# Fiber Optic Grating Earth Pressure Sensor

PN：FBG-S-L-C-01

Fiber Optic Grating Earth Pressure Sensor FBG-S-L-C-01 is a new type of fiber optic earth pressure gauge developed by adopting high quality constant elasticity alloy as the pressure transmitter and utilizing the inherent strain sensing characteristics of fiber optic grating.FBG-S-L-C-01 is suitable for the measurement of earth stresses in earth and rock dams, jetties, revetments, quay walls, high-rise buildings, pipeline foundations, bridge abutments, retaining walls, tunnels, subways, airports and other construction foundations, and impermeable wall structures as well as freezing forces in glacial permafrost, Highways, railroads and other building foundations, and impermeable wall structures, as well as glacial permafrost freezing force measurement. FBG-S-L-C-01 has the advantages of good stability, suitable for long-term monitoring, and comes with temperature compensation.

Features

- Anti-electromagnetic interference, intrinsically explosion-proof, lightning strike resistant
- Excellent temperature resistance, corrosion resistance, aging resistance
- Built-in automatic temperature compensation
- High precision and high resolution
- Integrated package, more stable performance
- Easy to use, quick installation, reusable
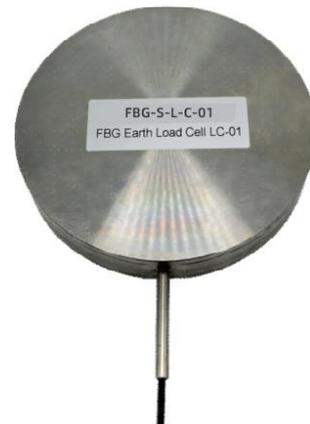
Applications

- Highway Health Monitoring
- Slope Monitoring
- Measurement of total pressure in soil and fill works, dams
- Compressive stresses in building foundations and soils such as highways, railroads, and impermeable wall structures
- Measurement of stresses in concrete

Specifications

Parameters	Unit	Value
Center wavelength	nm	1460～1610
Scales range	Kpa	2000

Resolution	Kpa	<0.1% F.S.
Accuracy	Kpa	<0.5% F.S.
temperature compensation		built-in
package material	--	stainless steels
Dimension	mm	Φ156 x 20
Installation method	--	bury
Fiber Type	m	Φ 3mm/ Φ 6mm armored fiber optic cable, single-ended exit fiber 1m, or customized
connector	--	FC/APC, or customized
operating temperature	°C	-20 ~ +80