The CDI4- Series (H&T) is designed to measure humidity and temperature in air ducts of heating,

ventilation and air conditioning systems

The sensor operates with low voltage power supply

In accordance with RESET® and WELL Building Standard™.

Reading / Parameter settings via NFC technology

With Operation LED - optional with ePaper display available

Product Designed in accordance to CE and UL standards

Cover/bottom housing connected with magnets and two screws

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

Humidity and Temperature measuring in air ducts of heating, ventilation and air conditioning systems

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active output, optional with passive Temperature output

Sensor outputs 0-10V or 4-20mA

Optional with ePaper display available

Reading / Parameter settings via NFC technology

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

Cover/bottom housing connected with magnets and two screws

Immersion Pockets in Stainless Steel

Firmware updates via service connector

Easy to use, install and maintain.

Product Range

Order Codes	General Parameters					Temperature Active		*Temperature Passive		Humidity Parameters		
	Pocket Length	Active Outputs	Power Supply	Display / LED	IP Rating	Range	Accu-racy	Passive Sensor	Accu-racy	Range / Unit		Accu-racy
CDI4G.FA CDI4G.HA	150mm 250mm	T&H= 0-10V	AC/DC 24V (±10%)	Display 31x60mm	IP 65	-20~+80°C (default) / -40~+135°C via NFC adjustable	± 0.2C between 0°C~+50°C	n.a		rel. humidity (default)	0~100%	± 2%, Full Scale
CDI4G.EA CDI4G.GD	150mm 250mm											
CDI4G.EK CDI4G.GK	150mm 250mm			n.a				PT1000	± 0.15K @ 0°C	absolute humidity	0~50gr/m3	
CDI4G.EM CDI4G.GM	150mm 250mm							NTC10k	±0.25K @ 25°C			
CDI4G.FD CDI4G.HD	150mm 250mm	T&H: 4-20mA		Display 31x60mm				n.a		dew point	-20~80°C	
CDI4G.ED CDI4G.GD	150mm 250mm											
CDI4G.EQ CDI4G.GQ	150mm 250mm			n.a				PT1000	± 0.15K @ 0°C	enthalpy	0~85kJ/Kg	
CDI4G.ES CDI4G.GS	150mm 250mm							NTC10k	±0.25K @ 25°C			

Note: LED column and "selectable via NFC" apply across the Display/LED and Range/Unit columns respectively.

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

Sensor Specification	Sensor Specification	Measured	Humidity and Temperature
		Sensor Characteristics	Active, optional passive Temperature
		Sensor Output (s)	0-10V/4-20mA
		Output Load	
		0-10V output	Min. load 5kΩ @ AC/DC 24V
		4-20mA output	Max. load 700Ω @ DC 24V
	Temperature (active)	Accuracy	± 0.2C between 0~50ºC
		Response time	$t_{63\%}$ 2s
		Long Term Drift	<0.03ºC/Y
		Default Measuring Range	-20ºC~80ºC
		Optional Measuring Range	Free selectable via NFC -40~+135ºC
	Temperature (passive)	Accuracy PT- Sensors	± 0.15K @ 0ºC DIN EN 60751, class A
		Accuracy NTC- Sensors	±0.25K @ 25ºC
	Humidity	Accuracy	typically ±2% RH
		Repeatability	average 0.15% RH
		Long Term Drift	<0.25 & RH / y
		Measuring Value (default)	Relative Humidity / 0~100%
		Optional Measuring Value	absolute humidity / 0~50gr/m3
			Dew Point / -20~80°C
			Enthalpy / 0~85kJ/Kg
Technical Information	Electrical Information	Power Supply	AC/DC 24V (±10%)
		Frequency	50 / 60 Hz at AC 24V
		Terminal Clamp	Screw terminal, max. 1.5mm²
		Power Consumption	
		0-10V output	≤ 1W
		4-20mA output	≤ 1W
	Mechanical Information	Cable Entry	~50mm x 10mm on the backside
			Bootloader for software updates
		Display	ePaper 31x60mm
		Immersion Pocket	Ø19.5 x 150mm/250mm
	Colour and Materials	Housing Cover	ABS, white
		Housing Bottom	ABS, white
		Sensor Pipe	ABS, white with SS304 cover
		Flammability Standard	UL94class HB ; IEC 6070 ; ISO 9770
	Environmental Conditions	Operation Temperature	-25ºC~+70ºC
		Operation Humidity	100% RH, with condensation
		Transport Temperature	-35ºC~+70ºC
		Transport Humidity	< 90% RH
		Storage Temperature	-10ºC~+70ºC
		Storage Humidity	< 85% RH, no condensation
	Norms and Directives	IP- Rating	IP65 to IEC60529
		Safety Class	III to EN 60 730
		Product Standard 1	Automatic EC for household and similar use
		Product Standard 2	2009/EN 60 730-1
		CE Conformities to	2004/108/EG Electromagnetic Compatibility EMV
		CE ECE Interference	2000/EN60730-1 Emitted Interference
		CE ECI Resistance	2000/EN60730-1 Interference Resistance
		RoHS Compatibility	RoHS 3, Directive 2015/863
		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
Misc.	Shipping & Handling	Minimum Order	1 box with 1 piece
		Packaging	Rigid Cardboards Packaging
	Order Notes	Order Code	e.g. CDI4G.ED

