GZ-10 Gozinta® Sensor

Tension, Compression, Shear, Bending and Torsion

Features

- **Install on new or existing structures**
- **Easy Press Fit Mounting**
- **Hermetically Sealed**
- **Stainless Steel Corrosion Resistant**
- **Low Temperature Sensitivity**
- **Unlimited load capacity**
- **Proven reliability**
- **Mounting Kit**

The GZ10 provides the most cost effective total solution to force measurement on any load bearing structure. The small footprint (0.75" diameter) is designed to provide the user with a quick inexpensive installation. This unique design provides the total solution for weighing, level control, stress and fatigue monitoring. The innovative approach offers a completely unique concept to force sensors by allowing the user to permanently mount the sensor at the greatest point of stress, not at some compromised stress point further down the structure. The design also allows multiple sensors to be permanently mounted for more complex stress profiling and analysis.

The GZ10 provides an ideal solution for non intrusive level measurements for materials that are subject to uneven build up, bridging, or sidewall collection. Also, liquids or wetted materials that are not suited for direct contact level measurement are an ideal application for the GZ10. The design of the GZ10 makes it an excellent solution for retrofitting existing structures without compromise of the integrity of the vessel or structure.

Originally patented by Revere Transducers in 1986, the GZ10 has provided continuous force measurements in hundreds of different applications with an installed base of over 25,000 thousands of sensors. There are no moving parts, no mechanical assembly or disassembly, no mounting plates, no leveling and no additional hardware required. It is truly the simplest cost effective solution for your weighing or load monitoring needs.

Installation is quick and simple. Drill and ream a ¾" hole, press the sensor in the hole, and you are done. The sensor becomes part of the structure and therefore provides an output that directly correlates to the stress at the point of mounting whether it is tension, compression, shear, bending or torsion. Multiple sensors can be mounted to provide complete analysis of the component force vectors at any location. Multiple sensors can be installed and calibrated to provide higher resolution over critical performance bands. The range of applications is only limited by the imagination of the user.

Applications

- Tank Weighing or Level Systems
- Agricultural Equipment
- Rolling Mill Sensing
- Moment Sensing
- Structural Loading Measurements
- Fork lift
- Conveyor belt
- Wind Machines
- Flood Gates
- Bridge Structures

Advantages

- Easily Adaptable into OEM Products
- Field Installable into Existing Structures
- Infinite load capacity
- Stainless Steel Construction
- No disassembly or dismantling for installation
- No additional mounting or adaptor plates
- Light weight, easy to handle
- Small size allows installation in small structures
- Can be used on I Beams, Channel Iron, Pipes, or Tubing with minimum thickness of 0.160" (4.06mm).

GZ-10 Specifications

Parameter	Units of Measure	Specification
Bridge Configuration		Full Bridge
Rated Output - Tension	mV/V	± 2.5
Rated Output - Compression	mV/V	± 2.5
Rated Output - Shear	mV/V	± 4.0
Accuracy Class Type Designation	OIML and NTEP	D3
Nonlinearity	± % of Full Scale	± 1.0 [1]
Hysteresis	± % of Full Scale	± 0.05 [1]
Nonrepeatability	± % of Full Scale	± 0.1
Temperature Effect on Output	% of Reading / ºF	0.02
Temperature Effect on Zero	% of Full Scale / ºF (15 to 115)	± 0.2
Temperature Range: Storage	°F	-60 to +200
Temperature Range: Operating	°F	-40 to +150
Zero Balance	mV/V	0.00 ± 0.05 Prior to Installation
Excitation Voltage	Volts AC or DC	10 Recommended, 15 Maximum
Input Resistance	Ohms	700.0 ± 20.0
Output Resistance	Ohms	700.0 ± 20.0
Insulation Resistance	Megohms at 50 VDC	>5000 @ 50VDC
Element Material	ASTM	Stainless Steel
Weight	lb.	.5
Environmental Protection	IP Rating	Hermetically Sealed, IP68
Cable Length	ft	GZ10-02 is 2 Feet, GZ10-31 is 31 Feet
Cable Type	N/A	4 Wire Shielded, Polyurethane Jacket, shield is not connected to load cell body

Note: [1] Includes the effects of Non-Linearity and Hysteresis.

[2] Maximum safe output for the Gozinta is based on 10^4 full negative to full positive operating cycles (zero to minus to plus to zero). Caution: The endurance limits of the beam must be determined separately.

[3] Gozinta sensors are Factory Mutual approved as Class IS / I, II, III / 1.