



HSG1030 – NO₂ Sensor

NO₂ Sensor for monitoring, ventilation control and alarming

HSG1030

0...20ppm
4...20mA output according to the range
Calibration adjustable at time of installation using test cap and applying test gas

Applications

Any area where presence of NO₂ gas may require forced ventilation or NO₂ level monitoring/alarming.

Design

The HSG1030 applies an electro-chemical principal to sense NO₂ ppm concentration in air.

The assembly comprises:

- Electro-chemical sensing element
- Loop-powered (20...28Vdc) PCB with 4...20mA output
- Sensor protection filter
- IP65 housing in ABS plastic

Operation & Testing

The HSG1030 is supplied calibrated to a range of 0...20ppm NO₂. Using the test cap HSG1001 to apply test gas, it may be calibrated to a user defined range at time of installation. The test cap is also used for periodic checking and recalibration. The test gas applied should be at a flow rate of 0.5 l/min.

If for any reason the PCB is removed from the sensing element for a prolonged length of time then a shorting wire should be place between the sensor pins. If this short-circuit is not applied then the sensor may polarize, in which case, when first plugging the PCB back on to the sensor, the complete assembled unit should be left un-powered for two to three hours to allow it to re-stabilize.

Operation & Testing (cont...)

The HSG1030 is delivered with the PCB fitted. The PCB provides the necessary stabilization and so the HSG1030 may be operated immediately in this case.

Brief disconnection of the PCB from the sensor unit will not de-stabilize the sensor. The screw terminals may be removed from the PCB for connection of the 4...20mA loop wiring without having to remove the PCB from the sensor unit.

To test the unit, connect a 20...28Vdc, 4...20mA loop to the screw terminals. With test gas applied, measure the 4...20mA output signal equivalent to the range 0...20ppm NO₂.

Accessories & Spares

HSG1001

Test Cap



Mounting instructions

The housing should be wall mounted in an area that has adequate air movement to ensure good air sampling.

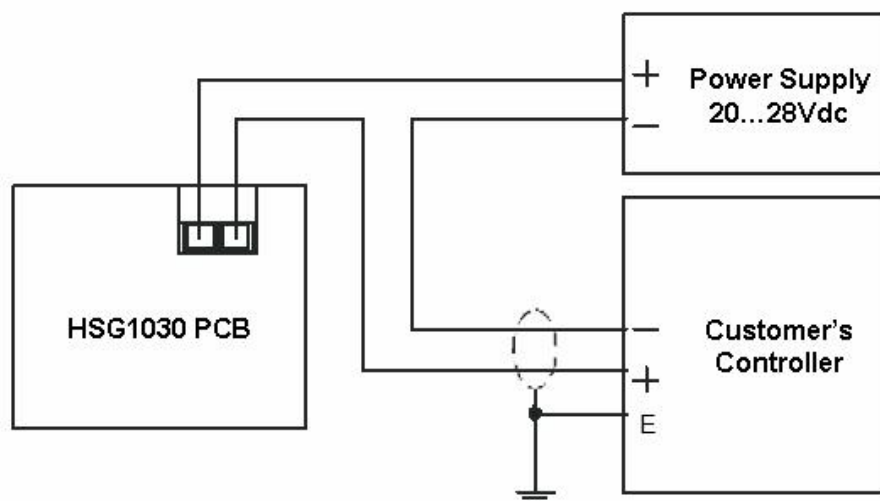
The housing should be positioned with the sensor aperture downward to ensure water cannot be allowed to enter.

Cable entry point is freely selectable; rear, side or top.

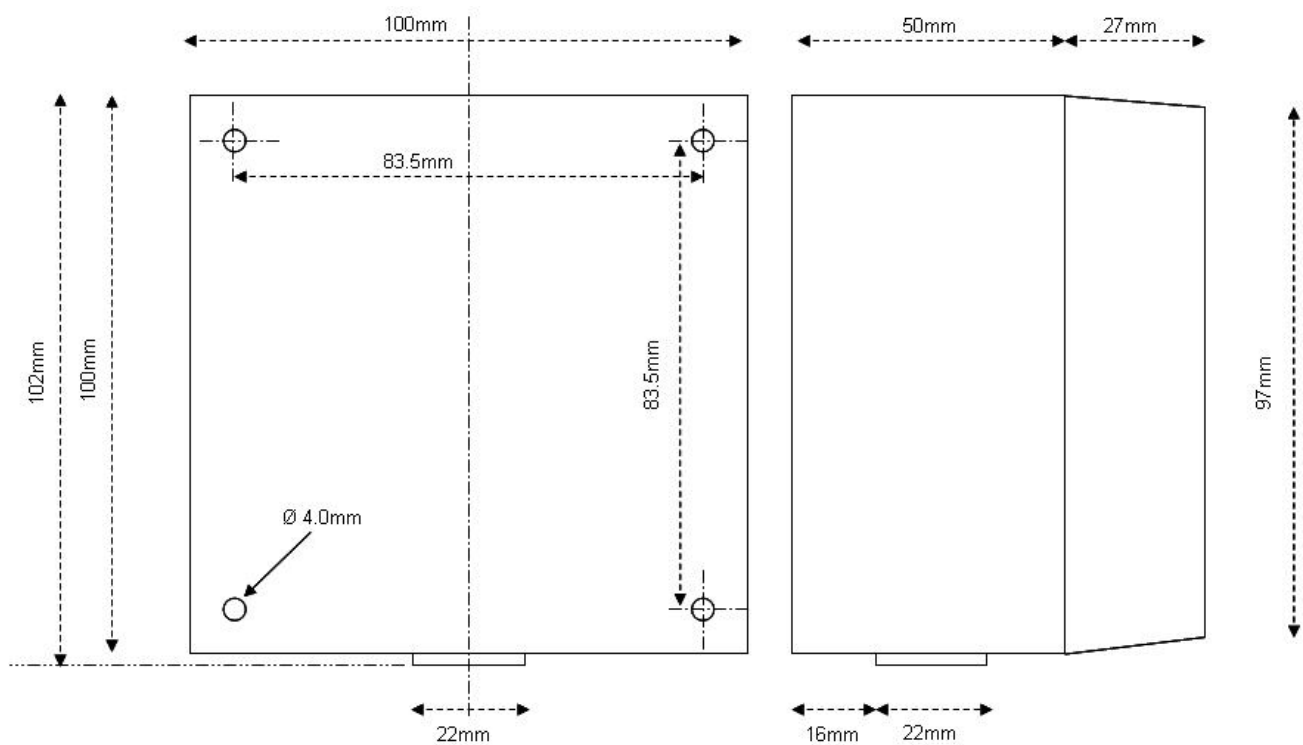
Cable entry should be sealed via conduit adapter or cable gland to ensure no water is able to enter the housing.

Connections

Two-wire combined power supply and signal output.
The power supply is not polarity sensitive.



Dimensions



Technical Data

Detection principle:	Electro-chemical
Operation:	continuous
Gas entry:	by diffusion
Measuring range:	0...20ppm NO ₂
Reproducibility:	≤ 2% of measuring signal
Response time t ₉₀ :	< 60 sec
Temperature range:	-15°C...+40°C
Humidity range:	15...90% rH, non-condensing
Power supply:	20...28Vdc
Lifetime of NO ₂ sensor element:	2 years
Signal:	4...20mA, max. load 300Ω
Zero adjustment:	Automatic
Sensitivity adjustment:	Via potentiometer
R.F.I.:	According EN50081-1 resp. EN50082-2B
Recommended storage temperature:	0...20°C
Housing material:	ABS
Housing protection:	IP65