Fibre Optic Soil Pressure Sensor YOSC-OFSP

YOSC-OFSP fibre optic soil pressure sensor is a force sensor used for both static and dynamic measurements. Its principle is that the elastic structure undergoes elastic deformation under external forces, and the fibre optic grating pasted on the elastic structure also undergoes deformation.



The product has a simple structure, no electronic components, high system reliability, and can be widely used for long-term monitoring of soil pressure in structures such as earth dams, embankments, slopes, and roadbeds.

+ Features

- All metal design, easy to install
- Intrinsic safety, electromagnetic interference and lightning strikes resistance
- Long distance optical signal transmission
- Dual end outlet, capable of multiple multiplexes
- High precision, long-term reliability and stability

+ Applications

- Highway safety monitoring
- Slope monitoring
- Soil stress in building foundations such as earth and rock dams, breakwaters, revetments, and dock walls
- Soil stress in foundations of high-rise buildings, bridge piers, retaining walls, tunnels, subways, airports, and other buildings
- The compressive stress between the foundation and soil of buildings such as highways, railways, and anti-seepage wall structures

+ Parameters

Items	YOSC-OFSP
Range	0.1~10MPa
Resolution	0.1%FS
Accuracy	0.5%FS
Working temperature	-40~80°C
Center wavelength	C-band(1525-1565nm)
Peak reflectivity	>90%
External dimension	Φ120×35mm(customizable)
Weight	Approximately 1~5kg
Material	Stainless steel/Spring steel
Fibre optic cable type	Armored optical cable
Fibre optic interface	FC/APC or fusion welding
Installation method	Welding, bolt fixation, etc.