



WEB-TECH

Model 400 Level & Weight Indicator

The Model 400 is a microprocessor based level / weight indicator. The local display is an LCD type and provides the user with a versatile means of level and weight readout. Remote level data is provided by an isolated 4-20mA current source, an RS 485 port is also available for digital data transmission. The Model 400 can accept the output from 3 and 4 wire style load cells. It is an ideal instrument for use with "bolt on" and "press in" type sensors commonly used to instrument existing tanks and silos.

Level control using direct support (load cells) or stress measurement (bolt on/press in) technology, have become industries preferred method, for the following:-

- ◆ No inaccuracies caused by material profile.
- ◆ Weighing provides continuous level control.
- ◆ No performance degradation caused by material build up on sensors. Sensors are fitted outside the tank and therefore not subject to hostile environments often found inside tanks and silos, especially when being filled.
- ◆ Dust in the tank/silos atmosphere cannot blind the system.
- ◆ Load cells etc are passive devices which do not emit annoying sound waves, radio waves or laser light, which can be irritating to operations staff.

◆ The Model 400 **comes with standard features** that other manufacturers call options. The combination of a **20 bit Sigma Delta Analogue to Digital converter** and selectable amplifier gain, enables the instrument to accommodate a wide range of input signals. These features together with the ability to accept both **full - bridge and half bridge type load cells and strain gauges**, make the Model 400 a truly versatile instrument.

◆ The built in functions such as **zeroing, calibrating, and the programming of set points** are **simply** accessed and performed through an **integral four key, keypad**.

◆ The Model 400 level controller is a **"state of the art" device**, utilising an embedded Motorola **HC11** microprocessor as the main processing element.

◆ The microprocessor is **watchdog** equipped. Providing the user with **"get up and go"** after a program disturbance.

◆ **The power supply is rugged and uncomplicated** and fitted with line filters. For applications where the mains power is

exceptionally noisy, Web-Tech can optionally supply proprietary line filters

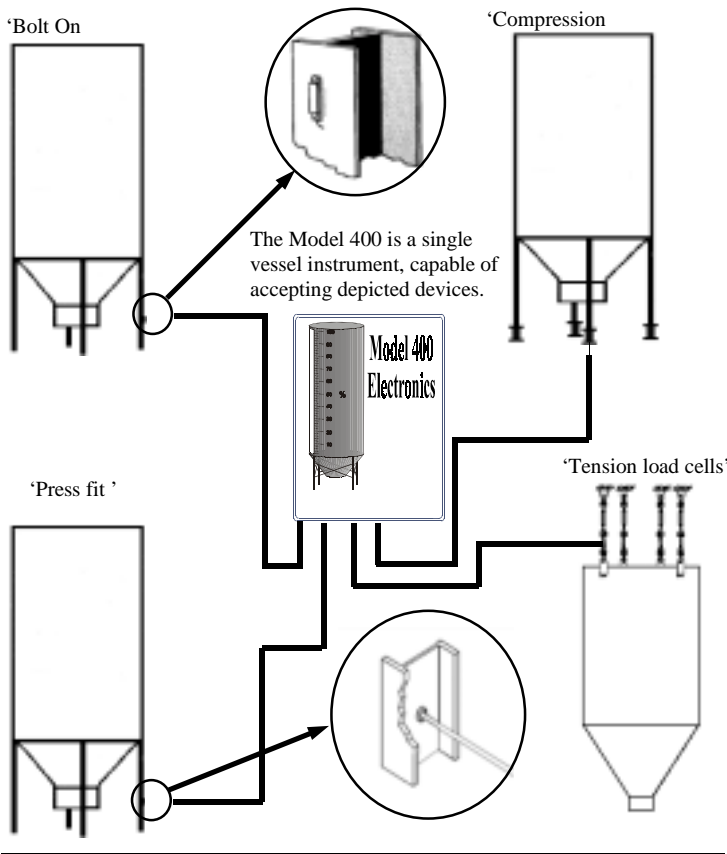
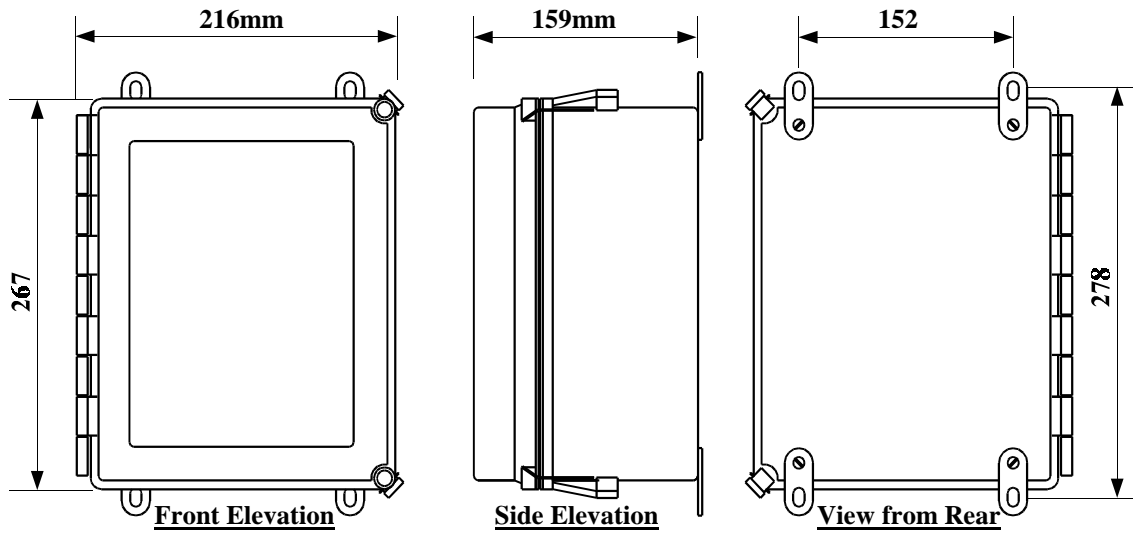
◆ Augmenting the the built in electronic robustness of the electronics, is the provision of an **IP65 / NEMA 4X** rated enclosure, made from moulded **fibreglass polyester** and incorporating patented quick release latches and piano style hinges.

