PEL 8K - Differential pressure transmitter

PEL 8K is a pressure transmitter for detecting pressures and pressure differences in air handling systems. The pressure measurement is compensated according to the ambient temperature.

The influence of process disturbances (e.g. turbulence) can be damped by selecting a suitable time constant (2 s or 8 s). Output signal can be selected to be either differential pressure linear or flow (volume) linear.

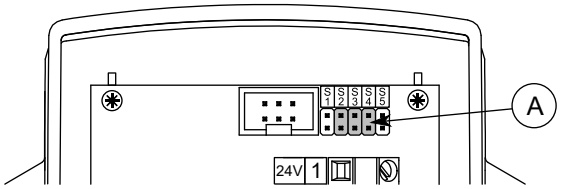
The transmitter zero point is kept accurate by using the regular automatic zeroing, eliminating the possible zero point drifting. The re-calibration is not normally needed.

Technical specifications

Property	Value
Supply	24 Vac/dc (22…28 V), < 2 VA
Pressure measurement	
Range	[1)]0...8000 Pa / custom setting, 100 Pa steps
Accuracy (25 °C)	±10 Pa ±1 % of reading
Time constant	2 s or [1)]8 s
Max. over pressure	25 kPa
Connection	Ø5 mm
Output (pressure or flow linear)	[1)]0...10 / 2…10 / 0…5 Vdc, < 2 mA
	[1)]4…20 / 0…20 mA, 700 Ω
Display (N models)	
Type	backlit dot matrix display
Resolution	0.1 Pa for values below 200 Pa, 1 Pa for values above 200 Pa
Wiring terminals	
Size	1.5 mm^2
Tightening torque	0.6 Nm
Appliance class (IEC 60664-1)	III
Operating conditions	
Temperature	0...45 °C
Humidity	0...95 %rH (non-condensing)
Housing	

Property	Value
Material	PC plastic
Protection class	IP54, cable entry downwards
Cable gland	M16
Dimensions (w x h x d)	106 x 102 x 46 mm
	[1] Factory default

Measuring range selection



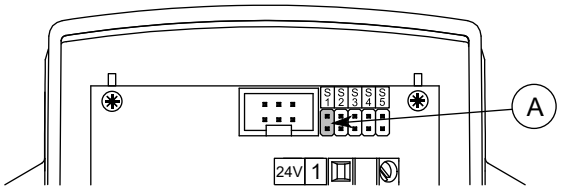
A. Pressure range selection jumpers

	0...1000	0..1500	0...2000	0...2500	0...3000	0...4000	0...5000	[1] 0...8000
S2	● ●	■	● ●	■	● ●	■	● ●	■
S3	● ●	● ●	■	■	● ●	● ●	■	■
S4	● ●	● ●	● ●	● ●	■	■	■	■

[1] Factory setting. The 0…8000 Pa range is also used for the custom range setting.

The custom range can be changed by using ML-SER tool. The custom range can be adjusted by 100 Pa steps.

Time constant selection

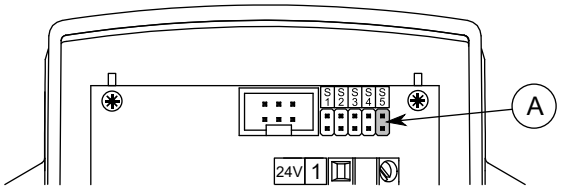


A. Time constant selection jumper

	[1] 8 s	2 s
S1	■	● ●

[1] Factory setting.

Output mode selection



A. Output mode selection jumper

	[1] Pressure linear	Flow linear
S5	■	• •

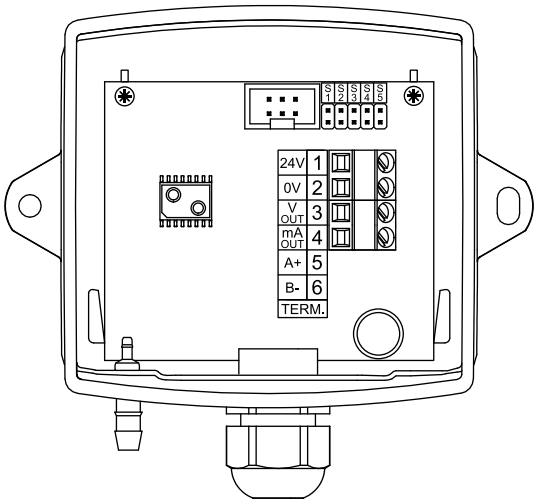
[1] Factory setting.

Wiring

WARNING: Device wiring and commissioning can only be carried out by qualified professionals. Always make the device wirings in de-energised electricity network.

WARNING: This product is appliance class III product according to IEC 60664-1. The product may only be connected to SELV (safety extra low voltage) electricity network.

CAUTION: The product may only be connected to overvoltage category I, II or III electricity network according to IEC 60664-1.



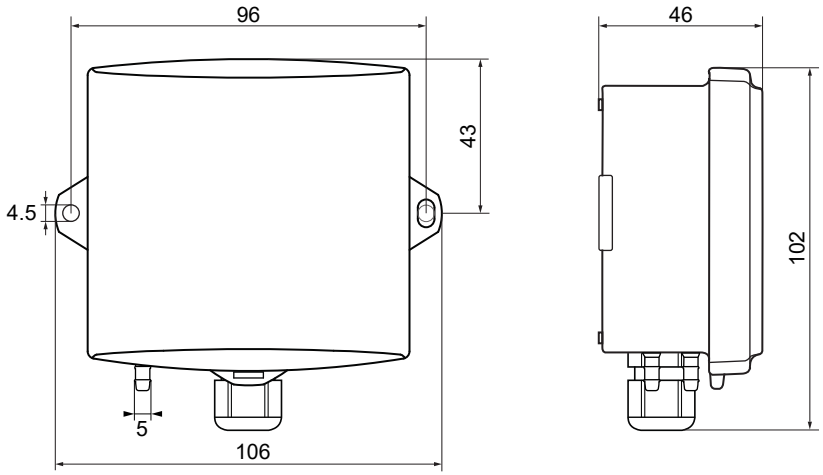
24V	Supply, 24 Vac/dc (22…28 V), < 2 VA
0V	0 V
V out	Voltage output, 0...10 / 2…10 / 0…5 Vdc, < 2 mA
mA out	Current output, 4…20 / 0…20 mA, 700 Ω

The nominal wire terminal screw tightening torque is 0.6 Nm.

Important: Don't use excessive force when tightening the wiring terminal screws.

CAUTION: Ensure that all covers are closed before connecting supply voltage to the product. Don't remove the covers when the supply voltage is connected.

Dimensions



Ordering information

	Type	Product number	Description
	PEL 8K	1131350	Differential pressure transmitter, range 0...8000 Pa
	PEL 8K-N	1131351	Differential pressure transmitter with display, range 0...8000 Pa
	ML-SER	1139010	Transmitter commissioning tool

Supported standards and directives

Standard	Description
2014/30/EU	Electromagnetic Compatibility (EMC).
2011/65/EU	Restriction of Hazardous Substances (RoHS2) Directive.
(EU) 2015/863	Commission Delegated Directive, amending Annex II to Directive 2011/65/EU.
EN 61000-6-3:2007/ A1:2011	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.
EN 61000-6-2:2019	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments.