FBG-Hollow Loadcell

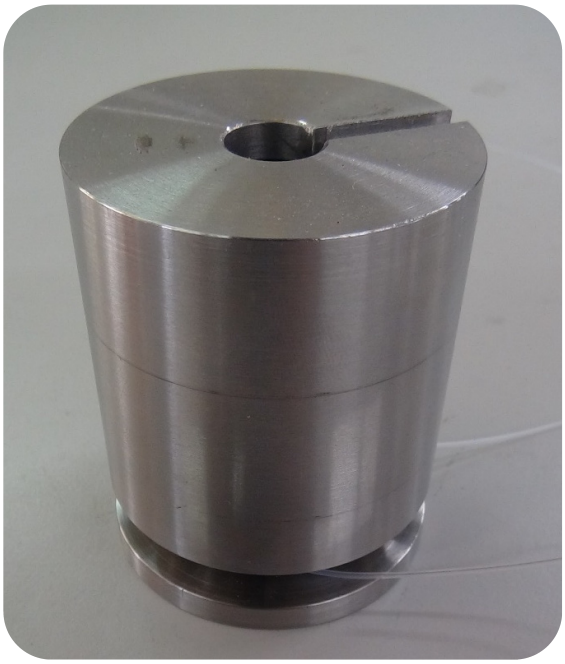
8000 Series

Applications

- Rock bolts
- Tensions in cable anchors and tendons
- Structural Beams
- Tunnel supports
- Loading and pull-out tests on trial anchors
- Loads in arch tunnel supports

Features

- Immune to EMI and short circuits
- Low noise long distance signal transmission
- Connecting multiple sensors to a common optical fiber



Description

The axial force experienced by this hollow, cylindrically shaped load cell is sensed by FBG attached to the surface of the load cell. Taking advantage of the linear relationship between FBG peak wavelength and strain, the FBG-Hollow Load cell is exceptionally linear and stable. The load cell is temperature compensated. The load cell dimensions can be varied to fit the need in field applications.

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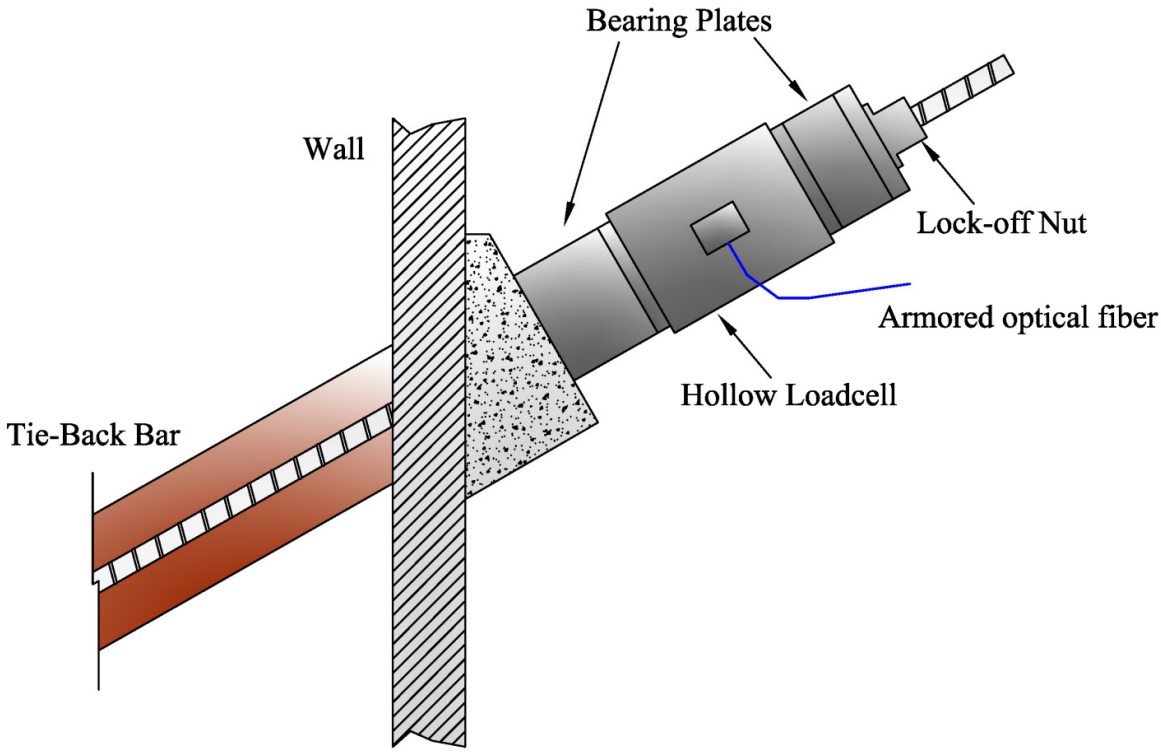
FBG-Hollow Loadcell



Tieback monitoring with a Hollow Load Cell.

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FBG-Hollow Loadcell

Specifications	FBG-Hollow Loadcell
Physical Properties	
Operating Temp. range	0 to 80°C
Capacity range	100 to 10,000 kN
Resolution[1]	<0.05% Full scale range
Accuracy[2]	±0.5% Full scale range
Connectors	FC/APC, SC/APC, or customer specified
Internal Diameters	50, 75, 100, 125, 150, 200, 250 mm
Cables	Armored cable
Optical Properties	
Peak Reflectivity (Rmax)	>70%
FWHM (-3dB point)	0.25nm(±0.05nm)

Notes:

1. Dependent on FBG interrogator.
2. Dependent on load bearing conditions.

Ordering Information	FBG8100-XXX-1LL-15YY
XXX: Internal Diameters	1LL: Cable 1, Length & Connector
00S: Solid	1: 1m Standard, Cable Length
025: 25 mm	FC: FC/APC Connector
050: 50 mm	SC: SC/APC Connector
100: 100 mm	LC: LC/APC Connector
125: 125 mm	
150: 150 mm	
YY: FBG Wavelength	
Standard: 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84	

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