◆ Moulded **fibreglass polyester has outstanding chemical and temperature resistance and exhibits excellent weatherability and physical properties**. Oil resistant "O" ring gasket with tongue and groove construction combine to produce a **consistently repeatable seal**.

◆ An **optically isolated, parallel, analogue to digital converter** provides a **full 12bit output** to the remote current driver. The current loop output is internally generated, and is capable of driving into a maximum of **800 Ohms**. A **light emitting diode** fitted to the main processor PCB, provides **visual indication of current loop failure**.



- ◆ A two line, 16 digit, LED backlit, LCD display. Provides for a variety of silo capacity readouts.
- ◆ **Signal dampening** is provided for bins and tanks with internal agitators.
- ◆ A **systems status relay** has been provided, allowing PLC /DCS's to **poll status of the instrument**.
- ◆ All field programmed parameters are stored in **non volatile memory**, so power outs don't require the user to re-program.
- ◆ The Model 400 is switch selectable **120/240VAC dual voltage operation**.
- ◆ **High and low relay outputs** have been provided for those customers without access to a PLC/DCS.
- ◆ Material build-up inside the bin is cancelled by means of the "Autozero" function.



Mechanical Specifications

Power Requirements Mains Supply*:

240V AC +/- 10% 50-60 Hz :117V AC +/- 10% 50-60 Hz

*Mains supply voltage is switch selectable

Enclosure

Moulded Fibreglass reinforced Polyester, Rated IP66 or Nema 4/X

Stainless Steel Optional Supply (consult factory)

Dimensions: 267 x 216 x 158mm

Mounting: Suitable for wall mounting only

Shipping Weight: 4kg

Load Cell Excitation

Voltage:..... 12 Volts DC, fixed.

Current:.....200mA, internally limited.

Load Cell Input Range:.....0- 1 volt.

Resolution:.....20 bits.

Type:.....Will accept both **full-bridge and half-bridge** type load cells

Display.....16 digit x 2line x 12mm high digits, LCD type, with LED backlighting. Programmable units and integral % bar graph.

Analogue Output4-20mA Current

Transmitter -

Fully isolated, internal loop supply, 800 ohms max. loop resistance .

Setpoint Relay Outputs

Quantity:two, identical.

Programmable Range:.....0 - 100%

Contact Rating:..... 240V AC @ 5A, resistive.
30V DC @ 10A resistive.

Status Relay Output

Contact rating:.....20V DC @ 0.5A, resistive.

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