HI 6500 series Quick Start Guide

The HI 6500 series are single-channel instruments designed to process signals from analog load cells and output stable gross or net weight readings to a display, a PLC or PC.

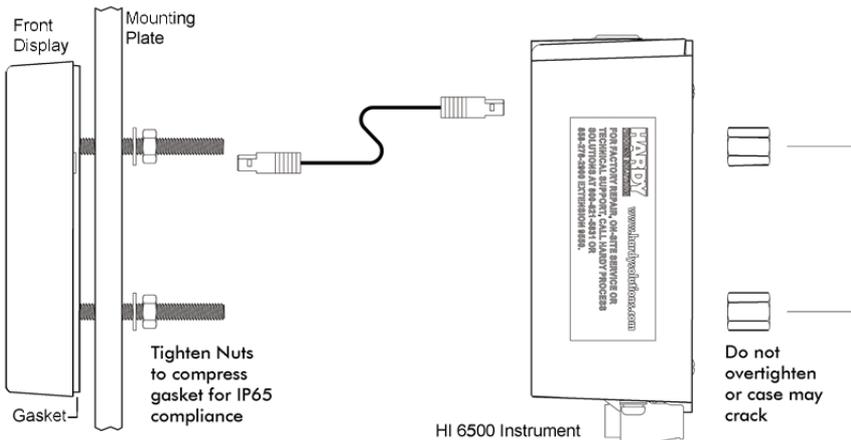Connect, view and control one to four instruments on one display panel

This Quick Start Guide is intended for users that are already familiar with setting up Hardy Process Solutions weighing instruments.

A complete User's Guide can be found under Documents and Programs online: www.hardysolutions.com Click the product menu> Weighing Instruments > Weight Processors > HI 6500. Then click on the Docs & Programs tab to download the User's Guide.

Panel Installation:

1. Use template provided to drill the hole pattern into panel.
2. Install the display onto the panel using 4mm nuts and washers, tighten until gasket is compressed and display bezel comes in contact with the panel. Do not overtighten or the instrument's case may crack.
3. Connect the display cable to display and then to the instrument.
4. Slide the instrument onto threaded rods and secure in place with 8mm x 4mm retaining nuts using an 8mm nut wrench (do not over tighten instrument retaining nuts, overtighting could cause the instrument to crack).

Front Display

Mounting Plate

Tighten Nuts to compress gasket for IP65 compliance

Gasket

HI 6500 Instrument

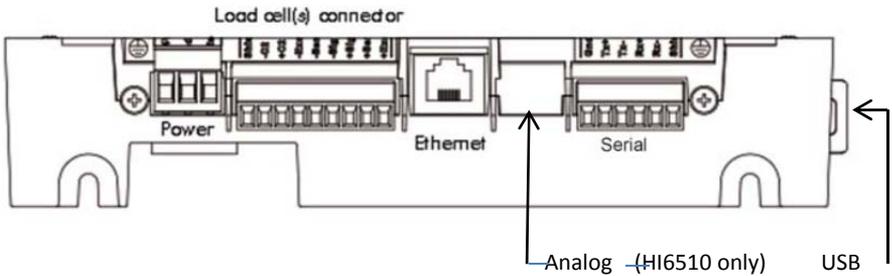Do not overtighten or case may crack

DIN Rail Installation:

1. Use template provided to drill the hole pattern into panel
2. Install the display panel using 4mm nuts and washers, tighten until gasket is compressed (4mm screws tightened with an 8 mm nut wrench) with a length length appropriate to panel thickness can be used in place of the 4mm rods sent with the unit).
3. Place the instrument onto the DIN rail, slide DIN rail clip up until it snaps into place to secure.
4. Connect the display cable to the display panel and instrument (legthen the cable as needed by using a thin screwdriver to release and replace wires between the two connectors).

