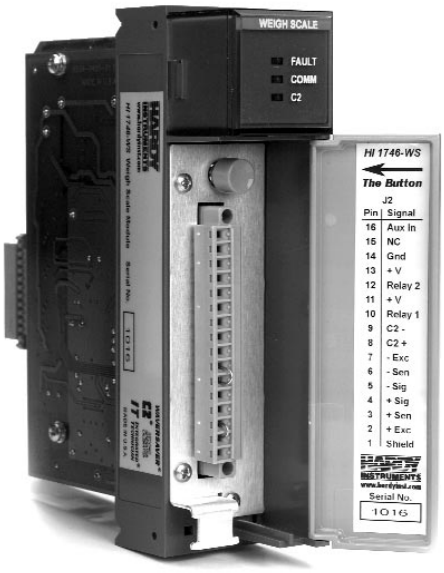
Apter Power

Weigh Scale Module



The HI 1746-WS Weigh Scale Module is specifically designed to work with an Allen-Bradley SLC 500 Series processor. This weighing instrument installs like an I/O module in either a local or remote rack.

The HI 1746-WS Weigh Scale Module reads net, gross and rate-of-change data from Hardy load points (or industry standard load cells) and sends this data to the SLC 500 processor. It also compares weight to set-point values (with pre-act values) and transfers the results to the SLC's input image table for quick response. Two relay output drive signals can be used for control directly from the module. Three LED status lights report functional characteristics.

FEATURES

The HI 1746-WS provides 5V excitation voltage for up to four 360-Ohm load sensors associated with a single vessel and will support up to eight load sensors with external power. Two setpoints can be established in the module with corresponding pre-act and deadband values, and two relay drive outputs are provided. The setpoint comparison status can be read in the input image table for quick response in addition to the relay drive signals. The module provides accurate weight readings with 20-bit A/D conversion, providing 985,000 counts of displayed resolution over the 0-15mV range. You can set the gross or net weight to zero at any point in the process. The module returns "weight-in-motion" and other status information.

THE BUTTON

With one push of a button the weigh scale module automatically calibrates the weighing system, making it ready for use. This saves system start-up time costs and aggravations. Of course, even if C2® certified load sensors are not used, the system can still be calibrated the traditional way using certified test weights.



C2® ELECTRONIC CALIBRATION

Calibration can be performed in traditional ways (hard cal), or by our exclusive C2®, Second Generation Calibration. C2® enables electronic calibration of the weigh system without test weights.

WAVERSAVER®

WAVERSAVER® eliminates the effects of unwanted plant vibration on or around a scale by permitting the weigh scale module to "see" through the unwanted vibration signals - as low as 0.25Hz - while yielding a stable actual weight reading.

INTEGRATED TECHNICIAN®

INTEGRATED TECHNICIAN® continuously monitors the weighing system's excitation current and tells you of drastic changes in it. Coupled with an IT® compatible junction box, the module provides diagnostic and troubleshooting tools that read weights and voltages to help isolate problems and assure the integrity of the weighing system. In short, IT® helps you solve problems should they occur.

Model HI 1746-WS

Applications

Process Weighing:

- Batching/Blending
- Filling/Dispensing
- Level by Weight
- Check Weighing

ROCKWELL AUTOMATION ENCOMPASS™ GLOBAL PARTNER

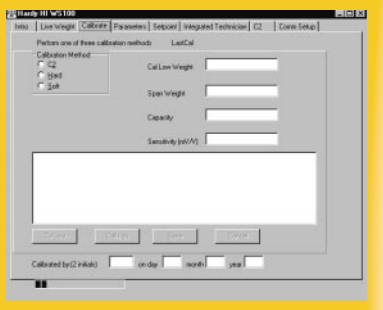
Features

- **WAVERSAVER®:** Ignores Vibration On and Around Scales
- **C2®, Second Generation Calibration:** Calibrates Electronically
- **THE BUTTON®:** One-Step Calibration With C2® Load Cells
- **INTEGRATED TECHNICIAN®:** Weighing System Monitoring and Troubleshooting

HARDY INSTRUMENTS

ACCESSORIES

- **HI WS100 Configuration Software**



The fastest and easiest way to configure the HI 1746-WS weigh scale module is with the HI WS100 Configuration Software. No need to write ladder logic, this optional software unleashes the full power of your HI 1746-WS as it provides configuration, troubleshooting, calibration, and real-time data displays. This PC-compatible software operates under Windows 95, 98, or NT.

