

The Model 9004 is a miniature space saving 92 x 92 x 26 mm DIN-rail mount programmable Load Cell Transmitter. Configuration and field calibration is done via a notebook or desktop PC using the user-friendly software available from our website. Complete 3-way isolation is provided between power supply, input and output.

The transmitter is designed for mV inputs from loadcells, strain gauges and strain gauge pressure transmitters. The stable bridge excitation voltage powers up to four load cells and includes sense feedback to compensate for line variations. The precision instrumentation op-amp front end circuit ensures high accuracy & stability. The adjustable digital damping feature allows for a stable output in noisy systems. The isolated analog output is configurable for industry standard voltage or current signal.

Options include one or two alarms, remote tare / zero & RS 485 output. The RS485 communications option allows interfacing to remote computers and SCADA systems using ASCIIbus or DIGIbus. Up to 32 transmitters can be linked on the same RS485 bus (using our Model 7000 comms converter).

A feature of this programmable transmitter is the calibration method. Pre-calibrated ranges can be allocated zero and full scale values and these can be adjusted on site via a notebook to allow for tare offset and test weight trim. This product meets EMC directive 89/336/EEC & Low Voltage Directive 73/23/EEC.

FEATURES

- ❑ DIN rail mount 92 x 92 x 26 mm enclosure.
- ❑ Powers up to 4 load cells as standard.
- ❑ Fully programmable via a laptop or desktop PC.
- ❑ 4-wire bipolar excitation (sense feedback included).
- ❑ Suitable for 1 mV/V, 2 mV/V, 3 mV/V and 10 mV/V bridges.
- ❑ Low cost - high performance design.
- ❑ Isolated 0-10V, 0-20mA or 4-20mA output with programmable zero & span.
- ❑ Complete 3-way isolation between power supply, input and output.
- ❑ RS485 communications option with ASCIIbus or DIGIbus.

OPTIONS

9-3001-P	Two alarm setpoints (solid state relays)
9-3002	RS 485 communications
9-3004-P	One alarm setpoint (solid state relays)
9-3014	Remote Tare / Zero
7000	RS485 to RS232 converter

SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Accuracy & linearity	:	± 0.05% of full scale
Internal resolution	:	20000 counts bi-polar
Temperature coefficient.	:	± 20 ppm / °C typical
Conversion / settling time	:	0.15 seconds typically
Power / self test time	:	1 - 3 seconds
Operating temp. range	:	0 to +50°C
Storage temp. range	:	-40 to +85°C
Data retention	:	20 years typical
Maximum isolation voltage	:	1500 V
Solid state relays (option)	:	400 V AC/DC, 0.5A, PF=1
Analog output accuracy	:	0.1% of full scale
Current analog output load	:	500 Ω maximum
Voltage analog output load	:	1 kΩ minimum
EC EMC & Low Volt directives:	:	89/336/EEC & 73/23/EEC

INPUT AMPLIFIER

Input impedance	:	2 M Ohm (differential)
C.M.R. ratio	:	86 dB typical
Input protection	:	±4V max. continuous

EXCITATION

Excitation type	:	4-wire bipolar (sense feedback)
Voltage	:	10 volts total, ± 5V bipolar
Unbalance	:	0.5% typical
Temp. coefficient	:	10ppm typical
No. of loadcells	:	4 x 350 ohm load cells maximum or 6 x 1000 ohm load cells

POWER SUPPLY OPTIONS

Standard power supply :

105V - 265V AC isolated supply, 7VA typical, powers 4 loadcells

Optional power supplies (check for availability):

Option 3008-12 : Internal 12 V DC isolated supply, 7 VA typical, powers 4 loadcells.

Option 3008-24 : Internal 24 V DC isolated supply, 7 VA typical, powers 4 loadcells.

Option 3016 : External 95V - 265V AC/DC, powers 6 loadcells.

ORDERING EXAMPLE

When ordering, please specify :

- Supply voltage
- Load cell sensitivity in mV/V
- Load cell capacity (rating)
- Output type (voltage or current)

Option modules (see front page)

MODEL 9004 - 9-3001P - 2 mV/V

"Miniature load cell transmitter with dual alarm, 2mV/V sensitivity"

PROGRAMMABLE SETTINGS

These are the range of settings offered with the configuration software available from our website.

