

FOIL STRAIN GAGE COMPLETION UNIT

COMPLETION UNIT

Many data acquisition systems are equipped for completing quarter-arm Wheatstone bridge strain gage circuits using internal resistor networks. However, when long lead wires are required between the data acquisition system and the single-arm gage installation site, the wire impedance will influence the bridge circuit and noise sensitivity is increased. The effect on the millivolt-level output signals from the gage can be significant. Therefore, it is often advantageous to complete the bridge circuit very near the gage location. This approach provides a symmetrical and balanced lead wire system that reduces lead wire effects and improves the noise reduction in most structural testing environments.

BDI has designed our Wheatstone bridge completion units to allow for simple and efficient connection of single foil strain gages to our STS-WiFi or your existing data acquisition system. Available in both 120Ω and 350Ω configurations, the rugged and re-usable BDI Foil Strain Gage Completion Unit significantly reduces field installation time since only the lead wires need to be soldered to the installed foil gage.



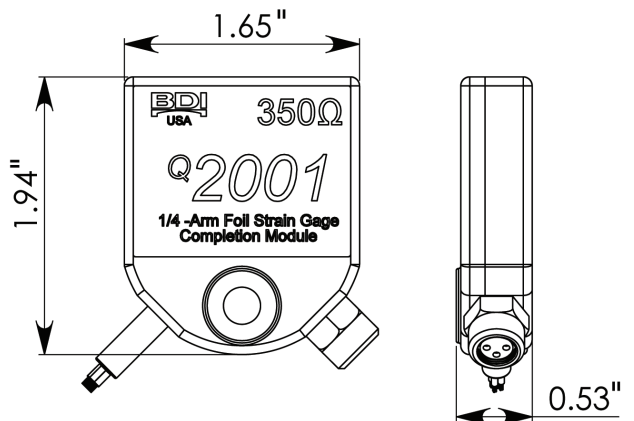
APPLICATIONS

- Use standard foil strain gages with BDI STS-WiFi or your existing data acquisition system
- Significantly reduces installation time and field soldering.
- Available for 120Ω, 350Ω, and 1000Ω bridges.
- Replaceable connector for lead wire.
- Specify cable length.

FEATURES

- **MINIMIZE LEAD WIRE EFFECTS:** These units have been designed to reduce lead wire effects by completing the bridge circuit near the gage installation site.
- **ENVIRONMENTALLY SEALED:** Ideal for both field and laboratory use since it is environmentally sealed and waterproof.
- **EASY MOUNTING:** using BDI Mounting Tabs.

DIMENSIONS

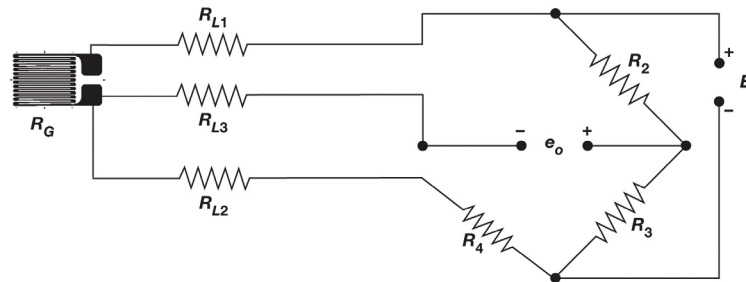


MODEL	QA120	QA350	QA1000
RANGE (RESISTANCE)	120Ω	350Ω	1000Ω
CIRCUIT	Full Wheatstone bridge with 3-wire hookup to foil gage		
FOIL GAGE HOOKUP	36 inch (914mm) three-wire 30 awg assembly with waterproof M8 connector (other lengths available upon request)		
EXITATION VOLTAGE	+1.0 to +10.0 Vdc		
POWER RATING MAX: TYPICAL: INTELLIDUCER:	840mW 210mW @ +5.0 Vdc 13mW @ +5.0 Vdc*	300mW 72mW @ +5.0 Vdc 13mW @ +5.0 Vdc*	100mW 25mW @ +5.0 Vdc 13mW @ +5.0 Vdc*
CABLE	IC-02-182 (22awg, 2 pair, shielded with drain wire, red PVC cable)		
HOUSING	6061-Aluminum		
WEATHER PROOFING	IP67 Rated (with connector plugged in)		
OPERATING TEMPERATURE	-58°F to +185°F (-50°C to +85°C)		
SIZE (A x B x C)	0.08 in x 1.95 in x 0.49 in (20.3 mm x 49.5 mm x 12.4 mm)		
WEIGHT	0.12 lbs (54 grams)		
MOUNTING	BDI Mounting Tab and adhesive, mechanical connection		

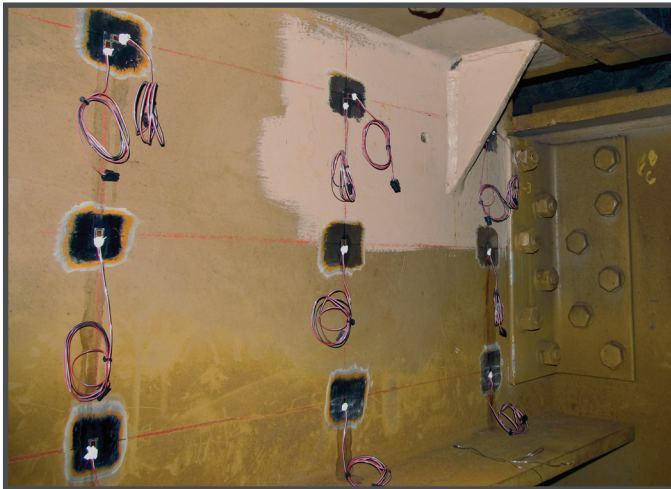
* Intelliducer connectors operate at +5.0 Vdc only.



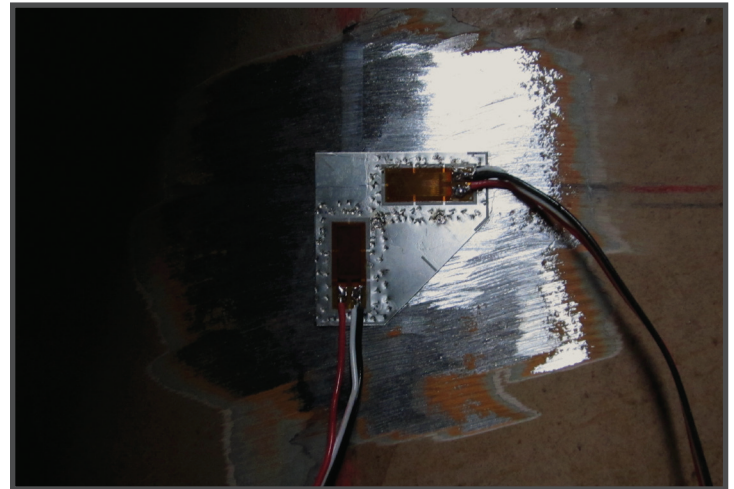
3-WIRE HOOKUP REDUCES LEAD WIRE EFFECTS



EVALUATE CONNECTION DETAILS



BONDED OR WELDABLE GAGES



Portions of this brochure are courtesy of Micro-Measurements, a Division of Vishay Precision Group, Raleigh, NC.

