Model 6004

FIELD MOUNT LOAD CELL TRANSMITTER

DIGITAL PROCESS MEASUREMENT

Processing your future

CERTIFICATION DEKRA DIN ISO 9001

TECHNOLOGY TOP • 100

CE

The Model 6004 is a self-contained, easy-to-use precision programmable digital transmitter and indicator for load cell applications. All the features of more expensive systems are included in one unit.

The unit features a full 20mm high 5½ digit bright red LED display (-199999 to 199999). Inputs to the instrument include load cell input (6 wire plus earth screen) and a number of digital inputs for functions such as remote tare, peak hold reset etc. The unit includes excitation for load cells and is user selectable for normal or barriered applications. The excitation includes sense feedback to compensate for cable loss. The precision front end circuitry ensures high stability and accuracy for millivolt input from the load cells. The precision analog output circuitry (0-20mA / 4-20mA / 0-10V) is fully isolated from the load cells and the power supply. An isolated RS232 serial interface is included as standard. Four alarms / trips with solid state relays is optional.

A feature of this programmable indicator / controller is the calibration method. Pre-calibrated ranges can be allocated zero and full scale values and these can be adjusted on site to allow for deadweight / back-balance offset and single point span calibration (test weight trim). The instrument meets European Community EMC directive 89/336/EEC and Low Voltage directive 73/23/EEC.

FEATURES

- -199999 to 199999 counts display
- 20mm high bright red LED display
- Low cost - high performance design
- Rugged and compact IP65 powder coated die-cast aluminum housing
- Fully programmable from the front keypad
- 10 V, 5V & 3.3V load cell excitation with sense feedback included as standard
- Isolated programmable analog output as standard
- Isolated RS232 serial interface as standard
- 4 Solid state relays optional.

OPTIONS

3002F	RS485 serial interface (DIGIbus or ASCIIbus protocol) instead of RS232
3001P	Dual relay output.
3018P	4 Relay output.

SPECIFICATIONS

DISPLAY

Display	5½ digit (-199999 to 199999) bright red LED, 20mm high
Display resolution	Up to 200,000 divisions

OPERATION

Setup and calibration	Full digital with visual prompting in plain messages
Memory retention	Full non-volatile operation
Digital filter	Low pass with 10 user selectable ranges
Back-balance range	Adjustable 100% of full capacity

INPUT FILTER

Sensitivity adjustment	Up to 3.00 mV/V full scale (2.00 mV/V default)
Zero drift	0.1μV / °C typically
Span drift	20 ppm / °C typically
Accuracy & linearity	0.05% of full scale, ± 1 display count
Warm up time	15 minutes
Noise	< 0.5 μV p-p

EXCITATION

10V	Up to 4 x 350 load cells (default for most applications)
10V	Up to 8 x 1000 load cells
5V	Up to 8 x 350 load cells
5V	For barriered applications up to 2 load cells
3.3V	For barriered applications up to 4 load cells
Load cell connection	6 wire + shields (sense included)

ANALOG / DIGITAL CONVERTER

A/D Type	20 bit sigma delta
Resolution	1 000 000 internal counts
A/D conversion rate	Approximately 5 per second

DIGITAL INPUTS

Digital input no. 2	Remote input for display gross/net toggle
Digital input no. 3	Remote input for peak / valley reset
Digital input no. 4	Remote input for tare

ANALOG OUTPUT

Analog output isolation	Yes, to 1000V
Analog output accuracy	0.1% of full scale
Analog output resolution	12 bits
Analog output temp. coefficient	20 ppm / °C typically
Current analog output load	500 maximum (current is source, not sink)
Voltage analog output load	1 k minimum

RELAYS

Type	Solid State
Rating	400V AC/DC,0.5A, power factor 1
Form	Normally open contact with no common.

