



Revision V1.01

FCX-TR2-0025

Easy to use & highly integrable
Long lifetime
Maintenance-free operation



KEY FEATURES

- Highly sensitive to oxygen
- Measurement range: 0.1 – 25 vol.-%O₂
- Easy connectivity and integration
- Linearized output signal
- Digital or analog output interface
- 12-24VDC power supply
- Diffusion and/or forced flow variants
- Fast response & recovery times
- Low maintenance and long lifetime



APPLICATION AREAS

- Industrial Safety & Process Control
- Energy Systems
- Additive Manufacturing
- O₂ Concentrators & Generators
- N₂ Generators
- Food storage and Packaging
- CO₂ incubators
- Server rooms and trace gas applications



MEASUREMENT SPECIFICATIONS

Measuring Gas	Oxygen O ₂
Measurement Method	Zirconia oxide ZrO ₂ – limiting current (Amperometric)
Detection Range	FCX-TR2-0025 → 0.1 – 25vol.-% O ₂
Accuracy [at 25°C]	FCX-TR2-0025 → ±0.5vol.-% O ₂
Output Signal	Linearized
Response Time t_{90}	within 30s
Warm-up Time ²	about 3 min before the measurement Heater warm-up → Maximum 40mV/s
Flow rate ²	0.1 – 3.0 l/min (Nominal flow rate: 0.75 l/min)

TECHNICAL SPECIFICATIONS

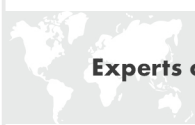
Temperature Range	-10°C to +50°C
Humidity Range	0 to 85% r.h. [non-condensing]
Storage Temperature	-40°C to +120°C
External Dimensions L x W x H	130.7 mm x 41.5 mm x 41.5 mm 144.5 mm x 41.5 mm x 41.5 mm with flow-cap
Weight	165 g 222 g with flow-cap
Supply Voltage	12 to 24VDC
Power Consumption	Less than 2W
Output Signal Interface	Analog: 4 – 20mA Digital: RS-485, Modbus RTU
Lifetime	FCX-TR2-0025 → ~90.000 hrs
Electrical Interface	Industry standard M12
Mechanical Interface	G3/4" external thread, 36mm wrench size (SW36)
Housing Material	Anodized aluminum

ORDERING INSTRUCTIONS

Part no.	1620215201
Model	FCX-TR2-0025-F-CH

¹ Dependent on the ambient temperature; measured at 25°C

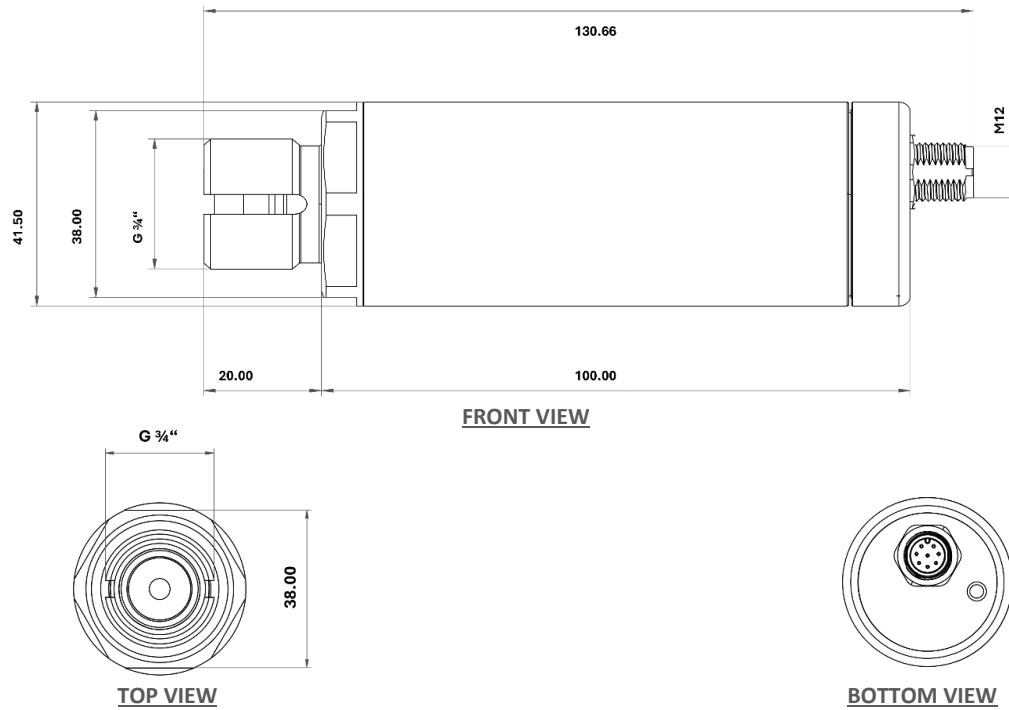
² Only valid for the variant with flow-cap



