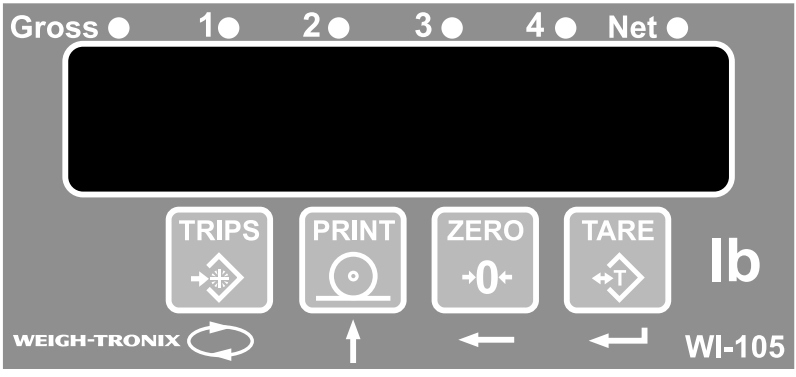
WEIGH-TRONIX



WI-105 Indicator
User's Manual

UNITED STATES

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la Class A prescrites dans le Reglement sur le brouillage radioelectrique que edicte par le ministere des Communications du Canada.

EUROPEAN COUNTRIES WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which the user may be required to take adequate measures.

CAUTION

Risk of electrical shock. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Weigh-Tronix reserves the right to change specifications at any time.

04/02/01 105_U.P65 PN 297770-0015e1 Printed in USA

Table of Contents

To avoid the possiblility of electric shock or damage to the instrument, always switch off the instrument and isolate from the power supply before carrying out any routine maintenance.

This instrument may only be used when housed within another enclosure, e.g. rack, panel or other housing. Full electrical saftey requirements (note: high voltages within instrument) will only be met by enclosure in a suitable housing.

Cleaning the front panel

Switch the instrument off and isolate it from the power supply. The front panel may only be cleaned with a slightly damp (water only) clean cloth. Ensure that no water gets inside the unit.

Specifications

Power requirements:
Standard: 95-265 AC/DC, 8VA typical
Optional: 12 VDC, 8VA typical

Excitation: 10 VDC supports up to four 350-ohm weight sensors

Operational keys:
ZERO, TARE, PRINT, TRIPS (cutoff)

Display:
5½ digits (199999)
Seven segment bright red LED 0.56" high

Display update rate: Five times per second

Display resolution: up to 50,000 divisions

Capacity selections:
199,999 with decimal located from zero to five places

Minimum signal / increment:
Sensitivity 0.5 µV per increment

Increment selections:
1, 2, 5, 10, 20, 50, 100

Analog to digital:
24 bit sigma delta, 8,000,000 internal counts

Operating environment:
85% non-condensing humidity
-10 to 50° C (14 to 122° F)

Serial outputs: RS-232 with optional RS-485
Capabilities: continuous output
output on demand via print button
output on demand via serial request.

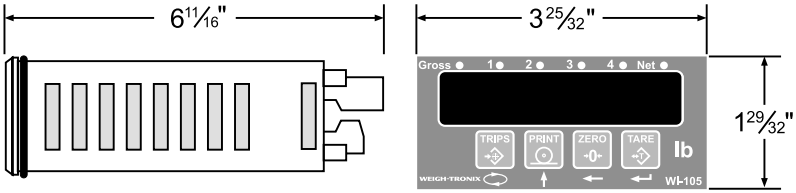
Trip value range:	199999 to 199999
Hysterisis range:	0 to 255 (default 1)
Switching delay range:	0 to 255 seconds (default 0)
Trip logic:	HIGH or LOW alarm and NO or NC contacts
Electro-mechanical relays:	250VAC, 30VDC, 2A, PF=1, change over contacts
Solid-state relays:	400VAC or DC, 0.5A, PF=1 normally open contacts only.

Introduction

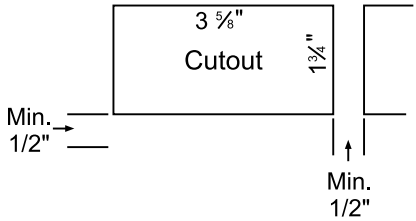
The WI-105 indicator is a small, panel mount, digital weight indicator. This manual covers the operation of the WI-105 indicator.

Installation

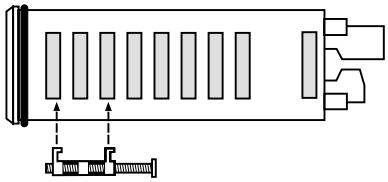
Overall dimensions



Panel cut-out



Fastening clips



Caution: Do not overtighten the screws.

The fastening clips supplied may be attached on the sides or top/bottom of the indicator. Be sure the clip and screw are mounted as show above.

Front Panel

The front panel of the WI-105 is shown in Figure 1.

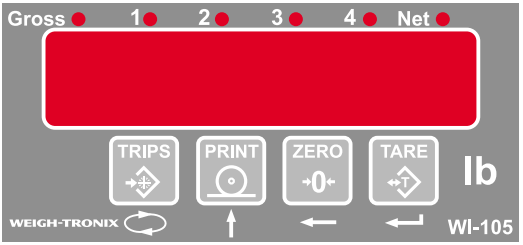


Figure 1
Front panel of the WI-105

There are six annunciator lights acrosse the top of the front panel. Gross or Net will light when in gross or net weighing mode respectively.

The 1-4 annunciators light when the associated trip point is reached.

