
 TI3203en	Product Information	
PDE1- Series (dP)	Air Differential Pressure Sensor with Active Output	

The PDE1- Series (dP) is designed to measure differential pressure in Duct Systems or Rooms, especially where high precision measurements are needed

The sensor can be use in non aggressive, non flammable environments

Four Selectable Measuring Ranges

The sensor operates with low power supply.

The sensor output is 0..10V or 4...20mA, field selectable



Use	<p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Differential pressure measurement in precise HVAC control systems</p> <p>Monitoring differential pressure of fans in air systems</p> <p>Suitable for laboratory and clean room applications with high precession controls</p>
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Features	<p>Sensor outputs 0...10V or 4...20mA, field selectable</p> <p>dP- Sensor with excellent repeatability, practically no drift or offset</p> <p>dP Sensor is factory calibrated and temperature compensated</p> <p>Response Time Filter</p> <p>Professional and practical product design, withstands rough environmental conditions</p> <p>Easy to use, install and maintain</p>
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Product Range	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="204 1402 341 1496">Order Codes</th> <th data-bbox="341 1402 544 1496">Power Supply</th> <th data-bbox="544 1402 746 1496">Outputs</th> <th data-bbox="746 1402 879 1496">Measuring Range</th> <th data-bbox="879 1402 1018 1496">Over Pressure Rating</th> <th data-bbox="1018 1402 1150 1496">Bust Pressure Rating</th> <th data-bbox="1150 1402 1286 1496">IP Rating</th> </tr> </thead> <tbody> <tr> <td data-bbox="204 1496 341 1767">PDE1.CE</td> <td data-bbox="341 1496 544 2033" rowspan="6" style="text-align: center; vertical-align: middle;">AC/DC 24V (±10%)</td> <td data-bbox="544 1496 746 1767" rowspan="4" style="text-align: center; vertical-align: middle;">0...10V</td> <td data-bbox="746 1496 879 1547">0...50Pa</td> <td data-bbox="879 1496 1018 2033" rowspan="6" style="text-align: center; vertical-align: middle;">1 bar - 100.000 Pa</td> <td data-bbox="1018 1496 1150 2033" rowspan="6" style="text-align: center; vertical-align: middle;">3 bar - 300.000 Pa</td> <td data-bbox="1150 1496 1286 2033" rowspan="6" style="text-align: center; vertical-align: middle;">IP65</td> </tr> <tr> <td data-bbox="204 1547 341 1599"></td> <td data-bbox="746 1547 879 1599">0...100Pa</td> </tr> <tr> <td data-bbox="204 1599 341 1650"></td> <td data-bbox="746 1599 879 1650">0...250Pa</td> </tr> <tr> <td data-bbox="204 1650 341 1702"></td> <td data-bbox="746 1650 879 1702">0...500Pa</td> </tr> <tr> <td data-bbox="204 1702 341 1767"></td> <td data-bbox="544 1767 746 1818" style="text-align: center; vertical-align: middle;">or</td> <td data-bbox="746 1702 879 1767">0...750Pa</td> </tr> <tr> <td data-bbox="204 1767 341 2033">PDE1.DE</td> <td data-bbox="544 1818 746 2033" style="text-align: center; vertical-align: middle;">4...20mA</td> <td data-bbox="746 1767 879 1818">0...1000Pa</td> </tr> <tr> <td></td> <td></td> <td></td> <td data-bbox="746 1818 879 1870">0...1250Pa</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td data-bbox="746 1870 879 1921">0...1500Pa</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							Order Codes	Power Supply	Outputs	Measuring Range	Over Pressure Rating	Bust Pressure Rating	IP Rating	PDE1.CE	AC/DC 24V (±10%)	0...10V	0...50Pa	1 bar - 100.000 Pa	3 bar - 300.000 Pa	IP65		0...100Pa		0...250Pa		0...500Pa		or	0...750Pa	PDE1.DE	4...20mA	0...1000Pa				0...1250Pa							0...1500Pa			
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Sensor Specification	Sensor Specification	Measured	Air Differential Pressure	
		Sensor Characteristics	Active	
		Sensor Output	0...10V or 4...20mA	
		Total Accuracy	see accuracy curve page 3	
		Zero Point Accuracy	0.2 Pa	
		Zero Point Repetability	0.1 Pa	
		Over Pressure	1 bar, 100.000 Pa	
		Burst Pressure	2 bar, 100.000 Pa	
		Offset stability	<0.03 Pa / year	
		Calibrated Temperature Range	-40...85°C	
		Response Time Filter	4sec. ; 10 sec.	
		Measuring Range	see page 1	
		Media Compatitbility	Air, N2, O2, non condensing	
	Technical Information	Electrical Information	Power Supply	DC 15...24V (±10%) or AC 24V (±10%)
Frequency			50 / 60 Hz @ AC 24V	
Output Load			Min. load 10kΩ	
Power Consumption			Typical 1.1W at 24V= , 1.7VA at 24V~	
Mechanical Information		Terminal Clamp	Screw terminal, max. 1.5mm ²	
		Connection Nozzle Dimension	Ø6.3 x 1.15mm, L=10mm	
		Cable Entry	M20, Ø6...Ø8mm cables	
		Sensing Element Position	Internal	
Color and Material		Housing Cover	PA6, White	
		Housing Bottom	PA6, White	
		Lock Screws	Snap Connector	
		Cable Gland	ABS, RAL 7042 (Traffic Grey A)	
		Gland Rubber Seal	ENSOF50, RAL 9016 (Traffic White)	
		User element	DIP Switches	
		Connection Nozzle	PA6, White	
Environmental Condition		Operation Temperature	-10°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	IP65 according to IEC60529	
		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	
		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	2 plastic duct connectors; 2m Silicone tube
		Shipping & Handling	Product Dimension (L x W x H) / Weight	88mm x 90mm x 52mm / 125gr.
Transport and Storage dimension (L x W x H) / Weight			100mm x 100mm x 100mm / 225gr.	
Packaging Material			Rigid Cardboards Packaging	
Order Notes		Order Code	PDE1.DE	

