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:

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http://www.hardysolutions.com

Quick Start Guide
Swivel Mount Enclosure for HI 6300 and HI 6500 Series

The HI 6300 and 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.

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 6300 or HI 6500.
Then click on the Docs & Programs tab to download the User's Guide.

Mounting Location:
The swivel mount enclosure is designed to accommodate a wide range of installation requirements for the HI 6500 or HI 6300 instrument, including mounting horizontal and vertical surfaces. It is also ideal for mounting on top of an instrument column or pedestal.
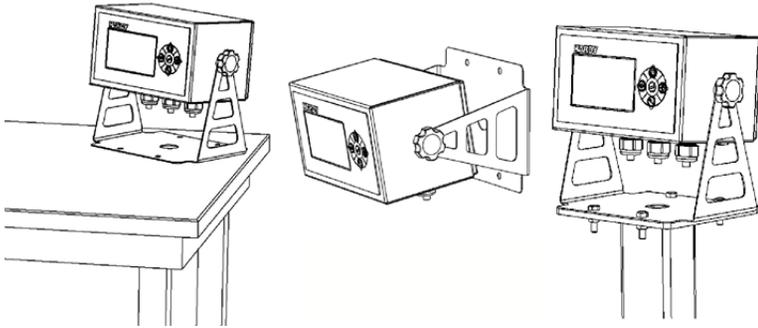
Figure A

Cable Gland Assembly:

Three cable glands and one breather vent are shipped with the enclosure. Both the glands and the vent have an integrated seal to meet IP66 ingress requirements. To install, simply insert glands and vent into the pre-cut holes found on the bottom of the enclosure and secure with included backing nuts (see Figure A) by firmly tightening (torque: 40-45 in-lbs). Also included are gland-plugs to be used in the event that communication cabling is not required. To seal a cable gland with a plug, simply insert to the midpoint of the plug and firmly tighten gland until plug material compresses
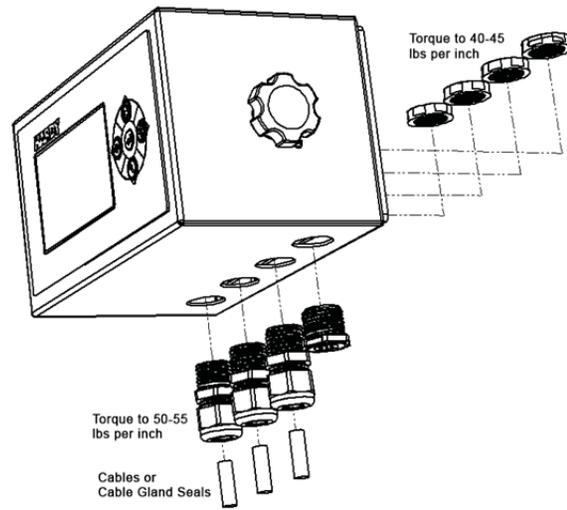

Figure B

Notes:

Wiring:

Install wiring through glands following the recommend sequence shown in Figure B. Wiring must be round and have an outside diameter between 0.17" to 0.45" (4.3mm to 11.4mm) in order to achieve a proper seal. Before tightening glands around wiring (gland seal nut torque: 50-55 in-lbs), check to be sure there is enough length of wire left inside the enclosure to reach termination points found on the instrument. Terminate wires with proper connectors, connect terminations to instrument.

Power is supplied by either directly connecting to the DC Power connector or connecting AC power to the optional AC-DC power supply (Figure C). Seethe I/I Diagram on the website for further detail.

