

ZD21 Transmitter

Extremely stable oxygen detector



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Long-term monitoring of oxygen concentration under difficult conditions

Oxygen concentration must be permanently controlled in many applications. If harsh environmental conditions such as varying temperatures, high or low pressure or dry or humid air require a particularly robust transmitter, the ZD21 is a good choice. The sensor operates with a zirconium dioxide oxygen pump cell. This measuring principle enables stable long-term measurement of O₂ under difficult conditions and with short response times.

The ZD21 is characterized by its high selectivity and long-term stability. Oxygen sensors with different measuring ranges are available. The sensor can also be installed remotely. The maximum cable length between the transmitter and the external sensor is 6 1/2 feet.

Rugged and durable

The transmitter housing is made of aluminum. It is protected against dust and water ingress (IP54). The O₂ sensors have a long sensor lifetime of 5 years and are insensitive to CO₂. Temperatures between -13 to +122°F, very low or very high humidity and extreme pressure do not affect the accuracy of the oxygen measurement.

Communication and service

Changes in the O₂ concentration are detected within a very short time (t₉₀ > 2 s). The measurement signal is communicated analog to the controller (0.2-1 mA or 4-20 mA). A calibration adapter is available for the test gas supply during the regular function tests. The adjustment can be performed by a single technician.

Technical Data: ZD21

Gas: Oxygen (O₂)

Measuring principle: Zirconium dioxide (ZD)

Detection range: 0-25% volume
10-1,000 ppm

Gas supply: Diffusion

Expected sensor life: Greater than 5 years

Response times:

Response time t₉₀: sensor dependent

Warm up time: less than 5 minutes

Stabilization time: less than 30 minutes

Temperature:

Operating: -30 to +50 °C, -20 to +40 °C

Ambient: -13 to +122 °F / -25 to +50 °C

Humidity: 0 to 99% r.h. non-condensing

Pressure: 80 to 120 kPa

Output Signal: 0.2-1 mA or 4-20 mA

Power supply: 10 to 32 V DC / < 3 W

Connection Cable:

PG 11, for cable size 3 x 1.5 mm²

3 core shielded cable LIYCY 3 x 1.5 mm²

Cable length to controller:

Up to 984 ft / 300 m

Housing: Aluminum

Protection class: IP54

Dimensions: 3.94 x 3.94 x 2.24 in /

100 x 100 x 57 mm (W x H x D)

Weight: 13.05 oz / 370 g

Approvals / Certifications:

EC-type examination:

PFG 15 G 001 (for measuring function)

Electromagnetic compatibility:

DIN EN 50270

Interference emission: Type class 1

Interference immunity: Type class 2

CSA:

c-CSA-us

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