qOXY

DATA SHEET

O_2 GAS ANALYZER

qOXY

SW Technology gas analyzer qOXY is a system for the continuous monitoring of gas O_2. Based highly robust, accurate and reliable Zirconium probe sensor without the need for a physical reference-channel.

The gas measurements is based on an extractive system.

- Extremely high selectivity to the target gas
- Functional safety, continuous status reporting
- Long lifetime (10+ years)
- Fast response times
- Low power consumption possible
- Very low cost-of-ownership (no regular replacement and/or calibration)
- Touch screen and navigation keyboard
- Three access level Operator, Engineer and Service

Description

The qOXY analyzer is a new and innovative gas detector for continuous fast and reliable measurement of O2.

The unit is a standard 19" rack, ready-to-use system for selective detection and monitoring of gases.

Gas measurement is done at temperature below 100 °C and no special attention should be pay to maintain physical gas characteristics unaltered.

Using an extractive system has several advantages versus in-situ solutions in terms of installation and maintenance costs.

Zirconium Dioxide Sensor

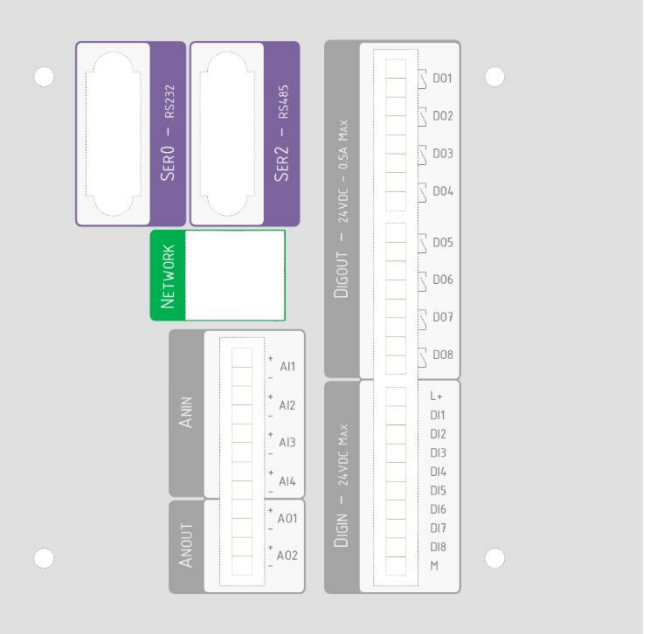
The sensor employs a well proven, small Zirconium Dioxide based element at it's heart and due to it's innovative design does not require a reference gas. This removes limitations in the environments in which the sensor can be operated with high temperatures, humidity and oxygen pressures all possible.

I/O Interface

The unit is equipped with latest technology electronics. Two analog output with 16 bits resolution is provided for the O2 concentration.

Up to 4 free voltage contact relays provide state and calibration valve control.

Up to 4 digital inputs are available as control signals for controlling calibration cycles.



Terminal Blocks

Calibration

The Zero and Span calibration cycles can be performed in several different ways:

- on time basis by using internal RTC
- by means of dedicated digital input signal
- directly through the front panel display
- through the communication port

Front Panel

The front panel of the qOXY is equipped with a graphical color touch screen display and a navigation membrane keyboard.

Both display and keyboard are water-proof.

Available screens are browsed quickly with keys while all setting are done with on screen touch keyboard.

User interface is make even more by using modern style pop-up menus, buttons and other controls.

Back Panel

The back panel provide power supply socket, gas inlet and outlet fittings, I/O signals and communications sockets as well.

All sockets signal are clearly marked with proper tags in order to make the avoid connection errors.

Furthermore all I/O signals uses different size sockets that makes impossible to plug the socket in the wrong position. This prevents damages of the instrument due to the bad fitting of terminal block.

Auto Diagnostics

The qOXY uses a continuous diagnostic algorithm to check the integrity of the O2 cell hence the gas measurement.

An output relay indicates the measurement quality state.

Communication

The qOXY have two serial lines and a 10/100 standard Ethernet socket.

- Ser0 is the RS232 console port for system administration, firmware update and so on.
- Ser2 is a 2 wire RS485 for MMI data exchange with ModBus RTU protocol.
- Network port has built in ModBus RTU over Ethernet.

SPECIFICATION

TARGET GAS		
O2		
MEASUREMENT TYPE		
Extractive <100 °C		
RANGE		
O2	0-25	%
ANALOG OUTPUT		
O2	4÷20	mA
CALIBRATION GAS		
Span	Typ. 80% Full Range	
Zero	Ambient Air (21%), N2	
TEMPERATURE		
Internal	15÷50 °C	
External	-5÷45 °C with relative humidity < 90% without condensation.	
POWER SUPPLY		
Voltage	90-230 V.a.c. switching, 50/60 Hz	
Consumption	100 VA	
TECHNICAL DATA		
Accuracy	±0.8 % Full Range	
Risolution	1/32000	
Precision	0.2 % absolute	
TIMING		
Warm-Up	10 min	
Response	< 30 sec	
SIZING		
Height	3HE	
Width	19" rack	
Depth	230 mm	