HS-01   Humidity sensor

Basic characteristic

▲ HS-01 is an FBG-based relative humidity sensor usable in various environments.

▲ HS-01 offers to measure temperature and relative humidity changes within one body.

▲ The small dimensions of the body allow the sensor to be inserted in narrowed spaces.

Benefits

▲ Inbuilt particle filter made from PTFE.

▲ Integrated temperature sensor for temperature compensation.

▲ Can be manufactured completely without any metal.

Applications

▲ Relative Humidity and temperature measurement in one body.

▲ Combined with the right choice of housing material the sensor is suitable for harsh environments.

Performance properties

Relative Humidity Range [1]	0-99%
Accuracy (guaranteed) [2]	<3% FS[4]
Accuracy (typical) [2]	<1.5% FS[4]
Precision (guaranteed) [3]	<1.25% FS[4]
Precision (typical) [3]	<0.75% FS[4]
Temperature sensitivity	10-11pm/°C
Relative Humidity Sensitivity[5]	~3pm/rH%
Operating Temperature range	-20°C to +60°C
Ingress Protection rating	IP 42

[1] Calibrated in µm on demand

[2] Accuracy is established for each sensor under laboratory conditions and it includes hysteresis, non-linearity, and repeatability of the sensor.

[3] Precision is established on a batch basis and it includes hysteresis, non-linearity, repeatability, and reproducibility of the sensor.

[4] FS: full-scale range

[5] The relative humidity sensitivity is a combination of temperature and humidity impacts.

Release date: 10th of May, 2023 | **Version:** 01 | **Revision:** 01

SYLEX s.r.o. | Mlynské luhy 31 | 821 05 Bratislava | Slovak Republic | **Email:** sales@sylex.sk | **www.sylex.sk**   1/2

Physical properties

Housing material	PEEK
Other available housing materials [1]	PTFE, 1.4404. 1.4301
Dimensions (without cable) [2]	Ø8mm x 80mm
Weight (without cable)	< 10g
Cable type	3mm Dyneema reinforced cable, 900µm tubing
Cable length [3]	1mtr
Cable Bend Radius (dynamic)	40mm (for 3mm cable)
Cable Bend Radius (static)	30mm (for 3mm cable)
Connector type [4]	FC/APC
Mounting method	Clamping to an object

[1] The housing material can be utilized for different applications

[2] For further dimensions details see the product drawing

[3] Cable length is extendable on request

[4] Other connector types available on request

Packaging

Cardboard box with dimensions: 370x290x45mm

Quality statement

HS-01 sensor is compliant with IEC 61757:2018
All sensors are 100% tested and calibrated at SYLEX
The sensor is manufactured according to ISO 9001:2008 and ISO 14001:2004

Optional accessories

▲ **WCP-01 Watertight connector protection** – used for FC/APC connector protection during the installation against dust and water – IP67 rated.

▲ **LCP-03 Longer cable pigtails** – used to extend the cable lengths from 1mtr up to 20mtr.

For more information contact our sales team at sales@sylex.sk

* Specifications are subject to change without notice