

LLS-01 Liquid level sensor

Basic characteristic

High-accuracy pressure gauge based on novel Fiber Bragg Grating (FBG) technology capable of measuring relative or absolute pressure changes of liquid environments. The ruggedized construction of the gauge is featuring connection cables with air channels for pressure correction against atmospheric pressure and thus allowing the immersion of the sensor deep beyond the water level for water column height measurements.



Benefits

- ▲ 2-fiber port configuration allowing daisy chain the sensor
- ▲ Extremely small drift (<0.5%FS/year)
- ▲ Very high accuracy and stability
- ▲ Customizable for different pressure ranges

Applications

- ▲ Water height monitoring
- ▲ Pore water pressure measurements
- ▲ (Hazardous) tank monitoring
- ▲ Geotechnical applications
- ▲ Marine & offshore applications

Performance properties

Measured parameter	Relative or Absolute Pressure ¹⁾
Pressure Range	1-20 bar ²⁾
Operating Temperature Range	-20°C to +60°C
Pressure resolution	0.1% FS ³⁾
Pressure accuracy	<1% FS ³⁾
Pressure precision	<0.5% FS ³⁾
Pressure sensitivity (1bar range)	4pm/1mbar
Operating Humidity Range	0 – 95% Relative Humidity
Burst Pressure	up to 150% FS ³⁾
Measurement rate	up to 100 measurements/second ²⁾
Occupied bandwidth	~12nm
Ingress Protection rating	IP 68

¹⁾ Absolute pressure sensor available upon request

²⁾ Standard configuration includes pressure ranges: 1, 4, 7, 10, 15, and 20bar.

³⁾ FS: full-scale range

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Physical properties

Housing material ¹⁾	Stainless steel SS304
Dimensions (sensor)	Ø30 x 164mm
Weight (without cable)	550g
Cable type ²⁾	7mm reinforced cable / 6mm PA12 (Nylon) tube
Cable length ³⁾	2mtr
Cable Bend Radius (dynamic)	80mm
Cable Bend Radius (static)	70mm
Connector type ⁴⁾	FC/APC
Pressure inlet thread	G1/8
Porous stone ⁵⁾	Optional – on request

¹⁾ Other housing materials are available on request

²⁾ For liquid level monitoring, the LLS-01 will be equipped with a cable with air channels connected to the sensor through a bottle splice

³⁾ Cable length is extendable on request

⁴⁾ Other connector types available on request

⁵⁾ MG40 316 sintered stainless steel (high permeability)

Packaging

Cardboard box with dimensions: 370x290x45mm

Quality statement

The 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.
- ▲ **PSA-01 Porous stone adapter** – porous stone adapter with a flat design and porosity of MG40 mounted at the pressure inlet of the sensor suitable for water level measurements.
- ▲ **PSA-02 Porous stone adapter** – porous stone adapter with a spike design and porosity of MG40 mounted at the pressure inlet of the sensor suitable for pore water pressure measurement.

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

* Specifications are subject to change without notice