HARDY
PROCESS SOLUTIONS
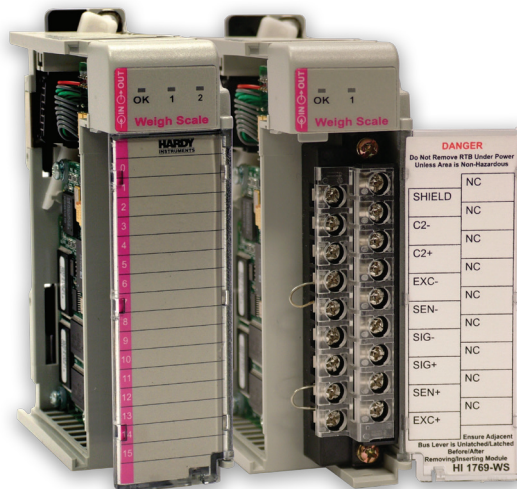Measurement ▪ Automation ▪ Productivity

Models HI 1769-WS HI 1769-2WS
Weigh Scale Module

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

SILVER
Technology Partner
A ROCKWELL AUTOMATION PARTNER

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.

PRODUCTIVITY
HARDY
PROCESS TOOLBOX

C2® and eCAL™ Electronic Calibration
C2®

Electronic calibration without test weights

WAVERSAVER®
Ignores vibration on and around scales

INTEGRATED TECHNICIAN®
Weighing system monitoring and troubleshooting

IT *INTEGRATED TECHNICIAN*®

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

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Hardy's compact weigh scale module is available in single or dual channel models for use in Rockwell® CompactLogix® PLC controllers (and certain MicroLogix™ 1500). The HI 1769-2WS and HI 1769-WS read and condition weight and diagnostic data from strain gauge load sensors or load cells and communicate this data over the I/O chassis backplane to the PLC processor. Both modules reduce installation costs, as they do not require an external Ethernet switch or router.

The HI 1769-WS conditions and digitizes the weight signal 110 times per second with over eight million counts of resolution over a differential signal range of 0 to 15mV. It then transmits the selectable Gross, Net, Rate-of-change and/or Diagnostics data to the processor. High resolution enables the module to tolerate large dead loads and oversizing 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 scale (-WS), or eight load cells associated with a dual (-2WS) scale.

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 PLCs/PACs using RSLogix® and Studio 5000®.

Two or three bi-color LEDs on the module's front panel report functional characteristics. A clear door and removable label enable positioning of your own unique information and viewing once the door is closed.

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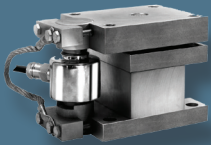
INTEGRATED TECHNICIAN®
INTEGRATED TECHNICIAN, used in conjunction with an IT Junction Box, provides built-in system diagnostics that enable you to troubleshoot and diagnose your weighing system. You can read individual load sensor voltages and weights, make comparisons, and isolate individual system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

STOCK   MAKE   PACK   SHIP

SPECIFICATIONS

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

Backplane Current
- < 0.5 Amps @ 5Vdc

Inputs
- Signal, -0.3mV through +15.3 mV
- Sense, +5Vdc
- C2® Electronic Calibration Diagnostics data

Outputs
- Excitation 5Vdc

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

Resolution
- Internal, 1:8,388,608

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

Weight
- 0.6 lb (0.27 kg)

Environmental Conditions
- Operating Temperature: 0 to 60°C(32 to 140°F)
- Storage Temperature: -40 to 65°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)

Conversion Rate
- 100 updates per second

Approvals
- UL/CUL, CE
- Class I, Div 2, Group A, B, C & D

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

Warranty
- Two-year warranty against defects in workmanship

All specifications subject to change without notice. Please contact the Hardy factory or visit our website for the latest specifications.
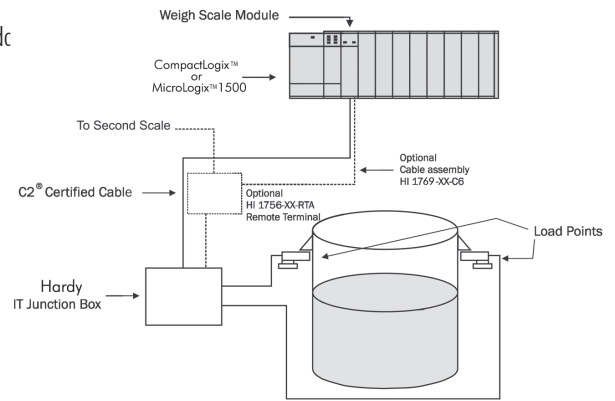
TYPICAL CONFIGURATION

Weigh Scale Module
CompactLogix™ or MicroLogix™1500
To Second Scale
C2® Certified Cable
Optional Cable assembly HI 1769-XX-C6
Optional HI 1756-XX-RTA Remote Terminal
Load Points
Hardy IT Junction Box

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 1769-RTA configuration, the weigh scale modules can be replaced without disturbing the wiring.

- **Cable (-C6 -DC6)**
Hardy provides an optional 6-foot cable assembly from the weigh scale module to the remote termination assembly for both single and dual configuration.

- **Options Ordering**
Options can be ordered at the same time the module is ordered by adding the dash designators to the end of the module number.

For example:

HI 1769-WS	Single weigh scale module alone
HI 1769-2WS	Dual weigh scale module alone
HI 1769-XX-RTA	Remote termination panel alone; supports two single-scale and one dual-scale module
HI 1769-XX-C6	Single-scale 6-foot (1.8m) cable from RTA to a single module
HI 1769-XX-DC6	Dual-scale 6-foot (1.8m) cable from RTA to 2 single modules or one dual module
HI 1769-WS-RTA-C6	Single weigh scale module with remote termination assembly and cable
HI 1769-2WS-RTA-DC6	Dual weigh scale module with remote termination assembly and cable

ISO 9001:2015 CERTIFIED COMPANY

HI 1769-0522