

HI 6800 Series Weight Processors & Controllers



Weight and Application Controllers

The **HI 6800 Series** instruments are weight and application controllers ideal for a wide variety of weight-based applications. The series combines direct process control with fast, accurate and stable weight data essential to profitable manufacturing operations.

Designed to address the needs of both highly integrated and stand-alone industrial weighing applications, the **HI 6800 Series** serves as an all-in-one weight controller for the following:

- Weight Measurement and Monitoring
- Level Measurement
- Piece Count
- Rate of Change Measurement
- Feed Weight Control (Set-point, Filling, Dispensing, Batching)
- Feed Rate Control (closed loop rate control)
- Product Inspection (Static and Dynamic Checkweighing)

Versatility is delivered thru a variety of optional configurations that include Digital and Analog I/O, DC relays and up to 4 channels of scale inputs per instrument. Pre-programmed application packs simplify set-up and commissioning or customize controller programming to suit the specifics of critical manufacturing operations. Available in three form factors: 4.3" touch-display with tactile buttons, a 7" touch-screen display featuring full-color GUI or a DIN rail mount (no display); the **HI 6800 Series** are ideal for any industrial weighing requirements.

CONNECTED!

Featuring dual-port connectivity and an embedded network switch, the **HI 6800 Series** makes serving up data to both control networks and information networks simple and safe. Choose from the most popular Industrial Fieldbus protocols for control networks: EtherNet/IP, PROFINET, Modbus TCP-IP; while reaping the benefits of IIoT device-level connectivity through a built-in Webserver.

Make use of a suite of control network integration tools such as Rockwell EDS_AOPs, AOIs, HMI Faceplates; as well as GSDML and PROFINET GDS files.

SUPERIOR PERFORMANCE

With a dual-core processor and featuring Hardy's exclusive WAVERSAVER+[®], even in noisy environments with excessive amounts of mechanical vibration, the **HI 6800 Series** provides a steady **1:30:000** resolution in oz, lb, ton, g, and kg at 250 updates per second on the primary channel and 100 updates per second on secondary channels.

SIMPLE SET-UP, CALIBRATION, MAINTENCE & TROUBLESHOOTING

Use Hardy's exclusive C2[®] Second Generation Calibration for automatic system calibration to save hours in commissioning and routine maintenance. By reading the calibration certificate electronically embedded in the C2[®] load cell sensor, the scale system can be calibrated with the touch of a button; avoiding time consuming and expensive traditional calibration procedures.

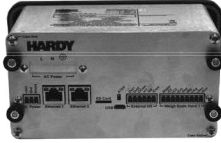
QUICK MAINTENANCE AND TROUBLESHOOTING

Comprehensive diagnostics are displayed for power, network, and weighing function status allowing users to quickly identify faults and solve issues by following on-board help instructions.

With INTEGRATED TECHNICIAN[®], maintain and troubleshoot the weighing system at the sensor level by diagnosing individual scale components (load cells) without the need to disconnect wiring.

All information and drawings on these pages are subject to change without notice. Consult website for latest specifications.

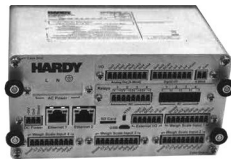
HI 6800



The Model HI 6800 is designed for weight-based control of applications such as level monitoring, set-point control, static checkweighing, and piece/part counting. The model features an optional HI6130 (4.3-inch color TFT touchscreen) for operation and setup.

The Model HI 6800 comes with a dual-core processor, two Ethernet ports, a microSD card slot, USB-C port, 2 digital outputs, 2 digital inputs, and a single analog scale input. The dual 10/100 Mbps Ethernet ports with integrated network switch are ideal for simultaneously linking the instrument to both control and information networks for monitoring performance, diagnostics, and process statistics. Data from the instrument can be easily served up to the Intranet, Extranet, VPN, and the Internet by utilizing the EtherNet/IP® or Modbus TCP/IP communication protocols.

HI 6850



The Model HI 6850 is designed to accommodate weight-based applications including:

- Multi-Channel Weight Measurement and Control
- Dynamic Checkweighing
- Feed Weight Control (loss-in-weight / gain-in-weight)
- Feed Rate Control (loss-of-weight)
- Dispensing and Filling
- Batch Control

In addition to features found on the Model HI 6800, the modular design of the Model HI 6850 allows configuration to accommodate the above applications with the following option cards:

- General Purpose Input/Out (GPIO) option card (up to 2)
- Relay option card with 8 DC Normally Open relays
- High Speed Scale input card; 24-bit ADC with C2 (second-generation calibration) compatibility at 250 updates per second
- Three additional weight channels operating at 100 updates per second

The Model HI 6850 can be configured with either a HI6130 4.3-inch (67 x 105mm) color TFT touchscreen screen or a HI6150 7-inch (100 x 165mm) color TFT touchscreen for operation, setup, and user-friendly graphics. The larger front panel display is ideal for dynamic checkweighing, batch control, rate control, and belt weighing applications.

Optional – GPIO card (up to 2 per instrument)

- 4 analog outputs (4-20mA)
- 4 inputs (sinking 0-24vdc)
- 2 outputs (sourcing 0-32vdc@300mA)
- 1 analog input (4-20mA, 5-32vdc)
- GPRC card (up to 2 per instrument)
 - 8 DC relays (NO, 5-30 VDC, 1A)
- PROFINET® Communications Card

HI 6800 Series Specifications

Resolution: Stable processed weight 1:30,000
Internal resolution: 24-bit

Update Rate: Processed weight: 250 Hz. Primary Channel
HI6850 Only – Three 100 Hz secondary weight channels
Unprocessed weight (A/D conversion rate): up to 4,800 Hz.

