

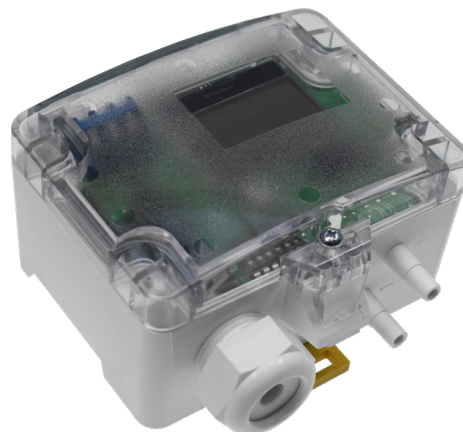
» DPE Flow LCD

Differential Pressure/Air Flow Transmitter

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
Issue date: 13.03.2020 · A100



» APPLICATION

Differential pressure and flow transmitter for monitoring and control of air filters, fans, industrial cold air circuits, flows in ventilation ducts with output 0..10 V. Eight selectable measuring ranges for differential pressure and a free measuring range for the flow rate are available. Screw mounting onto flat surface is possible. The device is prepared for mounting on DIN rail TS35 (35x7,5 mm) according to EN 60715.

» TYPES AVAILABLE

DPE2500 Flow LCD

DPE7000 Flow LCD

» SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

» NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

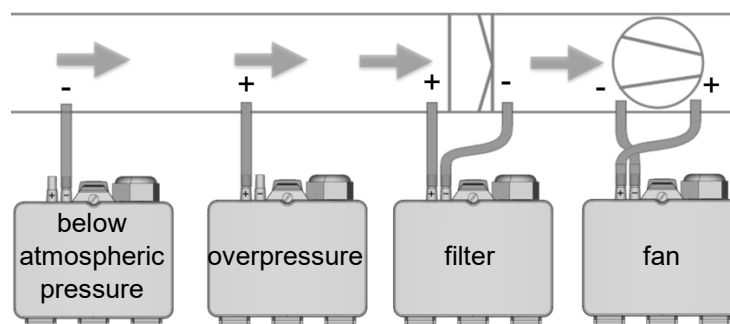
The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>.

» TECHNICAL DATA

Measuring values	flow meter, differential pressure	
Medium	air and non-aggressive gases	
Output voltage	0..10 V, min. load 10 kΩ	
Power supply	15..24 V = (±10%) or 24 V ~ (±10%) SELV	
Power consumption	typ. 1,1 W (24 V =) 1,7 VA (24 V ~)	
Measuring range pressure	Typ DPE2500 -100..+100 0..+100 0..+250 0..+500 0..+1000 0..+1500 0..+2000 0..+2500 Pa Factory default 0..+500 Pa	Typ DPE7000 0..+1000 0..+1500 0..+2000 0..+2500 0..+3000 0..+4000 0..+5000 0..+7000 Pa Factory default 0..+5000 Pa
Measuring range velocity	max range configurable, 0..50.000 m ³ /s (default)	
Accuracy pressure	measuring range ≤500 Pa: ±5 Pa, measuring range >500 Pa: ±10 Pa configurable response time (time constant) 0..20 s, (factory default 8 s)	
Max. overpressure	400 kPa	
Calibration	automatic zero-point calibration	
Sensor	piezo measuring element	
Display	LCD 37,5x31,6 mm units pressure (<i>configurable</i>): Pa (<i>default</i>), kPa, mbar, inWC, units air flow (<i>configurable</i>): m ³ /h, m ³ /s (<i>default</i>), cfm, l/s, scf/h, l/min	
Enclosure	hinged lid enclosure, PA6, pure white	
Protection	IP54 according to EN 60529, IP65 with bolted cover	
Cable entry	M20 for cable max. Ø=8 mm, seal insert for double cable entry for wire max Ø=6 mm	
Connection electrical	terminal block, max. 1,5 mm ²	
Connection mechanical	pressure connection male Ø=5,0 mm / Ø=6,3 mm, connection tube: PVC, soft	
Ambient condition	-10..+50 °C, max. 85% rH short term condensation	
Weight	150 g	
Mounting	screw mounting onto flat surface, prepared for mounting on DIN rail TS35 (35x7,5 mm) according to EN 60715	
Delivery content	4 mounting screws, 2 plastic duct flanges, 2 m PVC connection tube	

» MOUNTING ADVICES

Before installing the device, please check the leak tightness of the pressure lines.



» **CONNECTION PLAN**

For output 1 (AOU1), the output measured variable (differential pressure or flow rate) can be configured. On delivery, the measured variable flow rate is set.

