

EE600

Differential Pressure Sensor

The EE600 is dedicated for accurate and reliable measurement of differential pressure in HVAC, building automation and filter monitoring applications. It is available as multi-range device with full scale 1,000 Pa (4 inch Water Column) and 10,000 Pa (40 inch WC). It can be employed for air as well as all non-flammable and non-aggressive gases. The piezo-resistive pressure sensing element provides outstanding long term stability.

The measured data is available on the analogue output, whereby both voltage and current signals are available simultaneously at the spring terminals.

The IP65 / NEMA 4 enclosure minimizes installation costs. External mounting holes allow installation with closed cover, the electronics are thus protected against construction site pollution.

EE600 stands for full flexibility. Using DIP-switches on the electronics board, the user can select the pressure range, the output signal, the time constant as well as the units and the backlight of the large, graphic display. The user can easily perform a zero and span point adjustment with push buttons on the electronics board.



Features

Multi-range

- » 0 ... 250 / 500 / 750 / 1000 Pa
- » 0 ... 2500 / 5000 / 7500 / 10000 Pa

External mounting holes

- » Mounting with closed cover
- » Electronics protected against construction site pollution
- » Easy and fast mounting

Status LED

Spring terminals

User configurable and adjustable

- » Pressure range
- » Output signal
- » Response time
- » Display units and backlight
- » Zero and span point adjustment

Knockout for 1/2" conduit fitting (US)

Graphic display with backlight

Enclosure

- » IP65 / NEMA 4 protection class
- » Bayonet screws - open/closed with a 1/4 rotation

Technical Data

Measured Value

Differential Pressure (Δp)

Measurement principle	Piezoresistive, no flow-through	
Measurement range	I: 0...250 / 500 / 750 / 1000 Pa	(0...1 / 2 / 3 / 4 inch WC ²⁾)
selectable with DIP switches ¹⁾	II: 0...2500 / 5000 / 7500 / 10000 Pa	(0...10 / 20 / 30 / 40 inch WC ²⁾)
Accuracy (incl. hysteresis, non-linearity and repeatability) at 20 °C		
0...1000 Pa (4 inch WC ²⁾)	±2 % FS ³⁾	
0...10000 Pa (40 inch WC ²⁾)	±1 % FS ³⁾	
Response time t_{90}	50 ms / 500 ms / 2 s / 4s selectable with DIP switches ¹⁾	
Temperature dependency	typ. < 0.03 % from FS ^{3)/K}	
Long-term stability	< 0.5 % from FS ^{3)/year}	
Overload limits		
0...1000 Pa (4 inch WC)	± 10000 Pa (± 40 inch WC)	
0...10000 Pa (40 inch WC)	± 80000 Pa (± 320 inch WC)	

Outputs

Analogue outputs	0-5 V or 0-10 V	-1 mA < I_L < 1 mA
selectable with	and ⁴⁾	
DIP switches ¹⁾	0-20 mA or 4-20 mA (3-wire)	$R_L \leq 500 \text{ Ohm}$

General

Power supply	15-35 V DC or 24 V AC ±20 %	
Current consumption	typ. 18 mA (without Display)	
at 0 Pa / 24 V DC	typ. 43 mA (with Display and Backlight)	
Display	Graphic, with backlight	
Display units	Pa, mbar, inch WC ²⁾ , kPa selectable with DIP switches ¹⁾	
Connection	Spring terminals, max. 1.5 mm ²	
Housing material	Polycarbonate, UL94V-0 (with Display UL94HB) approved	
Protection class	IP65 / NEMA 4	
Cable gland	M16 x 1.5	
Electromagnetic compatibility	EN61326-1 EN61326-2-3	
Humidity range	0...95 % RH (non condensing)	
Temperature ranges	Operation: -20...60 °C (-4...140 °F) Storage: -40...70 °C (-40...158 °F)	



