

## Family datasheet

### ECO 210-3 Fine Manometer

### ECO 210-5 Manometer

- Modern and functional design – pocket-size
- Excellent price/performance ratio
- 3-line backlit display / overhead display at the push of a button
- Waterproof (IP67 excl. pressure ports)
- Robust, long battery operation time
- Easy to use universal pressure port with exchangeable connections
- High resolution and precision
- Very fast!
- Calibration options/ traceable
- Made in Germany



### Characteristics

The primary focus in the development of the ECO line series was placed on the essential functions of the measurement technology. The heart of the instrument – the sensor – is a high-class component – which excels in this instrument class.

The high reliability, speed and precision of the ECO 210 variants, packed in a compact and water protected housing makes the instruments an ideal partner of industry and craft sector, Made in Germany

**ECO line – The reference class in pocket size.**

#### ECO 210-3

#### **Fine pressure manometer for application in Heating / Ventilation / Air-conditioning (HVAC)**

The measurement range up to 200 hPa (mbar) / 20 kPa and the high resolution up to 0.1 Pascal in the optimized fine pressure mode covers the main applications for gas pressure 150 hPa (mbar) and burner adjustments with a single instrument. The high precision simplifies e.g. adjustments of dynamic pressure or draft measurements. The measurement is independent of instruments orientation – better than many, even much more expensive, competitors.

#### ECO 210-5

The sister device of the extremely high-resolution G 1107 is the first choice when differential pressures  $> \pm 200$  hPa (mbar) are to be measured. Up to  $\pm 2000$  hPa are covered precisely and with high resolution (up to 0.01 hPa or 0.1 Pascal in optimized fine pressure mode).

**NEW: UNIVERSAL-PORTS for use with a large range of pressure connections: Screw fitting, Quick-Connect, Push-Pull: All these types can be connected to the instrument! You have the choice, which connection is most practicable for you – instrument keeps the same. Increased resolution of 0.1 Pascal at high precision for finest pressure adjustments.**

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#### Connection variants

- ① UT connection for tubes 6 x 1 mm (4 mm inner) and 8 x 1 mm (6 mm inner)
- ② QC6 Quick-Connect connection for 6 x 1 mm (Ø 4 mm inner) tubes
- ③ ST6 screw connection for 6 x 1 mm (Ø 4 mm inner) tubes
- ④ MCM mini male quick coupling nominal diameter 2.7 (Mini quick connect coupling socket optionally available)

*Universal port for the connection of different pressure connections. The pressure connection is exchangeable due to 1/8-inch port!*



Please select variant when ordering. Can be changed later.



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#### TECHNICAL DATA

		ECO 210-3	ECO 210-5
Description		Fine Manometer	Manometer
Measuring		Difference	
Pressure connection		2 tube connections, interchangeable with G1/8 universal ports	
Ranges / resolution	standard	-200.0...+200.0 hPa (mbar) -2.900 ... +2.900 PSI -150.0 ... +150.0 mmHg (Torr)	-2000...+2000 hPa (mbar) -2.000...+2.000 bar -29.00 ... +29.00 PSI -1500 ... +1500 mmHg (Torr)
	FINE	-2000 ... +2000 Pa -20.00 ... +20.00 hPa (mbar) -20.00 ... +20.00 mmHg (Torr)	-200.0 ... +200.0 hPa (mbar) -200.0 ... +200.0 mmHg (Torr)
Display units		Pa, hPa, mbar, PSI, mmHg (Torr)	hPa, mbar, bar, PSI, mmHg (Torr)
Measuring frequency		Slow: 2,5 measurements per second Fast: 25 measurements per second	
Precision typ. @ 25 °C		+/- 0.1 % FSS	+/- 0.1 % FSS
Precision max. (-20..50 °C)		+/- 1 % FSS	+/- 1 % FSS
Max. overload		+/- 1700 hPa	+/- 3100 hPa
Display		3-line segment LCD, additional symbols, illuminated (white, illumination time adjustable), overhead display on key press	
Standard functions		Min/Max/Hold, Auto-Power-Off-function / if activated, the product switches off automatically	
Optional special functions		NULL / Tare function	
		<i>Fine</i> : With 0.1 Pa resolution	<i>Fine</i> : With 1 Pa resolution
		<i>Rur</i> : Averaging over 2 s / 5 s / 10 s	
Adjustment		Zero point and slope	
Housing		Break-proof ABS housing, protection rating IP67 (pressure connections must be protected from soiling and moisture), dimensions L x W x H: 108 x 54 x 8 mm, with connection ca. 122 x 54 x 8 mm, weight: 150 g incl. battery	
Operating conditions		-20 to +50 °C; 0 to 95 % r.h. (temporarily 100 % r.h.)	
Storage temperature		-20 to +70 °C	

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Power supply	2 x AA battery (included in the scope of delivery), current consumption: ca. 1 mA (slow measurement SLO), battery life ca. 3000 h, battery indicator: 4-stage charge status indicator, note for low charge level: "bAt Lo"
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#### ORDERING CODE

1.            2.            3.

