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DATA SHEET

PEL 2500-MZ

Produal

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PEL 2500-MZ - Differential pressure transmitter



PEL 2500-MZ 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).

The M models have RS-485 connection for Modbus RTU communication. ML-SER tool is needed at commissioning for making the Modbus settings.

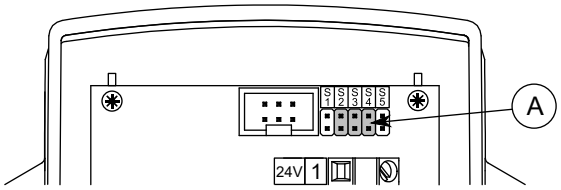
Technical specifications

Property	Value
Supply	24 Vac/dc (22…28 V), < 2 VA
Pressure measurement	
Range	[1)]0...2500 Pa / custom setting
Accuracy (25 °C)	±3 Pa ±1 % of reading
Time constant	2 s or [1)]8 s
Max. over pressure	13 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
Communication (M models)	Modbus RTU (RS-485)
Bus speed	9600/19200/38400/57600 bit/s
Data bits	8
Parity	[1)]none/odd/even
Stop bits	1
Unit load	1/4 UL
Display (N models)	backlit dot matrix display
Wiring terminals	1.5 mm^2
Overvoltage category (IEC 60664-1)	III
Operating conditions	
Temperature	0...45 °C

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Property	Value
Humidity	0...95 %rH (non-condensing)
Housing	
Material	PC plastic
Protection class	IP54, cable entry downwards
Cable gland	M16
Cable gland (M models)	2 x M16
Dimensions (w x h x d)	106 x 102 x 46 mm
	[1] Factory default

Measuring range selection



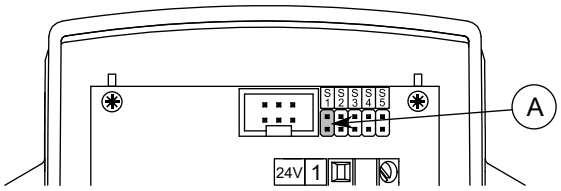
A. Pressure range selection jumpers

	±100	0..100	0...200	0...500	0...1000	0...1500	0...2000	[1] 0...2500
S2	● ●	■	● ●	■	● ●	■	● ●	■
S3	● ●	● ●	■	■	● ●	● ●	■	■
S4	● ●	● ●	● ●	● ●	■	■	■	■

[1] Factory setting. The 0…2500 Pa range is also used for the custom range setting.

The custom range is 0…2500 Pa as a default. The range can be changed by using ML-SER tool or by defining the limits to the Modbus registers 40001…40002 (M models).

Time constant selection

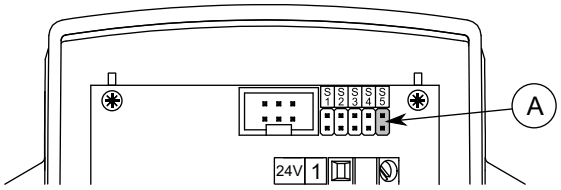


A. Time constant selection jumper

	[1] 8 s	2 s
S1	■	● ●

[1] Factory setting.

Output mode selection



A. Output mode selection jumper

	[1] Pressure linear	Flow linear
S5	■	• •

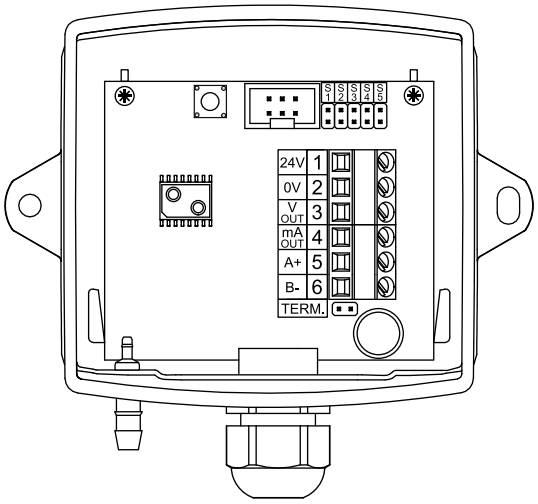
[1] Factory setting.

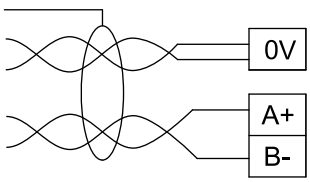
Wiring

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 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
A+ *B-*	 Modbus RTU, RS-485 (M models)

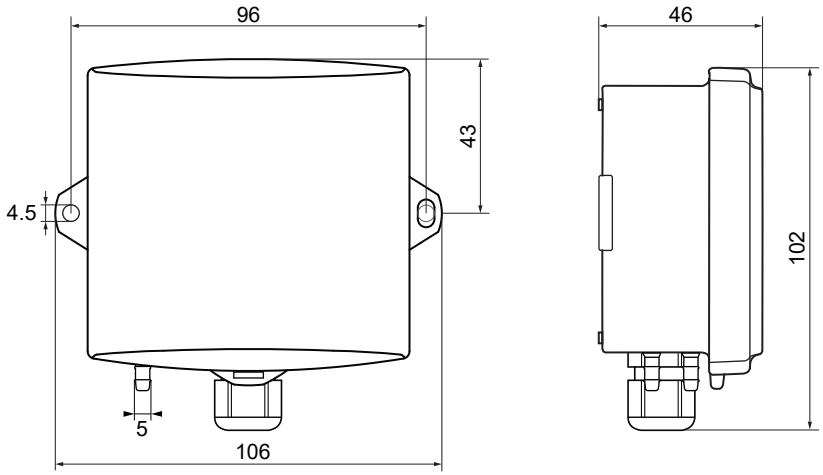
The nominal wire terminal screw tightening torque is 0.6 Nm

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.

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Dimensions



Ordering information

	Type	Product number	Description
	PEL 2500-MZ	1131460	Differential pressure transmitter, range 0...2500 Pa
	PEL 2500-MZ-N	1131461	Differential pressure transmitter with display, range 0...2500 Pa
	PEL 2500-M-MZ	1131470	Differential pressure transmitter, Modbus, range 0...2500 Pa
	PEL 2500-M-MZ-N	1131471	Differential pressure transmitter with display, Modbus, range 0...2500 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.

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