DIN Rail Bracket

DIN Rail Clip

35 25 1

7.5
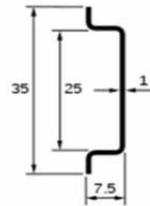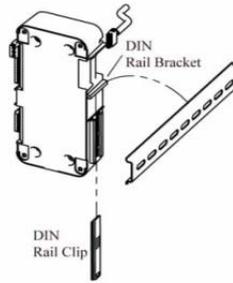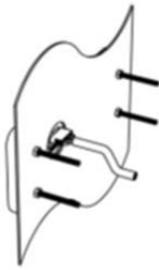
DIN Rail Supported
(All Dimensions in mm)

Wiring:

1. Remove connectors from the instrument and wire as per markings found on the connector labels.
2. When using 4 wire sensors place a jumper between Excitation(+) and Sense(+) and a jumper between Excitation(-) and Sense(-).
3. Grounding of the instrument is recommended by connecting to either of the 2 screws located left of power connector or right of the RS-485 connector.

Load cell(s) connector

Power   Ethernet   Serial

Analog   (HI6510 only)   USB

4. Connect to 12-27 VDC power source

DC Power

V+   Gnd   Shield

FACTORY INSTALLED JUMPER

Display Menu Tree

Calibration
- C2 eCAL
- Hard Cal
- Cal Date

Communication
- EtherNet IP
- Ethernet TCP/IP
- Ethernet UDP
- Modbus-RTU
- Modbus-TCP
- Printer
- USB
- 4-20mA [*]

Diagnostics
- Stability
- Weight & Voltage

Display
- Backlight
- Power Saving
- Set Background
- Set Foreground
- Split Screen

Filter
- NumAverages
- Waversaver

[*] *Available only on the HI6510*

Information
- READ ONLY
  Product Serial#
  Software Revision

Language
- Chinese
- English

Operations
- Tare Operations
- Zero Operations
- Piece Count
- Auto Mode

Security
- Calibration Lock
- Configuration Lock
- Display Lock
- Key Pad Lock
- Read Only Lock

Setup
- Capacity
- Decimal Point
- Grads
- Instrument ID
- Motion Tolerance
- Operator ID
- Unit
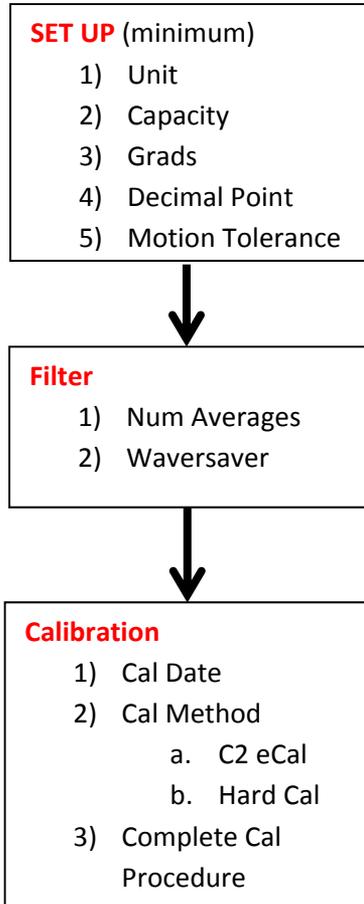
Initial Set-Up:

Set Up may be performed through the front panel display or through the integrated Webserver. If setting up using the Webserver, first connect an Ethernet cable between the instrument and and then follow the **Communications>Ethernet TCP/IP** instructions below.

Suggested flow when setting up the instrument for the first time:

SET UP (minimum)
1) Unit
2) Capacity
3) Grads
4) Decimal Point
5) Motion Tolerance

↓

Filter
1) Num Averages
2) Waversaver

↓

Calibration
1) Cal Date
2) Cal Method
    a. C2 eCal
    b. Hard Cal
3) Complete Cal
   Procedure

If setting up an instrument without a display for the first time, skip to the communication section below.

Calibration:

Section used to calibrate the instrument to the sensor(s) used.

C2 – Electronic Calibration
1) Remove all weight from the scale.
2) Press Do C2 Cal.
3) Place a verification weight on the scale to ensure calibration is successful.

