

Datasheet

Subject to technical alteration
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Application

Differential pressure transmitter with 8 selectable ranges and outputs 0..10 V or 4..20 mA. For monitoring the differential pressure of air and other non-flammable and non-aggressive gases. Possible applications: Monitoring for air filters, fans, industrial cooling air cycles as well as overheating protection, control of air and fire dampers. Screw mounting onto flat surface, prepared for mounting on DIN rail TS35 (35x7,5 mm) according to EN 60715.

Types available

Type	Measuring range ¹⁾
DPA 250-D ²⁾³⁾ / DPA 250 ³⁾	0..1.00 inchWC
DPA 2500-D ²⁾³⁾ / DPA 2500 ³⁾	0..10.04 inchWC
DPA 7000-D ²⁾³⁾ / DPA 7000 ³⁾	0..28.10 inchWC

¹⁾ Details for measuring range, please refer to configuration

²⁾ Type with display

³⁾ Optional with Auto-zero function

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.

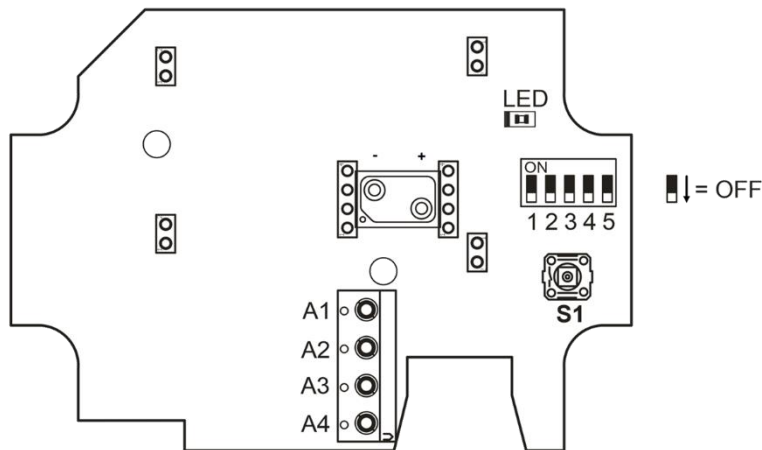
Technical Data

Measuring values		differential pressure
Medium		air and non-aggressive gases
Output voltage		0..10 V (selectable), min. load 10 kΩ
Output Amp		4..20 mA (selectable), max. load 500 Ω
Power supply		15..24 V = (±10%) or 24 V ~ (±10%)
Power consumption		typ. 1,1 W (24 V =) 1,7 VA (24 V ~)
Measuring range pressure	DPA250	0..+0.10 0..+0.20 0..+0.40 0..10 (default) -0.10..+0.10 -0.20..+0.20 -0.40..+0.40 -0.60..+0.60 inchWC
	DPA2500	-0.40..+0.40 0..+0.40 0..+1.00 0..+2.00 (default) 0..+4.01 0..+6.02 0..+8.03 0..+10.04 inchWC
	DPA7000	0..+4.01 0..+6.02 0..+8.03 0..+10.04 (default) 0..+12.04 0..+16.05 0..+20.07 0..+28.10 inchWC
Accuracy pressure	DPA250	deviation compared to the reference device
	DPA2500	typ. ±0.004 inchWC at range <1 inchWC
	DPA7000	measuring range ≤2 inchWC: ±0.02 inchWC, measuring range >2 inchWC: ±0.04 inchWC
		measuring range ≤8 inchWC: ±0.04 inchWC measuring range >8 inchWC: ±0.1 inchWC
Max. working overpressure		1600 inchWC
Calibration		automatic zero-point calibration (optional)
Sensor		piezo measuring element
Display		LCD 1.48x1.24 in. (optional), measured values: Pa, inchWC, mmWC, kPa, mbar, psi (configurable)
Enclosure		hinged lid enclosure, PA6, pure white
Protection		IP54 according to EN 60529, IP65 with bolted cover
Cable entry		M20 for cable max. Ø=0.31 in. seal insert for double cable entry for wire max Ø=0.24 in.
Connection electrical		terminal block, max. 15AWG
Connection mechanical		pressure connection male Ø=0.2 in / Ø=0.25 in., connection tube: PVC, soft
Ambient condition		+14..+122 °F, max. 85% rH short term condensation
Weight		5.3 oz.
Mounting		screw mounting onto flat surface, prepared for mounting on DIN rail TS35 (35x7,5 mm) according to EN 60715
Delivery content		2 mounting screws, 2 plastic duct flanges, 7 ft. PVC connection tube

