Special Use Strain Gages - Weldable Strain Gages

Micro-Measurements Sealed Weldable Strain Gages are specially designed for spot welding to structures and components. They are ideally used for applications where test or environmental conditions preclude clamping and curing an adhesively bonded gage installation. These gages are equally advantageous when strain measurements must be made at elevated temperatures, but the nature of the test object does not permit the use of an elevated-temperature-curing adhesive. Additionally, all Micro-Measurements Sealed Weldable Strain Gages come with a preinstalled protective coating providing both protection in moist environments and savings in the time and effort required for making the complete gage installation.

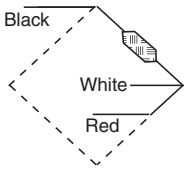
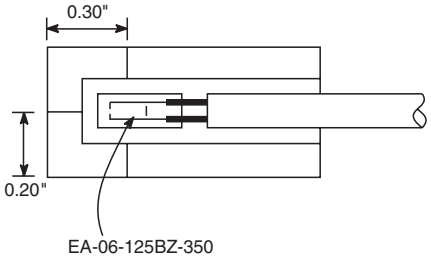
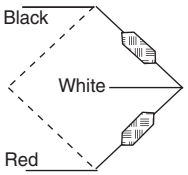
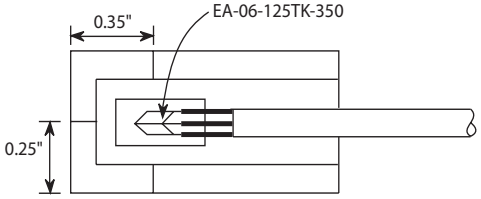
All sensors are fabricated with EA-Series strain gages, laboratory-prebonded with a high-performance adhesive to a thin [0.005 in (0.127 mm)] stainless steel carrier, and fully encapsulated for protection against moisture. They have a ±5000 microinch/in strain range, and a normal operating temperature range of -40°F (-40°C) to +180°F (+83°C). These gages can be used on surfaces with a radius of curvature of 3.0 in (76 mm) or greater.

The three leadwire-series of Micro-Measurements Sealed Weldable Strain Gages have physical constructions designed for various environmental exposures and installation constraints.

R-LEADWIRE-SERIES

These gages are designed for long-term out-of-doors use. Primarily used in applications such as railroad and civil structures, they can be exposed to oil and water splash and short-term submersion in water of shallow [24 in (60 cm)] depth. The metal carrier is processed to give good first cycle data, excellent fatigue resistance and a high strain range.

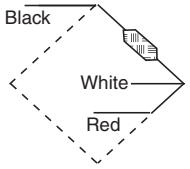
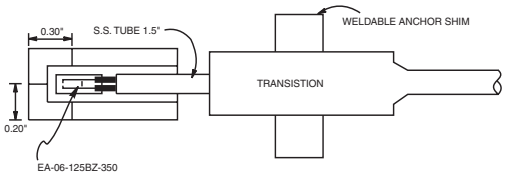
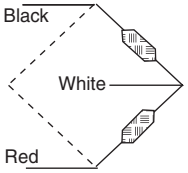
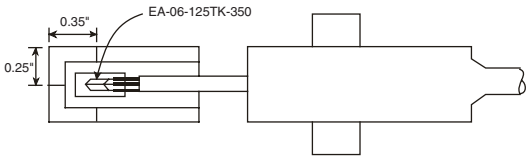
Exposure of the vinyl-insulated cable to strong solvents - especially MEK - should be avoided to prevent damage. Long-term exposure to sub-freezing temperatures requires careful handling to avoid cracking of the vinyl insulation.

DESIGNATION	NOMINAL RESISTANCE (Ohms)	NOMINAL GAGE FACTOR	GRID GEOMETRY	GAGE LENGTH (in)	LEADWIRE	SHIM LENGTH (in)	SHIM WIDTH (in)
LEA-06-W125E-350/3R	350	2.0	Axial	0.125	Vinyl	0.8	0.4
	 **Bridge Circuit**				 **Configuration**		
LEA-06-W125F-350/3R	350	2.0	Shear	0.125	Vinyl	1.0	0.5
	 **Bridge Circuit**				 **Configuration**		

Special Use Strain Gages - Weldable Strain Gages

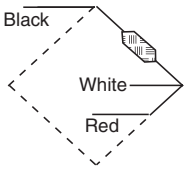
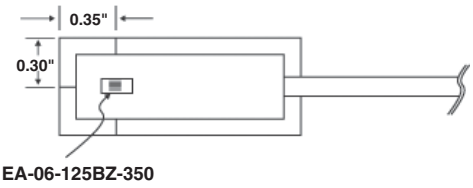
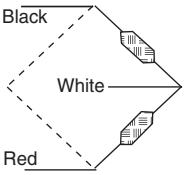
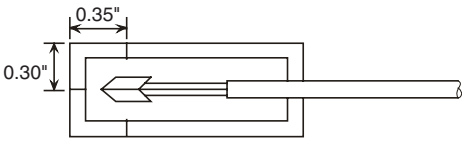
T-LEADWIRE-SERIES

This series is designed to withstand exposure to water pressures of up to 500 psi. They can also withstand short-term (up to 14 days) immersion in crude oil. A flexible stainless steel tube, providing wire routing from the strain gage to a cable transition, enables fine positioning of the sensor as well as providing strain relief. These sensors are typically used on larger civil structures, including bridges, dams, and buildings, or for exposures of up to a year in seawater.

DESIGNATION	NOMINAL RESISTANCE (Ohms)	NOMINAL GAGE FACTOR	GRID GEOMETRY	GAGE LENGTH (in)	LEADWIRE	SHIM LENGTH (in)	SHIM WIDTH (in)
LEA-06-W125E-350/10T	350	2.0	Axial	0.125	Shielded Vinyl	0.8	0.4
	 Bridge Circuit			 Configuration			
LEA-06-W125F-350/10T	350	2.0	Shear	0.125	Shielded Vinyl	1.0	0.5
	 Bridge Circuit			 Configuration			

L-LEADWIRE-SERIES

The L-Leadwire-Series sensors are designed to have a performance similar to the T-Leadwire-Series but without a cable transition. They can be used in similar applications when the sensor will be exposed to smaller strains, and care can be taken during installation to anchor the leadwire to provide for strain relief. The L-Leadwire-Series gages are particularly useful where space constraints preclude the use of the cable transition of T-Leadwire-Series gages.

DESIGNATION	NOMINAL RESISTANCE (Ohms)	NOMINAL GAGE FACTOR	GRID GEOMETRY	GAGE LENGTH (in)	LEADWIRE	SHIM LENGTH (in)	SHIM WIDTH (in)
LEA-06-W125E-350/10L	350	2.0	Axial	0.125	Shielded Vinyl	1.5	0.6
	 Bridge Circuit			 Configuration			
LEA-06-W125F-350/10L	350	2.0	Shear	0.125	Shielded Vinyl	1.5	0.6
	 Bridge Circuit			 Configuration			

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