

Fiber Optic Rebar Strainmeter

Applications

The Model FP4911 Fiber Optic Rebar Strainmeter is designed to measure strain in...

- Concrete piles and caissons
- Slurry walls
- Concrete slabs and footings
- Bridge abutments
- Tunnel linings



• Model FP4911 Fiber Optic Rebar Strainmeter.

Operating Principle

The Model FP4911 Fiber Optic Rebar Strainmeter is designed for measuring strains in foundations, slurry walls, precast piles, caissons, bridge abutments, tunnel liners, etc. The standard Model FP4911 (#4 rebar), known as the "Sister Bar," is installed alongside structural rebar. The Fiber Optic element employed in this sensor makes it particularly suitable where dynamic measurements are to be made and/or on projects where other fiber optic sensors are deployed.

Technical Specifications

Standard Range	-1000 to +1000 $\mu\epsilon$
Resolution	0.15 $\mu\epsilon$
Accuracy	$\pm 0.25\%$ F.S.
Nonlinearity	<0.5% F.S.
Temperature Sensitivity	0.85 to 1.22 $\mu\epsilon/^\circ\text{C}$
Temperature Operating Range ¹	-40 $^\circ\text{C}$ to +80 $^\circ\text{C}$
Rebar Size	4 (Sister Bar)
Active Gauge Length	914 mm

¹Other ranges available on request.

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