

The CompuScale III is a versatile microprocessor-based integrator designed for continuous in-line weighing of dry bulk solids with conveyor belt scales. It operates with a one, two or four load cell belt scale system, though by using an optional load cell pre-amplifier, the CompuScale III can receive six to eight load cell inputs. The CompuScale III provides a digital read-out of load, speed, flow rate and totalized flow, with outputs for remote rate indication and totalization. The digital display features large, high resolution illuminated characters and graphics.

A high resolution analog-to-digital conversion scheme for setting zero and span enables quick, simple calibration. A material test may then be performed to verify system accuracy and the CompuScale-III programmed to correct any deviation. It is simple to commission and easy to maintain. The unit features power loss protected memory, communications link, alarm and a real time clock. Load cells are balanced electronically by the CompuScale III.



## Product Features

- Versatile integrator for wide range of belt scales
- Simple, automatic calibration
- Quick, low cost access to advanced information
- Analog mA output, and relay contact for rate alarm
- Provision for remote totalization
- Low maintenance
- NTEP and Industry Canada approved when used with MMI-02 belt scale and MD-36A speed sensor
- Communications ports

## Technical Specifications

### Power

- 100/115/200/230 Vac  $\pm 10\%$ , jumper selectable, 50/60 Hz, 65 VA

### Fuse

- main (FU 1): 3/4 Amp MDL SLO-BLO or equivalent
- speed sensor (FU 2): 1/4 Amp MDL SLO-BLO or equivalent

### Operating Temperature

- -20 to 50°C (-5 to 122°F)

### Accuracy

- $\pm 0.1\%$  of span, typical

### Resolution

- $\pm 0.02\%$  of span, typical

### Inputs

- load cell: -20 to +45 mVdc per load cell (4 load cells max.)
- LVDT: 0 to 0.75 Vrms, 3 kHz
- speed sensor: 5-15 Vdc pulses, 2-2000 Hz
- multispan: 4 contact inputs for up to 8 spans
- keypad: 20 key sealed membrane with tactile feedback
- auto zero: contact input to enable
- printer: contact input for print request

### Outputs

- load cell: 10 Vdc, 250 mA max. (excitation)
- LVDT: 2.0 Vrms, 3 kHz, 50 mArms max. (excitation)
- speed sensor: 15 Vdc, 150 mA max. (excitation)
- analog:
  - 4-20 mA, (0-25 mA scaleable), isolated, proportional to rate
  - 0.1% resolution
  - 750  $\Omega$  max. load
- remote totalizer:
  - SPST sealed relay
  - 1 form 'A' contact rated 2A at 250 Vac, 100 VA max.
  - 25 msec. minimum contact closure duration
  - 15 closures per second max.
- alarm:
  - 2 multipurpose relays for rate, load or speed
  - 1 Form 'C' SPDT contact per relay, rated 5A at 230 Vac
- communication: 1 relay, 4PDT used for communication loop dropout, rated 1A at 230 Vac
- display: illuminated 256 x 128 dot matrix

### Communication

- 2 serial ports
- RS232C and  $\pm 20$  mA current loop

### Enclosure

- NEMA 4 style, steel construction with polycarbonate window
- 330 mm W x 406 mm H x 102 mm D (13" W x 16" H x 4" D)

### Options

#### Cable

- single load cell, 150 m (500 ft.) max. 20 AWG, 4 wire shielded, Belden 8404 or equivalent
- single load cell, 300 m (1000 ft.) max. 20 AWG, 6 wire shielded, Belden 8426 or equivalent
- dual load cell, 150 m (500 ft.) max. 20 AWG, 6 wire shielded, Belden 8426 or equivalent
- dual load cell, 300 m (1000 ft.) max. 20 AWG, 8 wire shielded, Belden 8418 or equivalent
- LVDT, 150 m (500 ft.) max. 20 AWG, 4 wire shielded, Belden 8404 or equivalent
- speed sensor, 300 m (1000 ft.) max. 18 AWG, 3 wire shielded, Belden 8770 or equivalent

#### Speed Sensor

- Milltronics MD series speed sensors

#### LCPA-08 interface

- for connection to MMI-3 or MMI-4 scale configurations

#### Incline Compensator

- for variable incline conveyors

#### Barrier Strips

- for hazardous location belt scales

#### Enclosure Heater

- recommended for operating temperatures below -10°C (14°F) or excessive humidity

#### Relay

- food grade remote totalizer relay

#### CVCC

- for bipolar current loop/RS-232C conversion

#### BIC-II:

- for 6 port bipolar current loop/RS-232C or RS-422 conversion.

