

Portable digital pressure gauges

OVERVIEW

	EMA 200	EMA 84
Details on	p. 30	p. 31
		
Features	Portable digital pressure gauge with min./max. value memory and free selection of units, also suitable for flow measurements	Rugged, portable digital pressure gauge
Measurement ranges	± 200 Pa (± 2 mbar) ± 2 kPa (± 20 mbar) ± 20 kPa (± 200 mbar) ± 200 kPa (± 2 000 mbar)	0 .. 100 Pa (0 .. 1 mbar) 0 .. 1 kPa (0 .. 10 mbar) 0 .. 10 kPa (0 .. 100 mbar) 0 .. 100 kPa (0 .. 1 000 mbar)
Margin of error	0.5 % of max. value	0.2 % of max. value, min. 0.3 Pa for measurement ranges 1 .. 50 kPa or 0.5 % of max. value for measurement ranges ≥ 1 kPa or 1 % of max. value

The EMA 200 is available with 4 measurement ranges. The units (Pa, kPa) are shown in the display or printed on the keyboard film (mbar, mmH₂O, inH₂O).

The EMA 84 is also available with 4 measurement ranges. The following units may be selected: Pa/mbar and mbar/kPa. The measurement range selected (incl. the units) is printed on the device.

ACCESSORIES

Carrying bag EMA 200
Carrying bag EMA 84
Carrying bag EMA 84 (with LCD viewing window)
DAkkS calibration certificate, German
DAkkS calibration certificate, English
ISO factory calibration certificate
Connecting components
Pitot tube for flow measurements

Order no.
9074.0001 ①
9063.0001 ②
9064.0001 ③
9601.0003
9601.0004
9601.0002
see p. 17
see p. 12



APPLICATION

After start-up of an air-conditioning system and cleanroom, or during maintenance or validation work, it is necessary to monitor a large number of pressure values. It is therefore essential to measure and record the following values accurately:

- ventilator pressure
- pressure drop at power units and filters
- overpressure in the cleanroom
- flow in the air duct and rooms

The EMA range of handheld pressure gauges are simple to operate, have a rugged design and are optimised for long-term use in building services engineering and industrial applications.



Margin of error	0.5 % of max. value
Overload capacity	10 x for measurement ranges ≤ 10 kPa 2 x for measurement ranges > 10 kPa 1.2 x in the 200 kPa measurement range
Calculation of air speed	$v = 1,291 \cdot \sqrt{\Delta p}$ with v in m/s and Δp = differential pressure at the pitot tube in Pa (pitot factor and density adjustable) for selection of the primary element: see p. 12
Zero-point calibration	Performed electronically by pressing zero-point key
Medium	Air, all non-aggressive gases
Analog output	0..2 V ($R_L \geq 2 \text{ k}\Omega$) 0..1..2 V ($R_L \geq 2 \text{ k}\Omega$) for negative and positive measurement ranges
Display	3 1/2 digit, LCD, character height = 10 mm
Time constants	1 - 10 s
Operating temperature	0..50 °C
Storage temperature	-10..70 °C
Power supply	9 V battery (service life approx. 100 h) (display reads "low bat" when power falls below a certain minimum level) Switches off automatically after approx. 20 min.
Weight	approx. 0.4 kg
Pressure ports	for tubing NW 4-6 mm
Certificates	CE

Measurement range			A
± 200 Pa	(± 2 mbar)	1.5..18 m/s	0
± 2 kPa	(± 20 mbar)	5..58 m/s	1
± 20 kPa	(± 200 mbar)	15..180 m/s	10
± 200 kPa	(± 2000 mbar)		100

