

Weigh Scale Module



HI 1769-2WS

Hardy Instruments' compact weigh scale module is available in single channel or dual channel models for use with the Allen-Bradley MicroLogix™ 1500 and CompactLogix® controllers. 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 MicroLogix™ 1500 or CompactLogix® processor. The HI 1769-2WS and HI 1769-WS modules reduce installation costs, as they need no external stand-alone scale instrument with a wired communications link to the PLC.

The HI 1769-WS conditions and digitizes the weight signal fifty 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 and/or Diagnostics data to the processor. This 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. It will support additional load cells with an external power supply.



HI 1769-WS



C2® ELECTRONIC CALIBRATION

Calibration can be performed by our exclusive C2® Second Generation 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®, 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.

ADDITIONAL FEATURES

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.

Model
HI 1769-WS
HI 1769-2WS

Applications

Process Weighing

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

Features

- **WAVERSAVER®**

Ignores Vibration On and Around Scales

- **C2®**
Second Generation Calibration



Calibrates Electronically

- **INTEGRATED TECHNICIAN®**

Systems Diagnostics and Troubleshooting

- **Modular/Rackless**

-True Front Insertion and Removal

-Speeds Initial System Assembly and Module Replacement

- **Barrier-Type Terminal Blocks**

Helps Prevent Accidental Shorting of Field Wiring

HARDY
INSTRUMENTS

COMPONENTS TO COMPLETE YOUR HARDY INSTRUMENTS SYSTEM

• Hardy Platform Scales and Load Points

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



ADVANTAGE Series Load Point with C2® Calibration

ANY-WEIGH® Scales



• Hardy C2® Certified Cable

This 8-conductor cable is designed for optimizing weight and load sensor characteristic signals from the junction box to the instrument.

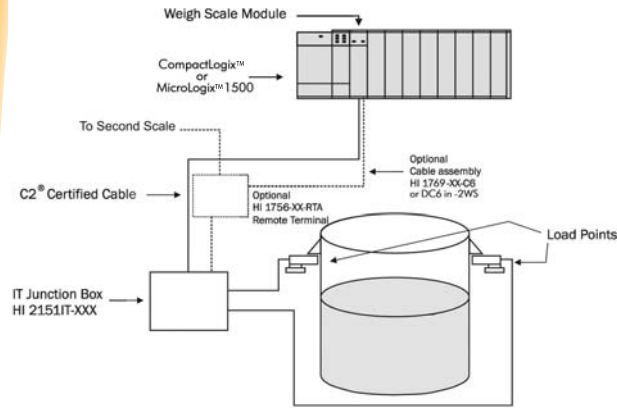
• Hardy Junction Box (HI 215IT Series) with INTEGRATED TECHNICIAN®

This Nema 4 rated waterproof enclosure sums from one to four load sensor signals. Its unique design allows for easy electronic isolation and troubleshooting of the weighing system.



HARDY INSTRUMENTS

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 Instruments 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-RTA-C6 (single weigh scale module with remote termination assembly and cable), or
- HI 1769-2WS-RTA-DC6 (dual weigh scale module alone), or
- HI1756-XX-RTA (remote termination panel alone; supports 2 single-scale modules)
- HI 1769-XX-C6 (single-scale 6-foot [1.8m] cable from RTA to a single module), or
- HI 1769-XX-DC6 (dual-scale 6-foot [1.8m] cable from RTA to 2 single modules.

To learn more about the HI 1769-WS, visit our web site for:

- full product specifications
 - ordering information
 - application notes
 - technical description
 - downloadable operator's manual
- www.hardyinst.com

or call us: 800-821-5831
858-278-2900

SPECIFICATIONS

• Power

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

• Backplane Current

< 0.5 Amps @ 5Vdc
< 0 Amps @ 24Vdc

• Inputs

Signal, -0.3mV through +15.3 mV
Sense, +5Vdc
C2® Second Generation 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

• 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

• Calibration

Electronic (C2®)
Traditional (test weights)

• Conversion Rate

50 updates per second

• Certifications (pending)

UL Listed
CUL Certified
Class 1, Div 2 Hazardous Environment
CE Compliant

• Indicators

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



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ISO 9001
CERTIFIED
Since 1993

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