The four keys on the front panel are described below:

TRIPS Use this key to access the Trips setup menu.

PRINT Use this key to output data to a connected device.

ZERO Use this key to zero the display.

TARE Use this key to tare a weight from the scale.

Each key has a second function shown by the arrow underneath. These functions become active when you are in the menu. The functions are described below:

Menu/Next Trip (alarm) value

Increment digit

Next digit

Enter/Accept value

Weighing Operations

Zeroing the Indicator

To zero the indicator, empty the scale, be sure the GROSS annunciator is lit and press the **ZERO** key.

If you attempt to zero the indicator while the display shows a weight outside the zeroing range, the display will briefly show the following:

Performing a Simple Gross Weighment

To perform a gross weighment:

1. Be sure scale is empty and indicator is in gross mode and zeroed. . . Display shows 0 weight.

2. Place object on the scale to be weighed. . . Gross weight is displayed.

Performing a Single Tare Weighment

To tare a weight from the scale, follow these steps:

1. Be sure scale is empty and indicator is in gross mode and zeroed.	
2. Place object on the scale to be tared. . .	Gross weight is displayed.
3. Press the **TARE** key. . .	Net annunciator lights and the display shows zero weight.
4. Place material to be weighed on the scale. . .	Net weight of the material is displayed.
5. Press the **TARE** key to see the gross weight (tare + load). . .	Gross annunciator lights and gross weight it displayed.
6. Repeat steps 1-5 for each tare weighment.	

Performing a Multiple Tare Weighment

Use these steps to perform multiple tares in one weighment.

1. Be sure scale is emptied and indicator is in gross mode and zeroed.

2. Place object on the scale to be tared. . .

   Gross weight is displayed.

3. Press the **TARE** key. . .

   Net annunciator lights and the display shows zero weight.

4. Place material to be weighed on the scale. . .

   Net weight of the material is displayed.

5. Press the **TARE** key to see the gross weight (tare + load). . .

   Gross annunciator lights and gross weight it displayed.

6. Press the **TARE** key again, then add more weight to the scale. . .

   The Net annunciator lights and only the newly added weight will be displayed.

7. Repeat steps 5 and 6 for each new item added to the scale.

8. With the gross annunciator lit, remove all weight from the scale and you are ready for your next weighment.

Cancelling a Tare

To cancel a tare, remove the load from the scale and press the **TARE** key. You may have to press **TARE** a second time to return the indicator to gross mode. Check the GROSS annunciator. It will be lit when in gross weighing mode.

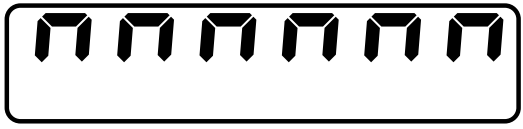
Printing Data

Your indicator can be configured to output data in a couple of ways. The most common way to output to a peripheral device (printer, PC, etc.) is to press the **PRINT** key.

If your indicator is configured for continuous output, the current weight data will be automatically transmitted approximately five times per second.

Error Message

If the system capacity is exceeded by approximately 10%, the display will show the following overload condition:



Setting up the Trip Values (option)

Menu/Next alarm

Increment digit

Next digit

Enter/Accept value

Up to four Trip values (trip values, alarms, and setpoints are all interchangeable terms) can be set through the front panel by following the steps below. After you configure the Trips, the indicator will activate each succesive relay as each Trip value is reached. Set the lowest weight for Trip 1 and the next higher weight for Trip 2, etc.

Use the note at left to remind you of the keys to use in the steps below.

1. Press and hold the **TRIPS** key for three seconds. . . — ***AL 1*** is displayed. This stands for Alarm 1.

2. Press **ENTER** to see the current value set for Trip 1. — Current value for Trip 1 is displayed. The right most digit will be flashing.

3. Press the **Increment Digit** key to increase the value of the flashing digit.

4. Press the **Next Digit** key to make the next digit flash. Repeat steps 3 and 4 until the value you want for Trip 1 is correct.

5. Press **ENTER** to accept Alarm 1 value. AL 1 is displayed.

6. Press **Menu/Next alarm** to proceed to the next trip value. . . ***AL 2***is displayed.

7. Repeat steps 2 - 6 to set each of the other Trip values.

8. When you are through setting Trip values, repeatedly press the **ENTER** key until you return to the gross weighing mode.

Peak or Valley Hold Function (optional)

If this option is installed, the indicator will hold the maximum (peak) or minimum (valley) display value. Peak or valley mode configuration instructions appear in the WI-105 Service Manual.

You may control the display mode via the front panel to show peak/valley or to show the normal display value. Resetting the peak/valley value can only be done via a remote reset button.

1. Press the MENU key momentarily to toggle to the peak/valley hold mode. . . ***Hold*** is displayed.

2. Press MENU momentarily to toggle back to the normal display. . . ***nor*** is displayed.

3. Press the remote reset button to reset the peak or hold value.

Remote button will only be available if you have the Peak/Valley option installed.

Weigh-Tronix
1000 Armstrong Dr.
Fairmont, MN 56031 USA
Telephone: 507-238-4461
Facsimile: 507-238-4195
e-mail: industrial@weigh-tronix.com
www.wtxweb.com

Weigh-Tronix Canada, ULC
217 Brunswick Blvd.
Pointe Claire, QC H9R 4R7 Canada
Telephone: 514-695-0380
Facsimile: 514-695-6820

WEIGH-TRONIX

Weighing Products & Systems