All Information and technical data are subject to alteration

Installation Notes

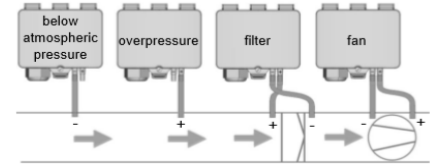
Observe the following general regulation for engineering and implementation:



- 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

Advices

Mounting Advices



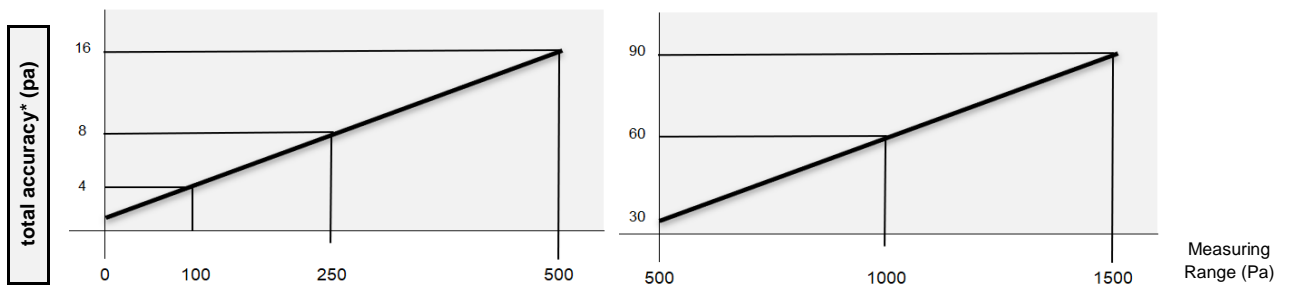
Disposal Notes

The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.



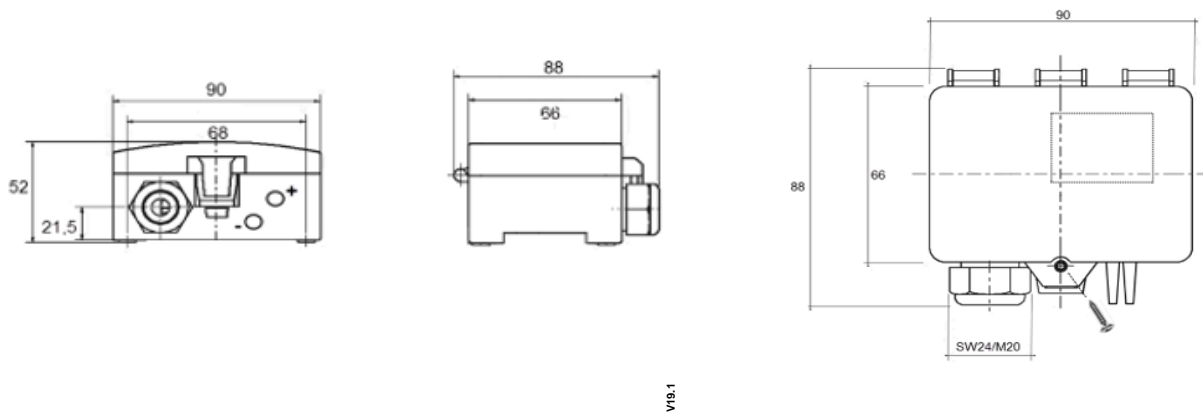
- The device may not be disposed as domestic garbage.
- The device must be disposed through channels provided for this purpose.
- It is mandatory to comply with local currently applying laws and regulations.

Accuracy Curves



* total accuracy =sum of zero-point accuracy, span accuracy and repeatability

Dimensional Drawing



Connections & Settings

Terminals

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

Pressure Setting (DIP1 & DIP 2)				Response Time (DIP3)		Output Signal (DIP4)		n/a	
DIP1	DIP2	DIP1	DIP2	DIP3	DIP3	DIP4	DIP4	DIP5	DIP5
0...50Pa		0...100Pa		10 sec.	4 sec.	0...10V	4...20mA	n/a	n/a
0...100Pa		0...250Pa							
0...500Pa									

Pressure Setting (DIP1 & DIP 2)				Response Time (DIP3)		Output Signal (DIP4)		n/a	
DIP1	DIP2	DIP1	DIP2	DIP3	DIP3	DIP4	DIP4	DIP5	DIP5
0...750Pa		0...1000Pa		10 sec.	4 sec.	0...10V	4...20mA	n/a	n/a
0...1250Pa		0...1500Pa							

PDE1.DE

PDE1.EE