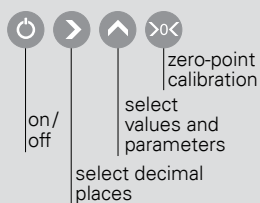
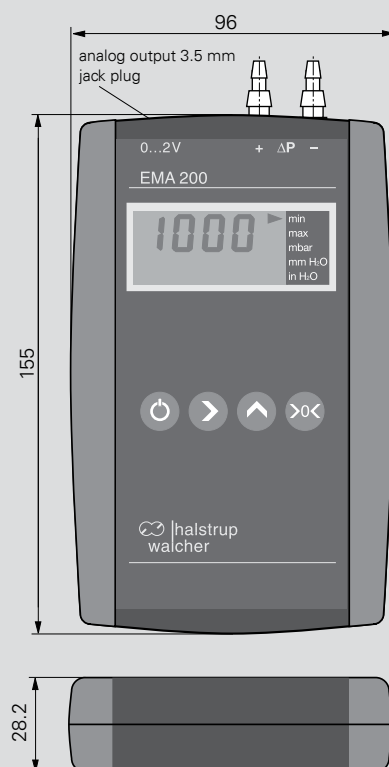
Order code	A
EMA200	—

EMA 200

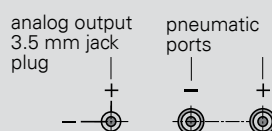


Features

- High-end pressure gauge for differential pressure and flow measurements
- Adjustable pitot factor and density
- Zero-point calibration at the push of a button
- Min./max. value memory



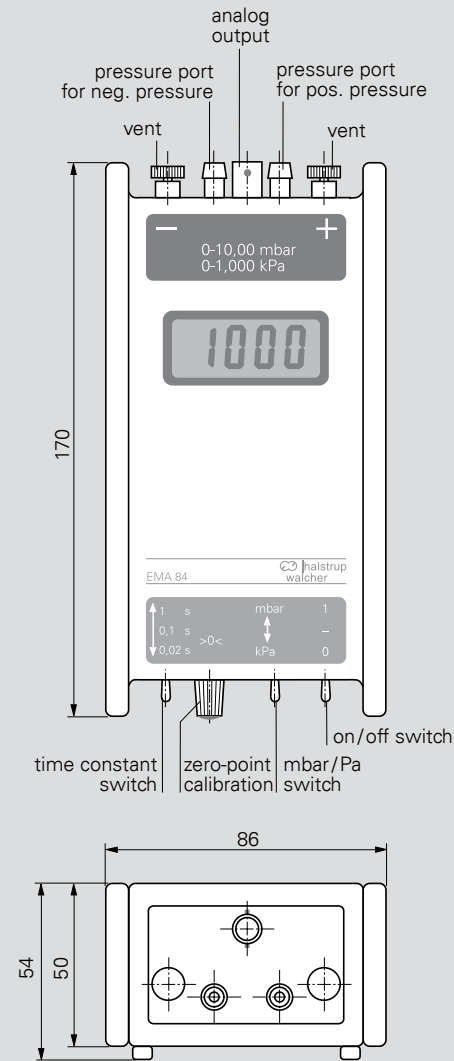
Connection diagram





Features

- Very robust digital pressure gauge
- Ideal for service technicians, easy-to-read display
- High level of accuracy
- Manual zero-point calibration
- With optional analog output for writer/power/voltage logger



Margin of error	0.2 % of max. value for measurement ranges 1 .. 50 kPa or 0.5 % of max. value for measurement ranges ≥ 1 kPa or 1 % of max. value
Overload capacity	10 x for measurement ranges ≤ 10 kPa 2 x for measurement ranges > 10 kPa
Zero-point calibration	Via potentiometer on front face
Medium	Air, all non-aggressive gases
Analog output	0..1 V ($R_L \geq 2$ k Ω) BNC connector
Display	3 1/2 digit, LCD, character height = 13 mm
Time constants	toggles between 0.02 s; 0.2 s; 1 s
Operating temperature	10..60 °C
Storage temperature	-10..70 °C
Operating position	Preferably horizontal
Power supply	9 V battery
Weight	approx. 0.8 kg
Pressure ports	for tubing NW 6 mm
Certificates	CE

Measurement range	A
0..100 Pa (0..1 mbar)	0
0..1 kPa (0..10 mbar)	1
0..10 kPa (0..100 mbar)	10
0..100 kPa (0..1000 mbar)	100

Margin of error	B
0.2 % of max. value (only for measurement ranges 1..50 kPa)	2
0.5 % of max. value (only for measurement ranges ≥ 1 kPa)	5
1 % of max. value	1

Analog output	C
none	0
0..1 V (optional)	1

Order code	A	B	C
EMA 84	-	-	-

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