NOTE   An AC-DC power module is optional. When wiring for AC power, the ground wire must be connected to ground post using a terminal ring connector.
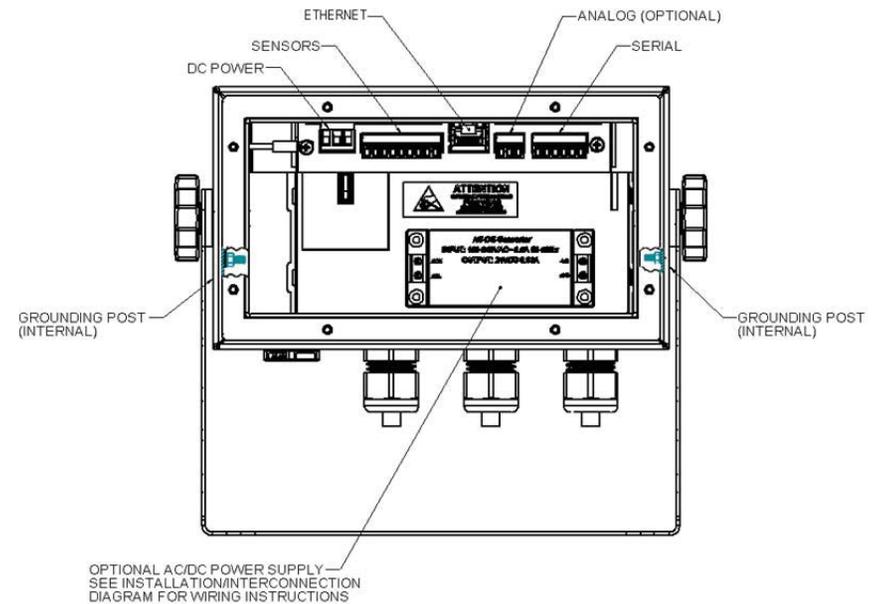

Figure C

Before sealing back of unit, it is recommend to power up the instrument to test that all connections have been properly made. Install back panel squarely over gasket on the back of the enclosure and loosely insert screws into all locations 1 thru 8 (see FIGURE D). Once screws are located in holes 1 thru 8, tighten each screw in numerical order shown to 10 in-lbs.
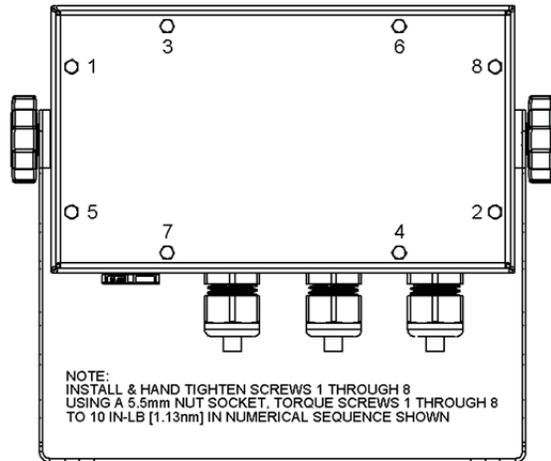

NOTE:
INSTALL & HAND TIGHTEN SCREWS 1 THROUGH 8
USING A 5.5mm NUT SOCKET, TORQUE SCREWS 1 THROUGH 8
TO 10 IN-LB [1.13nm] IN NUMERICAL SEQUENCE SHOWN

Figure D

CAUTION: It is important to closely follow tightening instructions to achieve a proper seal. Assembly of the screws in any other order could cause the gasket material to tear, resulting in loss of ingress protection

ATTENTION: Il est important de suivre de près les instructions de serrage pour obtenir une bonne étanchéité. Assemblée dans un autre ordre pourrait entraîner le matériau de joint à déchirer , entraînant une perte de protection contre la pénétration .

Finish assembly and mounting per the diagrams above.
1. Position enclosure between mounting stand.
2. Insert rubber washer between enclosure and stand.
3. Insert thumb screws and loosely tighten.
4. Adjust the front display viewing angle.
5. Firmly tighten thumb screws.

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.

