

ECO2

Compact, economical, digital manometer

Features

- Accuracy 0,5 %FS
- Compact design
- Piezoresistive pressure sensor chip, insulated encapsulated
- Energy-efficient: battery life of up to 1000 operating hours
- Optional: intrinsically safe version ECO2-Ei available for use in potentially explosive atmospheres

Functions

- Wide range of units of pressure to choose from
- Zero point calibration via buttons
- Automatic shutdown
- Min. / max. display

Typical applications

- Industrial applications
- Servicing
- Monitoring of glass bottle filling



Accuracy

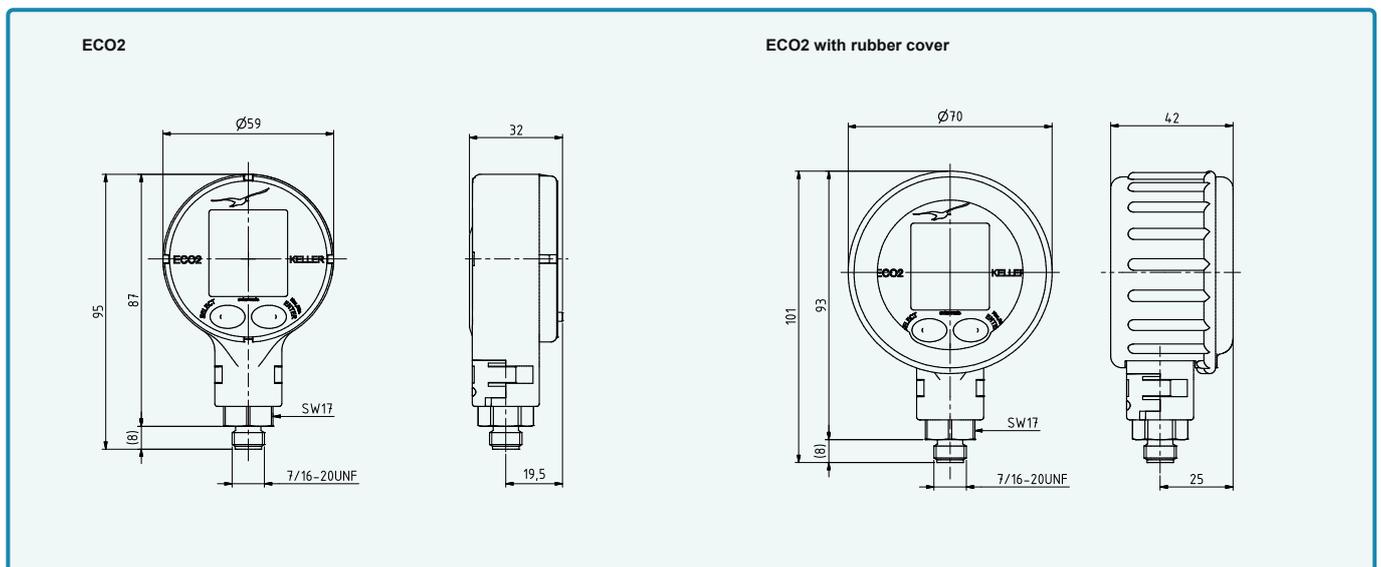
± 0,5 %FS

Total Error Band

± 1.0 %FS

Pressure Ranges

0...31 bar and 0...300 bar



Edition 06/2025
Subject to alterations
info@keller-pressure.com

Find your local contact at keller-pressure.com

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Contáctanos:
Telf. (+511) 640 1666
Cel. (+51) 941 451 011



Cotizaciones:
ventas@inprocess.com.pe



ECO2 – Specifications

Standard pressure ranges

Absolute pressure, PAA	0...31		bar abs.	Zero at 0 bar abs. (vacuum)
Absolute pressure, PA		0...300	bar	Zero at 1 bar abs.
Overload resistance	60	400	bar	
Display resolution (LCD)	0,01	0,1	bar	

Performance

Pressure

Accuracy @ RT (20...25 °C)	$\leq \pm 0,5$ %FS	Nonlinearity (BFSL), pressure hysteresis, non-repeatability, zero point deviation and amplification deviation
Total error band (0...50 °C)	$\leq \pm 1,0$ %FS	Max. deviation within the specified pressure and temperature range.
Long-term stability	$\leq \pm 0,2$ %FS	Per year under reference conditions, yearly recalibration recommended.
Pressure range reserve	$\geq \pm 10$ %	Valid measured values outside the pressure range, no overflow/underflow.