ECO 210	-		-		-	
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<b>1.</b>	<b>Measuring range</b>	
	3	-2000...2000 Pascal (-20.00...20.00 hPa) -200.0...200.0 hPa dif.
	5	-200.0...200.0 hPa -2000...2000 hPa dif.
<b>2.</b>	<b>Connection option</b>	
	UT	2x G1/8-inch port incl. connection for tube 6x1 mm (4 mm inner) or 8x1 mm (6 mm inner)
	QC6	2x G1/8-inch port incl. quick connector for tube with outer-Ø 6 mm
	ST6	2x G1/8-inch port incl. screw connector for tube with outer-Ø 6 mm
	MCM	2x G1/8-inch port incl. mini quick coupling plug, nominal width 2.7
<b>3.</b>	<b>Set option</b>	
		Device in carton box, test-protocol, batteries, manual
	SET	Device in case GKK 1002, 1 m tube 6x1 PVC, test-protocol, batteries, manual
	SET	For -MCM: Device in case GKK 1002, 1 m tube 6x1 PVC, test-protocol, batteries, manual, 2 quick connect sockets GDZ-MCF
	SET 8	Device in case GKK 1002, incl. 1 m rubber tube 8 mm, test-protocol, batteries, manual
	WPD	Device in case GKK 1002, 1 m tube 6x1 PVC, factory calibration WPD5, not DAkkS accredited, batteries, manual

#### STANDARD ARTICLES

ECO 210-3-UT	Fine manometer, pressure connection: 2x G1/8-inch port incl. connection for tube 6x1 mm (4 mm inner) or 8x1 mm (6 mm inner) Set-Option: Device in carton box, test-protocol, batteries, manual <b>Art no. 486718</b>
ECO 210-3-UT-SET8	Fine manometer, pressure connection: 2x G1/8-inch port incl. connection for tube 6x1 mm (4 mm inner) or 8x1 mm (6 mm inner) Set-Option: Device in case GKK 1002, 1 m silicone tube 8 mm, , test-protocol, batteries, manual <b>Art no. 487010</b>
ECO 210-3-QC6	Fine manometer, pressure connection: 2x G1/8-inch port incl. quick connector for tube with outer-Ø 6 mm Set-Option: Device in carton box, test-protocol, batteries, manual <b>Art no. 486960</b>

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ECO 210-5-UT	Manometer, pressure connection: 2x G1/8-inch port incl. connection for tube 6x1 mm (4 mm inner) or 8x1 mm (6 mm inner) Set-Option: Device in carton box, test-protocol, batteries, manual	<b>Art no. 486735</b>
ECO 210-5-ST6-WPD	Manometer, pressure connection: 2x G1/8-inch port incl. screw connector for tube with outer-Ø 6 mm Set-Option: Device in case GKK 1002, incl. 1 m tube 6x1 PVC, factory calibration WPD5, not DAkkS accredited, batteries, manual	<b>Art no. 487035</b>
ECO 210-5-QC6	Manometer, pressure connection: 2x G1/8-inch port incl. quick connector for tube with outer-Ø 6 mm Set-Option: Device in carton box, test-protocol, batteries, manual	<b>Art no. 486983</b>

### ACCESSORIES

ST-G1000	Protection bag with belt clip	<b>Art no. 611373</b>
G1000-Cover	Rubber protection cover for ECO-Line/G 1000 series, black, incl. 2 neodymium magnets	<b>Art no. 483958</b>
GCLIP1000	Metal belt clip self-adhesive	<b>Art no. 475820</b>
G1000-BASE	ECO-Line table base and wall suspension	<b>Art no. 481885</b>
GDZ-UT	Universal pressure port for tube 6/4 or 8/6 with male thread G 1/8, brass nickel-plated	<b>Art no. 479260</b>
GDZ-QC6	Quick connect for hose 6/4 with male thread G 1/8, brass nickel-plated	<b>Art no. 479261</b>
GDZ-MCM	Mini quick connect coupling plug (nominal diameter 2.7) with male thread G 1/8, brass nickel-plated	<b>Art no. 479467</b>
GDZ-MCF	Mini quick connect coupling socket (nominal diameter 2.7) with screw lock for tube 6/4, seals when plugged off, brass nickel-plated	<b>Art no. 480221</b>
GDZ-01	PVC hose 6/4 (6 mm outside-Ø, 4 mm inside-Ø, 5 bar at 23 °C)	<b>Art no. 601541</b>
GDZ-31	Rubber tube 8/5 (8 mm outside-Ø, 5 mm inside-Ø, 2 bar at 23 °C, max. 200 °C)	<b>Art no. 606070</b>
GKK1002	Case for ECO-Line / G1000 series, dimensions: 235 x 185 x 48 mm	<b>Art no. 411907</b>

For more available accessories, visit the Senseca-Website.

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#### OPTIONAL: CALIBRATION

ISO-WPD5

ISO calibration certificate: 5 points rising, 5 points falling

Art no. 602514

Many other calibration options are available at Senseca, for more information please visit the Senseca-Website