HARDY PROCESS SOLUTIONS
Measurement ▪ Automation ▪ Productivity

Models HI 1756-WS HI 1756-2WS
Weigh Scale Module



HI 1756-WS
Single Scale

HI 1756-2WS
Dual Scale

SILVER
Technology Partner
A ROCKWELL AUTOMATION PARTNER

Applications

PROCESS WEIGHING

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

Features

THE HARDY PROCESS TOOLBOX

The Hardy Process Toolbox is a set of productivity tools that support process weighing functions. Each tool saves time, increases accuracy, improves efficiency or reduces risk in process weighing applications.

PROCESS TOOLBOX

C2® and eCAL™ Electronic Calibration

Electronic calibration without test weights

WAVERSAVER®

Ignores vibration on and around scales

INTEGRATED TECHNICIAN®

Weighing system monitoring and troubleshooting

Add-On-Profile (AOP)

Rockwell Automation configuration files that provides access to device data in a user-friendly manner

HM Faceplates/AOIs

SE and ME software instruction tags for the controller and graphics for the HMI to reduce GUI development time

Hardy's HI 1756-WS is available as a single slot, single or dual weigh scale module that mounts in Rockwell® ControlLogix® Chassis. It reads weight and diagnostic data from strain gauge load sensors or load cells and communicates this data over the I/O chassis Backplane to the ControlLogix Processor. The HI 1756-WS module reduces installation cost and increases speed since no external Ethernet switches or routers are needed.

The HI 1756-WS conditions and digitizes the weight signal 110 times per second with over one million counts of resolution over a differential signal range of 0 to 15mV. It then transmits the selectable Gross, Net and/or Rate-of-Change data to the processor. This high resolution allows the module to tolerate large dead loads and over sizing of the load sensors while retaining a high level of usable resolution. The module supplies 5 volts of DC excitation to drive up to four 350 ohm load sensors or load cells associated with a single (-WS), or eight load cells associated with a dual (-2WS) scale. It will support additional load cells with an external power supply.

ADD-ON-PROFILES & FACEPLATE/AOI

Hardy's pre-programmed and pre-tested integration tools can reduce development time by 50 to 90%. Using a combination of Add-on-Profiles (AOPs) and SE and ME HMI Faceplates with Add-on-Instructions, creates a synergistic method for EASY and seamless integration for weighing with Rockwell Automation PLCs/PACs using RSLogix® and Studio 5000®.

The HI 1756-WS supports the use of the producer/consumer technology in the ControlLogix system to transmit data. This type of communications is an intelligent data exchange in the system where the module produces data without having to be polled. Two or three bi-color LEDs on the module's front panel report functional characteristics. Being a true ControlLogix module the HI 1756-WS supports removal and insertion under power.

C2® ELECTRONIC CALIBRATION

C2 enables electronic calibration of the weigh system without test weights. This saves system start-up costs and aggravation. Of course, even if C2 certified load sensors are not used, the system can still be calibrated the slow, traditional way using certified test weights.

WAVERSAVER®

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

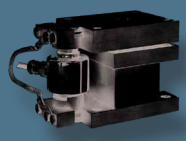
INTEGRATED TECHNICIAN®

INTEGRATED TECHNICIAN, used in conjunction with an IT Junction Box, provides built-in system diagnostics that enable you to troubleshoot and diagnose your weighing system. You can read individual load sensor voltages and weights, make comparisons, and isolate individual system components for quick and easy troubleshooting.

COMPONENTS TO COMPLETE YOUR HARDY SYSTEM

Hardy Bench Scales, Floor Scales and Load Points

Hardy carries a wide variety of strain gauge load points and scale bases to accommodate your application requirements.



ADVANTAGE Series Load Point with C2 Calibration

Hardy Bench Scales



Weighing Instruments Dedicated to Your Applications

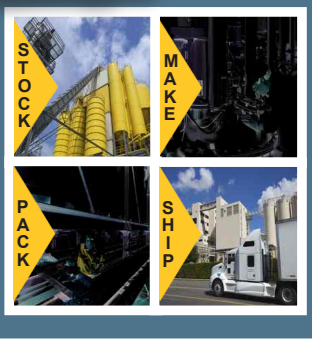
Controllers, Weigh Modules, Weight processors

Allen-Bradley® Compatible Plug-in Weigh Scale Modules



HI 3000 Series HI 4050 Controllers and HI 6000 Series





SPECIFICATIONS

Power
- Provided from the backplane of the rack: +5Vdc, +24Vdc

Backplane Current
- < 1 Amp @ 5Vdc 5W
- < 0.0125 Amp 0.3 @ 24Vdc with 4 350 ohm L.

