



**BUILT SMART  
BUILT TO SURVIVE**

## THAYER Series 5200 Weigh Belt Integrator

The **THAYER Series 5200 Instrument** allows maximum versatility in system integration and customer ease of use.

*The first component is the Scale Unit (SU).* The SU is mounted on the scale and is pre-wired at Thayer. The SU gathers Load, Speed and Temperature information from the scale and has digital interfaces to the ATWL and belt travel limit switches. An RS-485 Serial connection allows data transfer to and from the CPU module.

*The Control Processing Unit (CPU)* is the second component of the Series 5200. It uses an embedded PC (EPC) with the appropriate plug in boards to process the application. The CPU gathers information directly from the SU, and provides an additional RS-485 communications link for the Operator Interface. Plug in boards for the CPU include:

- I-5200 board which contains all required I/O for an CPU Application.
- C-5200 board which contains additional I/O for controller applications. This is used in conjunction with I-5200 boards.
- Optional communication boards are also available.

The third component is the Operator Interface (OI) contains a display and custom keypad for operator's use. An RS-485 Serial connection allows data transfer to and from the CPU.

### •SCALE UNIT (SU)

The SU gathers load, speed and temperature information from the scale. The SU also controls and monitors the position of the of the Automated Test Weight Lifter (ATWL) and belt travel limit switches. The SU will communicate to and get its power from the Central Processor Unit or an optional local 24-48 VDC Power Supply. Communication media is a 2-wire RS-422/485 multi-drop connection to the Central Processor Unit (CPU).

The SU is mounted in a NEMA 4 enclosure and is located at the scale, which is factory wired and tested by Thayer. Plug in boards are for LVDT or Strain Gage load sensors and quadrature pulser board for speed sensor. The only wiring at the scale required during installation, is power and communications to the CPU.

### •CENTRAL PROCESSOR UNIT (CPU)

- The CPU is the main processor module that is used to run the application software, control communications and performs the required I/O for an Integrator Application through a plug-in board.

#### *Features of the CPU:*

- Provides power to the Scale Unit and Operator Interface.
- Communications to the SU via a single RS-485, 2-wire point-to point interface.
- Communications to the OI(s) (maximum three) via a single RS-485, 2 wire multi-drop interface.
- Universal power supply (100 to 240 VAC @ 50 to 60Hz)
- Built-in Parallel port for printer.
- Various communications modules and software are available: Allen Bradley, Modbus Plus, and FieldBuses.
- The Operator Interface (OI) is provided to allow the user to monitor and control the feeder or scale.

### •OPERATOR INTERFACE (OI)

#### *Features of the OI:*

- 4 X 20 vacuum florescent display.
- Key presses are both tactile and audible.
- Single MENU key for:
  - Normal menu function.
  - Kernel menu functions.
  - Exception menu functions.
  - Diagnostic menu to view information about: Software .  
Revisions, Raw Data, Alarm & Calibration History.



Series 5200

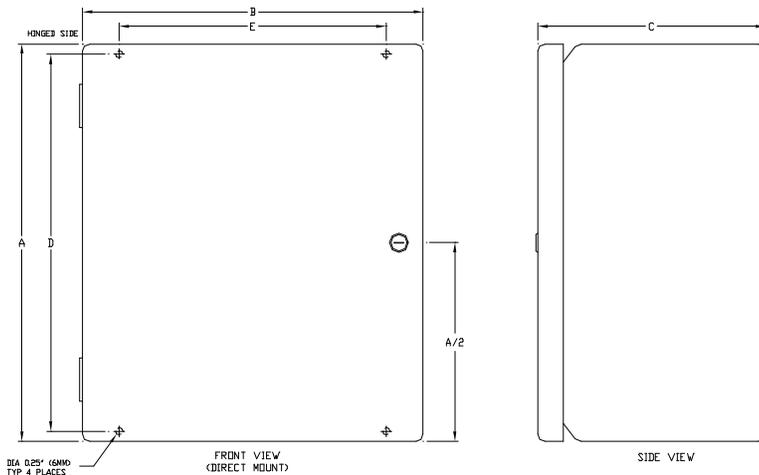
## Thayer Scale-Hyer Industries, Inc.