AOU1	Output 0..10 V
GND	GND
UB+	15..24 V = / 24 V ~

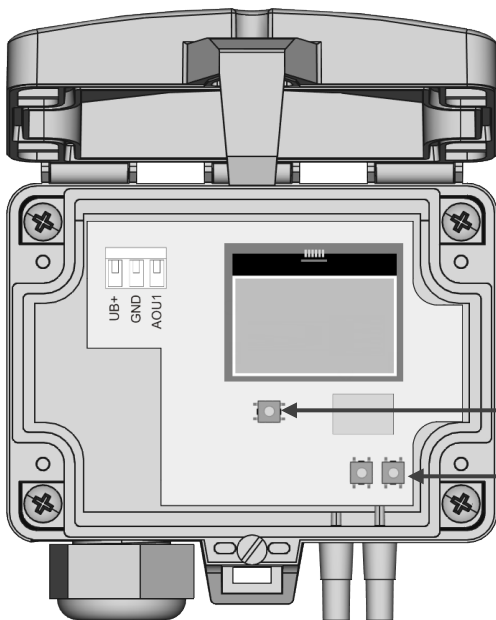
» **AUTOMATIC ZERO-POINT CALIBRATION**



Transmitters equipped with the auto zero calibration are maintenance free.

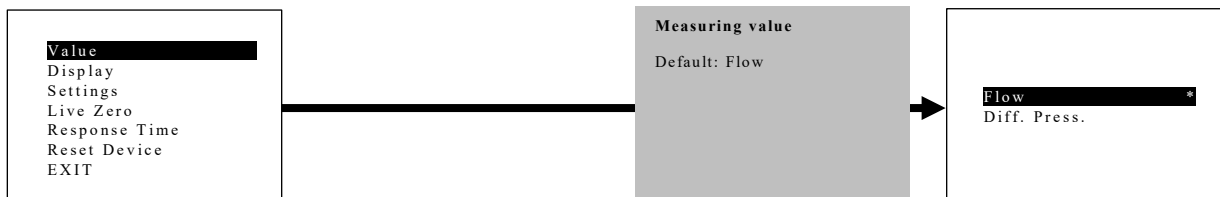
The auto-zero calibration electronically adjusts the transmitter zero every 10 minutes. The function eliminates all output signal drift due to thermal, electronic or mechanical effects. The auto-zero adjustment takes approx. 1 second after which the device returns to its normal measuring mode. During the 1 second adjustment period, the output and display values will freeze to the latest measured value.