Hard Cal-
1) Input the **Span Weight.** The span weight should be about 80% of the scale capacity.
2) Input **Cal Low Weight**. With nothing on the scale, the Cal Low Weight is 0, with 5 lbs on the scale, the Cal Low Weight would be 5.
3) Press **Do Cal Low** to set the low point on the calibration curve.
4) Place the Span Weight onto the scale.
5) Press **Do Cal Hi.**

Refer to User's Guide if adjustments to other calibration-related parameters are required.

Communication:

Section used for setting up communications to the instrument.

Ethernet TCP/IP
1) Connect an Ethernet cable between the instrument's RJ45 connector and a PC, then power up the instrument. A cross-over cable is not required, but can be used.
2) The instrument will auto-negotiate settings suitable for a variety of operating systems and network configurations. Wait approximately 15 seconds and check to see if the green light of the Ethernet port is on and blinking – if so, skip to step 8 – you are connected.
3) If the green light on the Ethernet port does not light up, check that the unit's **Enable DHCP** is turned off and follow steps 4 through 9.
4) Using the unit's Fixed IP address (the default is 192.168.000.100), the PC must now be assigned a *unique* IP address (for example, 192.168.000.101)

There are two simple rules for the IP Address:

- It must have the same network identifier as the computer
- It must have a **different node identifier** than the computer.

192.168.0.100

Network Identifier   Node Identifier
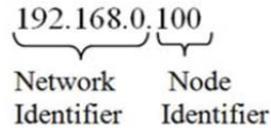
5) On a PC running windows, open Internet Properties (TCP/IP).
6) Click in the 'Use the Following IP Address' checkbox; then enter the following into the TCP/IP Properties dialog.

      IP Address = 192.168.0.101
      Subnet Mask = 255.255.255.000

7) Select OK on the TCP/IP Properties dialog box. The computer is now fully configured. To return the computer to the original network settings, return to the 'Internet Properties (TCP/IP) dialog, select 'Obtain an IP address automatically,' and click OK.

8) The HI 6500 series instrument is now configured to communicate with the PC. Enter the HI 6500 series instrument IP address into the Windows PC Web browser to access the embedded web browser. For example: http://192.168.000.100

See the HI 6500 User's Guide for setting up EtherNet/IP, Ethernet-UDP and Modbus-RTU communication protocols. Set up of the Analog communications (HI6510 only), Printer, and USB are also located in this section.

Diagnostics: Section used for diagnostics of system. Refer to User's Guide if troubleshooting and use of diagnostics menu is required.

Display: Section used for adjusting various aspects of the display, including contrast, brightness, and split screen feature.

Filter: Section used to stabilize weigh readings in an unstable environment.

WAVERSAVER: *Press the enter button and use the arrow keys to select the appropriate setting. WAVERSAVER eliminates unwanted noise and is typically set at 1.0 Hz.*

NumAverages: *Set the number of readings to average to provide a stable weight.*

Information: Section used for checking instrument serial number, and firmware revision.

Language: Section used for changing language.

Operations: Section used for setting up parameters related to Tare, Count and Zero of scale.

Security: It is highly recommended to see the User's Guide for setting up security functions on the instrument. Improper set up of the security settings could cause a user to be locked out from using the device.

Setup: Section used for setting up operation parameters of the instrument.

Capacity: Sets the normal operating capacity of scale.

Decimal Point: Sets to decimal point for the weight resolution.

Grads: Sets the graduation size of the display increments.

Instrument ID: Allows the instrument to be named.

Motion Tol: Choose the level of acceptable scale instability.

Operator ID: Optional area for entering an operator ID.

Unit: Choose the units such as lbs. or kg that is desired to show on the scale.

Hardy Process Solutions sincerely appreciates your business. We encourage input about the performance and operation of our products from our customers. Should you not understand any information in this guide or experience any problems with this product, please contact our Technical Support Dept. at:

Phone: (858) 278-2900
Toll Free: 1-800-821-5831
FAX: (858) 278-6700
E-Mail: hardysupport@hardysolutions.com
Or visit our web site at:
http://www.hardysolutions.com

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