Zero setting : -10000 to 10000
 Full scale setting : -10000 to 10000
 Digital averaging : Yes, factor 0 to 100
 Input sensitivity : 1, 2, 3 or 10mV/V (see note 2)
 Retransmission zero : -10000 to 10000
 Retransmission span : -10000 to 10000
 RS485 address : 1 to 127
 RS232 / RS485 baud : 2400, 4800, 9600, 19200

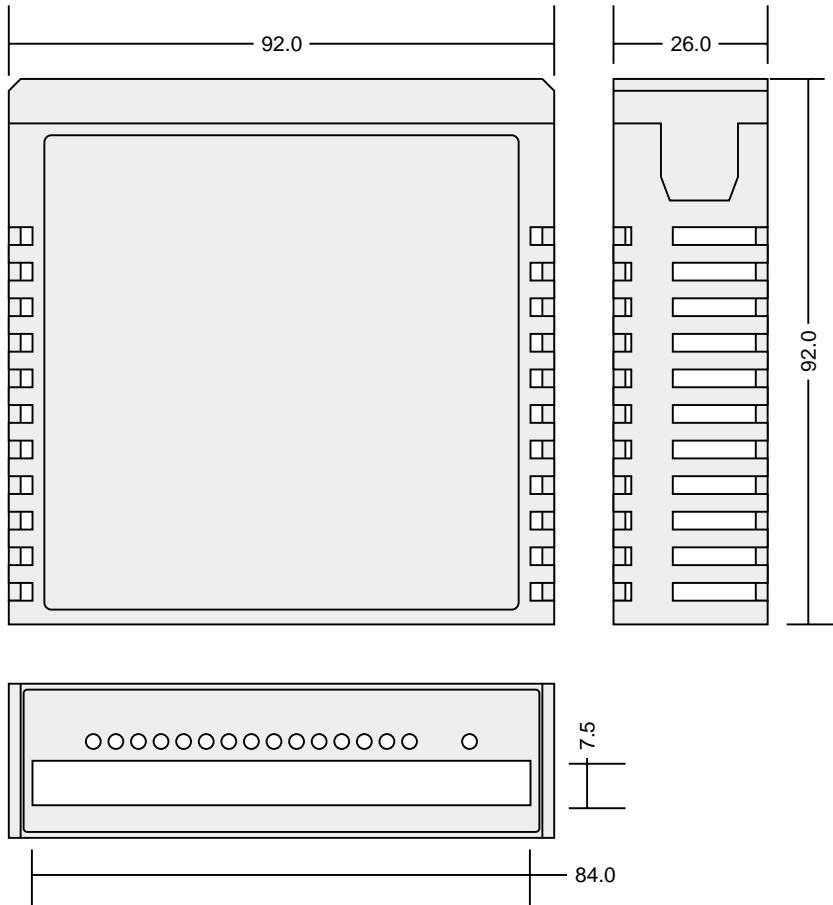
*Alarm values : -10000 to 10000
 *Alarm hysteresis : 0 to 255 (default 1)
 *Alarm delay : 0 to 255 seconds (default 0)
 *Alarm relay settings : Selectable HI or LO alarm
 *Alarm relay state : Selectable NO or NC

* indicates option

NOTE (2) These 4 sensitivities cover the vast majority of applications. The 10mV/V range can be factory changed for non-standard sensitivities. Consult the factory for further information.