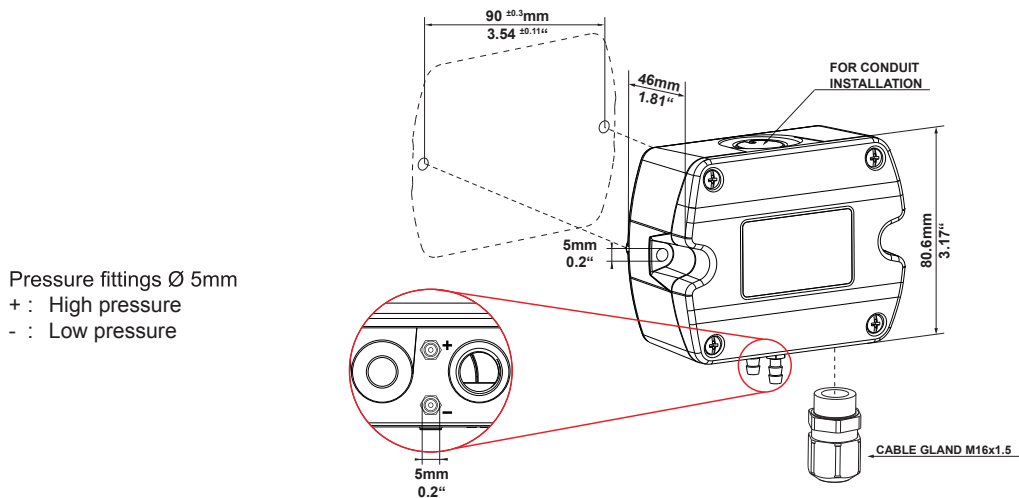
1) Factory setup: Measurement range 0...100%; Response time t_{90} : 50 ms; Display unit: Pa; Display backlight: on; Analogue outputs: 0-10 V and 4-20 mA
 2) WC = Water Column 3) FS = full scale (1000 Pa or 10000 Pa) 4) Voltage and current output signals available simultaneously at the spring terminals, see connection diagram

Configuration with DIP-Switches S_1 ... S_8

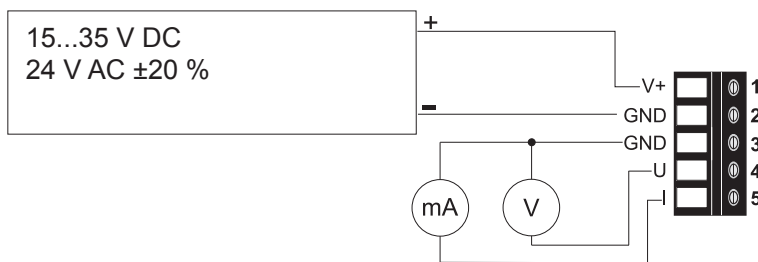
Measuring range ⁵⁾		Response time		Display unit		Backlight display		Output signals				
S_1	S_2	S_3	S_4	S_5	S_6	S_7		S_8				
0	0	100%	0	0	50ms	0	0	Pa	0	on	0	0-10 V and 4-20 mA
1	0	75%	1	0	500ms	1	0	mbar	1	off	1	0-5 V and 0-20 mA
0	1	50%	0	1	2s	0	1	inch WC				
1	1	25%	1	1	4s	1	1	kPa				

5) Percentage of the full scale (FS) of 1000 Pa or 10000 Pa resp.

Dimensions (mm/inch)



Connection Diagram



Scope of supply

- EE600 pressure sensor according to ordering guide
- Pressure connection kit, straight, including 2m hose
- Mounting materials
- Operation manual - Quick guide
- Test report according to DIN EN 10204 – 2.2

Accessories (see data sheet "Accessories")

Pressure connection kit HA011304

Ordering Guide

		EE600
Measuring range	0...1000 Pa (0...4 inch WC, 0-10 mbar, 0-1 kPa)	HR1
	0...10000 Pa (0...40 inch WC, 0-100 mbar, 0-10 kPa)	HR10
Display	without Display	no code
	with Display	D2

Order Examples

EE600-HR1

Measuring range: 0...1000 Pa (0...4 inch WC, 0-10 mbar, 0-1 kPa)
Display: without Display

EE600-HR10D2

Measuring range: 0...10000 Pa (0...40 inch WC, 0-100 mbar, 0-10 kPa)
Display: with Display