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| 3230e | Product Information | thermokon asia pacific |
| PDI1- Series (V&T) | Air Velocity and Temperature Pressure Active | |

The PDI1-Series (V&T) is designed to measure air velocity and temperature in HVAC systems with non-flammable gases and non-aggressive gases. The control outputs are active. The air velocity transmitter has internal velocity selector. Optional LCD display available.



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| Use | <p>Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System</p> <p>Air velocity and temperature measurement in air ducts</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>Internal selectable measuring range</p> <p>Optional LCD display and 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"> <thead> <tr> <th rowspan="2">Model</th> <th colspan="3">Output</th> <th>Display</th> </tr> <tr> <th>0-10V</th> <th>4-20mA</th> <th>Relay</th> <th>LCD</th> </tr> </thead> <tbody> <tr> <td>PDI1.AA</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td></td> <td></td> </tr> <tr> <td>PDI1.BA</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td></td> <td style="text-align: center;">•</td> </tr> <tr> <td>PDI1.CA</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> <td style="text-align: center;">•</td> </tr> </tbody> </table> | Model | Output | | | Display | 0-10V | 4-20mA | Relay | LCD | PDI1.AA | • | • | | | PDI1.BA | • | • | | • | PDI1.CA | • | • | • | • |
|----------------------|---|--------|--------|---------|--|---------|-------|--------|-------|-----|---------|---|---|--|--|---------|---|---|--|---|---------|---|---|---|---|
| Model | Output | | | Display | | | | | | | | | | | | | | | | | | | | | |
| | 0-10V | 4-20mA | Relay | LCD | | | | | | | | | | | | | | | | | | | | | |
| PDI1.AA | • | • | | | | | | | | | | | | | | | | | | | | | | | |
| PDI1.BA | • | • | | • | | | | | | | | | | | | | | | | | | | | | |
| PDI1.CA | • | • | • | • | | | | | | | | | | | | | | | | | | | | | |

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| Sensor Specification | Sensor Specification | Measured Sensor Characteristics Sensor Output (s) Output Load Accuracy Measuring Range (s) Optional Measuring Range (s) Passive Temperature Sensor | Temperature / Air Flow Active / Active See Product Range, Page 1 Min. load 1kΩ @ AC/DC 24V / max. load 400Ω @ DC 24V ± 0.5K over full measuring range; 0.1m/s + 5% of actual value; 0.5m/s = 5% of actual value; 1m/s + 5% of actual value 0...20m/s / 0..50°C 0...2m/s; 0...10m/s PT1000 & NTC10k |
| 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 Immersion Rod Diameter Immersion Rod Length Cable Entry Sensing Element Position Range Selection Display Housing Cover Housing Bottom Lock Screws Cable Gland Gland Rubber Seal User element Display Immersion Rod 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, ≤50mA / AC 24V, ≤ 40mA AC 250V, max 6A; DC 30V, max. 6A Ø10mm 195mm Dual entry, 2 x M16, Ø6...Ø8mm cables external, top of the immersion rod Jumper switches inside the housing LCD optional Grey PC, RAL9006 (Aluminum Grey) Grey ABS, RAL7042 (Traffic Grey A) Snap Connector Grey ABS, RAL7042 (Traffic Grey A) White ENSOFT50, RAL9016 (Traffic White) Black DIL Switches Liquid Display, Black & White US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301 -25°C...+70°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 diagram illustrates the terminal connections for the sensor. It features a terminal block with four pins: Tout, vout, 24V, and GND. The Tout pin is connected to a circuit with a voltmeter (V) and an ammeter (A) to measure the output current (0...10V / 4...20mA temperature). The vout pin is connected to a similar circuit with a voltmeter (V) and an ammeter (A) to measure the output current (0...10V / 4...20mA velocity). The 24V pin is connected to a power supply, and the GND pin is connected to ground. A switch is shown with three contacts: NC (Normally Closed), COM (Common), and NO (Normally Open).</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 Order Code | Duct Mounting flange 1 box with 1 piece 95mm x 85mm x 265mm / 135gr. 325mm x 110mm x 100mm / 275gr. Rigid Cardboards Packaging See Product Range, Page 1, e.g. PDI1.AA |

All Information and technical data are subject to alteration

Advices

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



The supply cable and control cable for relay should be separated, if high voltage (no safety extra-low voltage) is used as relay contact. Both of the cable has its own cable entry.
The relay settings need to be done before high voltage (no safety extra-low voltage) is connected to the device. This ensures human safety against electrical shock.
The device is equipped with a lid fixing crew. The screw need to be used when high voltage (no safety extra-low voltage) is connected to the device.

Installation Notes



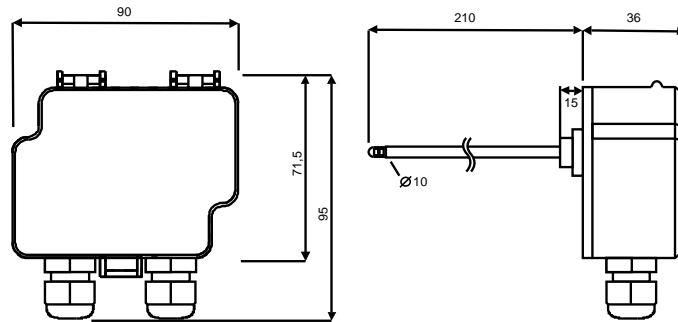
The product must be installed at a suitable place and within the range of validity of the local electrical installation laws and regulations.
A prerequisite for the operation is a proper installation of all electrical supply, control and sensing leads as well as the pressurized connection line.
The air velocity transmitter is supplied with a special protective cap protecting the sensitive sensor element against damage during transport. Before installing the AVT the cap must be removed necessarily.

Commissioning Notes

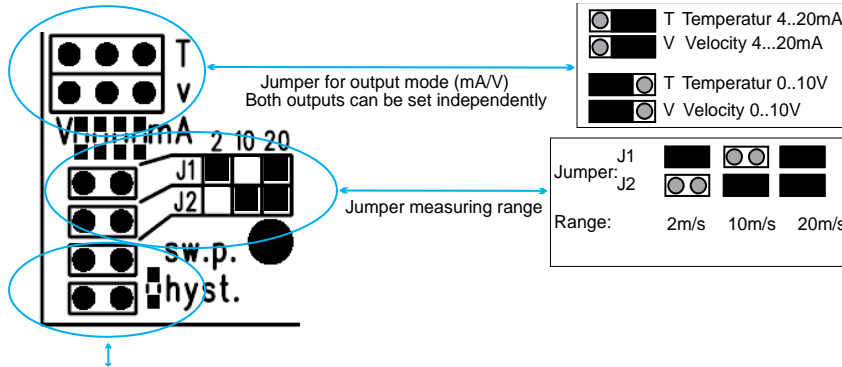


Sensing devices with transducers should in principle be operated in the middle of the measuring range.
The ambient temperature of the transducer electronics should be kept constant.
When switching the supply voltage on/off, power surges must be avoided on site.

Dimensional Drawing



Selection Diagram



Jumper and Push button for setting the relay parameters
Set the jumper "switching point" (sw.p) and push the button to adjust the switching point of the relay. The value chosen (m/s) is shown in the display.
Set the jumper "hysteresis" (hyst.) and push the button to adjust the hysteresis of the relay switching point. The value chosen (m/s) is shown in the display.