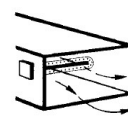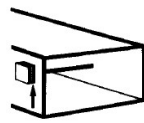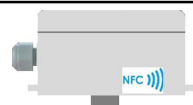|		
Advices	**Installation Notes** ⚠️ **Caution**	Observe the following general regulation for engineering and implementation: All relevant national and heavy power regulations Other country specific regulations Country-specific regulations Local electrical supply authority regulations Schematics, cable listings, dispositions, specification and arrangements from the engineering office in charge Third party specifications, e.g. general contractors or constructors.
	Mounting Advices ⚠️ **Caution**	
	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 NFC	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. 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 1h after powered up.

Accuracy Curves

Typical Temperature Accuracy Curve

Typical Humidity Accuracy Curve
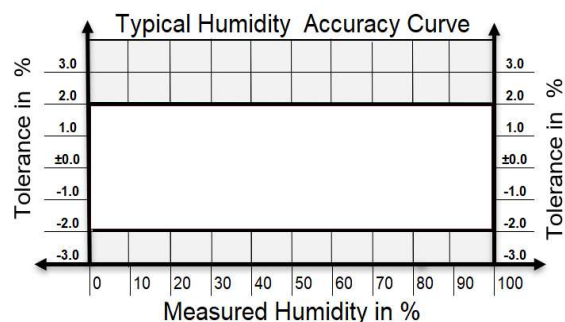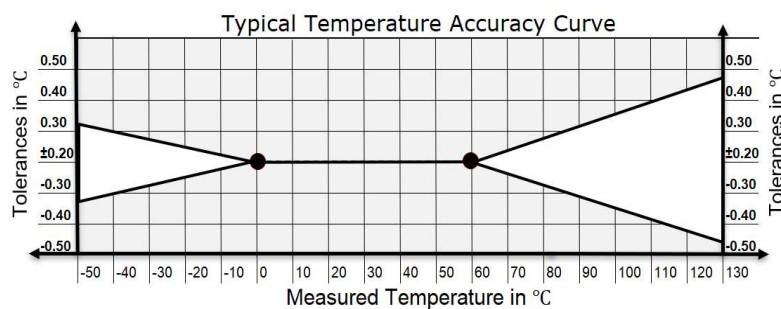
Dimensional Drawing / Mounting
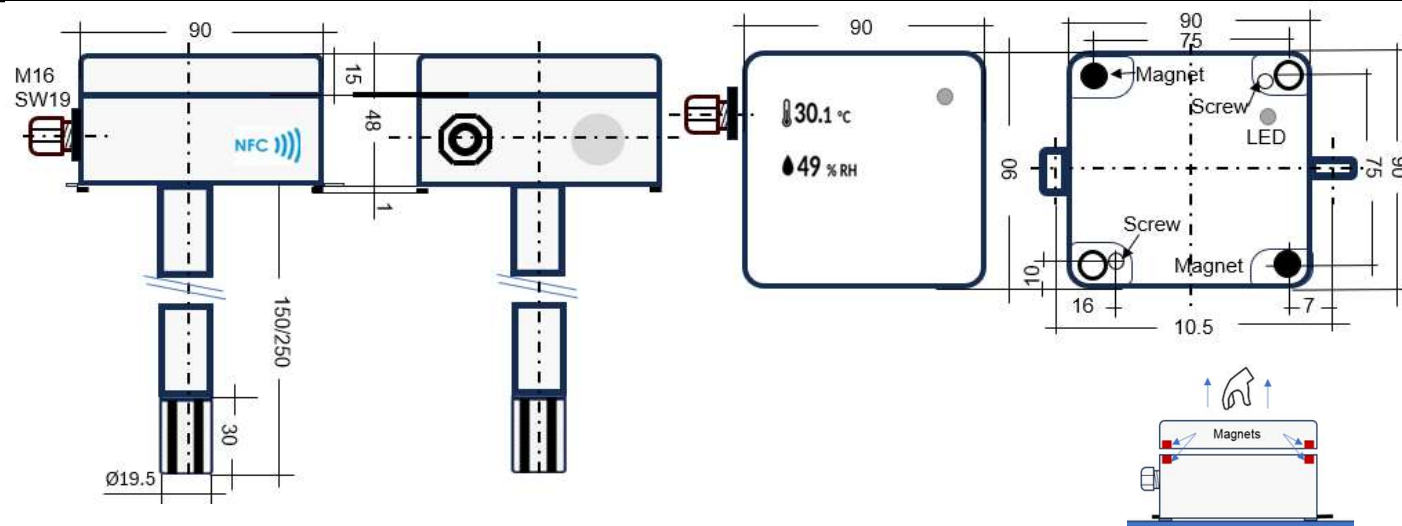
Connections & Settings

Terminal Connections						
S1	**S2**	**S3**	**S4**	**S5**	**S6**	**S7**
Temperature	Humidity	n.a	GND	UB+ 24V AC/DC	Temperature Passive (-)	Temperature Passive (+)