Temperature ranges

Compensated temperature range	0...50 °C
Media temperature range	-10...60 °C
Ambient temperature range	0...50 °C
Storage temperature range	-20...70 °C

Electrical data

Battery	3 V, type CR2430	Only CR2430 from Renata permitted for hazardous applications (ECO2-Ei).
Battery life	Up to 1000 hours	When used continuously.
CE-conformity as per 2014/30/EU (EMC)	EN IEC 61326-1 / EN IEC 61326-2-3 / EN IEC 61000-6-1 / EN IEC 61000-6-2 / EN IEC 61000-6-3 / EN IEC 61000-6-4	



ECO2 – Specifications

Display

Dimensions	Width × height: 27,8 mm × 30,0 mm (see dimensions and variants)
Number of digits on LC display	2 rows with 4 1/2 digits each
Measuring rate	2 measurements per second
Configurable units of pressure	bar, mbar, hPa, kPa, MPa, PSI, kp/cm ²

Mechanical data

Materials in contact with media

Pressure connection	Stainless steel AISI 316L
Pressure transducer separating diaphragm	Stainless steel AISI 316L
Pressure transducer seal (internal)	None
Swivel insert	Nickel-plated brass
Swivel O-ring	NBR
Adapter	Galvanised steel
Adapter seal (external)	NBR

Other materials

Display housing	Polyamide
Pressure transducer oil filling	Silicone oil

Further details

Pressure connection	7/16 - 20 UNF with G1/4 adapter	See dimensions and variants for other optional adapters
Diameter × height × depth	59 mm × 95 mm × 32 mm	Without rubber cover
	70 mm × 101 mm × 42 mm	With rubber cover
Weight	approx. 125 g	Without rubber cover and adapter
Protection	IP65	

Explosion protection ECO2-Ei

Intrinsically safe version ECO2-Ei in accordance with 2014/34/EU (ATEX) and IECEx	LCIE 01 ATEX 6001 X IECEX LCIE 18.0035 X Zone 0: Ex II 1G Ex ia IIC T5 Ga	Permitted max. ambient temperature range -10...80 °C.
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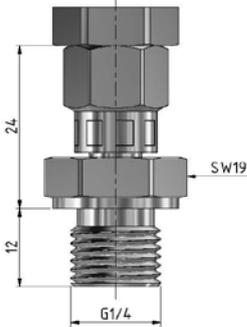
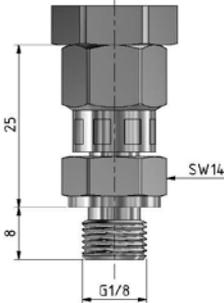
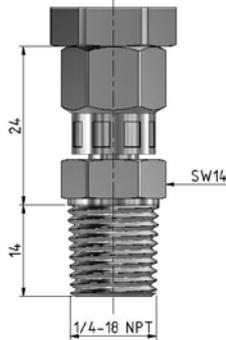
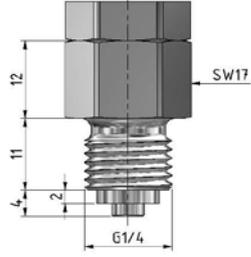
ECO2 – Dimensions and variants

LC display

Front cover	Content	Dimensions
		Width × height: 27,8 mm × 30,0 mm Digit height: top: 8 mm × 3 mm bottom: 7 mm × 3 mm

Available pressure connections

A swivel adapter with a G1/4 connection on the process side is supplied as standard with every ECO2. The swivel adapter is a cylinder with O-rings on each side. This allows the device to be optimally positioned. The following adapters are also available:

Principle Swivel adapter	G1/4 swivel adapter (standard)	G1/8 swivel adapter	1/4-18NPT swivel adapter	G1/4 EN 83 adapter, without swivel, alignment not possible
				

The process of fitting the adapter with the swivel seal insert is described in the operating instructions.

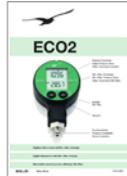
Customised configurations on request

- Customer-specific front covers
- Other oil filling for pressure transducers



ECO2 – Scope of delivery and accessories

Scope of delivery

Renata CR2430 battery	G1/4 swivel adapter	Operating instructions D/E/F	Copper seal for G 1/4 «mano» with centering pin
			

Accessories

Rubber cover	Calibration certificate with 5 measuring points	Calibration certificate with 11 measuring points	Carry case
			
For additional protection in harsh environments.	Deviation at room temperature. Issued by KELLER Pressure.	Deviation at room temperature with hysteresis. Issued by KELLER Pressure.	With belt loop.

Order information

Standard versions		Intrinsically safe versions	
Technical description	Product number	Technical description	Product number
ECO2 / 31 bar	303060.0001	ECO2-Ei / 31 bar	303060.2001
ECO2 / 300 bar	303060.0002	ECO2-Ei / 300 bar	303060.2002