Modes: Gross, Net, Count (standard)
Rate of Change (optional)

Units of Measure: Ounce, Pound, Ton, Gram, Kg, Metric Ton

Weight Processing: WAVERSAVER® : 0.25 Hz to 7.5 Hz
WAVERSAVER+ : ADAPTABLE
Averaging: 1 to 255 User-selectable in single increments

Calibration Methods: C2® calibration without test weights
Traditional calibration with test weights

Sensor(s): Up to 8 load cells at 350 Ω per channel
Sensor Excitation, 5Vdc
Sense, +5 Vdc
Signal, -0.3 mV to +15 mV
C2® Electronic Calibration

Power: 10 watts maximum
AC - 90-240 VAC
DC - 12-27 VDC (do not exceed 30 VDC)

Operating temperature: -10° to 40°C (14°F to 104°F)

Storage temperature: -30° to 70°C (-22° to 158°F)

Humidity: - 0-90% non-condensing

Network Options: Ethernet/IP, Modbus TCP/IP (standard)
PROFINET (optional, 6850 model only)

Input/Output: Standard – 2 digital Inputs / 2 digital outputs (mappable)
2 inputs (sinking 0-24vdc)
2 outputs (sourcing 0-32vdc@300mA)

Dimensions: Instruments

- HI6800: 6.15 in L x 3.63 in W x 3.36 H (156.2 mm x 92.1 mm x 82.8 mm)
- HI6850: 6.15 in L x 4.08 in W x 3.36 H (156.2 mm x 103.5 mm x 82.8 mm)
 - DIN Rail Mounts: Add 0.67 in or 16.9 mm to Width
 - Connectors: Add 0.44 in or 11.2 mm to Width

Touch Screen Displays

- HI6130: 7.26 in L x 0.53 in W x 3.26 in H (184.4 mm x 13.3 mm x 82.8 mm)
- HI6150 7.30 in L x 0.70 in W x 4.60 in H (185.4 mm x 17.8 mm x 116.8 mm)

Environmental: Instrument: IP-54
Display: IP65 (Type 4/4X).

Approvals: Hazardous: Class I, II, III/Div2
Safety: UL & CUL, CE
EtherNet/IP®: ODVA Certification Level III
PROFINET and Profibus: us.profinet.com

Compliance: RoHS3 and Reach

Warranty: Two-year warranty against defects in workmanship

HI 6800 Series Models

HI6800 – Base Unit

- PM1 – 4.3” touch screen display with 3 tactical buttons
- PM2 – 7” touch screen display
- DR – DIN rail mount (no display)

HI 6850 Base Unit - Configurable (add I/O, scale input, communications)

- PM1 – 4.3” touch screen display with 3 tactile buttons
- PM2 – 7” touch screen display
- DR – DIN rail mount (no display)

HI6850 IO Options: GPIO (general purpose I/O, 6850 model only)
GPRC (general purpose relay, 6850 model only)
NSA – No additional cards
WS# - Up to 3 Additional Scale cards (6850 only)

Applications: AWC Application Weight Controller
ROCA Rate of Change Application
SPWC Set-Point Weight Controller
DCWC Dynamic Checkweight Controller
CMFC Continuous Material Feed Controller
DFWC Dosing & Filling Weight Controller
SBWC Sequential Batch Controller

Weight Measurement & Monitoring:

- Vessel and Tank Weighing
- Accurate, Stable, Fast
- Static Checkweighing



Material Feed Control by Weight:

- Batching & Blending
- Filling & Dispensing
- Gain-in-Weight (GIW)
- Loss-in-Weight (LIW)



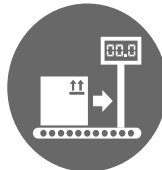
Material Feed Control by Rate:

- Loss-of-Weight (LOW)
- Rate Control
- Filling or Dispensing
- Belt Weighing



Product Inspection by Weight:

- Dynamic Checkweighing
- Static Checkweighing
- Filling or Dispensing



Rate of Change by Weight:

- Controls the rate at which a feed is executed
- Batching & Blending
- Filling or Dispensing
- Multi-Draft



Piece Count:

- Count exact number of pieces by weight
- Portion Control
- Dispense X number of pieces in a container
- Count the number of pieces in a carton



Level Measurement & Monitoring:

- Set-Point Control
- High/Low Level Control
- Automatic Refills



HI6130 Basic Display



HI6150 Advanced Display



Features:

- 4.3" Color TFT (screen size: 67 x 105mm) with 3 Tactile Button Cluster for Operation
- Touchscreen Operation and Set-Up

Basic Display to be used for:

- Weight Indication
- Set-Point Control (LIW/GIW)
- Static Checkweighing

Features:

- 7" Color TFT (screen size: 100 x 165mm)
- Touchscreen Operation and Set-up
- Application Graphics

Advanced Display to be used for:

- Dynamic Checkweighing
- Batch Control
- Rate Control

Proven Solutions

For more than 100 years, Hardy Process Solutions, headquartered in San Diego, California, has been providing innovative process weighing and packaging solutions for manufacturers. With that, we have saved our customers thousands of production hours and millions of dollars. Our goal is to provide accurate, stable and fast weighing equipment. At Hardy, we pride ourselves on the ability to continuously provide superior product quality and excellent customer support, which enables our customers to achieve their manufacturing goals.

Hardy delivers high performance weighing solutions with the **LOWEST TOTAL COST** to own. We include Industry Leading Technology in all of our scales and instruments to make it **EASY** for you to install, integrate, and maintain. Powerful solutions that are easy to use is why our customers realize increased production efficiency.



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