Fixed Gas Detection Systems

smart GasDetection Technologies

ZD21 Transmitter

Extremely stable oxygen detector

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Extremely stable oxygen detector

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 O_2 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 CO_2. 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 O_2 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 (O_2)
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 t_{90}: 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 mm^2
3 core shielded cable LiYCY 3 x 1.5 mm^2
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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