Model 5001 Panel Mount Weight Indicator

- **24 bit analogue to digital conversion (16,000,000 counts internal)**
- **Fast conversion rate of 50 per second, ideal for dosing and filling**
- **Sophisticated filtering algorithm optimised to give fast 'rock-steady' updates even with noisy weight signals**
- **Batching software standard**
- **Auto-diagnostics**
- **Wide range of communication options including ModBus™, DeviceNet™ and Profibus-DP**
- **Optional 4..20 mA output**
- **EC type approval for Legal-for-Trade applications, 10,000 division**

5001 Digital Weight Indicator

NOVA WEIGH

Model 5001 Digital Weight Indicator

The 5001 is a new-generation weight controller providing the highest performance and most sophisticated functionality at a cost less than most low-end weight indicators.

The 5001 is optimised for vessel weighing and process platform scales, especially those requiring flexible and reliable communication between weighing instruments and PCs, PLCs, Distributed Control Systems etc.

Process weighing demands fast weight updates (e.g. for precise dosing and filling) but often the input signals are made 'noisy' by the influences of vibrating feeders or product 'swilling' inside a mixing vessel. Normal weighing instruments rely on taking multiple readings and averaging the results - but this means a trade-off against response speed. The new 5001 filtering algorithm instantly 'locks on' to the true weight value even with widely fluctuating signals.

A built-in batching program is a standard feature.

Calibration and setting up

Calibration and setting up is fully menu driven without any need to adjust DIL switches or Potentiometers. Span and Tare adjustments are totally independent so avoiding time-consuming multi-pass calibration procedures.

Connectivity

The 5001 is equipped with two serial ports. One, duplex, port can be configured as RS232, or RS485 multi-drop. The second, simplex, port supports RS232 transmission.

This provides flexibility. For example, the 5001 can be simultaneously connected to a printer or repeat display *and* a host computer. ModBus™, Profibus-DP and DeviceNet™ are available using optional modules - see separate data sheets. An optional 4..20 mA analogue output module can also be fitted.

Digital inputs and outputs - optional

Three solid-state outputs and two opto-isolated inputs are available. Functions can be allocated under menu control.

The inputs can be used, for print, remote tare and zero functions. Each output can be configured as a setpoint or as a watchdog alarm to indicate a load cell failure or internal malfunction.

TECHNICAL SPECIFICATION

Performance

Non-linearity	0.0007% FSD typical
Displayed resolution	300,000 division (16,000,000 internal resolution)
A/D type and conversion rate	24-bit Delta-sigma, 50 conversions per second
Span linearisation	Multi-point
Calibration method	Under software control with non-volatile storage
Load cell circuit	5 VDC, four or six wire with sens e circuit, up to eight x 350 ohm load cells. Suitable for use with zener barriers upto IIC configurations.
Signal range	0.2 mV/V to 3 mV/V at standard excitation voltage.
Temperature effect	
-span	< 1 ppm/K of FSD, worst case
-zero	<5 nV/K typical
Filtering	Adjustable between 50 Hz and 1 Hz
CE marked	Compliant with EuroNorms for Electro-Magnetic Compatibility and low Voltage Directive
Legal-for-Trade Weighing	The 5001 has an EC type approval certificate in accordance with EU Directive 90/384/EEC (the NAWI Directive) for 10,000 divisions. It must be used with suitable load cells in a weighing system used for 'trade'

Inputs/outputs

Parallel inputs/outputs - optional	Functions allocated by menu, external psu recommended, 1,000 V opto-isolated
Outputs	Three-off solid state 12-30 VDC @ 60 mA max
Inputs	Two-off opto-isolated 12-24 Vdc
Serial	
Data port 1	RS232/RS485 twowire multi-drop, opto-isolated, ASCII protocol ModBus™ option Profibus-DP and DeviceNet™ available as options via 'gateway' modules external to instrument
Data port 2	RS232 configurable as remote display driver or printer output. Data and format configurable
Analogue - optional	
4 .. 20 mA or 0 .. 10V	15 bit 1,000 V isolated, active. 10 V into > 2,000 ohms, 4 .. 20 mA sink or source with 500 ohm burden, configurable set-up and fault modes

Operator interface

Display size	Seven x 14 mm, green LED
Keypad	Five key, durable chemical resistant elastomer

Power requirements

Supply	12 .. 28 VDC, 300 mA max @ 24 VDC

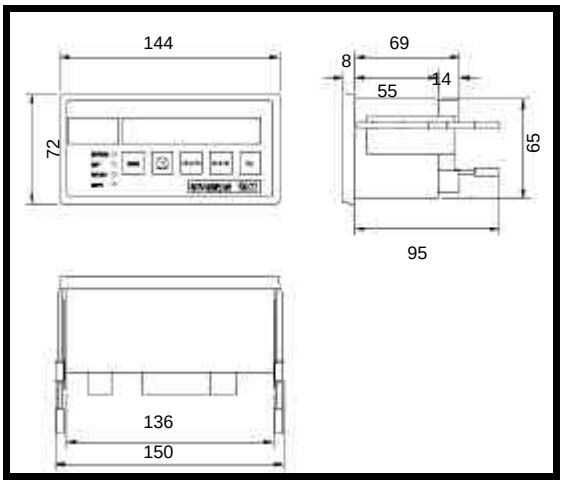
Construction

Housing	Panel mounting DIN standard, glass-fibre reinforced Noryl, GF52 SE1, keypad polyester
Dimensions (wxhxd)	144 x 72 x 69 mm
Terminations	pluggable spring terminals, cable size 0.08 .. 2.5 mm²

Environmental

Temperature - working	-10 .. +40 °C
Temperature - Storage	-10 .. +70 °C
Humidity	0 .. 95%
Sealing	Front face IP54, rear connections IP2X
Weight	350 g

DIMENSIONS (mm)



5001 digital weight indicator enclosure dimensions

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Visit us on the web **www.novaweigh.co.uk**

BS EN ISO 9001:2000 Cert No: FM 11445

5001/11/03