

Tl2217en

Technical Information

1122176

Duct Air Quality (CO2) and Temperature Sensor with Active Outputs



CDI5- Series (CO2&T)

The CDI5- Series (CO2&T) is designed to measure air quality and temperature 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 and temperature sensor outputs are active



Use

Features

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

Air quality (CO2) and temperature measurement in air ducts

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Sensor with active outputs

Dual channel system with automatic calibration

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

Professional and practical product design, withstands rough environmental conditions

Easy to use, install and maintain

Product Range

Order Code	Power Supply	Sensor Output CO2	Sensor Output Temperature	Immersion Length	Асси	ıracy	IP- Protection
CDI5.CAa	AC/DC 24V (±10%)	010V	010V	180mm	CO2= max. ±40ppm or ±4% of measured value	Temperature+ ±0.5°C measuring range	IP54 according to EN 60529, IP65 with bolted cover

	Sensor Specification	Measured	CO2	CO2 / Temperature		
		Sensor Characteristics	CO2	Active		
ication			Temperature	Active		
		Sensor Output	CO2	010V		
			Temperature	010V		
		Accuracy	CO2	max. ±40ppm or ±4% of measured value		
			Temperature	±0.5°C measuring range		
ב פ		Air Velocity		minimum 0.3m/sec		
Sensor Specification				maximum 10m/sec.		
		Temperature Dependency	CO2	4ppm / °C		
		Drift	CO2	Max. 0.5% of full scale per year / max. 5% of full scale over 10 year		
		Warm up time	CO2	<2 min. (Operational); ~15 min. (max. accuracy)		
		Sensor Element	CO2	NDIR (Non Dispersive InfraRed)		
		Calibration	CO2	Self calibration dual channel		
		Measuring Range	CO2	02000ppm		
			Temperature	0+50°C		
	Electrical Information	Power Supply		AC/DC 24V (±10%)		
		Frequency		50 / 60 Hz @ AC 24V		
		Output Load	CO2/Temp.	Min. load 10kΩ @ AC/DC 24V		
		Measuring Current		<1mA		
		Power Consumption		Max. 3.0W		
	Mechanical Information	Sensor Pipe Diameter		Ø19.5mm		
		Sensor Pipe Length		180mm		
		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)		
ŧ	Environmental Condition	Operation Temperature		0°C+50°C		
		Operation Humidity		<85% r.h., no condensation		
5		Transport Temperature		-35°C+70°C		
		Transport Humidity		< 90% r.h.		
		Storage Temperature		-20°C+70°C		
Technical Information		Storage Humidity				
•	Norms and Directives	IP- Rating		< 85% r.h., no condensation IP54 according to EN 60529, IP65 with bolted cover		
	Norms and Directives	•		III to EN 60 730		
		Safety Class				
		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 2011/65/EC		
		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		
	Accessories	Mounting Kit, Included in delivery		Duct Mounting Kit, HUA0.A		
	Shipping & Handling	Minimum Order		1 box with 1 piece		
		Packaging Material		Rigits Cardboards		
!	Order Notes	Order Code		CDI5.CAa		

Installation Notes



Other country specific regulations

Country-specific regulations

Local electrical supply authority regulation

All relevant national and heavy power regulation

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

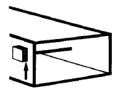
or engineering office in charge

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

Mounting Advices



Advices







Disposal Notes

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



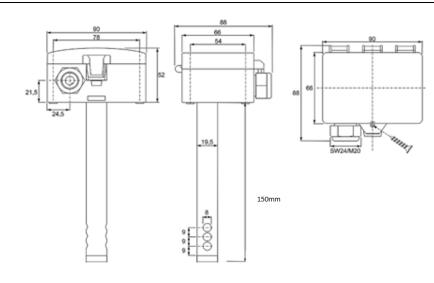
EUROPEAN DIRECTIVE 2012/19/EU.

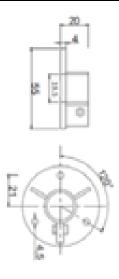
The device may not be disposed as domestic garbage.

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

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

Dimensional Drawing





Connection

Terminal Bar							
1	2	3	4	5	6	7	
UB+ (24V AC/DC)	GND	ı	Output Temperature (010V)	ı	Output CO2 (010V)		

