

FIBER OPTIC PRESSURE SENSOR

BIDIRECTIONAL DIFFERENTIAL PRESSURE SENSOR



KEY FEATURES

- Very compact and ultra-robust
- Fully bidirectional: positive and negative diff. pressure
- Complete EMI/RFI/Lightning immunity
- Intrinsically safe
- High precision
- Embedded Temperature sensor (OPP-GDT)



OPP-GD Differential pressure sensor

DESCRIPTION

The innovative OPP-GD, is a compact wet/dry differential pressure sensor measuring both negative and positive differential pressure (bidirectional sensor). With a length less than 100 mm and a diameter less than 40 mm, the sensor can be easily mounted in limited space.

The differential pressure sensor combines efficiently two major benefits: a very robust design to sustain high static pressure in harsh environment and high sensitivity to measure minute changes in differential pressure between two points of a pressurized system. Even with a static pressure of 30 bar, the sensor can measure millibar differential pressure variations with an accuracy of 0.1%.

The intrinsically safe nature of the technology enables pressure monitoring in hazardous environment with explosive atmosphere. The fiber optic technology provides complete immunity from electromagnetic interferences, vibrations, high voltage, electrostatic surge, and lightning.

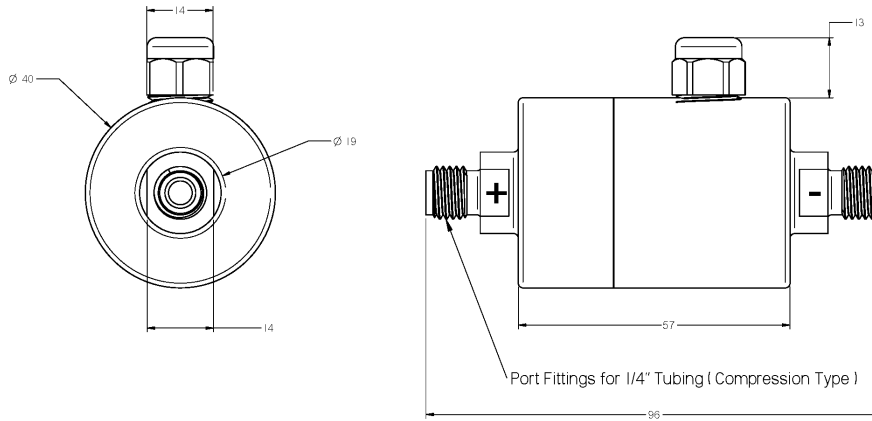
The differential pressure sensor can be delivered with an embedded temperature probe. Requiring no maintenance or calibration, the sensor is a true **Plug & Forget** measuring device.

APPLICATIONS

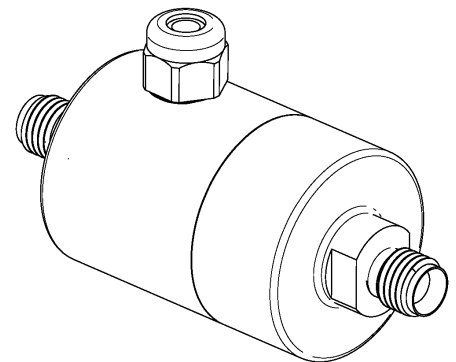
- Fuel Management
- Leak detection in pressurized system
- Flow rate analysis
- Explosive atmosphere conditions
- Detection of small pressure variations
- Strong EMI or High voltage areas
- Precise liquid level monitoring
- Cooling and HVAC systems

OPP-GD

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Schematic of the wet/dry differential pressure sensor



SPECIFICATIONS

DIFFERENTIAL PRESSURE RANGE	± 200 mbar, ± 1000 mbar and higher (contact factory) 0 to +50 mbar, 0 to +200 mbar and higher (for liquid level application)
OPERATING STATIC PRESSURE	Up to 30 bar
PROOF PRESSURES	Static: 45 bar; Differential: 3 times of the +diff. F.S., 1.5 time of the -diff. F.S.
PRECISION & RESOLUTION	0.1% of the ± diff. F.S. and < 0.02% of the ±diff. F.S. respectively
EMI & RFI	Complete immunity
WET & DRY PRESSURE PORTS	Positive port: wet; Negative port: dry
HOUSING & WETTED MATERIALS	Stainless Steel 316 housing. Wetted materials: primarily SS 316 and Silicon, but contact factory to verify fluid compatibility.
WEIGHT	0.6 Kg
OPTICAL CABLE TYPE	From ruggedized flexible outdoor cable to robust stainless steel cable
OPTICAL CABLE LENGTH	Up to 3 km (Sampling rate dependent, contact factory for more details)
OPTICAL CONNECTOR	SCA (Standard), other types (FCA, LCA, etc.) of connector available on request
SIGNAL CONDITIONER COMPATIBILITY	All Opsens Solutions' WLPI series of signal conditioners

This product is protected by Patents # US10082437B2, EP3353517B1, CN108027294B and other Patents Pending.