

3201e	<b>Product Information</b>	<b>thermokon</b> asia pacific
PDE1- Series (dP)	<b>Air Differential Pressure Active Sensor</b>	

The PDE1-Series (dP) is designed to measure differential pressure in HVAC systems with non-flammable gases and non-aggressive gases. The control output is active (0..10V / 4..20mA) selectable. The differential pressure transmitter has internal pressure range selector.



<b>Use</b>	<p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Differential pressure measurement in HVAC systems</p> <p>Monitoring the air dampers in the primary or secondary controls systems</p> <p>Supervision of the status of heating / cooling coils, preventing overheating / freezing</p> <p>Monitoring of fan belts</p> <p>Used in all common HVAC applications</p>
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<b>Features</b>	<p>Sensor with active output</p> <p>Internal selectable measuring range and control output signal</p> <p>Optional LCD display</p> <p>Professional and practical product design, withstands rough environmental conditions</p> <p>Easy to use, install and maintain</p>
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<b>Product Range</b>		<b>Measuring Ranges</b>						<b>Max. Working Overpressure</b>		<b>Display</b>						
	<b>Model</b>	-100...+100Pa	0...100Pa	0...250Pa	0...500Pa	0...1000Pa	0...1500Pa	0...2000Pa	0...2500Pa	0...3000Pa	0...4000Pa	0...5000Pa	0...7000Pa	30kPa	80kPa	LCD
	PDE1.EAa				•									•		
	PDE1.GAa								•						•	•
	PDE1.FAa				•									•		
PDE1.HAa									•					•	•	

All Information and technical data are subject to alteration


Sensor Specification	Sensor Specification	Measured	Air Differential Pressure	
	Sensor Characteristics	Active		
	Sensor Output (s)	0...10V (D) / 4...20mA		
	Output Load	Min. load 1kΩ @ AC/DC 24V Max. load 500Ω @ DC 24V		
	Accuracy	± 1.5% FC or ±3PA <250PA		
	Max. Over Pressure	See Product Range, Page 1		
	Response Time	0, 4 or 8 seconds (selectable)		
	Measuring Range (s)	See Product Range, Page 1		
	Optional Measuring Range (s)	See Product Range, Page 1		
Technical Information	Electrical Information	Power Supply	DC 15-24V (±10%) or AC 24V (±10%)	
		Frequency	50 / 60 Hz at AC 24V	
		Terminal Clamp	Screw terminal, max. 1.5mm <sup>2</sup>	
	Mechanical Information	Power Consumption	≤ 1VA / AC 24V; ≤ 1VA / DC 24V	
		Connection Nozzle Dimension	Ø6.3 x 1.15mm, L=10mm	
		Cable Entry	M20, Ø6...Ø8mm cables	
		Sensing Element Position	Internal	
		Range Selection	Jumper switches inside the housing	
	User Interface	Display	LCD, optional	
	Color and Materials	Housing Cover	PA6, White	
		Housing Bottom	PA6, White	
		Lock Screws	Snap Connector	
		Cable Gland	Grey ABS, RAL7042 (Traffic Grey A)	
		Gland Rubber Seal	White ENSOFT50, RAL9016 (Traffic White)	
		User element	DIP Switches	
		Display	Liquid Display, Black & White	
		Connection Nozzle	PA6, White	
		Environmental Conditions	Operation Temperature	-25°C...+70°C
			Operation Humidity	<85% r.h., no condensation
	Transport Temperature		-35°C...+70°C	
	Transport Humidity		< 90% r.h.	
	Storage Temperature		-10°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 to		2004/108/EG Electromagnetic Compatibility EMV		
CE Electromagnetic Compatibility Emitted Interference		2000/EN60730-1 Emitted Interference		
CE Electromagnetic Compatibility Interference Resistance		2000/EN60730-1 Interference Resistance		
RoHS Compatibility		RoHS 2011/65/EC		
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			


Connection	DIP Configuration	Measuring range pressure		
		PDE1.EAa/GAa	PDE1.FAa/HAA	
	ON OFF	1 2 3	-100...100	0...1000
	ON OFF	1 2 3	0...100	0...1500
	ON OFF	1 2 3	0...250	0...2000
	ON OFF	1 2 3	0...500	0...2500
	ON OFF	1 2 3	0...1000	0...3000
	ON OFF	1 2 3	0...1500	0...4000
	ON OFF	1 2 3	0...2000	0...5000
	ON OFF	1 2 3	0...2500	0...7000

