SENSOR TRANSMITTER 4 – 20mA WITH GALVANIC CELL FOR OXYGEN

USE AND INSTALLATION MANUAL

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SENSOR - TRANSMITTER FOR OXYGEN

SPECIFICATIONS

Power supply	12 ÷ 28 Vdc
Output signal	4 ÷ 20 mA with a range 0 ÷ 30% (25%) Vol. Oxygen
Oxygen cell	Electrochemical type
Certification	ISSeP04ATEX036 **II 2G/D EEx d IIC T6**
Operating temperature	-20°C ÷ + 50°C

INSTALLATION

The sensor/transmitter must be installed with nose pointing downwards at a location with little vibration and stable temperature.

Use the holes in the transmitter housing to mount the transmitter. For maintenance purposes, leave at least 30 cm of space below the transmitter sensor.

ELECTRICAL WIRING

Use 2 x 1,0 to 1,5 mm² wire size shielded cable.

Connect the wires to the green connector as indicated on Fig. 1.

No matter regarding polarity:

- First pole + 24Vdc.
- Second pole output current 4-20mA

The shield can be connected to the internal ground screw.

SENSOR – TRANSMITTER

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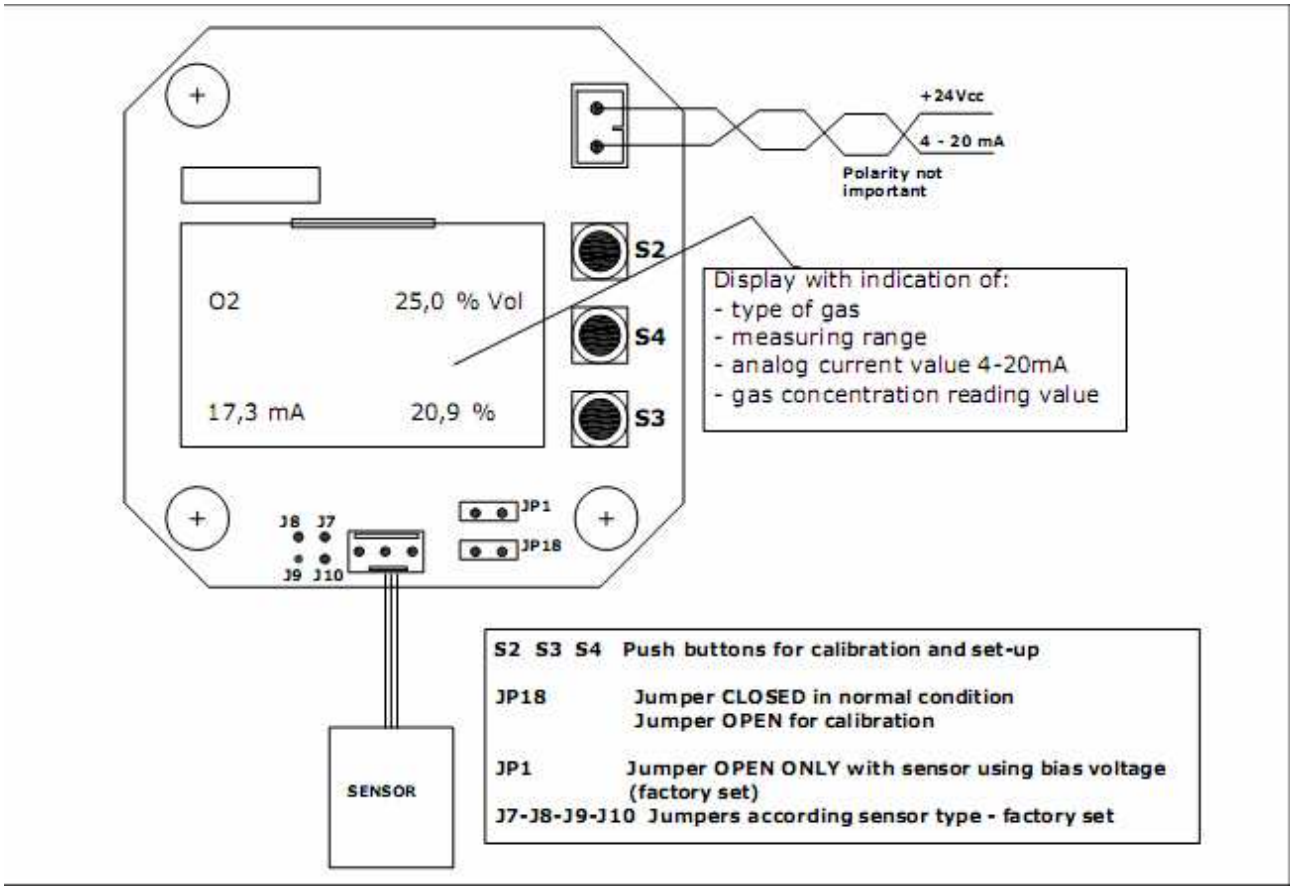


