



Procon Engineering

(A Division of National Oilwell Varco UK Limited)



Type EP500 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 "innovation" software

6 digit red LED 14mm high 7 segment display

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 ASCII or ModBus™ RTU

Ten-point linearisation compensation

Two setpoint outputs (opto isolated)

Optional 16-bit 4-20 mA analogue output

Optional Fieldbus connectivity with Profibus-DP, DeviceNet™, TCP/IP and more

The Type EP500 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 make it ideal for batching and dosing applications. Filtering can be adjusted to suppress signal fluctuations due to mechanical vibration etc.

Connectivity

The Type EP500 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 protocols it supports makes for easy interfacing to most PLCs etc. Internal option cards (replacing the 4-20 mA option) allow connection to Profibus -DP or DeviceNet™ networks. Profibus, DeviceNet™, TCP/IP and other popular protocols are all available via an optional Fieldbus gateway.

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.

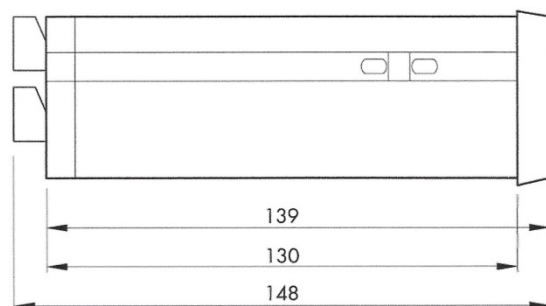
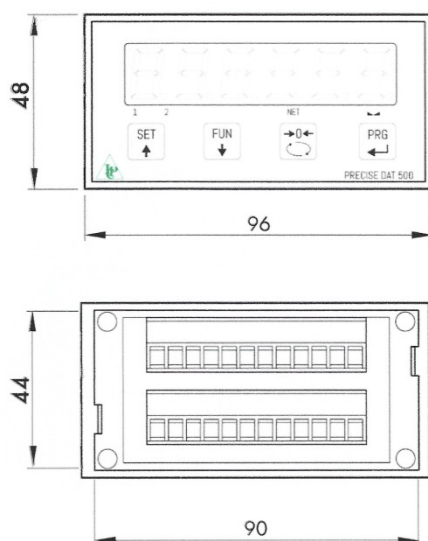
Calibration and setting up

The Type EP500 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.

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Technical Specification Sheet

SPECIFICATION	
Performance	
Non-linearity	0.01% of full scale
Display resolution	60,000 counts
A/D type and conversion rate	24-bit 50 conversions per second
Span linearisation	10-point
Calibration method	Via keypad or via optional RS232 port using Windows based 'Innovation' set-up program
Load cell circuit	5 V excitation with 6 wire connection incl sense circuit. Suitable for use with zener barriers
Signal range	-0.5 mV/V to +3.5 mV/V (-3.9 + +3.9 mV/V optional)
Temperature	<0.001% of FS/°C
Filtering	0.1 Hz to 25 Hz selectable
CE marked	Compliant with Euronorms for Electromagnetic Compatibility and LowVoltage Directive
Inputs and outputs	
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)
Serial Interface	RS232, RS422 or RS485, ASCII or ModBus™ protocols, variable Baud rate
Fieldbus connectivity	Profibus -DP or DeviceNet™ with internal option card (replaces the 4-20 option) or via optional Fieldbus gateway.
Analogue Output (optional)	16-bit DAC 0-10 Vdc (10 KO min load) or 4-20 mA (300 O max load) active, linearity <0.012% of FS
User interface	
Display size and type	6-digit red LED, 7-segment, 14 mm plus 4 red status LEDs
Keypad	4 membrane keys with tactile feedback
Power requirements	
Voltage and VA	24 Vdc, ± 15% - power 5W - optional mains PSU as separate item
Construction and housing	
Enclosure	ABS plastic
Dimensions	96 x 48 x 149 mm (L x H x D)
Panel cut-out	89 x 43 mm
Protection	IP20
Connections	Terminal block
Environmental	
Operating temperature	-10 - +50°C
Storage temperature	-20 - +70°C
Relative humidity	85% non-condensing



Procon Engineering's policy is one of continuous product enhancement.

We therefore reserve the right to incorporate technical modifications without prior notification. E&OE.

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