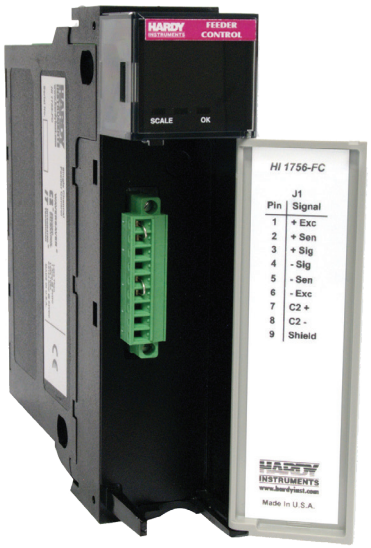
HARDY PROCESS SOLUTIONS
Measurement ▪ Automation ▪ Productivity

# Model HI 1756-FC
# Weigh Feeder Control Module




Rockwell Automation
Encompass™ Product Partner
Global

## Applications

### PROCESS WEIGHING

- *Feeder Rate Control*
- *Gravimetric Feeding*
- *Continuous and Batch Rate Control*

## 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® eCAL™ IT®

### - C2® and eCAL Electronic Calibration

*Electronic calibration without test weights*

### - WAVERSAVER®

*Ignores vibration on and around scales providing faster settling time*

### - INTEGRATED TECHNICIAN®

*Weighing system monitoring and trouble-shooting*

IT INTEGRATED TECHNICIAN®

### Benefits

- Direct Backplane to the Allen-Bradley® CompactLogix™ and MicroLogix™1500 PLC
- Reduce installation time and system costs with no need for external wiring
- Automatic Closed Loop Control
- Continuously adjusts feeder to deliver desired feed rate
- Add-On-Profile
- Automatic Refill starts and stops refilling without interrupting material feed

**Used in new applications, to retrofit volumetric feeders or replace outdated controllers in gravimetric systems, the single scale HI 1756-FC weigh feeder control module mounts directly into your Allen-Bradley® ControlLogix® chassis. By using the PLC rack I/O, it can control many feeding devices, such as auger, vibratory and belt-based feeders, and your proprietary designs.**

### EASY TO INTEGRATE INTO PLC

Hardy's ControlLogix Add-On Profile (AOP) makes it quick and easy to configure for your application through PLC software on a PC. As a backplane ControlLogix module, the HI 1756-FC has no need for external wiring and supports removal and insertion under power.

### MULTIPLE FEEDER CONTROL

The HI 1756-FC is a powerful building block when it comes to multiple feeder systems. It can be a slave to other process inputs through the PLC processor. Automatic closed loop control continuously adjusts the feeder to deliver the desired feed rate. Automatic refill starts and stops refilling without interrupting the feeding of material.

### WORRY-FREE OPERATION

The HI 1756-FC feeder control module will watch your process and notify you of problems. Prompts on your system's HMI display and PLC alarm relay outputs occur with tolerance errors and other failures. By entering specific control parameters, you decide at which levels to alarm or shut down the application. Two indicator lights show system status at all times.

### AUTOMATIC WEIGHT AND RATE CALIBRATION

A five-point auto rate calibration automatically allows the module to calibrate itself to the characteristics of the feeder and the material being fed. This allows for a higher feed accuracy over a broader range of feed rates.

### C2® ELECTRONIC CALIBRATION

C2 enables electronic calibration of the weigh system without test weights. This saves you 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 ignores vibration and mechanical noise in feeders and the plant environment by permitting the weigh module to "see" through the unwanted vibration signals - as low as 0.25Hz or as high as 7.5 Hz - while yielding a stable weight reading.

### INTEGRATED TECHNICIAN®

INTEGRATED TECHNICIAN, used in conjunction with a Hardy 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 meet 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 0.3W @ 24Vdc with four 350 ohm L.C.

**Totalizer**
- Keeps track of the amount of ingredient dispensed

**Time Units**
- Seconds, minutes and hours

**Units of Measure**
- lb, oz, ton, kg, g, mt

**Mode**
- Batch, continuous

**Inputs**
- Signal: -2.5mV through +17.56mVdc
- Sense: + 5Vdc
- C2, Electronic Calibration

**Outputs**
- Excitation 5Vdc to +8.75Vdc

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

**Resolution**
- Internal, 1:8,388,608

**Conversion Rate**
- 50 updates per second

**Averages**
- 1-255 user selectable in single increments

**Vibration Frequency Rejection**
- WAVERSAVER
- 0.25 Hz and above in 5 selectable steps, and OFF

**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

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

**Automatic Rate Calibration**
- Five-point

**Weight**
- 1.1 lb (0.5kg)

**Indicators**
- "OK", Module Status, LED
- "Scale 1", Functional Data, LED

**Approvals**
- UL and CE
- RoHS & REACH Compliant

**Warranty**
- Two-year warranty against defects in workmanship

## 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)**

Hardy provides an optional 6-foot cable assembly from the weigh scale module to the remote termination assembly.

- **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 1756-FC-RTA-C6 | Single-scale weigh feeder control module with remote termination assembly and cable |
| HI 1756-FC | Single-scale weigh feeder control module alone |
| HI 1756-XX-RTA | Remote termination panel alone |
| HI 1756-XX-C6 | Single-scale 6-foot (1.8m) cable alone |

***To learn more about the HI 1756-FC visit our web site for:***

- ***Full product specifications***
- ***Ordering information***
- ***Application notes***
- ***Technical description***
- ***User's Guide***

**www.hardysolutions.com**

***or call us:* 800-821-5831**
**+1-858-278-2900**

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**Hardy Process Solutions**
9440 Carroll Park Dr.
San Diego, CA 92121
tel. +1-858-278-2900
tel. 800-821-5831
fax +1-858-278-6700
www.hardysolutions.com
hardyinfo@hardysolutions.com

CERTIFIED ISO 9001:2015 COMPANY



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