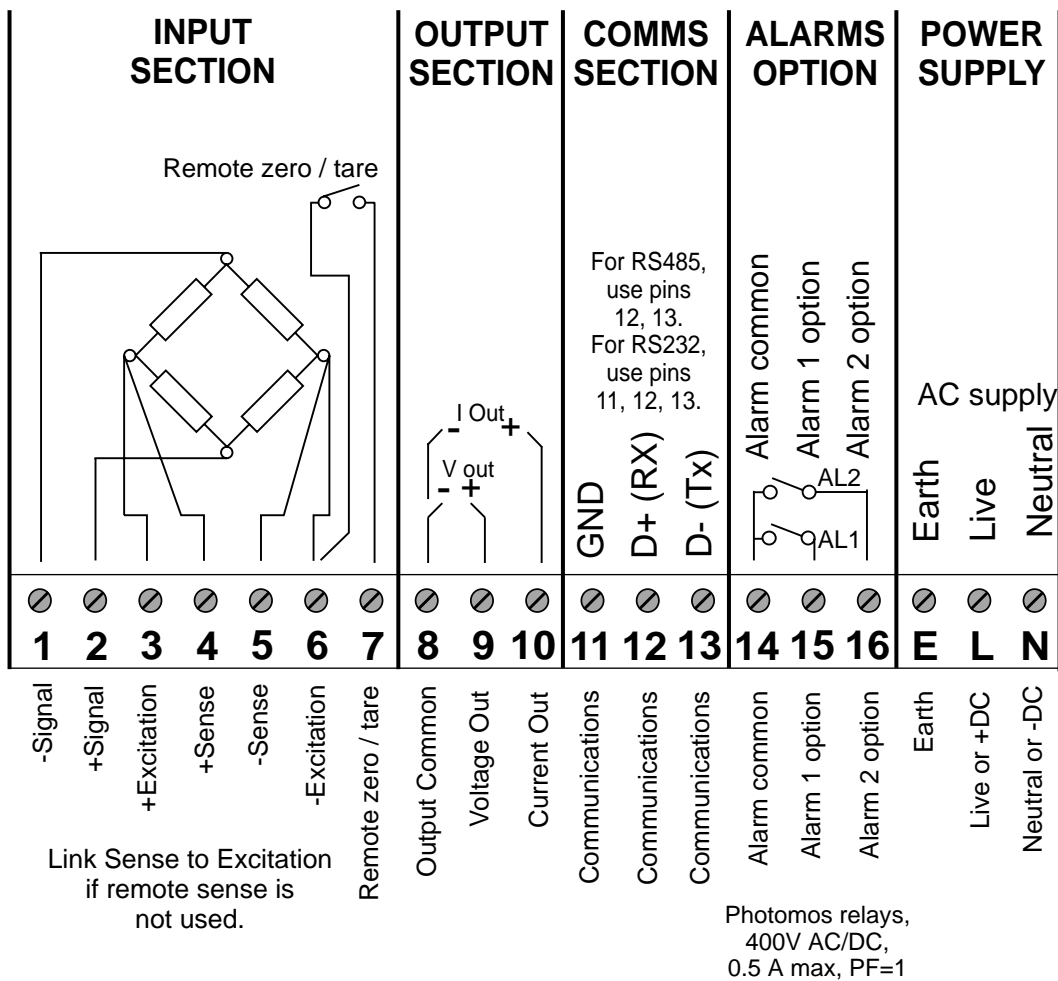
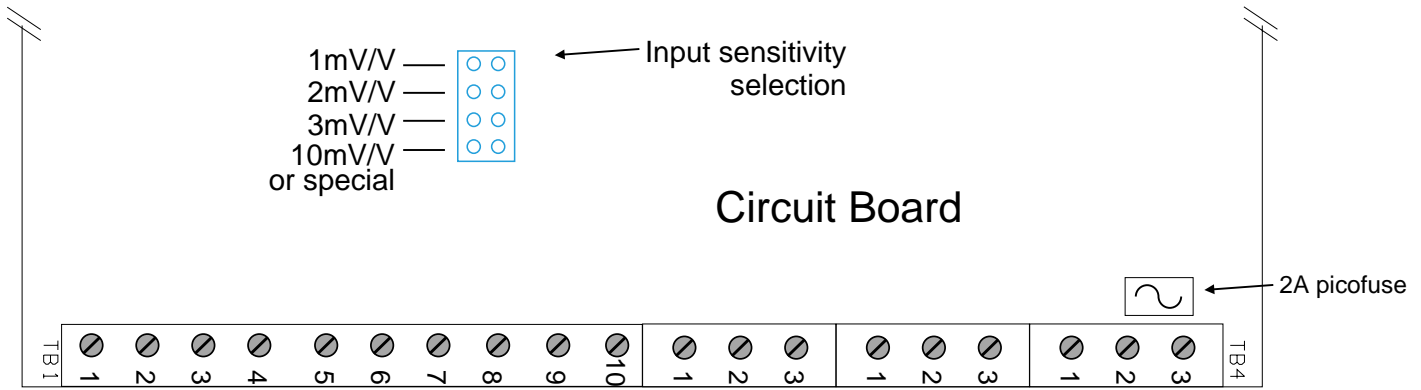
DIMENSIONS

HOUSING



Dimension in mm
 IP40 rating
 Rail mount industrial strength single piece housing
 Rail clips not shown
 Flame retardant ABS plastic (UL 94 V-0)

INTERNAL LINKS & CONNECTION DIAGRAM



Interposing relays recommended for heavy duty applications

GUARANTEE

This product is guaranteed against faulty workmanship or defective material, for a period of 3 (three) years from date of delivery by Instrotech.

Instrotech undertakes to replace without charge all defective equipment which is returned to it (transportation costs prepaid) during the period of guarantee, provided there is no evidence that the equipment has been abused or mishandled in any way.

Instrotech reserves the right to alter any specification without notice.



DISTRIBUTED BY:



Ph: 03 5278 8222 Fax: 03 5278 9761
65 Douro Street, North Geelong VIC 3215
www.factorycontrols.com.au