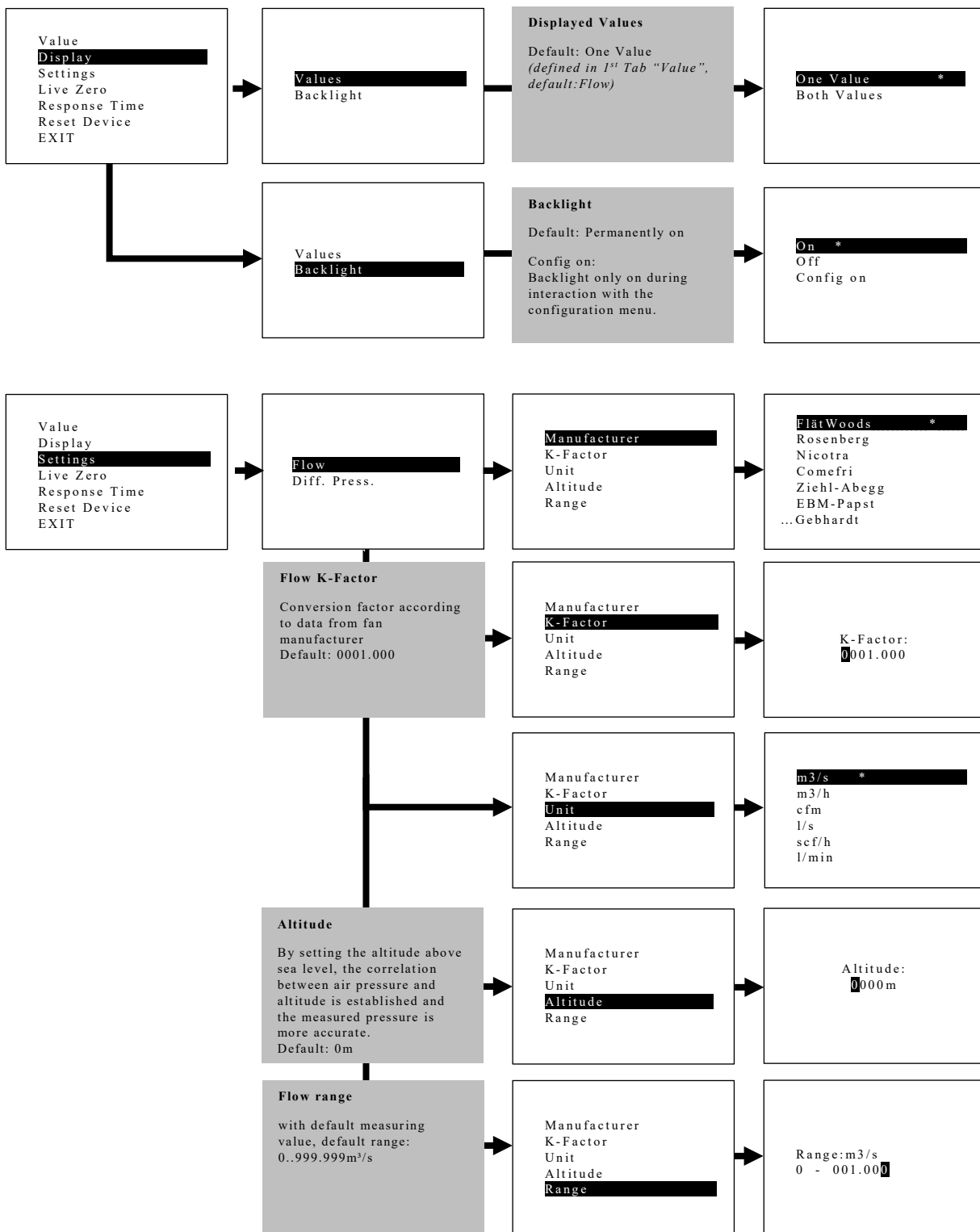
» **KEY FUNCTIONS**

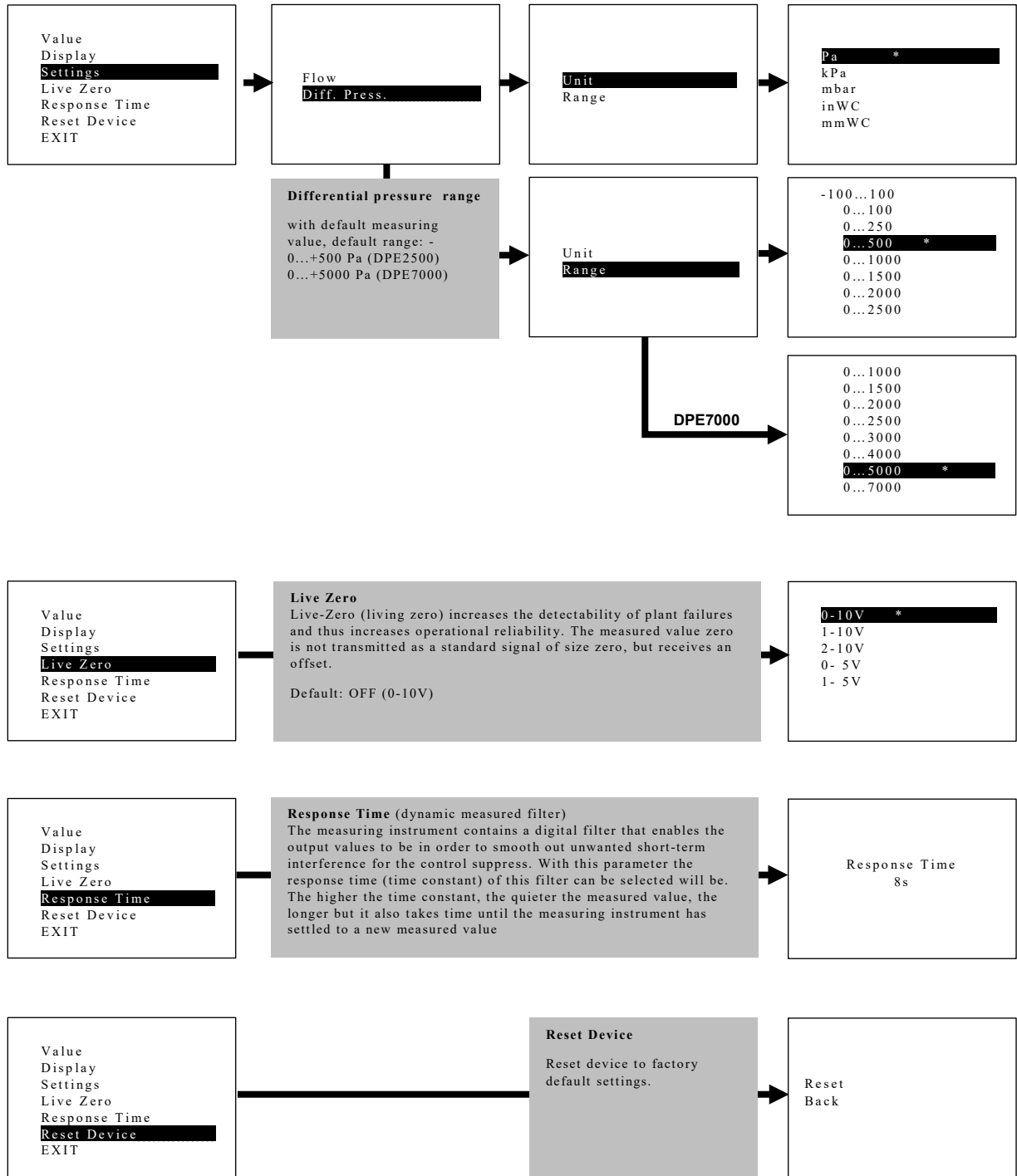


- **Select/Enter button**
The "Select/Enter" key confirms menu items and activates the input fields within the individual menu items.
Press and hold the Select/Enter button for 2 seconds to exit a selected menu item. Changed input fields are automatically confirmed when leaving the menu item.
- **Manual zero point correction**
With a short keystroke a manual zero point correction can be performed. The pressure connections must be removed before execution.
- **Up/Down button**
The menu guidance and the adjustment of the values is done by the keys "up" and "down".
- **Call up configuration menu**
