

# Weigh Scale Module



HI 1756-WS

HI 1756-2WS

Hardy Instruments' HI 1756-WS is available as a single slot, single or dual scale, weigh scale module that mounts in an Allen-Bradley 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 weigh scale module reduces installation costs, since no external stand-alone scale instrument with a wired communications link to the PLC is needed.

The HI 1756-WS conditions and digitizes the weight signal fifty times per second with over eight million counts of resolution over a differential signal range of -2.5 to 17.5mV. 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. 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.

## FEATURES

Three (or two) 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. Calibration can be performed in traditional ways (hard cal), or by our exclusive C2® calibration, which allows electronic calibration of your weighing system without using test weights.

## 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.

## INTEGRATED TECHNICIAN®

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

## Models

HI 1756-WS

HI 1756-2WS

## Applications

### Process Weighing:

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

## Features

### • WAVEESAVER®:

Ignores vibration on and around scales

### • C2® Electronic Calibration:

Calibrates scales without test weights

### • THE BUTTON®:

Calibrates your scales equipped with C2 load cells at the push of a button

### • INTEGRATED TECHNICIAN®:

Enables weighing system monitoring and troubleshooting

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## OPTIONS

### • Remote Termination Assembly (-RTA)

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

### • Cable (-C6, -DC6)

Hardy Instruments provides optional six-foot (1.8m) cable assemblies 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.

### Examples:

HI 1756-WS-RTA-C6: single weigh scale module with remote termination assembly and cable.

HI 1756-2WS-RTA-DC6: dual scale module with remote termination assembly and cable.

HI 1756-WS: Single Weigh Scale module alone

HI 1756-2WS: Dual Weigh Scale module alone

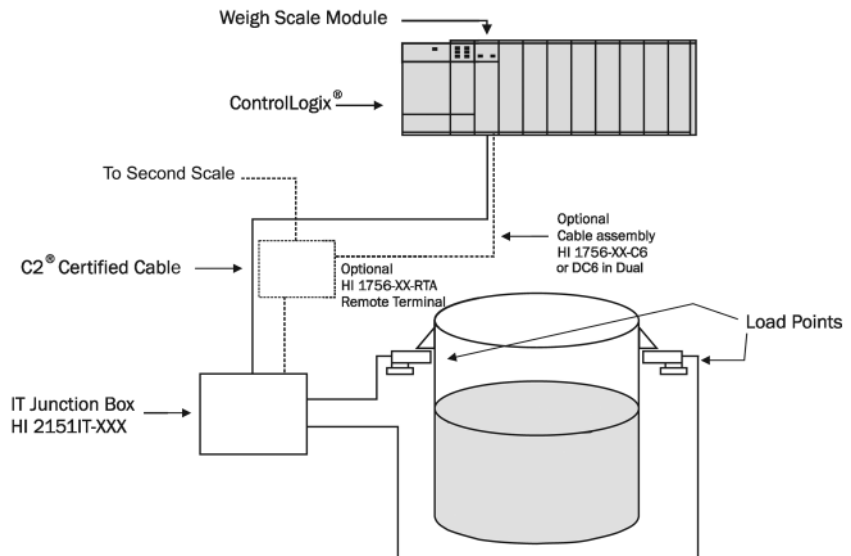
HI 1756-XX-RTA: remote termination panel alone, which handles both single and dual scales

HI 1756-XX-C6: single scale six-foot (1.8m) cable alone

HI 1756-XX-DC6: dual scale six-foot (1.8m) cable alone

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## TYPICAL CONFIGURATION



## SPECIFICATIONS

### • Power

Provided from the backplane of the rack

+5Vdc

+24Vdc

### • Backplane Current

< 1 Amp @ 5Vdc 5W

< 0.0125 Amp 0.3W @ 24Vdc with four 350 ohm L.C.

### • Inputs

Signal: -2.5mV thru +17.5mVdc

Sense: + 5Vdc

C2®, Second Generation 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

50 updates per second

### • Averages

1-255 user selectable in single increments

• **WAVESAVER®** 0.25 Hz and above in 5 selectable steps

## SPECIFICATIONS

### • I/O Chassis Location

Any single I/O chassis slot

### • 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 Techniques

Electronic (C2®)

Traditional (test weights)

### • Weight

1.1 lb (0.5kg)

### • Indicators

"OK", Module Status, tri-color LED

"Scale 1, Functional Data, tri-color LED

"Scale 2, Functional Data, tri-color LED

### • Certifications

CE



To learn more about  
the HI 1756-WS and  
the HI 1756-2WS,  
visit our web site to find:

- Full product specifications
- Technical description
- I/I diagrams
- Operator's manual

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**ISO 9001:2000**  
**CERTIFIED**

Since 1993

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