SERIAL INTERFACE

Serial interface	RS232, with optional RS485
Isolation to input	Yes, to 1000V
Capabilities - DIGIbus protocol	Full remote control, except for field setup
Capabilities - ASCIIbus protocol	- continuous output approximately 5 x second - output on demand via print button - output on demand via serial request

ENVIRONMENTAL

Operating temperature range	-10 to +50°C
Service temperature range	-15 to +60°C
Storage temperature range	-40 to +80°C
Humidity	< 85% non-condensing

POWER SUPPLY

Standard	95-265V AC / DC, 10VA typically
Optional	8-30V DC supply, 10VA typically

MECHANICAL SPECIFICATIONS

Dimensions	220 mm wide x 130 mm high x 70 mm deep
Glands	5 glands, 8 mm hole diameter
Housing rating	Ip65 / Powder coated, die-cast Aluminium

REGULATORY COMPLIANCE

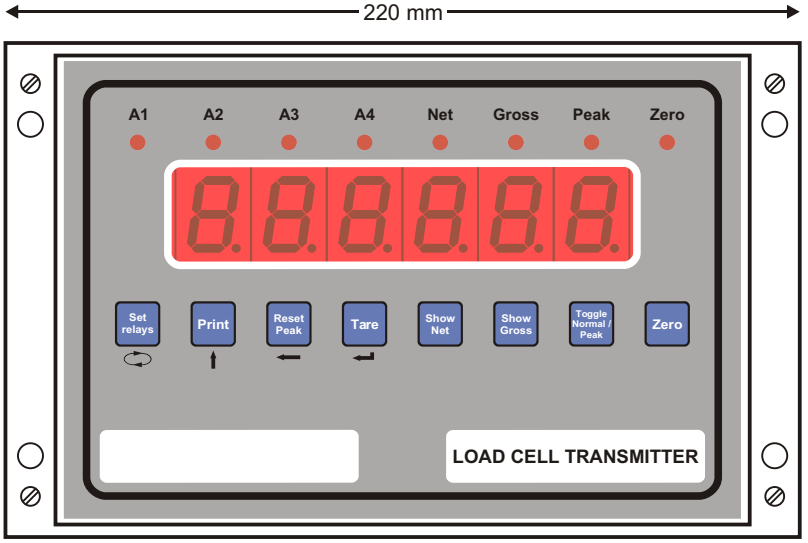
Regulatory requirements	Complies with EC Directives 89/336/EEC & 73/23/EEC