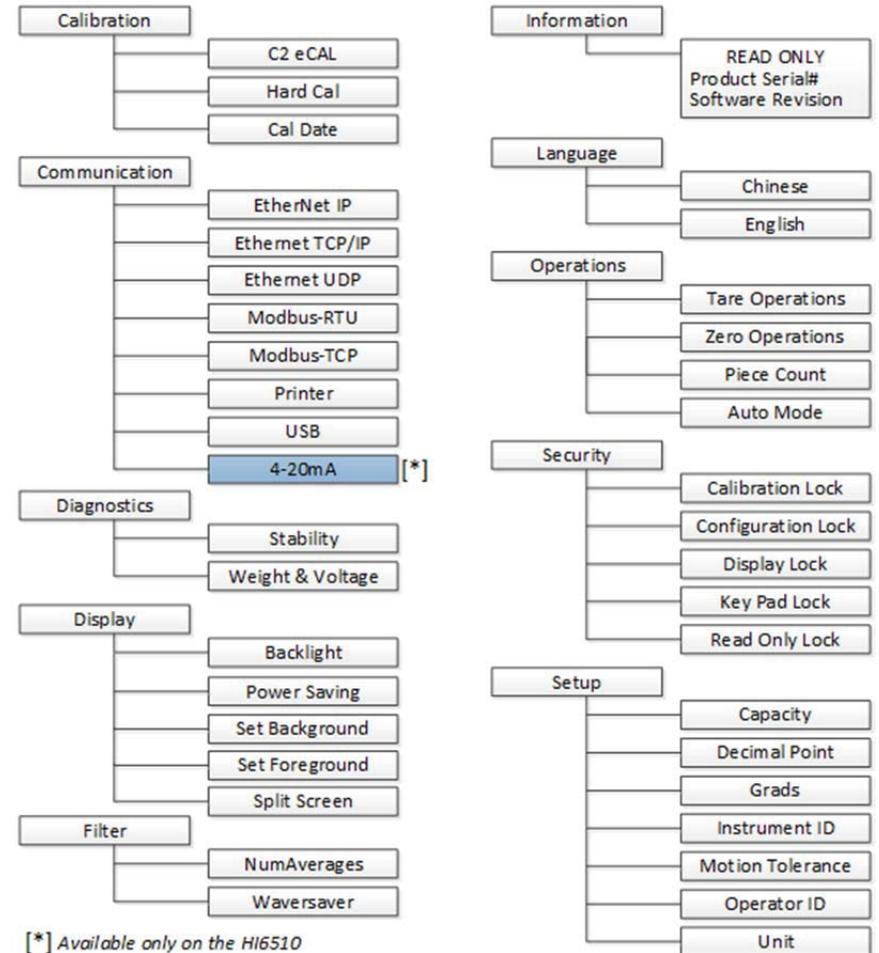**Operator ID:** Optional area for entering an operator ID.

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

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

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 or HI 6300 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 or HI 6300 User's Guide for setting up the appropriate communication protocol for your instrument, including   Analog communications (HI 6310 or HI 6510 only).

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

NOTE: Not all communication options are available on the HI 6300 series of instruments.

IMPORTANT: USB port is not available when using Swivel Mount Enclosures
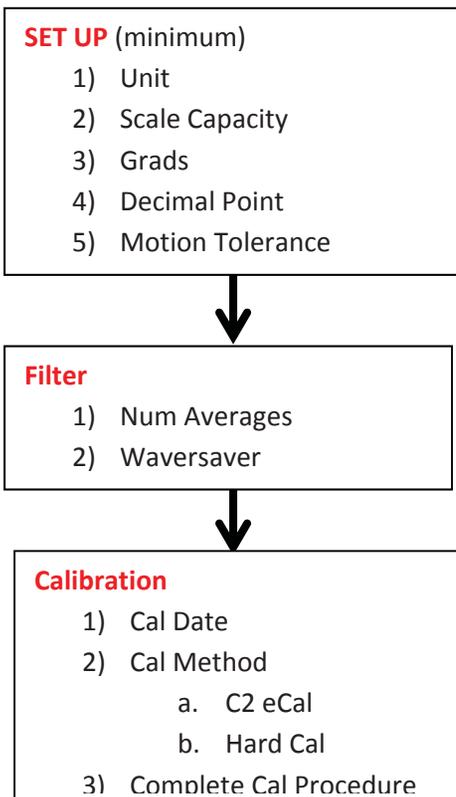
Initial Set-Up:

Using the Set-Up Wizard

The Set-up Wizard is designed to guide you through the basic steps of setting up an HI 6500 instrument for the first time or to easily make changes to an instrument after the initial setup is complete. The Wizard can be launched through the Webserver or the front panel display.

NOTE *To set up advanced features such as metrology requirement (Legal for Trade) or instrument security settings; please refer to the User's Guide.*

Set Up may be performed through the front panel display or throug 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)  Scale 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│
└─────────────────────────────┘
```

Calibration:

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

C2 eCAL – 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 the 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