

# SMART Oxygen Transmitter

## OXY-ProXT



- No calibration required
- Measurement ranges from 10 ppm to 96% O<sub>2</sub> defined by selected smart sensor
- Pre-calibrated smart sensors
- Analog 4...20 mA, 0...5 V (Optional) and RS485 Modbus RTU output
- User Programmable O<sub>2</sub>-alarm / Relay

### Description

The OXY-ProXT uses SMART sensors based on O<sub>2</sub> diffusion-limiting zirconia technology, delivering a long-life, reliable solution. Each smart sensor is individually calibrated against an O<sub>2</sub>-reference. The resulting calibration data is stored within the sensor. Upon connection of the sensor, the calibration and operating parameters are uploaded into the transmitter, allowing a plug and play approach in the application.

The transmitter is compatible with many sensors and thread/flange types from the SENSORE product range. The **OXY-ProXT is a single channel / single range solution**. For the combination of two different measurement ranges please refer to the **dual channel solution OXY-ProXT2**.

### Specifications

General sensor specification	
O <sub>2</sub> Accuracy	See page 2
Maximum flow velocity	6 m/s (19.7 ft/s)
Pressure range	700...1300 mbarA (10...19 psia)
Maximum safe pressure	1500 mbarg (21 psig)
Response time (T90)	Depends on selected sensor housing (fastest option < 5 seconds)
Operating temperature range (sensor head)	Depends on sensor cable configuration, in all cases +10...+100 °C (+50...+212 °F)
Operating temperature range (sensor plug)	+10...+75 °C (+50...+165 °F)
Life expectancy (application dependent)	Up to 5 years
Humidity (with normal use)	0 %RH to 90 %RH @ 40 °C (104 °F) non-condensing
Available housing configurations	D0 (M16 x 1.5 male), D2 (M16 x 1.5 male), D3 (M18 x 1.5 male), B1 (TO8 + flange)
Shelf life	Unlimited
Calibration interval	No calibration required. Calibration data stored in smart sensor.



### Analyzer (Monitor)

#### Electrical

Output signal	4...20 mA Optional: 0...5 V
Digital communications	RS485 / Modbus RTU
Relay contact output	24V DC / 100 mA controlled by an O <sub>2</sub> -alarm-level (programmable via RS485)
Electrical interface	8-pin M12 on sensor, extension cable from sensor plug to screw terminal on monitor
Operating temperature range (monitor)	+10...+50 °C (+50...+122 °F)
Power Supply	24V DC +/- 10 %
Maximum power consumption	6 W or 0.25 A

#### Mechanical

Ingress protection	IP40 (monitor), IP66 (sensor plug)
Housing material	PC (UL 94 V-0)
Mounting	DIN rail
Sensor cable length (supplied)	50 cm (19.6 in) with 8 pin M12 connector
Extension cable length	Standard: 3 m (9.8 ft) Optional: 1 m (3.28 ft)

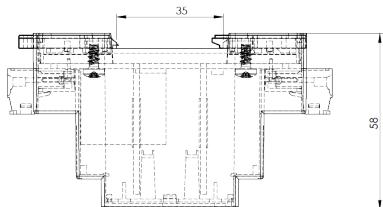
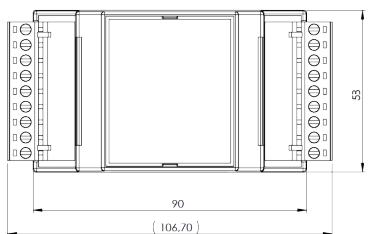
#### Compliance

CE: According to EU machinery directive EN ISO13849 (performance level non-SIL applications only) and EN 61010-1

Sensors				Zirconia (ZR)			
Available measurement ranges				O2 concentration in volumetric % or ppm			
Nominal sensor range	1000 ppm	1.00 %	2.00 %	5.00 %	25 %	40 %	96 %
Full scale output (20 mA/5 V/RS 485)	1200 ppm	1.25 %	2.5 %	6.25 %	25 %	50 %	100 %
Typical accuracy	20 ppm	100 ppm	200 ppm	500 ppm	0.25 %	0.40 %	1.0 %
Output resolution (4...20 mA)	< 1 ppm	< 10 ppm	< 20 ppm	< 50 ppm	< 0.025 %	< 0.04 %	< 0.1 %
Lower detection limit	10 ppm	100 ppm	100 ppm	500 ppm	0.1 %	0.2 %	1.0 %

\*Nominal sensor range is the specified maximal O2 concentration, overrange operation should be avoided

## Dimensions (mm)



Extension Cord



D1: M16 x 1.5 male nickel-plated steel housing, with porous stainless steel sinter cap



D2: M16 x 1.5 male aluminium housing, with porous stainless steel sinter disc



D3: M18 x 1.5 male housing, with porous stainless steel sinter cap



B1: Flange nickel plated housing with stainless steel mesh

**Housings: Measuring Side: porous sinter metal disc or cap 1.4404 stainless steel**

O P X T - X X - X X X - X X X

Sensor Type	Nominal Sensor Range	Ext Cable Length
D0 (M16 x 1.5 MALE Steel)	960 (96%)	100 (1m)
D2 (M16 x 1.5 MALE Al)	400 (40%)	300 (3m)
D3 (M18 x 1.5 MALE)	250 (25%)	
B1 (TO8) Flange	050 (5%)	
	020 (2%)	
	010 (1%)	
	001 (1000 ppm)	

We adopt a continuous development program, which sometimes necessitates specification changes without notice.

For technical assistance or enquiries about other options, please contact us here: [sensors@dwyeromega.com](mailto:sensors@dwyeromega.com)


  
 Improving the world, one measurement at a time.™