

9321 Load Cell Signal Converter

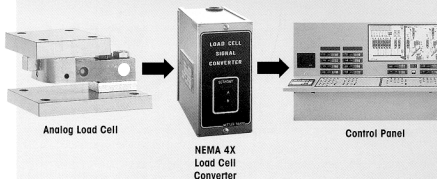


Process
Monitoring
by Weight –
Converts Weight
to Current or
Voltage Output

METTLER TOLEDO

9321 Load Cell Signal Converter

The Mettler Toledo™ 9321 load cell signal converter module is intended to be the electrical interface between a load cell (or group of up to 8 cells) and the customer's process control equipment. It converts the load cell DC millivolt signal to a 0 to 10 VDC or 4/20 mA signal which is then fed into a remote analog input.



Products are not shown to scale.

SPECIFICATIONS

ENVIRONMENT

Temperature Limits (Ambient)

Operating:

-10°C to +45°C (+14°F to +113°F)

Storage:

-40°C to +70°C (-40°F to +158°F)

Relative Humidity:

10% to 95% (non-condensing)

Environmental Classification

Model 9321-0001:

NEMA 1 dust resistant

Model 9321-0002: NEMA 4X

waterproof/corrosion resistant

Model 9321-0003: NEMA 7/9

explosion proof – Class I & II, Division 1 & 2, Applicable Groups C, D, E, F, & G with an AIT rating of T6.

ELECTRICAL

Power Required:

120 VAC $\pm 10\%$ 50/60 Hz 0.2 Amp
OR
240 VAC $\pm 10\%$ 50/60 Hz 0.1 Amp

Fuses: 0.1 Amp slow blow.

Fuse Type:

Wickman type TR5-T #19374K

Strain Gage Parameters

Excitation: 5 VDC ± 0.1 V or 10 VDC ± 0.2 V (Jumper selectable) 115 mA max. (8 - 350 Ω cells @ 5 V or 4 - 350 Ω cells @ 10 V) [5 V operation MANDATORY for hazardous area applications]

Regulation: Differential constant excitation via remote sensing.

Remote Sense Compensation

Range: Less than 0.1% of full scale span shift for 5 Ω resistance change.

Signal Span Limits: 1 mV to 15 mV.

Signal Zero Balance Range:

0 to 15 mV.

Current Signal Output

Range: 4 to 20 mA with 150% overload limit (= 30 mA).

Load: 0 to 500 ohms.

Configuration: Internal 21 VDC source – output common to isolated circuit common.

Isolation: 4/20 mA common is part of logic common but the entire circuit "floats," allowing ungrounded or grounded operation.

Noise: Less than 1 mV RMS.

Voltage Signal Output

Range: 0-10 VDC.

Load: 10,000 ohms minimum.

Configuration: Common connected to an isolated circuit common.

Noise: Less than 500 μ V.

Warmup Time: 10 minutes min.

Accuracy @20°C, 5 V Excitation: $\pm 0.02\%$ of full scale (combined linearity, repeatability, hysteresis)
Linearity: $\pm 0.01\%$ of full scale.

Output Stability:

Span: 10 PPM/°C

Zero: 100 PPM/°C

STANDARDS COMPLIANCE

RFI Susceptibility: Less than 200 PPM change for an RFI signal as follows: 3 V/meter signal strength at frequencies 27 & 460 mHz.

Static Discharge: Less than 200 PPM change for 6 kV discharges to external surfaces.

MTBF: 17,500 hours minimum

PHYSICAL

Dimensions

9321-0001: 6" (152 mm) high x 3 1/8" (79 mm) wide x 6" (152 mm) long (stainless steel box).

9321-0002: 6" (152 mm) high x 3 1/8" (79 mm) wide x 6" (152 mm) long (gasketed stainless steel box).

9321-0003: 7" (178 mm) high x 7 1/4" (197 mm) wide x 10 1/2" (267 mm) long (cast aluminum box).

PCB Only: 5" (127 mm) wide x 5 1/2" (140 mm) long (excluding pot shafts and connector).

Weight

9321-0001: 3.5 lb (1.59 kg)
Shipping Wt: 5 lb (2.30 kg)

9321-0002: 7 lb (3.17 kg)
Shipping Wt: 10 lb (4.54 kg)

9321-0003: 14 lb (6.35 kg)
Shipping Wt: 20 lb (9.07 kg)

FACTORY NUMBERS

Model-RAM	NEMA Rating	Enclosure Description
9321-0001	1	Stainless Steel Open Type
9321-0002	4X	Waterproof Stainless Steel
9321-0003	7/9	Cast Aluminum Explosion Proof

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