Special Use Sensors—Concrete Embedment Strain Gages

The EGP-Series Embedment Strain Gage is specially designed for measuring mechanical strains inside concrete structures. The sensing grid, constructed of a nickel-chromium alloy (similar to Karma), has an active gage length of 4 in (100 mm) for averaging strains in aggregate materials. A rugged 5 in (130 mm) outer body of proprietary polymer concrete resists mechanical damage during pouring, minimizes reinforcement of the structure, and provides protection from moisture and corrosive attack. The grid, cast within the polymer concrete to ensure maximum strain sensitivity, is self-temperature-compensated to minimize thermal output when installed in concrete structures. Each gage incorporates a heavy-duty 10 ft (3 m) cable with 22-AWG (0.643 mm dia.) leadwires; a three-wire construction to the sensing grid helps minimize temperature effects in the instrumentation leads. Special lengths of preattached cable will be quoted upon request. Micro-Measurements M-LINE accessory cable 322-DJV is available for adding cable length in the field.

Rugged and reliable, EGP-Series Strain Gages are available in both 120-ohm (EGP-5-120) and 350-ohm (EGP-5-350) resistances.

SPECIFICATIONS

- **Construction:** Strain sensing grid cast in a sturdy, water-resistant material.
- **Sensing Grid:** Nickel-chromium alloy on polyimide backing. Active gage length of 4 in (100 mm) nominal. Grid resistance of 120 or 350 ohms, ±0.8%.
- **Outer Body:** Proprietary polymer concrete. 5 x 0.7 x 0.4 in (130 x 17 x 10 mm) nominal.
- **Cable:** Three 10 ft (3 m) leads of 22-AWG (0.643 mm dia.) stranded tinned copper in 0.015 in (0.4 mm) thick PVC insulation. Nominal cable diameter of 0.2 in (5 mm). (Other lengths quoted upon request.)
- **Temperature Range:** The normal usage range is +25° to +125°F (–5° to +50°C). Extended range is –25° to +150°F (–30° to +60°C).
- **Strain Range:** ±0.5% (5000 με).

GAGE DESIGNATION (Pb-free RoHS COMPLIANT)	RES. IN OHMS	DIMENSIONS (Legend: ES = Each Section) inch / millimeter			
		ACTIVE GAGE LENGTH	OUTER BODY WIDTH	OUTER BODY LENGTH	OUTER BODY THICKNESS
EGP-5-120	120 ± 0.8%	4	0.7	5	0.4
		100	17	130	10
EGP-5-350	350 ± 0.8%	4	0.7	5	0.4
		100	17	130	10

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