

Model 500 Panel Mount Digital Weight Indicator

- A highly cost-effective weighing instrument for process vessel weighing and platform scales
- Calibration and set-up via front panel or by PC with 'Inovation' software
- High precision 24 bit analogue to digital conversion with 60,000 count resolution
- 50 conversions per second for quick update in dosing applications
- RS232, 422 or 485 serial port with ModBus™ RTU
- Optional 16-bit 4-20 mA analogue output
- Two setpoint outputs
- Ten-point linearisation compensation
- Optional Fieldbus connectivity with Profibus-DP, DeviceNet™, TCP/IP and more



NOVA WEIGH

Model 500 digital weight indicator

The Model 500 is a compact competitively priced panel mounting weight indicator that delivers excellent weighing performance plus a host of useful communication features. This combination makes it the perfect choice for hopper and vessel weighing applications where connectivity to PLCs and other types of control system is required.

The fast 50 conversions per second ADC makes it ideal for batching and dosing applications. Filtering can be adjusted to suppress signal fluctuations due to mechanical vibration etc.

Connectivity

The Model 500 is equipped with a serial port that can be used for RS232, 422 or 485 communications. This port can be connected to a printer to record weight data, a remote display or a PLC/computer control system. Data flow is bi-directional and setpoint values can be written to the indicator from the PLC or computer.

The ModBus™ protocol is supported making for easy interfacing to most PLCs etc. An internal option card (replacing the 4-20 mA option) allows connection to a Profibus-DP network. Alternatively, multiple indicators can be connected to a Model 300 fieldbus gateway providing a choice of Profibus-DP, DeviceNet™, TCP/IP and other popular fieldbus protocols.

Via an optional Fieldbus Gateway, Profibus, DeviceNet™, TCP/IP and other popular protocols are all available.

Digital inputs and outputs

Two setpoints are provided. These are solid-state switches with a maximum load of 100 mA at 24 Vdc. The hysteresis setting is menu selectable.

The digital inputs can be used for Tare, Zero and Print commands.

Calibration and setting

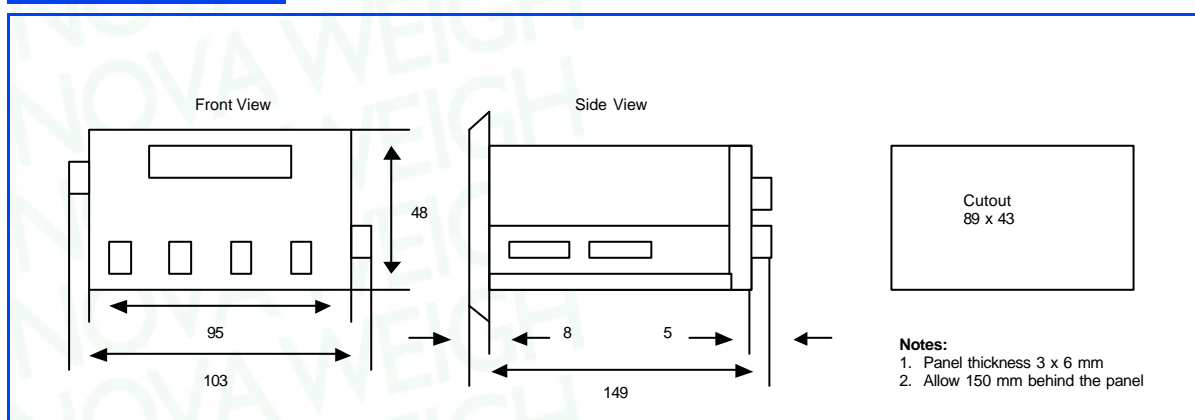
The Model 500 has an easily learnt menu-driven set-up procedure using the keys on the front of the instrument.

Alternatively the instrument can be set up using a PC and a Windows based software package. One benefit of the PC approach is the availability of a 'data sheet' calibration mode. This allows the unit to be calibrated according to the mV/V performance of the load cell selected and avoids the need for dead weights or other calibration references.

Technical Specification

Performance		Analogue (optional)	16-bit DAC 0-10 Vdc (10 KO min load) or 4-20 mA (300 Ω max load) active, linearity <0.012% of FS
Non-linearity	0.01% of full scale	User interface	
Display resolution	60,000 counts	Display size and type	6-digit red LED, 7-segment, 14 mm plus 4 red status LEDs
A/D type and conversion rate	24-bit 50 conversions per second	Keypad	4 membrane keys with tactile feedback
Span linearisation	10-point	Power requirements	
Calibration method	Via keypad or optional via RS232 port using Windows based 'Innovation' set-up program	Voltage and VA	24 Vdc, 7.5 VA - optional mains PSU as separate item
Load cell circuit	5 V excitation with 6 wire connection including sense circuit. Suitable for use with zener barriers	Construction and housing	
Signal range	-0.5 mV/V to +3.5 mV/V	Enclosure	ABS plastic
Temperature	<0.001% of FS/°C	Dimensions	95 x 48 x 149 mm (L x H x D)
Filtering	0.1 Hz to 25 Hz selectable	Panel cut-out	89 x 43 mm
CE marked	Compliant with Euronorms for Electromagnetic Compatibility and Low Voltage Directive	Protection	IP20
Inputs and outputs		Connections	Terminal block
Parallel inputs and outputs	Inputs: 2 opto isolated 24 Vdc PNP (requires external power supply) Outputs: 2 solid-state relays (max load 24 Vdc/100 mA each)	Environmental	
Serial	RS232, RS422 or RS485, ASCII or ModBus™ protocols, variable Baud rate	Operating temperature	-10 - +40°C
Fieldbus connectivity	Profibus-DP with internal option card (replaced the 4-20 option) or via Model 300 fieldbus gateway (see separate data sheet)	Storage temperature	-20 - +50°C
		Relative humidity	85% non-condensing

Dimensions



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BS EN ISO 9001:2000 Cert No: FM 11445

Nova Weigh's policy of constant product development dictates that we may alter specifications and or the appearance of our product range without notice.