Quick Guide

EE610 - Low Differential Pressure Sensor

your partner in sensor technology.

PLEASE NOTE

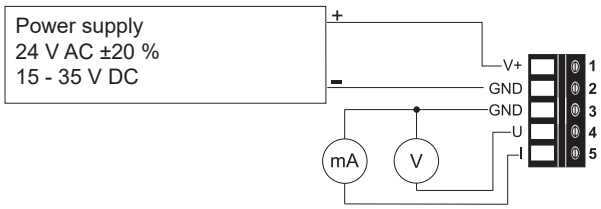
Find this document and further product information on our website at www.epluse.com/ee610.

Electrical Connection

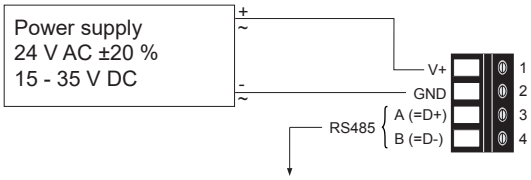
WARNING

Incorrect installation, wiring or power supply may cause overheating and result in personal injury or property damage. Cables must not be under voltage during electrical installation and connection or disconnection, especially at terminal connections on circuit boards. For correct cabling, always observe the presented wiring diagram for the product version used. The manufacturer cannot be held responsible for personal injury or damage to property caused by incorrect handling, installation, wiring, power supply or maintenance of the device.

Analogue Output

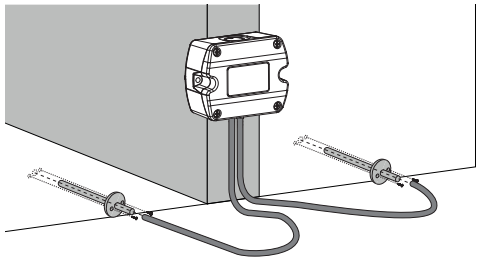


Digital Output



Installation

Pressure Connection



Use a Ø7.5 mm drill for installing the pressure connection nipples into the duct.

User Interface - LED Indication

Green LED	
Flashing (1 s interval)	EE610 operates normally, the measured data is within the selected measuring range
One flash (2 s)	Confirms adjustment or return to factory settings
Off	No power supply or electronics failure
Fast flashing (0.2 s interval)	Auto-zero is executed, first time 10 s after start / reset

Red LED	
Flashing (1 s interval)	The measured data is out of the selected range (overload or reversed pressure connection)
One flash (2 s)	Indicates the failure of the attempt to adjust zero point or span point, or to return to factory adjustment

EE610 with Analogue Output

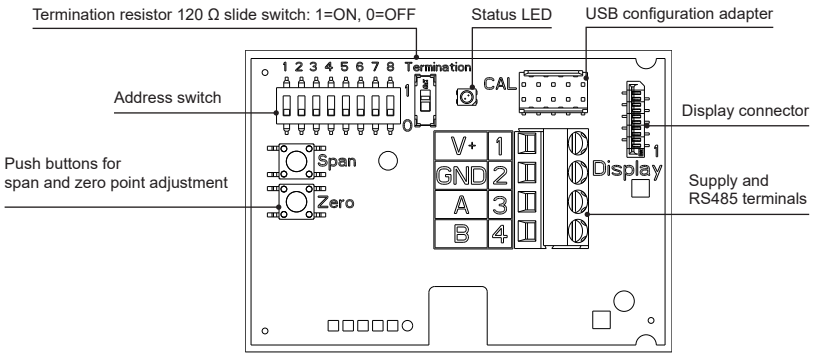
S1	S2	MR[1)]	S3	S4	Time	S5	S6	Unit	S7	DPB[2)]
0	**0**	100 %	**0**	**0**	50 ms	**0**	**0**	Pa	**0**	on
1	**0**	75 %	**1**	**0**	500 ms	**1**	**0**	mbar	**1**	off
0	**1**	50 %	**0**	**1**	2 s	**0**	**1**	inch WC		
1	**1**	25 %	**1**	**1**	4 s	**1**	**1**	mm H_2O		

S8	Output	S9	Setting[3)]	S10	Measuring Direction
0	0 - 10 V / 4 - 20 mA	**0**	DIP switches	**0**	Bidirectional
1	0 - 5 V / 0 - 20 mA	**1**	PCS10	**1**	Unidirectional

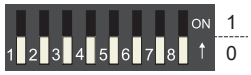
1) Measuring range: 100 % = max. / customised range, other MR of max. range
2) Display backlight
3) These and further settings can be changed with PCS10 via USB-C configuration stick (HA011070) while DIP switch S9 = 1. Only available with version with 10 DIP switches.

EE610 with RS485 Interface Electronics Board Layout

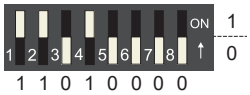
The bus termination shall be realised with the 120 Ω resistor (slide switch on board).



Address Setting



Address setting via Software
All DIP switches at position 0 → address has to be set via Software (via PCS10 Product Configuration Software or via protocol BACnet / Modbus). Default address 44.
Example: Address is set via configuration software.



Address setting via Dip-Switch
Setting the DIP switches to any other address than 0, overrules the default address (44) or the address set via Software.
Example: Address set to 3 (0000 0011 binary).

Communication Setttings

	BACnet		Modbus	
	Factory settings	**User selectable values (via PCS10)**	**Factory settings**	**User selectable values (via PCS10)**
Baud rate	As specified in the order code	9600, 19200, 38400, 57600, 76800, 115200	As specified in the order code	9600, 19200, 38400 57600, 76800, 115200
Data bits	8	8	8	8
Parity	None	None	Even	None, odd, even
Stop bits	1	1	1	1, 2
Modbus address	44	0...127	44	1...247

BACnet Protocol

The EE610 PICS (Product Implementation Conformance Statement) is available on the website at www.epluse.com/ee610.
The recommended settings for multiple devices in a BACnet MS/TP network are 38400, 8, none, 1.
Address and Baud rate can be set via:

- PCS10, Product Configuration Software and the USB-C configuration stick HA011070.
- BACnet protocol, see the PICS.

Modbus Protocol

The recommended settings for multiple devices in a Modbus RTU network are 9600, 8, even, 1.
Address, Baud rate, parity and stop bits can be set via:

- PCS10, Product Configuration Software and the USB-C configuration stick HA011070.
- Modbus protocol in the register 1 (0x00) and 2 (0x01).
  Refer to Application Note Modbus AN0103 (available on www.epluse.com/ee610).

The measured values are saved as 32 bit floating point value and as 16 bit signed integer value, see Modbus register map below.

Modbus Register Map

		FLOAT 32		INT16		
Parameter	**Unit**	**Register number[1] [DEC]**	**Register address[2] [HEX]**	**Scale[3]**	**Register number[1] [DEC]**	**Register address[2] [HEX]**
Read register: function code 0x03 / 0x04						
Differential pressure	mm H_2O	1211	4BA	10	4106	1009
Differential pressure	mbar	1213	4BC	100	4107	100A
Differential pressure	Pa	1215	4BE	1	4108	100B
Differential pressure	kPa	1217	4C0	1000	4109	100C
Differential pressure	inch WC	1219	4C2	100	4110	100D

1) Register number starts from 1
2) Register address starts from 0
3) 1xx is scale. E.g. for 1:100, reading of 2550 is equivalent to 25.5

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