Fig. 1

The display is used for the control of the regular functioning of the sensor and to perform SPAN and ZERO calibration with S2-S3-S4 pushbuttons .
On the first row it is possibile to read the gas type and range of analysis.
On the second row you have in real time the reading in mA and the corresponding value in % Vol. of gas concentration.

Sensor Calibration (oxygen)

For the control of regular functioning of the sensor you must use a source of zero gas (pure nitrogen) and free clean air as source of Span gas.
Ceck ZERO and SPAN calibration every 6 or 12 months or when the sensor is exposed to a gas concentration over full scale.

To proceed with zero and span calibration it is necessary to open Jumper JP18 (see fig. 1).

Access the Operating menu from the Reading Display by keying 5 times **S4** pushbutton.
The display will shows:

-	ZERO
-	SPAN

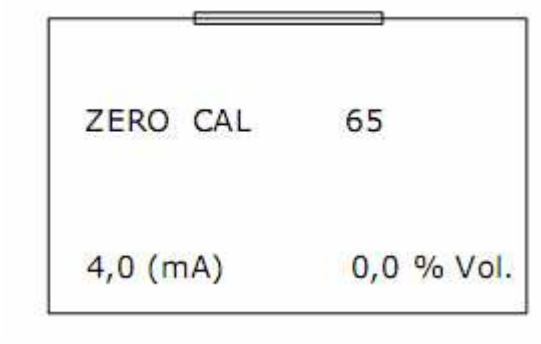
Push pushbutton (S4) on the right side of ZERO to proceed with ZERO menu.
Push pushbutton (S3) on the right side of SPAN to proceed with SPAN menu.

ZERO CALIBRATION

-	ZERO AUTO
-	ZERO MAN

Note: It is usefull to use manual zero function
Push pushbutton (S3) in line with ZERO MAN.

On the display you can reads:



It is necessary to use the calibration adapter (accessories) in order to perform a flowing gas calibration.

Start to flow pure nitrogen (from calibration gas cylinder) with a flow around 0,5 ÷1,0 l/m.
Wait to have a stable reading, then by using pushbuttons S2 or S3 adjust reading for 4,0 mA or 0% Vol. O_2.

Push **S4** buttom to return to previous menu:

-	ZERO AUTO
-	ZERO MAN

Push **S2** buttom to return to previous menu:

-	ZERO
-	SPAN

Push again **S2** buttom to leave the calibration menu and return to normal reading.

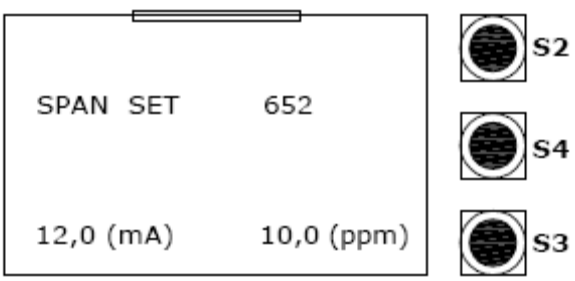
If you do not proceed with SPAN calibration, it is necessary to close JP18 otherwise the display will shows time to time CLOSE THE JUMPER

SPAN CALIBRATION

-	SPAN AUTO
-	SPAN MAN

Note: It is usefull to use manual span function (SPAN MAN)
Push pushbutton (S3) in line with SPAN MAN.

On the display you can reads:



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If you are using a span gas cylinder as SPAN gas, it is necessary to use the calibration adapter (accessories) in order to perform a flowing gas calibration (flow rate 0,5÷1 l/m).
If you use free clean ambient air as SPAN gas, leave the sensor free without the flowing device.

When the reading became stable, with pushbuttons **S2-S3** adjust reading to coincide with span Oxygen gas concentration or 20,9 % O_2 if you are using ambient air.

Push button **S4** to return to previous menu:

-	SPAN AUTO
-	SPAN MAN

Push button **S2** to return to previous menu:

-	ZERO
-	SPAN

Push again **S2** buttom to leave the calibration menu and return to normal reading.

Close jumper **JP18** to end the calibration procedure