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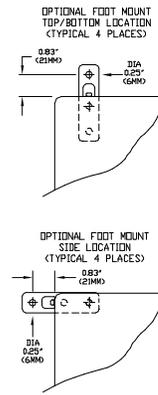
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# THAYER Series 5200 Instrument



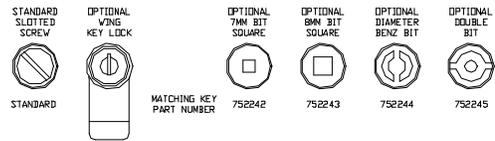
STANDARD ENCLOSURE DIMENSION TABLE

MODEL NUMBER	INSTRUMENT DESCRIPTION	ENCLOSURE SIZE A x B x C	ENCLOSURE MOUNTING D x E	PANEL SIZE H x W x D
SERIES-5200	INSTRUMENT	13.78 X 11.81 X 7.87 (350 X 300 X 200)	13.07 X 9.25 (332 X 235)	13.00 X 11.00 X 6.00 (330 X 279 X 152)
SU-5200	SCALE UNIT	11.81 X 9.84 X 5.91 (300 X 250 X 150)	11.10 X 7.28 (282 X 185)	10.50 X 9.00 X 3.00 (267 X 229 X 76)
OI-5200	OPERATOR INTERFACE			NOT APPLICABLE NO PANEL
SJB-5200	SCALE JUNCTION BOX	9.84 X 7.87 X 5.91 (250 X 200 X 150)	9.13 X 5.31 (232 X 185)	7.00 X 5.06 X 3.00 (178 X 127 X 76)



**ENCLOSURE LATCHING NOTES:**

THE FOLLOWING ARE PICTORIALS OF THE AVAILABLE LATCHING OPTIONS. OPENING TOOLS FOR ALL BIT TYPE LATCHES MUST BE ORDERED SEPARATELY.



**Operator Interface (OI)**

- 4 x 20 Vacuum Florescent Display.
- Key presses are both tactile audible.
- Numeric Keys for numeric entries.
- Single Menu Key for:
  - Normal MENU FUNCTIONS
  - Kernel Menu Functions.
  - Exception Menu Functions.
  - Diagnostic Menu to view information about:
    - Software revisions.
    - Raw Data.
    - Alarm & Calibration histories.
- Calibration key for normal calibration function with simple YES and NO response keys.
- Acknowledge and Silence keys for alarms and shutdown.
- Minimal customer wiring:
  - Single supply required from the CPU or local 24-48 VDC Supply.
  - RS-485 2-wire communication to the Central Processor Unit, max. 4,000 wire feet.

**CENTRAL PROCESSOR UNIT (CPU)**

- Communications:
  - Isolated RS-485, 4,000 wire feet max, to SU.
  - Isolated RS-485, 4,000 wire feet max, to operator interface.
- Power requirements:
  - 100 to 240 VAC @ 50-60 Hz.
- Communications:
  - FieldBus communication for DeviceNet or PROFIBUS.
  - Serial Communications for RS-232/485 Allen Bradley Ethernet/TCP or MODBUS/ TCP protocols.
- Parallel Port for printing totalizer & amount delivered since last print.

**-SCALE UNIT(SU)**

- Mechanical:**
- Enclosure: 300 mm High X 250 mm Wide X 150 mm Deep.
  - Standard: NEMA 4 (IP 65), Mild Steel, Enclosure Mounting
  - Optional: NEMA 4X (IP65), 304 Stainless Steel Mounting.
- Power Requirements: +24 to +48 VDC ±5%, 10 watts.
- Area Classification: Consult Factory.
- Speed and load sensor boards:
  - LVDT & Strain Gauge plug-in boards.
  - 24 bit A/D resolution with an effective resolution of 1 part in 4 million.
  - No hardware programming required.

**ENVIRONMENTAL**

- Operating Temperature: -10° to +60° C.
- Operating Humidity: 10 to 90%, non-condensing.
- Storage Temperature: -20 to +85°C.
- Storage Humidity: 5 to 95%, Non-condensing.
- Operating Vibration: 10= f < 57 0.375 mm amplitude continuous, 0.075 mm occasional
- 57= f < 150 0.5g constant acceleration continuous, 1.0g constant acceleration continuous,
- Shocks: 15g, 11 ms half-sine in three axis.
- Altitude: up to 2,000 M operational. 3,000 M storage (70 kPa).

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