Mounting Advices

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

Connection Plan



- A1
- Output 4..20 mA
- A2
- Output 0..10 V
- A3
- GND
- A4
- + 24 V = / 24 V ~

Configuration

Measuring ranges

DIP 1	DIP 2	DIP 3	Range	DPA 250 (inchWC)	DPA 2500 (inchWC)	DPA 7000 (inchWC)
OFF	OFF	OFF	1	0..+0.10	-0.40..+0.40	0..+4.01
OFF	OFF	ON	2	0..+0.20	0..+0.40	0..+6.02
OFF	ON	OFF	3	0..+0.40	0..+1.00	0..+8.03
OFF	ON	ON	4	0..+1.00	0..+2.00	0..+10.04
ON	OFF	OFF	5	-0.1004..+0.10	0..+4.01	0..+12.04
ON	OFF	ON	6	-0.2008..+0.20	0..+6.02	0..+16.05
ON	ON	OFF	7	-0.4015..+0.40	0..+8.03	0..+20.07
ON	ON	ON	8	-0.6022..+0.60	0..+10.04	0..+28.10

default

Response time/backlight

DIP 4	Response time
OFF	0.8 s
ON	4 s

Standard

DIP 5	Display backlight (only devices with display)
OFF	OFF
ON	ON

Standard

Change measuring unit (only devices with display)

To change the displayed measurement size unit push button S1 briefly (several times) until the required measuring unit (Pa, inchWC mmWC, kPa, mbar, psi) is shown at the display.

Automatic Zero-Point Calibration - (optional)



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. 4 seconds after which the device returns to its normal measuring mode. During the 4 second adjustment period, the output and display values will freeze to the latest measured value.

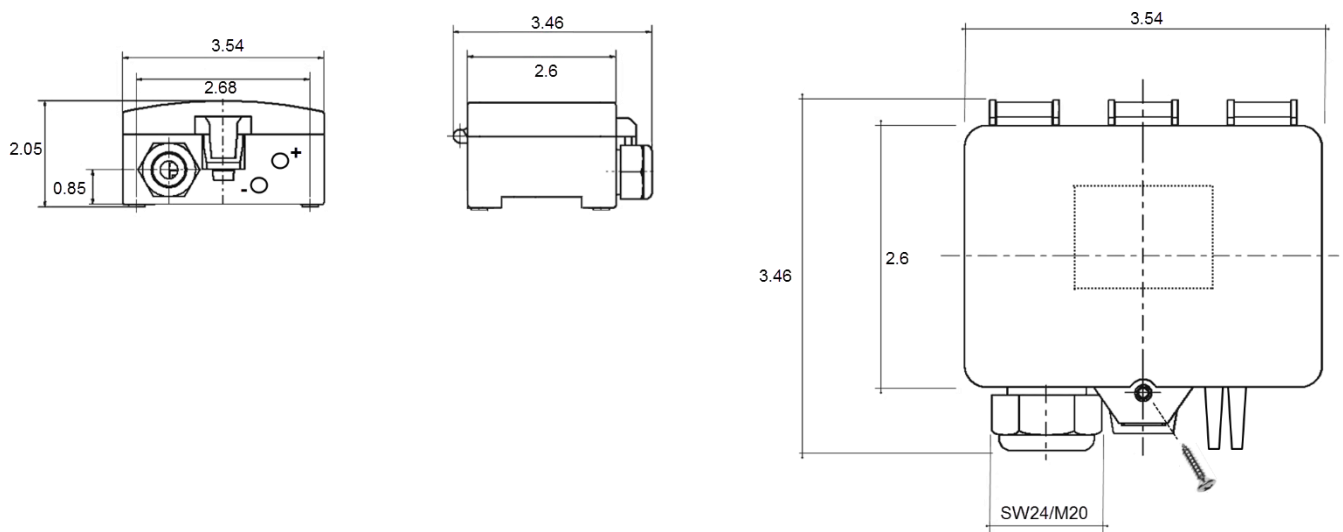
Manual zero-point calibration (for devices without auto-zero function)

In normal operation zero point calibration should be executed every 12 months.

Attention! For executing zero point calibration the power supply must be connected one hour before.

- Release both connection tubes from the pressure terminals + and -
- Press the button S1 until the LED lights permanently
- Wait until the LED flashes again and reinstall the connection tubes to the pressure ports (note + and -)

Dimensions (in.)



To gain protection IP 65 according to EN 60527 the cover has to be bolted at the prepared position, e.g. using a screw 0.14x0.39 in. according to EN 7981.

Accessories (enclosed in shipment)

2 fixing screws
2 plastic duct flanges
7 ft. PVC connection tube $\varnothing$ 0.16/0.28 in.
Spring for mounting on DIN rail TS35

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