Inputs
- Signal: -0.3mV through +15.3 mVdc
- Sense: +5Vdc
- C2® Electronic Calibration

Outputs
- Excitation 5Vdc to 8.75Vdc

Common Mode Rejection
- 100dB at or below 60 Hz (minimum)

Resolution
- Internal, 1:8,388,608

Conversion Rate
- 110 updates per second

Vibration Frequency Rejection
- 0.25 Hz and above in 5 selectable steps
- WAVERSAVER®

Weight
- 1.1 lb (0.5 kg)

Environmental Conditions
- Operating Temperature: 0 to 60°C (32 to 140°F)
- Storage Temperature: -40 to 85°C (-40 to 185°F)

Relative Humidity
- 5 to 95% (non-condensing)

Weighing Modes
- Net, Gross, Rate-of-Change

Calibration
- Electronic (C2)
- Traditional (test weights)

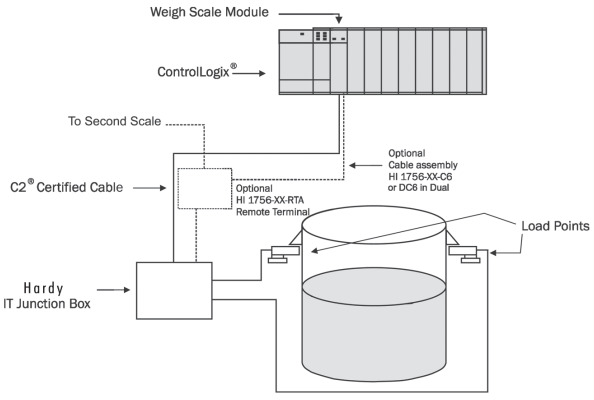
Averages
- 1-255 user selectable in single increments

Indicators
- "OK" Module Status, tri-color LED
- "Scale 1" Functional Data, tri-color LED
- "Scale 2" Functional Data, tri-color LED

Approvals
- UL, CUL, CE, RoHS 3 and REACH

Warranty
- Two-year warranty against defects in workmanship

TYPICAL CONFIGURATION



OPTIONS

• Remote Termination Assembly (-RTA)

The weigh scale module optional Remote Termination Assembly provides connection points between the cable assembly to the module and individual wires from the junction box, or load sensors, of up to two scales. The RTA is designed for standard DIN mounting rails or standoffs. With an HI 1756-RTA configuration, the weigh scale modules can be replaced without disturbing the wiring.

• Cable (-C6 -DC6)

Hardy provides an optional 6-foot (1.8m) cable assembly from the weigh scale module to the remote termination assembly for both single and dual configuration.

HI 1756-WS-RTA-C6	Single weigh scale module with remote termination assembly and cable
HI 1756-2WS-RTA-DC6	Dual weigh scale module with remote termination assembly and cable
HI 1756-WS	Single weigh scale module alone
HI 1756-2WS	Dual weigh scale module alone
HI 1756-XX-RTA	Remote termination panel alone; supports two single-scale and one dual-scale module
HI 1756-XX-C6	Single-scale 6-foot (1.8m) cable from RTA to a single module
HI 1756-XX-DC6	Dual-scale 6-foot (1.8m) cable from RTA to 2 single modules or one dual module

HARDY PROCESS SOLUTIONS
Measurement • Automation • Productivity

Hardy Process Solutions
10075 Mesa Rim Road
San Diego, CA 92121
tel. +1-858-278-2900
tel. 800-821-5831
www.hardysolutions.com
hardyinfo@hardysolutions.com

All information is subject to change without notice. Visit our website for latest specifications.
WAVERSAVER, C2, IT, ADVANTAGE and ANY-WEIGH are registered trademarks of Hardy Process Solutions.
Allen-Bradley, CompactLogix, MicroLogix and Encompass are trademarks of Rockwell Automation, Inc. All other trademarks or registered trademarks are the property of their respective owners.

CERTIFIED ISO 9001:2015 COMPANY

HI 1756-WS 0522
0400-0009-01H