COMPONENTS TO COMPLETE YOUR HARDY INSTRUMENTS SYSTEM

- **Hardy Platform Scales and Load Points**



Load Point
Model HI LPRA

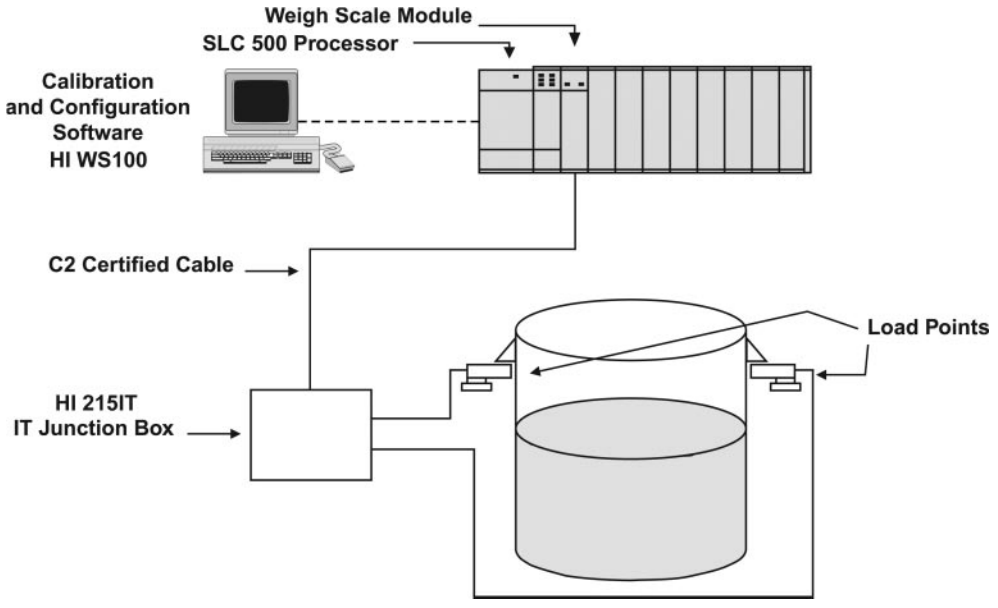


Platform
Scale
Model HIPS

- **Hardy C2® Certified Cable**
- **Hardy Junction Box with INTEGRATED TECHNICIAN® (HI 215IT Series)**

HARDY INSTRUMENTS

TYPICAL CONFIGURATION



SPECIFICATIONS

- **Power**

5 Vdc, from the SLC 500 rack, 1,000V dc minimum isolation from backplane logic circuitry

- **Backplane Current**

< 0.2 Amps with four 350 ohm or eight 1,000 ohm load sensors

- **Inputs**

– Signal, -0.5mV thru +16.5mV
– Sense, ±5V dc ±5%
– C2®, Second Generation Calibration data
– INTEGRATED TECHNICIAN (IT®); mV, mV/V, weight, resistance in ohms, excitation current

- **Outputs**

– Excitation: 5V dc ±5% 1.15 w max
– INTEGRATED TECHNICIAN (IT®) reference control

- **Common Mode**

Rejection, 110 dB at or below 60 Hz

- **Resolution**

20-bit A/D resolution (985,000 counts of displayed resolution over -0.5 to +16 mV range)

- **Setpoints Output**

Two independent TTL level drive signals

- **Location**

– Single slot (local or remote rack)
– SLC 502, 503, 504, 505

- **Frequency Rejection**

0.25 Hz and above in 5 selectable steps

- **Weight**

0.5kg (1.1 lb)

- **Weighing Modes**

Net, gross, rate-of-change (ROC)

- **Calibration**

– Electronic (C2®)
– Traditional (test weights)

- **Conversion Rate**

20 updates per second

- **Certifications**

UL, CUL, CE



HI 1746-WS in an Allen-Bradley SLC 500

Visit our website to learn more about the HI 1746-WS:

- **full product specifications**
- **ordering information**
- **application notes**
- **technical description**
- **downloadable operator's manual**

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