1	2	3	4
24V AC/DC	GND	0...10V	4...20mA





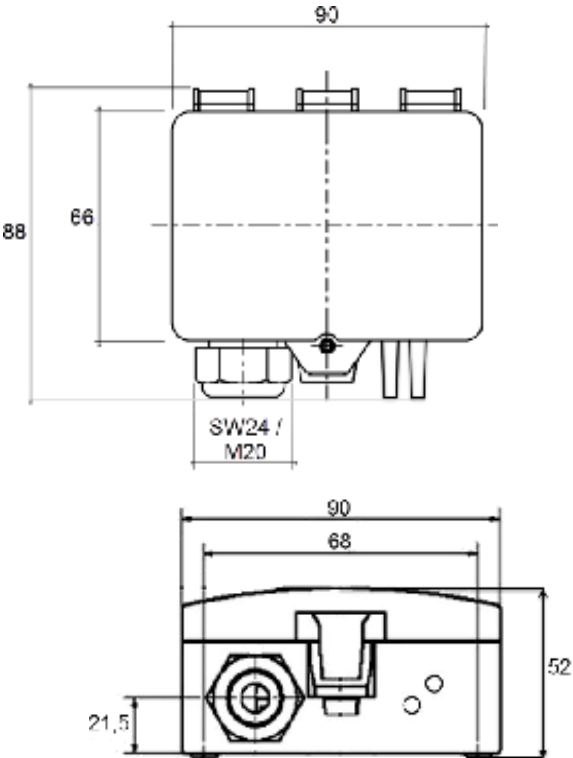
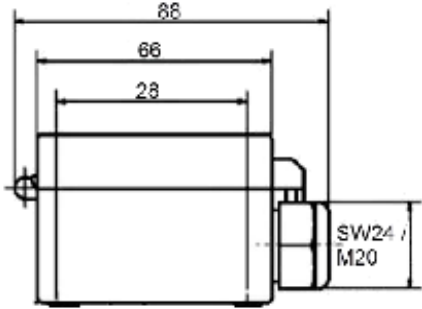
Use DIP 4 and DIP 5 to set the response time:

 DIP 4 and DIP 5: Response time 0,8 s

 DIP 4 and DIP 5: Response time 0,4 s

Note: When resetting the pressure range, be sure that you disconnected the pressure connection.

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Advices	<p><b>Security Advice</b></p>  <p>The installation and assembly of electrical equipment may only be performed by a skilled electrician.</p> <p>The products must not be used in any relation with equipment that supports, directly or indirectly, human health, life or with applications that can result in danger for people, animals or real value.</p>	
	<p><b>Mounting Advices</b></p>  <p>For connecting the device, the process lines must be unpressurized.</p> <p>Note the suitability of the device for the medium to be measured.</p> <p>Note the maximum pressures.</p>	
	<p><b>Installation Notes</b></p>  <p>The product must be installed at a suitable place and within the range of validity of the local electrical installation laws and regulations.</p> <p>A prerequisite for the operation is a proper installation of all electrical supply, control and sensing leads as well as the pressurized connection line.</p> <p>Before installing the device, the leak tightness of the pressurized connection lines must be inspected.</p>	
	<p><b>Commissioning Notes</b></p>  <p>Sensing devices with transducers should in principle be operated in the middle of the measuring range.</p> <p>The ambient temperature of the transducer electronics should be kept constant.</p> <p><u>Zero Calibration</u></p> <p>Supply voltage must be connected one hour before the zero-point calibration is carried out.</p> <ul style="list-style-type: none"> <li>- Release both tubes from the pressure inlets + and -.</li> <li>- Push zero button until the red LED turns ON.</li> <li>- Wait until LED turns off and then install tubes again to the pressure inlets.</li> </ul> <p>During normal operation it is recommended to calibrate the zero point every 12 months.</p> <p>If the transmitter is equipped with automatic zero-point calibration the manual calibration is not required.</p> <p>The automatic zero-point calibration is carried out every 10 minutes.</p> <p>During the calibration the output and display values will freeze to the latest measured value.</p> <p>The automatic zero-point calibration takes 4 seconds.</p>	
Dimensions		
	<p><b>Accessories</b></p> <p>= "Master PRES"IDI2</p> <p>Accessory not included in delivery</p> <p>2 plastic duct connectors; 2m PVC tube</p>	<p><b>Shipping &amp; Handling</b></p> <p>Product Dimension (L x W x H) / Weight</p> <p>Transport and Storage dimension (L x W x H) / Weight</p> <p>Package Material</p> <p>95mm x 90mm x 36mm / 100gr.</p> <p>175mm x 130mm x 45mm / 215gr.</p> <p>Rigid Cardboards Packaging</p>
Miscellanies	<p><b>Order Notes</b></p> <p>Order Code</p> <p>See Product Range, Page 1, e.g. PDE1.PAa</p>	

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