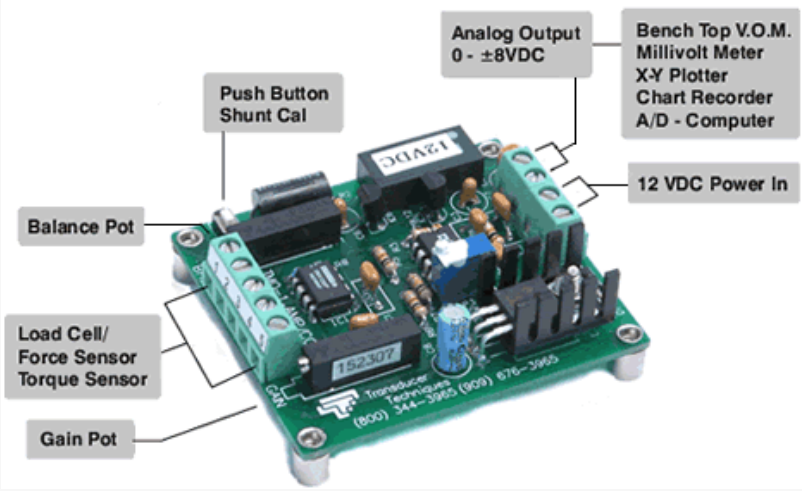
Presenting the TM0-1-24VDC Signal Conditioner Module Paired with the ATM-1 Enclosure for Industrial Environments

With 24 VDC input voltage commonly found in most automated machines, this setup provides dedicated load cell signal conditioning for one force sensor.

CAL-TEDS Plug & Play Smart Sensors Icon



TMO-1 Load Cell Conditioner

ATM-1 Enclosure

TEMECULA, CALIFORNIA, UNITED STATES, February 25, 2021 /EINPresswire.com/ -- The TM0-1-24VDC Load Cell Amplifier module paired with the ATM-1 enclosure provides low cost dedicated load cell signal conditioning for one bridge type load or pressure sensor. The 24 VDC input voltage is commonly found in most automated machines. The unit can also be mounted near the sensor for high-level signal transmission. Balance and gain potentiometers manufactured using low tempco metal film were selected for good resolution and excellent long term stability. The potentiometers are accessed from the outside of the ATM-1 enclosure via portholes. The access holes and cable restraints can be sealed for most wash down applications. The ATM-1's aluminum enclosure was chosen for the best isolation from nearby noise. Visit our website to learn more about our complete line of load cells and resources.

https://www.transducertechniques.com

Transducer Techniques, established in 1979, designs and manufactures a complete line of load

cells, torque sensors, special purpose transducers and related instrumentation. Transducer Techniques load cells are uniquely designed for weight and force measurement in such diversified applications as process control and factory automation. Other applications exist in numerous fields of science and industry for our load cells. All transducer sensing elements incorporate bonded foil strain gauges, wired in a full Wheatstone bridge configuration.

Technology
Load cells are electro-mechanical transducers that translate force or weight into voltage. This change in voltage produces a signal in the read-out instrumentation, a repeatable deflection or indication that can be calibrated directly in terms of the load applied to the load cell.

Construction
Construction of the load cell utilizes all the advantages of bonded foil strain gauges. Sealed within the load cell are sets of matched strain gauges bonded to a high strength element, machined to close tolerances. The strain gauges are electrically connected to form a balanced Wheatstone bridge and additional compensation resistors are added to the circuit for maintaining the accuracy of the bridge over a wide temperature range.

Operation
The principle of operation depends upon the deflection of the strain gauge filament, creating a change in its resistance, thereby unbalancing the bridge circuit. As a result, for a given input voltage, the output voltage of the bridge varies proportionally with the load and the change can be read on appropriate instrumentation.

Quality
When completed, each load cell is individually tested and calibrated. Each cell must meet or exceed rigid electrical and mechanical performance tests before it is released for service. Also, every cell is proof tested to its full rated capacity, and in most instances, to over its rated capacity.

Attributes
An important asset of our load cells is their extremely small deflection. The maximum deflection of standard cells does not exceed .012" at full load. This plus the fact that these load cells contain no moving parts opens unlimited application fields. The inherent compactness of the load cells minimizes installation problems.

The frequency response characteristics of our load cells are exceptionally good. The relatively low mass, and the small deflection under load, result in a high-frequency response which emphasizes the use of the load cells in many services where other transducers cannot perform.

Only strain gauges of the highest quality are installed and configured by technicians who have undergone our extensive training program targeting craftsmanship and attention to detail. To the end-user, this means a quality product. All Load Cells / Force Sensors and Torque Sensors are

supplied with a Calibration Certificate traceable to NIST.

Customer Support
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