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LOAD-CELL TRANSMITTER

TRW

OPERATION MANUAL

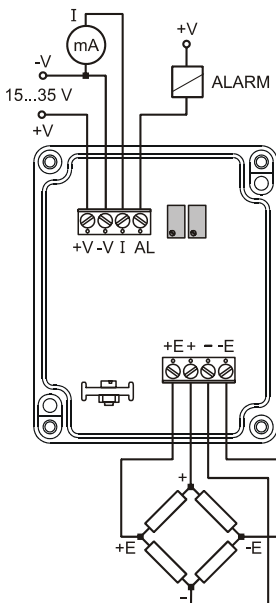


Please read this Operation Manual before mounting and operating!
Save the Manual for future references!

Overview

The TRW analog load-cell transmitter is a low-cost solution for general-purpose process weighting and tension measurement applications. It accepts 1, 2, or 3 mV/V input signal from a single 120...350 Ω load cell, generates a standard 4...20 mA three-wire output signal that can be safely sent over long distances to remote indicators, data loggers, or controllers, and powers the load cell with 10 V bridge excitation voltage. Enclosed in a cast aluminum box with IP67, TRW is especially suitable for use in harsh industrial environments.

Mounting and Wiring



Mounting

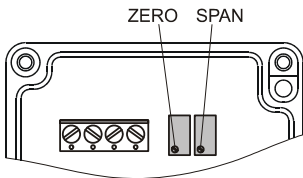
TRW's design allows free mounting according to customer standoffs. To mount the unit on a wall or plate:

- ◆ Set the exact positions of 2 mounting openings according to the schematic on the enclosure back.
- ◆ Unscrew the 4 screws in the enclosure corners and remove its protective cover.
- ◆ Attach the enclosure to the wall / plate using appropriate screws.
- ◆ Put the cover on and screw it.

Wiring

- ◆ Select cables with suitable outer diameter.
- ◆ Connect load cell to the input terminal block ($\pm E$ - excitation, \pm - cell output) and to the grounding screw.
- ◆ Connect the power supply and the current output loop to the output terminal block via terminals +V, -V, and I.
- ◆ If necessary, connect an alarm relay via terminals AL(-) and +V(+).

Calibrating



- ◆ Leave the unit for 15 minutes, if possible, at the ambient temperature it is intended to work at.
- ◆ Connect the transmitter to the load cell, a 24 VDC power source, and a suitable milliammeter as shown in the wiring diagram (see 'Wiring').
- ◆ Wait 15 minutes.
- ◆ With no load on the load cell, adjust ZERO potentiometer to get $I_{out} = 4.00 \text{ mA}$ (to increase, turn clockwise).
- ◆ Put on the cell a calibrated weight close the cell's upper range limit bearing in mind the tare.
- ◆ Adjust SPAN potentiometer to get $I_{out} = 20.00 \text{ mA}$ (to increase, turn counter-clockwise).
- ◆ Repeat the last 2 steps until readings converge.
- ◆ Secure the potentiometers with lacquer.



Important notes:

- ◆ To ensure IP67 protection, use **ONLY** connection cables fitted for the PG7 cable glands!
- ◆ Unless calibrating the device, always keep its cover well fixed to protect the electronics from environmental influences!

Specifications

Input	single load cell
Cell Resistance	120...350 Ω
Input Impedance	10 G Ω
Input Sensitivity	<input type="checkbox"/> 1 mV/V, <input type="checkbox"/> 2 mV/V, <input type="checkbox"/> 3 mV/V
Excitation Voltage	10 VDC \pm 0.05%
Output Signal	4...20 mA, 3-wire
ZERO Adjustment	\pm 10%
SPAN Adjustment	\pm 10%
Alarm Output at Broken Current Loop	NPN gate 40V/20mA, open collector
Power Supply	15...35 VDC
Admissible AC Variations	< 10% peak-to-peak, at 50 Hz
Maximum Output Loop Load	750 Ω at 24V/20mA
Measurement Error	\pm 0.15% full-scale
Temperature Coefficient	0.01% full-scale for 1 $^{\circ}$ C
Operating Temperature / Humidity	-20...60 $^{\circ}$ C / 0...95% RH
Protection Class	IP67

Warranty and Support

.....
serial number

.....
manufacturing date

QC check mark(passed)
(signature, stamp)

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Warranty

COMECO warrants this product to be free from defects in materials and workmanship for one year. If your unit is found to be defective within that time, we will promptly repair or replace it. This warranty does not cover accidental damage, wear or tear, or consequential or incidental loss. This warranty does not cover any defects caused by wrong transportation, storage, installation, or operating (see '**Specifications**').

Technical support

In the unlikely event that you encounter a problem with your COMECO device, please call your local dealer or contact directly our support team.