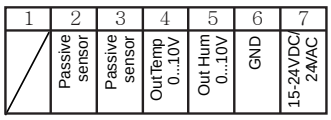
Sensor Specification	Measured	Temperature & Humidity
	Sensor Characteristics	Passive; Active
	Sensor Output (s)	See Product Range, Page 1
	Output Load	
	Type CRW4.AJ/AK/AM/AO/AN/AL/AA/BA	Min. load 10kΩ @ AC/DC 24V
	Type CRW4.AP/AQ/AS/AV/AT/AR/AD	Min. load 800kΩ @ DC 24V
	Measuring Current	<1mA
	Accuracy	
	Type CRW4.AJ/AK/AP/AQ	± 0.5°C between 0℃..50℃ ; ± 0.3K @ 0ºC, class B ; ± 2% between 10…90% r.h.
	Type CRW4.AM/AO/AN/AS/AV/AT	± 0.5°C between 0℃..50℃ ; ± 0.5K @ 25ºC ; ± 2% between 10…90% r.h.
	Type CRW4.AL/AR	± 0.5°C between 0℃..50℃ ; ± 0.4K @ 0ºC DIN EN 43760, class B ; ± 2% within 10-90% r.h.
	Type CRW4.AA/BA/AD	± 0.5°C between 0℃..50℃ ; ± 2% within 10-90% r.h.
	Repeatability	±0.1℃ ; ±0.1% r.h.
	Long Term Drift	< 0.04℃ / year ; < 0.5% r.h. / year
	Measuring Range (s)	0ºC…50ºC Active / -40ºC…150ºC Passive / 0…100% r.h.

Technical Information

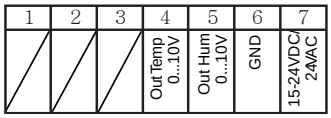
Electrical Information	Power Supply	
	Type CRW4.AJ/AK/AM/AO/AN/AL/AA/BA	DC 15-24V (±10%) or AC 24V (±10%)
	Type CRW4.AP/AQ/AS/AV/AT/AR/AD	DC 15-24V (±10%)
	Frequency	50 / 60 Hz at AC 24V
	Terminal Clamp	Screw terminal, max. 1.5mm²
	Power Consumption	
	Type CRW4.AJ/AK/AM/AO/AN/AL/AA/BA	≤ 0.3W / AC 24V; ≤ 0.5VA / DC 24V
	Type CRW4.AP/AQ/AS/AV/AT/AR/AD	≤ 40mA / DC 24V
Mechanical Information	Cable Entry	~30mm x 10mm on the backside
	Sensing Element Position	Inside the housing, top of the housing
User Interface	Humidity Recalibration	±4% r.h.
	Temperature Recalibration	±3K
Color and Materials	Housing Cover	White ASA, RAL 9010 (Pure White)
	Housing Bottom	White ASA, RAL 9010 (Pure White)
	Display	
	Type CRW4.BA	Liquid Display, Black & White
Environmental Conditions	Operation Temperature	-25ºC...+70ºC
	Operation Humidity	<85% r.h., no condensation
	Transport Temperature	-35ºC...+70ºC
	Transport Humidity	< 90% r.h.
	Storage Temperature	-10ºC...+70ºC
	Storage Humidity	< 85% r.h., no condensation
Norms and Directives	IP- Rating	IP30 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

Connection

Terminal Connection



Type CRW4.AJ/AK/AM/AO/AN/AL



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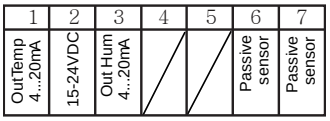
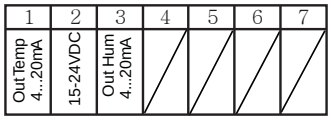


Type CRW4.AP/AQ/AS/AV/AT/AR



Type CRW4.AD

Miscellanies

Accessories	Accessory not included in delivery	TRA0.A (106mmx106mm backplate)
Shipping & Handling	Minimum Order	1 box with 1 piece
	Product Dimension (L x W x H) / ~Weight	85mm x 85mm x 26mm / 80gr.
	Transport and Storage dimension (L x W x H) / ~Weight	90mm x 90mm x 35mm / 100gr.
	Package Material	Rigid Cardboards Packaging
Order Notes	Order Code	See Product Range, Page 1, e.g. CRW4.AJ

Advices

Security Advice

Caution

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.

Mounting Advices

Caution

Mounted with screws and wall plugs onto a smooth wall surface.
For wiring, the snap-on lid must be separated from the base plate.
Make sure the flush socket is completely closed at the wall side, the circulation of air may take place through the gaps in the cover.
The sensor should not be covered by curtains, doors or furniture.

Installation Notes

Caution

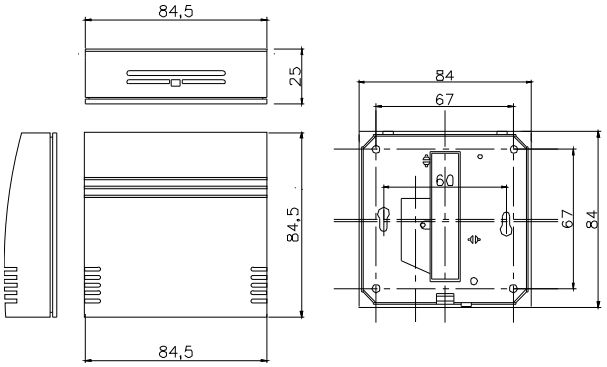
The product must be installed at a suitable place and within the range of validity of the local electrical installation laws and regulations.
Installation place must be made on representative places for the room temperature, next to doors (occurring draught) or windows (colder outside wall) should be avoided.
Solar radiation and draught should be avoided.
The end of the installation tube in the flush box must be sealed.
Due to the self-heating, the wire current should not exceed 1mA.

Commissioning Notes

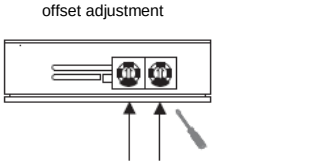
Caution

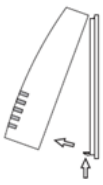
Sensing devices with transducers should in principle be operated in the middle of the measuring range.
The ambient temperature of the transducer electronics should be kept constant.
When switching the supply voltage on/off, power surges must be avoided on site.
With normal environmental conditions we 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.

Dimensional Drawing

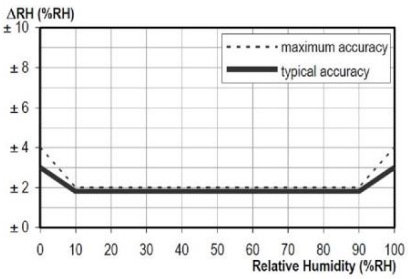


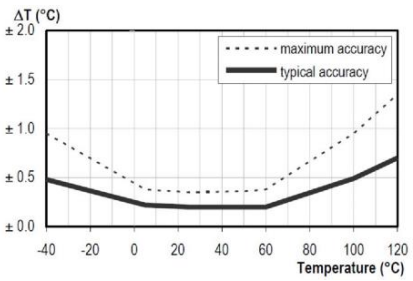
Calibration Diagram





Accuracy Curves





Active Sensor Output