

Static & Dynamic Check Weighing

Applications

PROCESS WEIGHING

- Static Check Weighing
- Dynamic Check Weighing



Features

THE HARDY PROCESS TOOLBOX

The Hardy Process Toolbox is a set of productivity tools that provide value for process weighing functions. Each tool saves time, increases accuracy, improves efficiency or reduces risk in process weighing applications.



Electronic calibration without test weights

C2® eCAL

Built-in Diagnostics and Troubleshooting

IT INTEGRATED TECHNICIAN®

Vibration immunity

WAVERSAVER®

Easy to configure and setup with a Rockwell Automation PLC

Rockwell EDS-Add-On-Profile

To learn more about the HI 4050CW visit our website:

- Full product specifications
- Ordering information
- Application notes & User's Guide
- Technical drawings

www.hardysolutions.com

Give your Check Weighing an EDGE

How important is using a Hardy Check Weighing system in your process?

We've done the math for you:

- Your system produces 120 packs per minute with an uptime of 85% a year.
- Overfill is 2 grams per pack.
- Product cost of \$0.001 per gram.
- Overfill cost per year = \$107,222
- Reduction of just 1 gram overfill per pack = **\$53,611 savings per year.**

The high speed HI4050CW check weighing instrument can process up to 250 weight measurements per second at high resolution (1:30:000). The 4050CW consists of a special version of the HI4050 weight controller with built-in check weighing firmware connected to up to four analog load cells and a Hardy junction box. The HI4050CW is perfect for building new systems for either static or dynamic check weighing or retrofitting the weight electronics of older, less reliable systems.

Hardy WAVERSAVER® and WAVERSAVER+ technology suppresses vibration and mechanical noise, dramatically reducing scale settling time and increasing the speed of stable gross and net weight readings. WAVERSAVER+ provides active filtering making weight readings fast, stable and accurate.

OPEN PLATFORM: A HI4050CW system is made of Commercially Available Off the Shelf (COTS) parts that are easy to understand, maintain and troubleshoot. Connect to your plant-wide system using standard protocols, including EIP

(EtherNet/IP), ControlNet, Profibus-DP, Modbus TCP/IP, or Analog.

It features a lower Total Cost of Ownership because it's simple to use, calibrate, integrate, and maintain. A Rockwell EDS Add-On-Profile (EDS-AOP) makes it easy to configure with RSLogix.

AUTOMATIC EDGE DETECTION: Smart features of the HI 4050CW include EDGE detection, an algorithm that optimizes when weight readings are captured:

- Automatic EDGE detection starts weight processing the instant a load settles onto the scale by monitoring changes in the signal waveform from connected load point.
- Also works in conjunction with up to two additional external sensors such as photo-eyes to optimize process timing of weight readings.

ANALOG: Connect the HI 4050CW to up to four ADVANTAGE® load points and a Hardy IT junction box for high speed, high resolution weight readings compatible with C2 calibration.

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



Hardy Bench
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

Controller Resolution

- Stable processed weight 1:30:000
- Maximum Displayed Resolution: 1:999,999
- Internal Resolution 1:8,388,608

Update Rate

- Processed weight, display, communications: 110 or 250 updates per sec.
- Unprocessed weight (A/D conversion: 4800 times per sec.)

Weight Ranges

- Analog: Depends on load point selection

Averaging

- Sliding up to 250 readings in single unit increments

Standard Interfaces

- Ethernet: 10/100base T; embedded web server
- Serial RS 232: simple to printer or to remote scoreboard

Stable Weight Reading

- WAVESSAVER® - user selectable .25 Hz to 7.5 Hz
- WAVESSAVER+ patent pending adaptive filtering improves by 3X the stability of static weight readings

Calibration Techniques

- C2 weightless calibration
- Traditional 2-point calibration with test weights

Display

- 64x128 LCD display with backlight

Units of Measure

- Lb, lb/oz, oz, ton, kg, g, t

Outputs:

- Four optional 5 to 24VDC (-DIO)

Mode

- Gross, Net

Load Point Excitation

- 5 VDC

Digital Inputs

- Three mappable, non-isolated
- Three optional mappable, isolated (-DIO)

Power Requirement

- AC: 110-240VAC, 47-63Hz
- DC: 24VDC
- 10 watts max

Operating Temperature

- HI4050-AC: -10° to +40°C (14° to 104°F)
- HI4050-DC: -10° to +60°C (14° to 140°F)

Storage Temperature

- PM: -30° to +70°C (-22° to 158°F)
- DR: -40° to +85°C (-40° to 185°F) Controller Enclosure Panel/remote mount, DIN mount, or Stainless steel wall mount

Controller Dimensions

- Front panel: 4"h x 7"w x .725"d (101.6h x 177.8w x 18.4d mm)
- Housing: 2.98"h x 5.65"w x 3"d (75.7h x 143.5w x 76.2d mm)
- Wall mount: 11.5"h x 8.28"w x 5.54"d (292h x 210.3w x 140.6d mm)

Approvals

- UL/CUL, CE certification (ordinary location on instrument only)

Compliance

- RoHS3 and REACH

Warranty

- Two-year warranty against defects in workmanship

THE HI 4050CW

Hardy 4050CW Controller

Check Weighing Software



ADVANTAGE® Analog

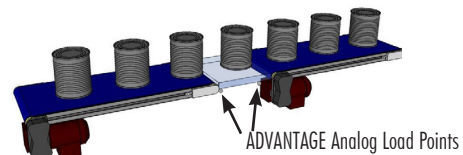
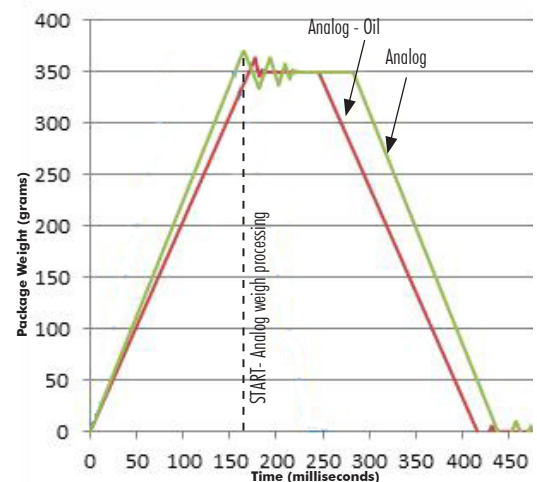
Load Points

- Connect up to 4 load points using a Hardy IT junction box
- C2 certification & weightless calibration



Hardy Junction Box

- Integrated Technician Diagnostics for the entire system
- C2 certification & weightless calibration



HARDY
PROCESS SOLUTIONS
Measurement • Automation • Productivity

Hardy Process Solutions

10075 Mesa Rim Rd.
San Diego, CA 92121
tel. +1-858-278-2900
tel. 800-821-5831
www.hardysolutions.com
hardyinfo@hardysolutions.com



All information within is subject to change without notice. Visit our website for latest specifications. WAVESSAVER, C2, IT, ADVANTAGE and ANYWEIGH are registered trademarks of Hardy Process Solutions, Inc.. Allen-Bradley and Encompass are trademarks of Rockwell Automation, Inc. All other trademarks or registered trademarks are the property of their respective owners.

HI 4050CW
08/2023
0400-0019-01F