



DS1413en

Data Sheet



COW4-Series (H&T)

Outdoor Humidity and Temperature Sensor
with Active and Passive Outputs

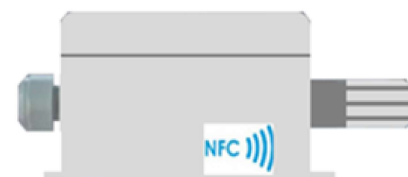
The COW4-Series (H&T) is designed to measure humidity and temperature in outdoor areas, plant rooms, factories, cold stores, greenhouses and warehouses

In accordance with RESET® and WELL Building Standard™

Reading/Parameter settings via NFC technology

With Operation LED, optional with ePaper display available

The sensor outputs are active, optional with passive Temperature output



Use

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

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active outputs, optional with passive Temperature output

Sensor outputs 0–10 V or 4–20 mA

Optional with ePaper display available

Reading/Parameter settings via NFC technology

Selectable Humidity Units (r.h / abs. H. / Dew Point / Enthalpy)

Cover/bottom housing connected with magnets and two screws

Firmware updates via service connector

Easy to use, install and maintain.

Product Range

Order Codes	General Parameters					Temperature Active		Temperature Passive *		Humidity Parameters												
	Active Outputs	Pocket Length	Power Supply	Display / LED	IP Rating	Range	Accuracy	Passive Sensor	Accuracy	Range / Unit	Accuracy											
COW4G.DA	T&H: 0–10 V	Ø19.5 mm × 50 mm	AC/DC 24 V (±10 %)	LED	IP 65	-40 °C to +60 °C (default) -40 °C to +135 °C via NFC adjustable	±0.2 °C between 0 °C to +50 °C	N/A		rel. humidity (default)	0 to 100 %	selectable via NFC	±2 %, Full Scale									
COW4G.CA																						
COW4G.CK										N/A	absolute humidity			0 to 50 g/m³								
COW4G.CM										N/A												
COW4G.DD	T&H: 4–20 mA							Ø19.5 mm × 50 mm	AC/DC 24 V (±10 %)	LED	IP 65			-40 °C to +60 °C (default) -40 °C to +135 °C via NFC adjustable	±0.2 °C between 0 °C to +50 °C	N/A		dew point	-20 to +80 °C	selectable via NFC	±2 %, Full Scale	
COW4G.CD																						
COW4G.CQ																		N/A	enthalpy			0 to 85kJ/kg
COW4G.CS																		N/A				

*Other passive elements are available. Contact your Sales Manager for more information

Sensor Specification	Sensor Specification	Measured Sensor Characteristics Sensor Output (s) Output Load 0–10 V output 4–20 mA output	Humidity and Temperature Active, optional passive Temperature 0–10 V or 4–20 mA Min. load 5 kΩ @ AC/DC 24 V Max. load 700 Ω @ DC 24 V
	Temperature (active)	Accuracy Response Time Long Term Drift Default Measuring Range Optional Measuring Range	±0.2 °C between 0 °C to +50 °C t ₆₃ = 2 s <0.03 °C per year –40 °C to +60 °C Free selectable via NFC –40 °C to +135 °C
	Temperature (passive)	Accuracy, PT sensors Accuracy, NTC sensors	±0.15 K @ 0 °C DIN EN 60751, class A ±0.25 K @ 25 °C
	Humidity	Accuracy Repeatability Long Term Drift Measuring Value (default) Optional Measuring Value	Typically ±2 % RH Average 0.15 % RH <0.25 % RH per year Relative Humidity, 0 % to 100% Absolute Humidity, 0 g/m ³ to 50 g/m ³ Dew Point, –20 °C to +80 °C Enthalpy, 0 kJ/kg to 85 kJ/kg
Technical Information	Electrical Information	Power Supply Frequency Terminal Clamp Power Consumption 0–10 V output 4–20 mA output	AC/DC 24 V (±10 %) 50/60 Hz at AC 24 V Screw terminal, max. 1.5 mm ² ≤1 W ≤1 W
	Mechanical Information	Cable Entry PIN Bar Display Pocket	M16 / SW19 Bootloader for software updates ePaper 31 mm × 60 mm Ø19.5 mm × 50 mm
	Colour and Materials	Housing Cover Housing Bottom Sensor Pipe	ABS, white / transparent (display) ABS, white ABS, white with SS304 cover
	Environmental Conditions	Flammability Standard Operation Temperature Operation Humidity Transport Temperature Transport Humidity Storage Temperature Storage Humidity	UL 94 class HB; IEC 60707; ISO 9770 –25 °C to +70 °C 100 % RH, with condensation –35 °C to +70 °C <90 % RH, no condensation –10 °C to +70 °C <85 % RH, no condensation
	Norms and Directives	IP-Rating Product Safety Product Standard	IP65 to IEC60529 Safety class III, in accordance with EN IEC 60730-1 Automatic electrical controls for household and similar use in accordance with EN IEC 60730-1:2022
		CE marking in accordance with Directive EMC Emissions, in accordance with EMC Immunity, in accordance with RoHS Compliance, in accordance with Operation Climatic Condition Operation Mechanical Condition Transport to Climatic Condition Transport Mechanical Condition Storage Climatic Condition Storage Mechanical Condition	2014/30/EU Electromagnetic Compatibility (EMC) EN IEC 60730-1:2022 EN IEC 60730-1:2022 Directive 2011/65/EU, as amended by (EU) 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	
	Shipping & Handling	Minimum Order Packaging	1 box with 1 piece Rigid cardboard packaging
	Order Notes	Order Code	See product range, page 1, e.g. COW4G.DA