To enter the configuration menu, press and hold the button Up or Down for 2 seconds.

» **MENU GUIDE**







» FORMULA FOR FLOW CALCULATION

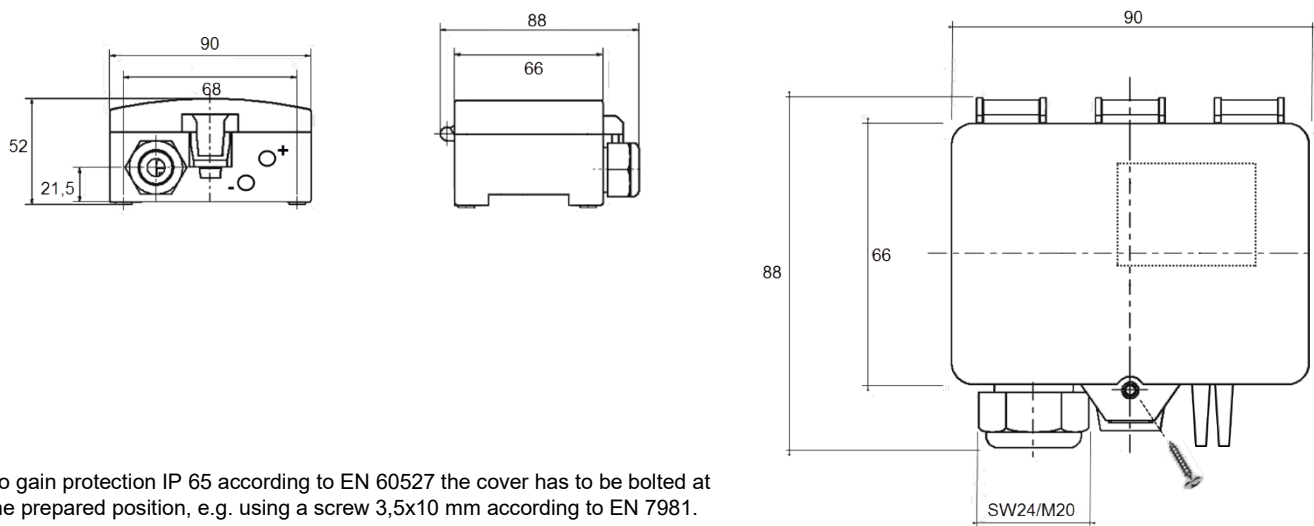
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$$q = k * \sqrt{2 * \frac{\Delta p}{\rho}}$$

$$q = k * \sqrt{\Delta p}$$

$$q = \frac{1}{k} * \sqrt{\Delta p}$$

» DIMENSIONS (MM)



To gain protection IP 65 according to EN 60527 the cover has to be bolted at the prepared position, e.g. using a screw 3,5x10 mm according to EN 7981.

» ACCESSORIES (OPTIONAL)

fixing screw
 plastic duct flange
 2 m PVC connection tube \varnothing 4/7 mm
 Spring for mounting on DIN rail TS35

Item No. 289870
 Item No. 484596
 Item No. 484268
 Item No. 255165