
 TI2217en	Technical Information	
CDI5- Series (CO2&T)	Duct Air Quality (CO2) and Temperature Sensor with Active Outputs	

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	<p>Compatible with all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Air quality (CO2) and temperature measurement in air ducts</p> <p>Used in all common HVAC applications</p> <p>Used in Commercial and Industrial Buildings</p>																						
Features	<p>Sensor with active outputs</p> <p>Dual channel system with automatic calibration</p> <p>Can be used 24h / 365d applications such as call center, hospital, etc.</p> <p>Professional and practical product design, withstands rough environmental conditions</p> <p>Easy to use, install and maintain</p>																						
Product Range	<table border="1"> <tr> <th>Order Code</th><th>Power Supply</th><th>Sensor Output CO2</th><th>Sensor Output Temperature</th><th>Immersion Length</th><th colspan="2">Accuracy</th><th>IP-Protection</th></tr> <tr> <td>CDI5.CAa</td><td>AC/DC 24V (±10%)</td><td>0...10V</td><td>0...10V</td><td>180mm</td><td>CO2= max. ±40ppm or ±4% of measured value</td><td>Temperature+ ±0.5°C measuring range</td><td>IP54 according to EN 60529, IP65 with bolted cover</td></tr> </table>							Order Code	Power Supply	Sensor Output CO2	Sensor Output Temperature	Immersion Length	Accuracy		IP-Protection	CDI5.CAa	AC/DC 24V (±10%)	0...10V	0...10V	180mm	CO2= max. ±40ppm or ±4% of measured value	Temperature+ ±0.5°C measuring range	IP54 according to EN 60529, IP65 with bolted cover
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Sensor Specification	Sensor Specification	Measured	CO2	CO2 / Temperature
		Sensor Characteristics	CO2	Active
			Temperature	Active
		Sensor Output	CO2	0...10V
			Temperature	0...10V
		Accuracy	CO2	max. ±40ppm or ±4% of measured value
			Temperature	±0.5°C measuring range
		Air Velocity	minimum	0.3m/sec
			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 years
		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	0...2000ppm
			Temperature	0...+50°C
Technical Information	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)
	Environmental Condition	Operation Temperature		0°C...+50°C
		Operation Humidity		<85% r.h., no condensation
		Transport Temperature		-35°C...+70°C
		Transport Humidity		< 90% r.h.
		Storage Temperature		-20°C...+70°C
		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 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
Miscellaneous	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

All Information and technical data are subject to alteration

Advices	<div>Installation Notes</div> <div><div><div>Caution</div></div><div><div>Observe the following general regulation for engineering and implementation:</div><div>All relevant national and heavy power regulation</div><div>Other country specific regulations</div><div>Country-specific regulations</div><div>Local electrical supply authority regulation</div><div>Schematics, cable listings, dispositions, specification and arrangements from the customer</div><div>or engineering office in charge</div><div>Third party specifications, e.g. general contractors or constructors</div></div></div>
	<div>Mounting Advices</div> <div><div><div>Caution</div></div><div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div></div></div>
	<div>Disposal Notes</div> <div><div><div></div></div><div><div>The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.</div><div>The device may not be disposed as domestic garbage.</div><div>The device must be disposed through channels provided for this purpose.</div><div>It is mandatory to complying with local currently applying laws and regulations.</div></div></div>
Dimensional Drawing	<div><div><div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div><div></div></div><div>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