

3210e	Product Information	thermokon asia pacific
PDE1- Series (dP_r)	Air Differential Pressure Switch / Active Sensor	

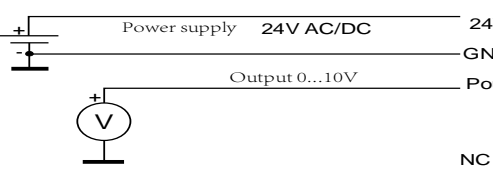
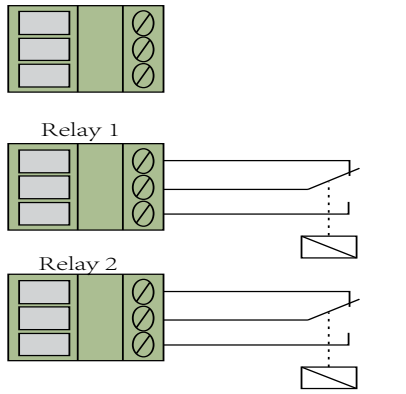
The PDE1-Series (dP) is designed to measure differential pressure in HVAC systems with non-flammable gases and non-aggressive gases. The control output active and 2-point (ON/OFF). Optional a 2nd 2-point (ON/OFF) control output available. The measuring units, measuring range, response time, set point and hysteresis of the relays can be programmed on the unit.



Use	<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>Used in all common HVAC applications</p> <p>Used in Commercial and Industrial Buildings</p>
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Features	<p>Sensor with active output, optional control output 2-point (ON/OFF)</p> <p>Programmable measuring units, measuring range, response time, set point and hysteresis of the relays</p> <p>Optional 2nd control 2-point (ON/OFF) output</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%; text-align: center;"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="2">Relay Output</th> <th>Output</th> </tr> <tr> <th>Relay 1</th> <th>Relay 2</th> <th>0-10V</th> </tr> </thead> <tbody> <tr> <td>PDE1.LG</td> <td>•</td> <td></td> <td>•</td> </tr> <tr> <td>PDE1.MH</td> <td></td> <td>•</td> <td>•</td> </tr> </tbody> </table>	Model	Relay Output		Output	Relay 1	Relay 2	0-10V	PDE1.LG	•		•	PDE1.MH		•	•
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Sensor Specification	Sensor Specification	Measured Sensor Characteristics Sensor Output (s) Output Load Accuracy Long Term Stability Max. Over Pressure Measuring Range (s) Optional Measuring Range (s)	Air Pressure Active / ON-OFF See Product Range, Page 1 Min. load 1kΩ @ AC/DC 24V ± 1.5% over full (selected) measuring range ≤1Pa / Year Max. 30kPa 0...2500Pa 0...100Pa / 0...250Pa / 0...1kPa / 0...1.5kPa
Technical Information	Electrical Information Mechanical Information User Interface Color and Materials Environmental Conditions Norms and Directives	Power Supply Frequency Terminal Clamp Power Consumption Relay Rating Connection Nozzle Dimension Cable Entry Sensing Element Position Range Selection None Housing Cover Housing Bottom Lock Screws Cable Gland Gland Rubber Seal User element Display Connection Nozzle Operation Temperature Operation Humidity Transport Temperature Transport Humidity Storage Temperature Storage Humidity IP- Rating Safety Class Product Standard 1 Product Standard 2 CE Conformities to CE Electromagnetic Compatibility Emitted Interference CE Electromagnetic Compatibility Interference Resistance RoHS Compatibility Operation Climatic Condition Operation Mechanical Condition Transport to Climatic Condition Transport Mechanical Condition Storage Climatic Condition Storage Mechanical Condition	AC 15-24V (±10%) or DC 24V (±10%) 50 / 60 Hz at AC 24V Screw terminal, max. 1.5mm ² DC 24V, ≤ 80mA / AC 24V, ≤ 6VA AC 250V, max 6A; DC 30V, max. 6A Ø6.3 x 1.15mm, L=10mm Dual entry, M16 & M20, Ø6...Ø8mm cables Internal Via user interface on the surface of the housing Grey PC, RAL3006 (Aluminum Grey) with Clear Window Grey ABS, RAL7042 (Traffic Grey A) US: AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301 Grey ABS, RAL7042 (Traffic Grey A) White ENSOFT50, RAL9016 (Traffic White) Grey ABS, RAL7024 (Graphite Grey) Liquid Display, Black & White Brass -10°C...+50°C <85% r.h., no condensation -35°C...+70°C < 90% r.h. -10°C...+70°C < 85% r.h., no condensation IP54 to IEC60529 III to EN 60 730 Automatic Electric. Controls for household and similar use 2009/EN 60 730-1 2004/108/EG Electromagnetic Compatibility EMV 2000/EN60730-1 Emitted Interference 2000/EN60730-1 Interference Resistance RoHS 2011/65/EC IEC 60 721-3-3 IEC 60 721-3-2 to class2M2 IEC 60 721-3-2 IEC 60 721-3-2 to class2M2 IEC 60 721-3-1 IEC 60 721-3-1 to class2M2
Connection	Terminal Connection	 <p>The supply cable and control cable for relays must be separate if no SELV voltage is used in relay contacts. Both of the cables have their own cable entry.</p>	
Miscellanies	Accessories Shipping & Handling Order Note	Mounting Kit. Included in delivery Minimum Order Product Dimension (L x W x H) / Weight Transport and Storage dimension (L x W x H) / Weight Package Material See Product Range, Page 1, e.g. PDE1.LG	2 plastic duct connectors; 2m PVC tube 1 box with 1 piece 95mm x 90mm x 36mm / 152gr. 175mm x 130mm x 45mm / 270gr. Rigid Cardboards Packaging See Product Range, Page 1, e.g. PDE1.LG

All Information and technical data are subject to alteration

Security Advice



The installation and assembly of electrical equipment may only be performed by a skilled electrician.
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.

Mounting Advices



While connecting the device, the process lines must be unpressurized
Note the suitability of the device in regards of the medium to be measured.
Note the maximum pressures.

Installation Notes



The product must be installed at a suitable place and within the range of validity of the local electrical installation laws and regulations.
A prerequisite for the operation is a proper installation of all electrical supply, control and sensing leads as well as the pressurized connection line.
Before installing the device, the leak tightness of the pressurized connection lines must be inspected.

Commissioning Notes



Setting

By pressing the button "MENU" for 3 seconds, you can enter the selected menu.
By pressing the button "BACK" you can return without making changes.
By pressing the button "OK" you can open new options or confirm changes and return to previous display.
By pressing the up and down arrow buttons you can scroll the minus.

Zero-Point Calibration

Supply voltage must be connected one hour before the 0-point adjustment is carried out.
1) Disconnect both tubes from the pressure inlets + and -
2) Push both arrow buttons or select "Zero" from the menu, green led turns off and "Zero" text followed by a counter from 3 to 0 seconds is displayed
3) Wait until the green LED turns on again and then connect the tubes back to the pressure inlets
It is recommended to adjust the zero point every 12 months during normal operation.

Span Adjustment

Supply voltage should be connected one hour before the span point adjustment is carried out. Span point must not be adjusted without input pressure.
If the span point is adjusted with 0Pa or close to 0Pa input pressure the device may lose its accuracy and will not give out correct readings. In this case go to menu and select Span "and then Reset" . This resets the span adjustment.
To adjust the span you need an accurate reference meter.
1) Set the zero point
2) Connect the input pressure
3) From the menu select "Span" and then "Adjust".
4) Adjust the display or 0...10V value to match the reference meters' value using the arrow buttons and confirm by pressing OK.

