

## ECO2

Compact, economical, digital manometer

### Features

- Accuracy 0,5 %FS
- Compact design
- Insulated piezoresistive pressure sensor encapsulated in an oil-filled metal housing
- 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

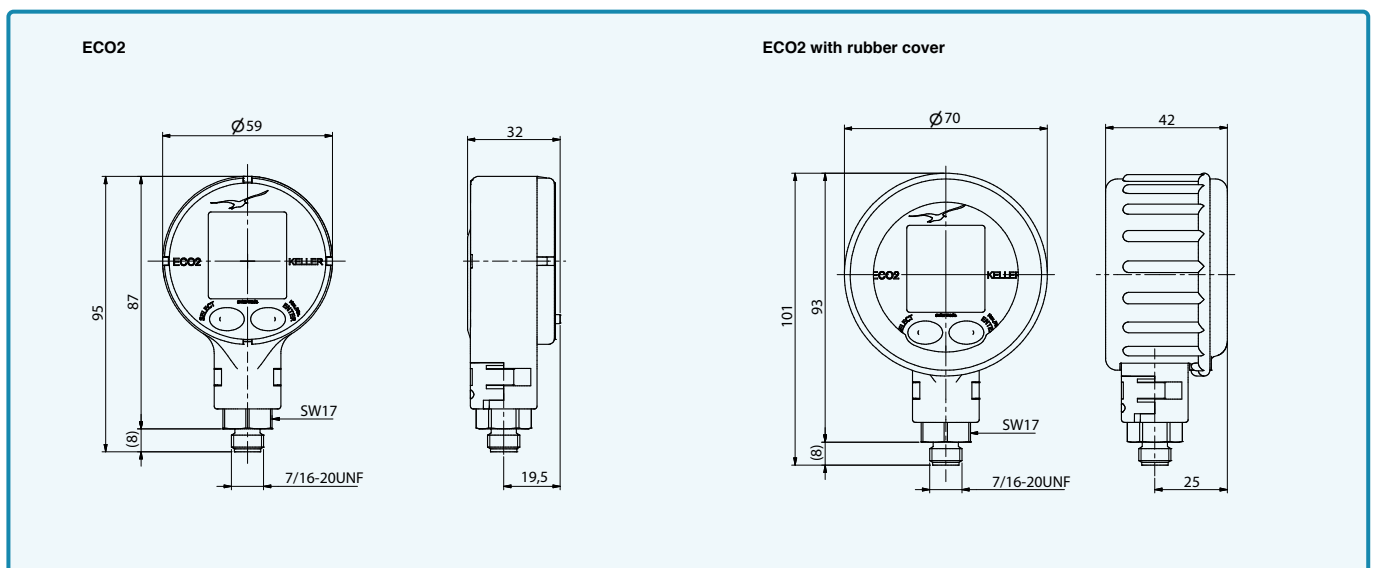
± 0,5 %FS

#### Total Error Band

± 1.0 %FS

#### Pressure Ranges

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



## ECO2 – Specifications

### Standard pressure ranges

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

Key	PAA	Sealed	Zero at 0 bar abs. (vacuum)
	PA	Sealed	Zero at 1 bar abs.

### 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 61000-6-1 to -6-4 EN 61326-1 / EN 61326-2-3	

## ECO2 – Specifications

### Display

Dimensions	Width x height: 27,8 mm x 30,0 mm (see Dimensions and options)
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 <sup>2</sup>

### 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 options for other optional adapters
Diameter x height x depth	59 mm x 95 mm x 32 mm	Without rubber cover
	70 mm x 101 mm x 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 options

### 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.

### Other customer-specific options





- Customer-specific front covers
- Other oil filling types for pressure transducers: e.g. special oils for oxygen applications

## ECO2 – Scope of delivery and accessories

### Scope of delivery

Renata CR2430 battery	G1/4 swivel adapter	Operating instructions D/E/F
		

### Accessories

Rubber cover	KELLER 5-point report	KELLER 11-point report	Carry case
			
For additional protection in harsh environments	Measurement deviation at room temperature	Measurement deviation at room temperature with hysteresis	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