TI2219en	Technical Information	thermokon asia pacific
GDI1- Series (CO2)	Duct Air Quality (CO2) with Active Output	

The GDI1-Series (CO2) is designed to measure air quality in air ducts

of heating, ventilation and air conditioning systems

The air quality is measured based on CO2 levels (CO2 = Carbon dioxide)

The sensor operates with low power supply (SELV)

The air quality sensor output is active

Use

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

Air quality (CO2) measurement in air ducts

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active output

Dual channel system with automatic calibration

Can be used 24h / 365d applications such as call center, hospital, etc.

Sensor output 0…10V or 4…20mA, field selectable

Professional and practical product design, withstands rough environmental conditions

Easy to use, install and maintain

Product Range

Order Code	Power Supply	Sensor Output CO2	Immersion Length	Accuracy	IP- Protection
GDI1.AE	AC/DC 24V (±10%)	0…10V or 4…20mA field selectable	150mm	± 40PPM +5% of reading	IP54 according to EN60529, IP65 with bolted cover

Sensor Specification	Sensor Specification	Measured		CO_2
		Sensor Characteristics		Active
		Sensor Output		0…10V or 4…20mA
		Accuracy		max. ±40ppm or ±5% of measured value
		Repetability		± 10PPM
		Drift		max. ± 5PPM+ 0.5% of reading
		Response Time (T_{63})		60 sec.
		Sensor Element		Photoacoustic CO_2 sensor technology
		Measuring Range		0…2000ppm
Technical Information	Electrical Information	Power Supply		AC/DC 24V (±10%)
		Frequency		50 / 60 Hz @ AC 24V
		Output Load		Min. load 10kΩ @ AC/DC 24V
		Measuring Current		<1mA
		Power Consumption		Max. 3.0W
	Mechanical Information	Sensor Pipe Diameter		Ø19.5mm
		Sensor Pipe Length		150mm
		Sensing Element Position		Inside the housing
	User Interface			None
	Color and Material	Housing Cover		PA6, pure white
		Housing Bottom		PA6, pure white
		Cable Gland		ABS, Red 2002 (Vermilion)
		Gland Rubber Seal		ENSOFT50, RAL9016 (Traffic White)
		Sensor Pipe		PA6, RAL 9017 (Traffic Black)
	Environmental Condition	Operation Temperature		0ºC...+50ºC
		Operation Humidity		<85% r.h., no condensation
		Transport Temperature		-35ºC...+70ºC
		Transport Humidity	V21.	< 90% r.h.
		Storage Temperature		-20ºC...+70ºC
		Storage Humidity		< 85% r.h., no condensation
	Norms and Directives	IP- Rating		IP54 according to EN 60529, IP65 with bolted cover
		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		2004/108/EG Electromagnetic Compatibility EMV
		Emitted Interference		2000/EN60730-1 Emitted Interference
		Interference Resistance		2000/EN60730-1 Interference Resistance
		RoHS Compatibility		RoHS 3, Directive 2015/863
		Operation Climatic Condition		IEC 60721-3-3
		Operation Mechanical Condition		IEC 60721-3-2 to class 2M2
		Transport to Climatic Condition		IEC 60721-3-2
		Transport Mechanical Condition		IEC 60721-3-2 to class 2M2
		Storage Climatic Condition		IEC 60721-3-1
		Storage Mechanical Condition		IEC 60721-3-1 to class 2M2
Miscellaneous	Accessories	Mounting Kit, Included in delivery		Duct Mounting Kit, HUA0.A
	Shipping & Handling	Minimum Order		1 box with 1 piece
		Packaging Material		Rigid Cardboard
	Order Notes	Order Code		GDI1.AE

Advices

Installation Notes

Caution

Observe the following general regulation for engineering and implementation:

All relevant national and heavy power regulation

Other country specific regulations

Country-specific regulations

Local electrical supply authority regulation

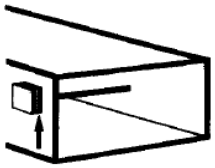
Schematics, cable listings, dispositions, specification and arrangements from the customer

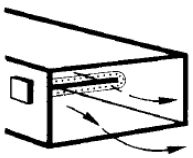
or engineering office in charge

Third party specifications, e.g. general contractors or constructors

Mounting Advices

Caution





Disposal Notes

The device is considered an electronic device for disposal in terms of the

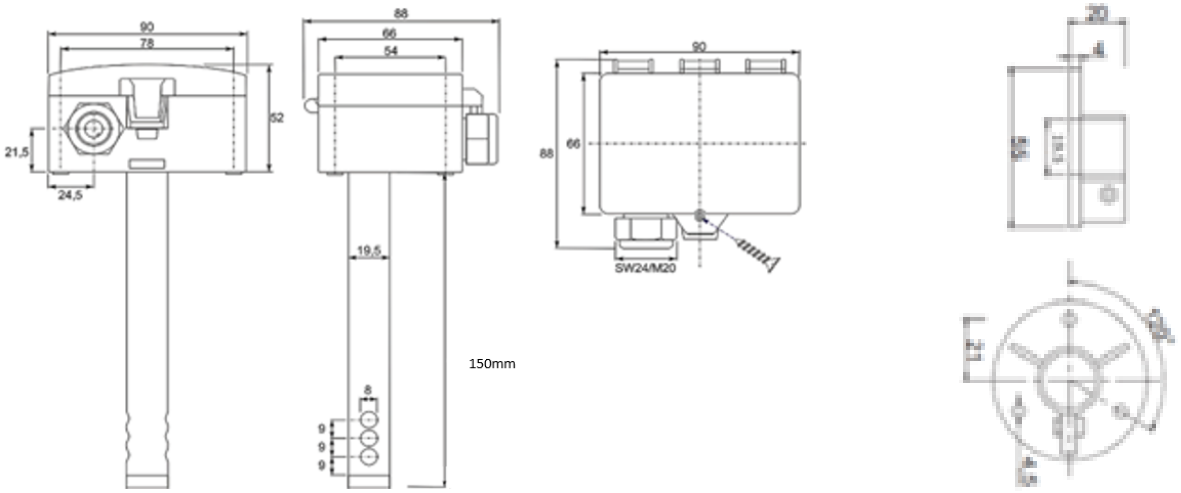
EUROPEAN DIRECTIVE 2012/19/EU.

The device may not be disposed as domestic garbage.

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

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

Dimensional Drawing

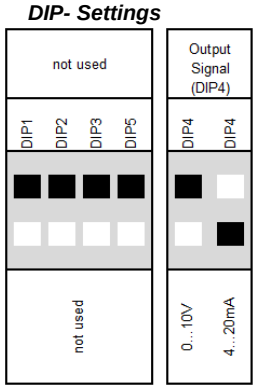
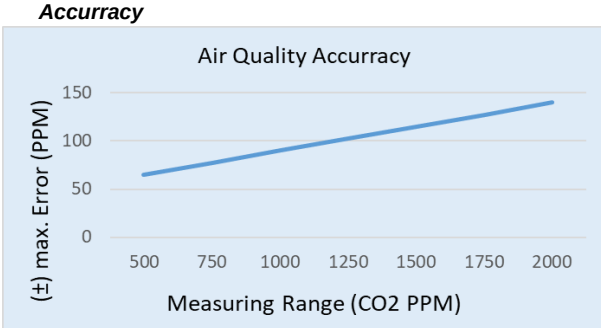


Connection, Settings and Accurray

Terminals

T1	UB+ (24V AC/DC)
T2	GND
T3	Air Quality (CO2)
T4	n/a
T5	n/a

DIP- Settings



Accurracy