

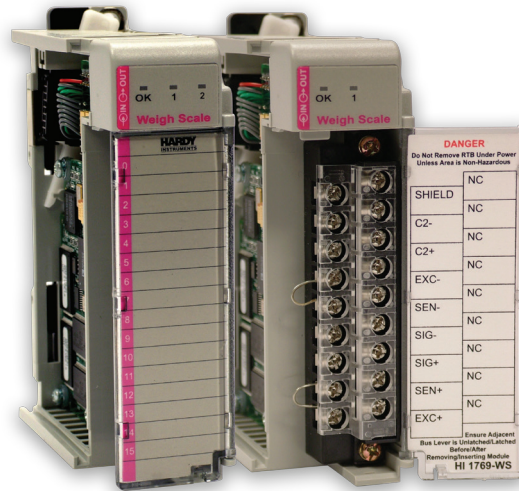
# Models HI 1769-WS HI 1769-2WS

## Weigh Scale Module

### 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 delivers value across process weighing functions. Each tool saves time, increases accuracy, improves efficiency or reduces risk in your process weighing applications.



#### Electronic calibration without test weights

**C2<sup>®</sup> eCAL**

#### Weighing system monitoring, diagnostics and troubleshooting

**IT<sup>®</sup> INTEGRATED TECHNICIAN<sup>®</sup>**

#### Vibration immunity from mechanical noise

**WAVERSAVER<sup>®</sup>**

#### Easy to configure and setup with a Rockwell Automation PLC

**Rockwell Add-on-Profile**

*Hardy's compact weigh scale module is available in single channel or dual channel models for use with the Allen-Bradley<sup>®</sup> MicroLogix<sup>™</sup> 1500 and CompactLogix<sup>®</sup> controllers. The 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 MicroLogix1500 or CompactLogix processor. Both modules reduce installation costs, as they do not require an external stand-alone scale instrument with a wired communications link to the PLC.*

The HI 1769-WS conditions and digitizes the weight signal 100 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.

Operating at 100 updates per second, fast speed and high internal resolution enables the module to tolerate large dead loads and oversizing of the load sensors, while retaining a high level of accuracy.

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.

### FEATURES

- A Rockwell Add-On-Profile (AOP) makes it easy to configure with RSLogix.
- Two or three bi-color LEDs on the module's front panel report functional characteristics.
- Plugs directly into the PLC backplane for ease of integration

#### C2<sup>®</sup> 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<sup>®</sup>

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<sup>®</sup>

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



ANY-WEIGH® Scales

### Weighing Instruments Dedicated to Your Applications

Controllers, Weigh Modules, Transmitters

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

### 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

### Update Rate

- 100 updates per second

### 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)

### Approvals

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

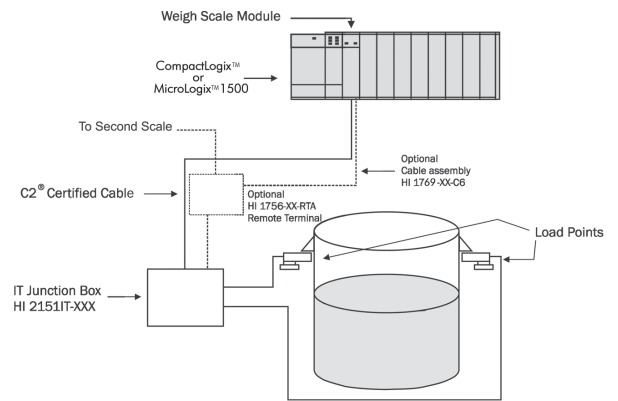
### Indicators

- "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

## 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 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.

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

**HARDY**  
**PROCESS SOLUTIONS**  
Measurement • Automation • Productivity

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**ISO 9001:2008**  
**CERTIFIED**  
Since 1993

To learn more about  
the HI 1769-WS / HI 1769-2WS,  
visit our web site for:

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

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