

**Special Use Sensors – Weldable Strain Gages**

**FEATURES**

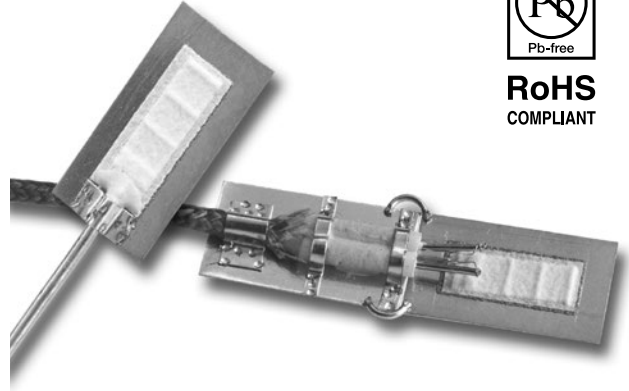
- High temperature installations using simple attachment techniques
- Ceramic bonded wire gage performance in a weldable gage
- Superior performance of bonded gages
- Improved fatigue life for dynamic applications

Micro-Measurements high-temperature weldable strain gages are free-filament wire strain gages pre-bonded to shim stock using flame sprayed alumina. The gages can be welded to the test structure using a capacitive discharge spot welder (such as Micro-Measurements Model 700), permitting easy installation in the field, especially on large structures. High-temperature weldable strain gages are excellent in applications where protection against moisture is not required. The fatigue resistance of this bonded wire strain gage makes it the best choice for dynamic, impact or vibratory strain measurements to 1800°F (980°C). Their use in measuring static strains should be avoided.

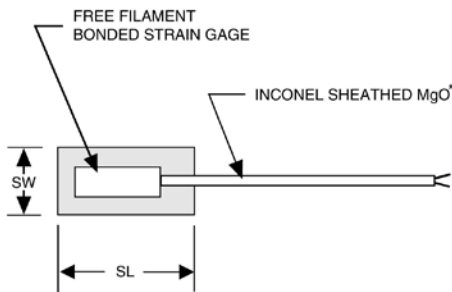
High-temperature weldable strain gages are available with grids of Nichrome V (N) or Pt8W (E) alloys. They can be ordered with either of two types of preattached high-temperature insulated cable.



**RoHS**  
COMPLIANT

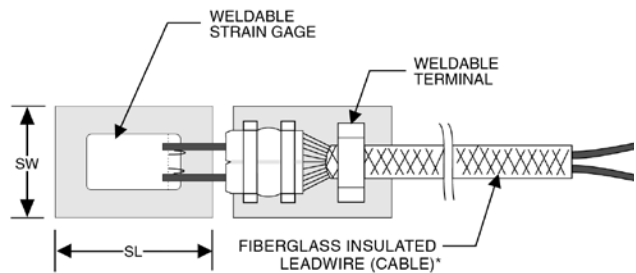


**GAGES WITH M-SERIES LEADWIRES**



Complete assembly consists of a free-filament gage bonded to a shim with an integral high-temperature cable with chromel/alumel wires. The mineral insulated, two-conductor cable with an Inconel metal jacket is rated to 1800°F (980°C) and offers excellent protection in harsh environments. While the ends are sealed to avoid moisture absorption during shipping or storage, care should be taken when using M-Series cables to ensure that the mineral insulation does not absorb moisture during handling and application.

**GAGES WITH F-SERIES LEADWIRES**



Complete assembly consists of a free-filament gage bonded to a shim, a weldable transition terminal and a high temperature cable with chromel/alumel wire. A fiberglass-insulated braided, two-conductor cable assembly is attached at the gage end through alumina insulators strap-welded to the terminal shim, providing a firm anchor for the cable at the gage end. The cable conductors are threaded through lengthwise holes in the alumina insulators and bonded to the insulators with high strength ceramic cement to prevent wire movement at the gage—cable weld junction. The fiberglass cable is rated to 1200°F (650°C) and is used where fraying due to vibration is not a concern. F-Series cables are more flexible than M-Series cables.

## Special Use Sensors—Weldable Strain Gages

DESIGNATION	NOMINAL RESISTANCE	NOMINAL GAGE FACTOR	SENSOR ALLOY	SENSOR GAGE LENGTH	MAX. TEMP.	LEADWIRE	SHIM LENGTH (SL)	SHIM WIDTH (SW)	LEAD TERMINAL
LZN-NC-W250G-120/2F	120 Ω	2.0	NiChrome V	0.25 in (6.35 mm)	1200°F (649°C)	Chromel-Alumel	0.50 in (12.7 mm)	0.30 in (7.62 mm)	Yes
LZN-NC-W250G-120/2M					1600°F (871°C)				None
LZE-NC-W250G-120/2F	120 Ω	4.0	Pt8W	0.25 in (6.35 mm)	1200°F (649°C)	Chromel-Alumel	0.50 in (12.7 mm)	0.30 in (7.62 mm)	Yes
LZE-NC-W250G-120/2M					1600°F (871°C)				None
<p><b>NOTE</b> The standard leadwire length is indicated, in feet, by the number to the left of the last letter of the gage designation. For example, /2F indicates 2 feet of fiberglass insulated leadwire. Gages with longer leadwires (up to 50 feet) are available on special order.</p>									



## Disclaimer

ALL PRODUCTS, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Vishay Precision Group, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "VPG"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

The product specifications do not expand or otherwise modify VPG's terms and conditions of purchase, including but not limited to, the warranty expressed therein.

VPG makes no warranty, representation or guarantee other than as set forth in the terms and conditions of purchase. **To the maximum extent permitted by applicable law, VPG disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.**

Information provided in datasheets and/or specifications may vary from actual results in different applications and performance may vary over time. Statements regarding the suitability of products for certain types of applications are based on VPG's knowledge of typical requirements that are often placed on VPG products. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. You should ensure you have the current version of the relevant information by contacting VPG prior to performing installation or use of the product, such as on our website at [vpgsensors.com](http://vpgsensors.com).

No license, express, implied, or otherwise, to any intellectual property rights is granted by this document, or by any conduct of VPG.

The products shown herein are not designed for use in life-saving or life-sustaining applications unless otherwise expressly indicated. Customers using or selling VPG products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify VPG for any damages arising or resulting from such use or sale. Please contact authorized VPG personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Copyright Vishay Precision Group, Inc., 2014. All rights reserved.