INSTALLATION

DIMENSIONS & MOUNTING HOLES

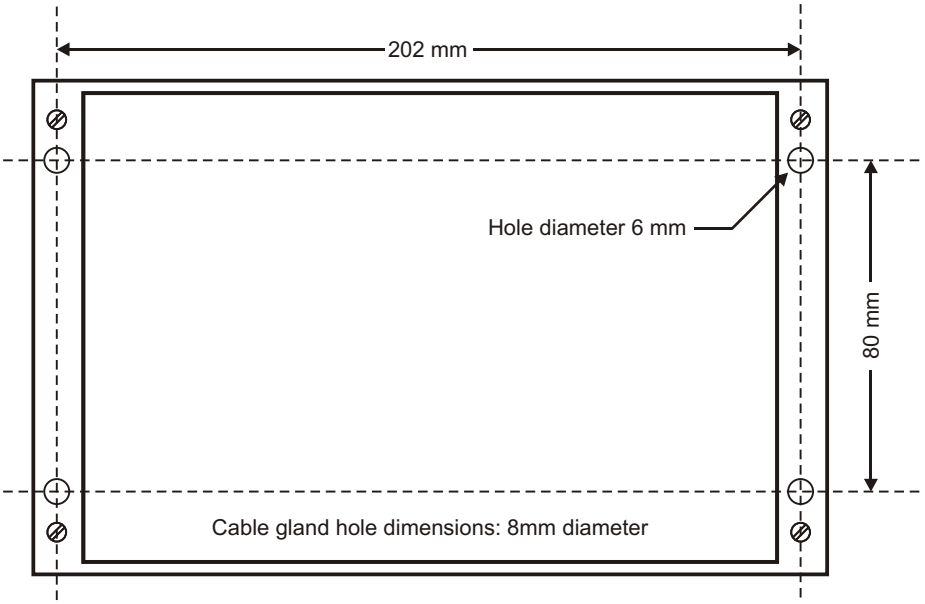
Overall dimensions

- Not to scale.
- Height of 130mm excludes cable glands
- Depth is 70 mm



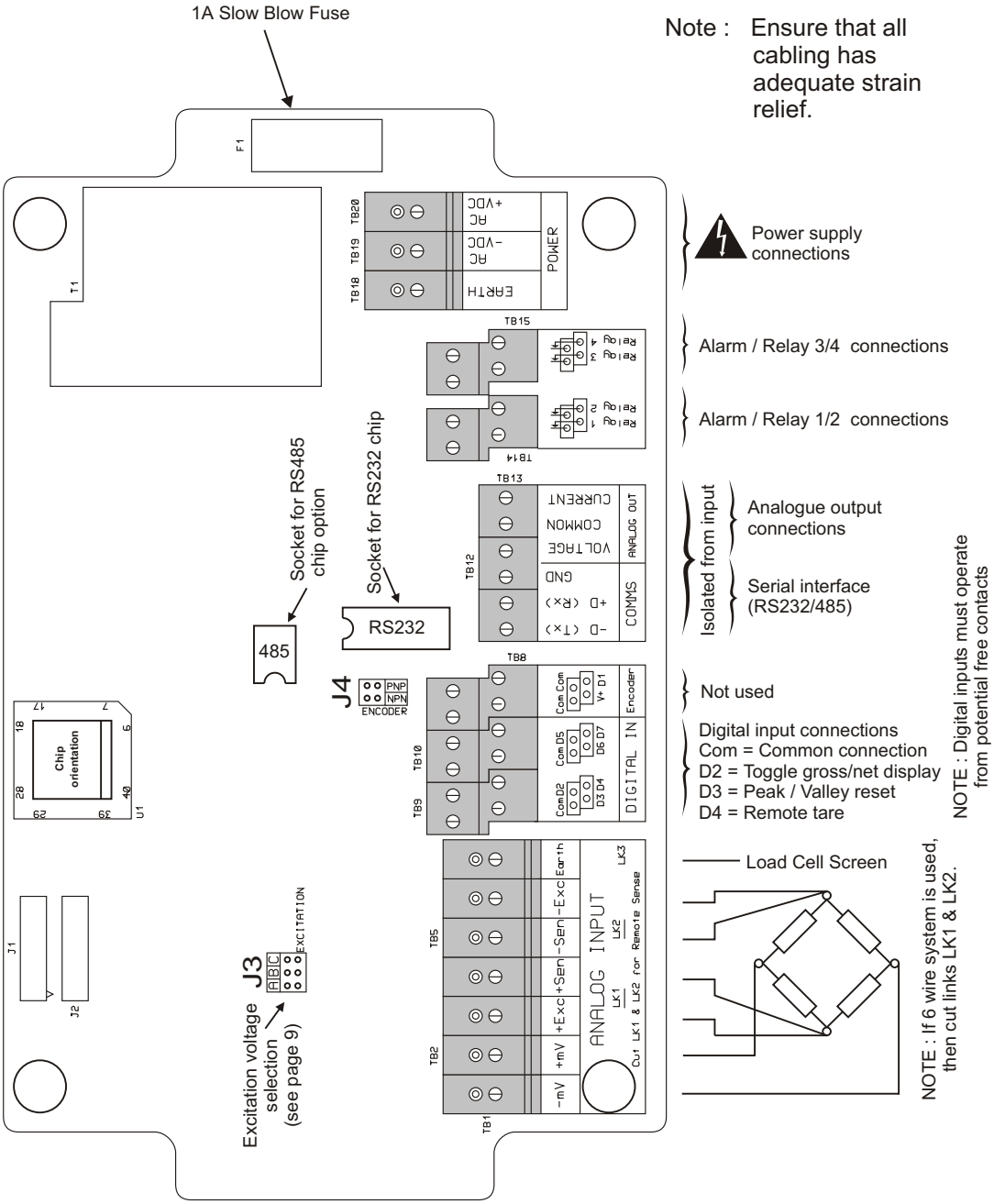
Mounting holes

- The housing side covers need to be removed to gain access to the mounting holes.
- When removing the housing cover, observe safety precautions.



CONNECTIONS, JUMPERS & FUSES

Wiring connections, jumpers and fuse replacement



GUARANTEE

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

DPM 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.

DPM reserves the right to alter any specification without notice.

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DISTRIBUTED BY:

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