All Information and technical data are subject to alteration

Installation Notes

Observe the following general regulation for engineering and installation:



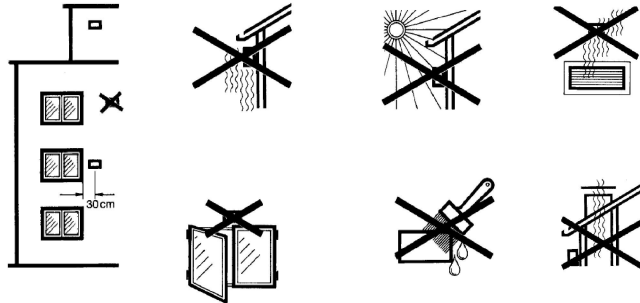
All relevant national and local electrical installation codes

Other country-specific regulations

Comply with all local safety regulations, schematics, cable listings, dispositions, specifications, and arrangements from the engineering office in charge

Third-party specifications, e.g., general contractors' or constructors' notes

Mounting Advices



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

NFC Setting

All devices marked with the NFC Logo can be parameterized via the Gruner AP NFC APP

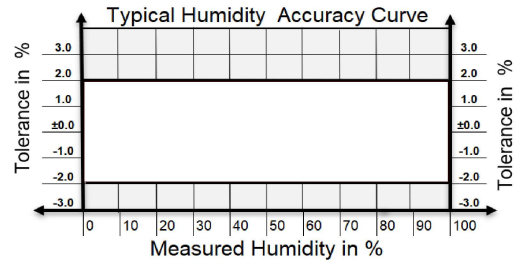
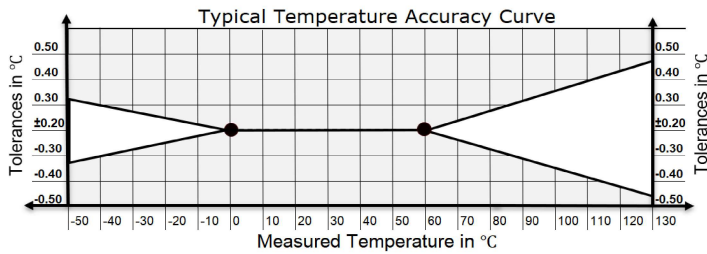
The NFC APP is available on the Gruner AP Website, <https://www.grunerasiapacific.com/>

Hold your NFC-capable Android phone to the NFC Logo, the installed APP will start automatically

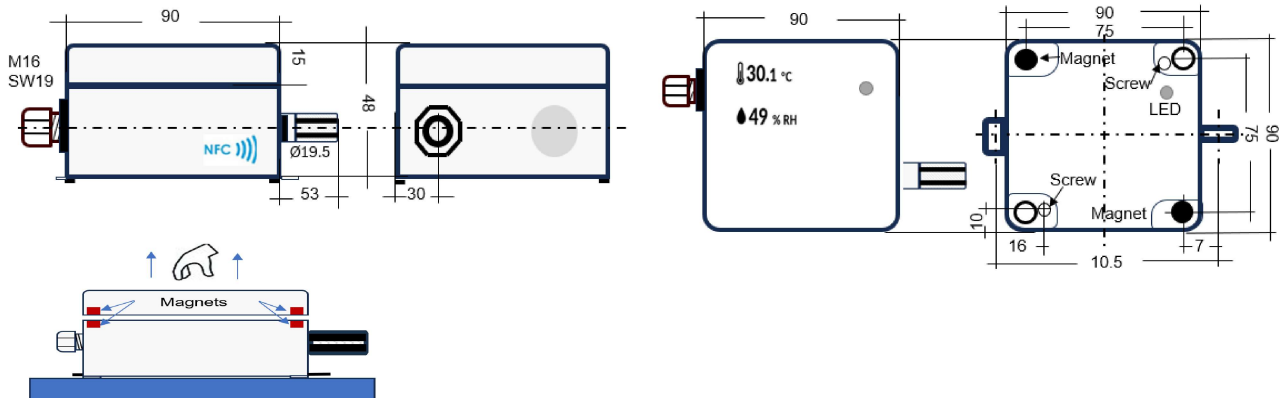
Commissioning Note: The sensor will reach its specified accuracy after 1 hour of being powered up



Accuracy Curves



Dimensional Drawing / Mounting



Connections & Settings

Terminal Connections						
S1	S2	S3	S4	S5	S6	S7
Temperature	Humidity	N/A	GND	UB+	24V AC/DC	Temperature Passive (+)
					Temperature Passive (-)	Temperature Passive (+)