### Shipping Weight

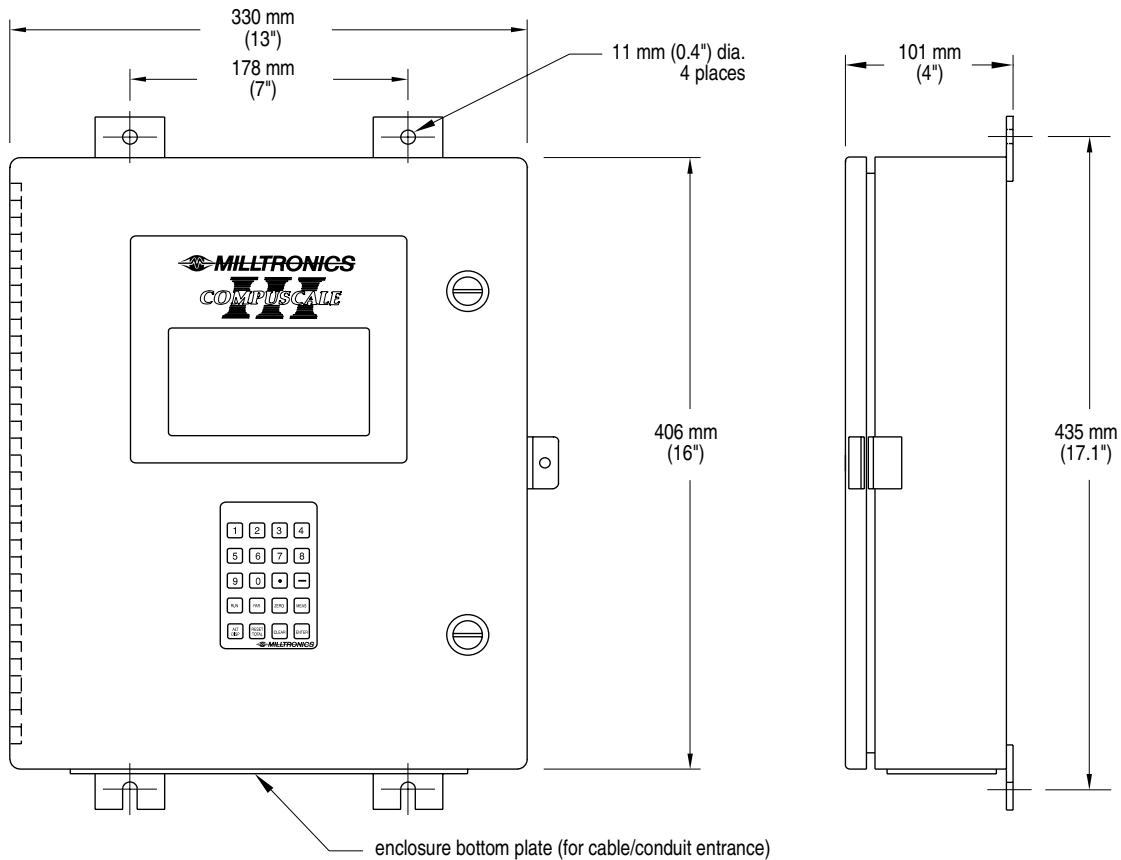
- 11.0 kg (24.3 lbs.), no options

### Approvals

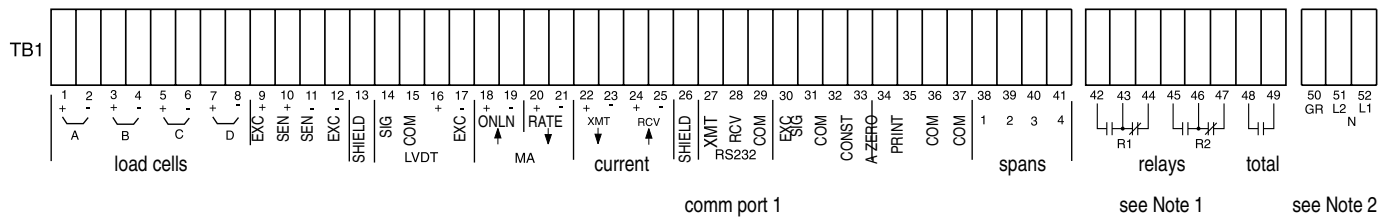
- CSA general purpose
- NOT CE compliant

# CompuScale III

## Dimensions



## Wiring



### Notes

1. Refer to Technical Specifications for relay ratings.
2. Position J1 for 100/115/200/230 Vac operation (50/60 Hz 65/A).



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