

# + Quick Guide



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## EE610 - Low Differential Pressure Sensor

### **i** PLEASE NOTE

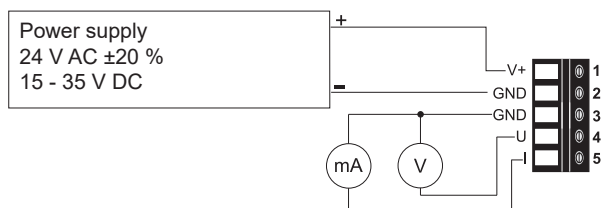
Find this document and further product information on our website at [www.epluse.com/ee610](http://www.epluse.com/ee610).

### Electrical Connection

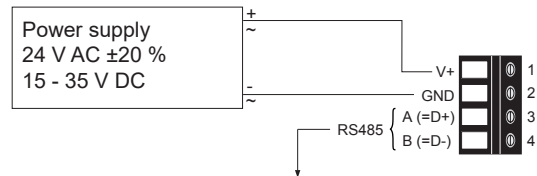
#### **⚠** WARNING

Incorrect installation, wiring or power supply may cause overheating and therefore personal injuries or damage to property. For correct cabling of the device, always observe the presented wiring diagram for the product version used. The manufacturer cannot be held responsible for personal injuries or damage to property as a result of incorrect handling, installation, wiring, power supply and maintenance of the device.

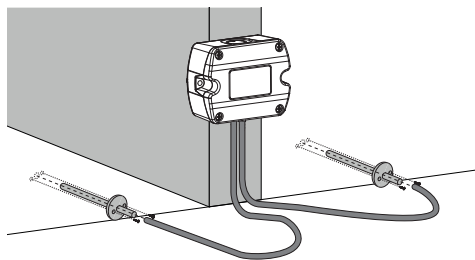
#### Analogue Output



#### 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

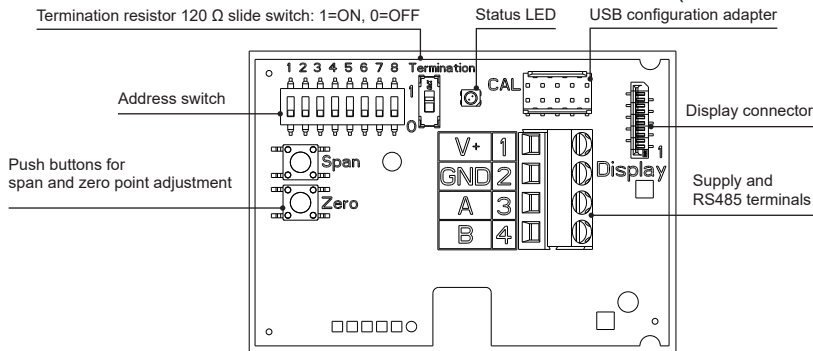
### EE610 with Analogue Output

S1	S2	MR <sup>1)</sup>	S3	S4	Time	S5	S6	Unit	S7	DPB <sup>2)</sup>	S8	Output	S9	Setting <sup>3)</sup>
0	0	±100 Pa	0	0	50 ms	0	0	Pa	0	on	0	0 - 10 V/4 - 20 mA	0	DIP switches
1	0	±50 Pa	1	0	500 ms	1	0	mbar	1	off	1	0 - 5 V/0 - 20 mA	1	PCS10
0	1	±25 Pa	0	1	2 s	0	1	inch WC						
1	1	0-100 Pa	1	1	4 s	1	1	mm H <sub>2</sub> O						

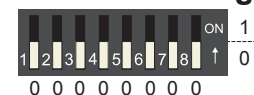
1) Measuring range 2) Display backlight 3) These and further settings can be changed with PCS10 via USB configuration adapter (HA011066) while DIP switch S9 = 1. Only available with version with 10 DIP switches.

# EE610 with RS485 Interface Electronics Board Layout

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

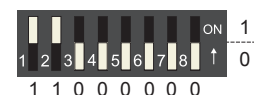


## Address Setting



### 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 Settings

	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](http://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 configuration adapter HA011066.
- 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 configuration adapter HA011066.
- Modbus protocol in the register 1 (0x00) and 2 (0x01).

Refer to Application Note Modbus AN0103 (available on [www.epluse.com/ee610](http://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

Parameter	Unit	FLOAT 32		Scale <sup>3)</sup>	INT16	
		Register number <sup>1)</sup> [DEC]	Register address <sup>2)</sup> [HEX]		Register number <sup>1)</sup> [DEC]	Register address <sup>2)</sup> [HEX]
Read register: function code 0x03 / 0x04						
Differential pressure	mm H <sub>2</sub> O	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