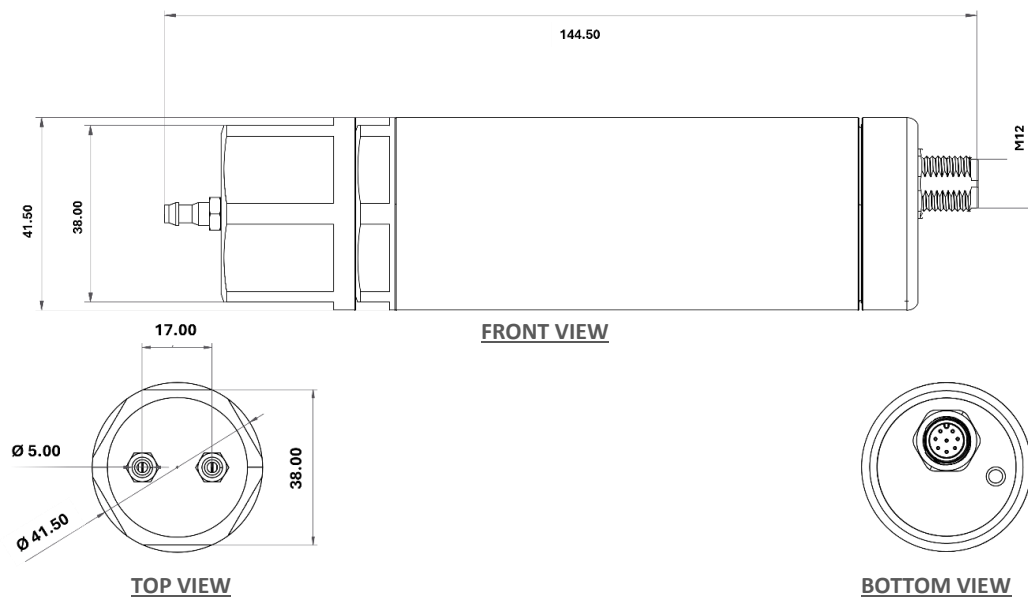


EXTERNAL DIMENSIONS

WITHOUT FLOW-CAP



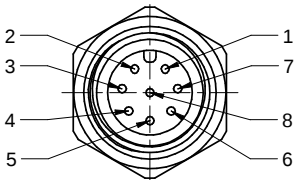
WITH FLOW-CAP





ELECTRONIC CONFIGURATION

The M12 connector used has the following pin assignment.

	Pin Nr.	Signal	Wire color on the plug (Phoenix Contact 1522590)
	1	-	white
	2	-	brown
	3	GND (Analog)	green
	4	RS-485 B	yellow
	5	RS-485 A	gray
	6	GND (Power)	pink
	7	24 VDC	blue
	8	4 – 20mA	red

! The 4 – 20mA output is active (source). The O₂ transmitter FCX-TR2 is not a current loop powered transmitter.

LIABILITY / DISCLAIMER

! CAUTION!

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📋 Typical values related to 1013 hPa, Ta = 25 °C, flow = 0.75 l/min for dry (non-condensing) and clean sample gas. Stated values exclude calibration gas tolerance.

All specifications – technical included – are subject to change without notice. Depending on the application, the target gas and the measurement range the technical data may differ. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale.

For more information, please visit sensorsandpower.angst-pfister.com

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