WEIGH-TRONIX

WPI-135 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.

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.

06/26/01 135_U.P65 PN 29749-0013C e1 Printed in USA

Table of Contents

Pages are numbered consecutively beginning with the cover page.

Specifications

Power Input	85-265 VAC, 50/60Hz, single phase
Excitation	10 Volts DC or 10 volts AC square wave capable of driving up to thirty-two 350-ohm weight sensors. Indicator is also capable of driving Quartzell™ transducers
Operational Keys	Zero, Tare, Print, Units, Select, Enter, Escape, Clear, 0-9, Decimal Point and Five Soft Keys labeled per selected operational routine.
Operational Annunciators	Displayed symbols indicate motion, center of zero, unit of measure and more.
Display	Model 135—1" H x 4.3" W vacuum fluorescent dot graphic display (32 X 128 dot layout)
Display rate	Selectable, from 1 in 10 seconds to 10 times per second
A to D Conversion Rate	60 times per second
Unit of Measure	Pounds, kilograms, grams, ounces, pounds and ounces and four programmable custom units
Capacity Selections	Up to 10,000,000 selectable
Incremental Selections	Multiples and sub multiples of 1, 2, 5
Decimal locations	88888888 pick any location relative to division size
Displayed Resolution	Up to 1 part in 10,000,000
Audio Output	Audio tone for key contact assurance or operational alarms
Time and Date	Battery protected real time clock is standard
Internal Resolution	1,000,000 counts analog, Quartzell™ transducer higher
Harmonizer™ digital filtering:	Fully programmable to ignore noise and vibration
Standard input and outputs:	Com 1: RS232, RS-485/422, Quartzell™ Com 2: RS232, 20 mA current loop Com 3: RS232, RS-485/422, Quartzell™, 16550 UART Com 4: RS232, RS-485/422, Quartzell™, 16550 UART (*One bi-directional signal per port*) Four set point I/O ports via OPTO 22 I/O modules 1 Analog scale input
Dimensions	7.25" H x 11" W x 8.25" D (184 mm x 279 mm x 205 mm)
Available Options	- Multiple analog scale inputs, up to seven additional - Eight fully isolated, programmable analog outputs, selectable 4-20mA, 0-5VDC, 0-10VDC, 0-20mA, 0-24mA, ±5VDC, ±10VDC - Remote expanded control linterface for TTL or solid state up to 64 - OPTO 22 Generation 4 I/O Modules - PC/104 Compatible expansion bus - Expanded memory - PC (AT) style alphanumeric keyboard - Alphanumeric, serial PC-style keyboard RS232/TTL - Field programmable with SimPoser®
Fieldbus Network Interfaces	Device Net™, ProfiBus®, ControlNet™, InterBus-S, ModBus+, Ethernet (TCP/IP-ModBus)
Operating Temperatures	14 to 104° F (-10 to 40° C), 10 to 90% relative humidity
Enclosure	Stainless steel wash down enclosure NEMA 4X
Weight	17 lb, 7.7 kg
Agencies	NTEP Class III/IIIL:10,000d (pending) Canada Consumer Affairs (pending) UL/CUL (pending) OIML (pending) CE (pending) FCC Class A
Warranty	2 year

Introduction

About This Manual

This manual covers the information you need to understand the operation of your WPI-135 (**W**eight **P**rocess **I**ndicator) instrument.

Major sections of this manual are headed by titles in a black bar like *Introduction* above. Subheadings appear in the left column. Instructions and text appear on the right side of the page. Occasionally notes, tips, and special instructions appear in the left column.

WPI-135 Process Indicator

The WPI-135 is a stand alone or network capable weight indicator and process controller. Built into the WPI-135 are the following standard features:

- 4 serial ports
- Time
- Date
- Stainless steel enclosure
- Large graphic display

The WPI-135 front panel is shown in Figure 1. The front panel includes the following:

- 32 x 128 dot, vacuum fluorescent, dot addressable display
- Five variable function soft keys
- Numeric keypad
- SELECT key
- UNITS key
- PRINT key
- TARE key
- ZERO key
- CE (Clear) key
- ESC (Escape) key
- ENTER key
- Decimal point key

WPI-135 Front Panel

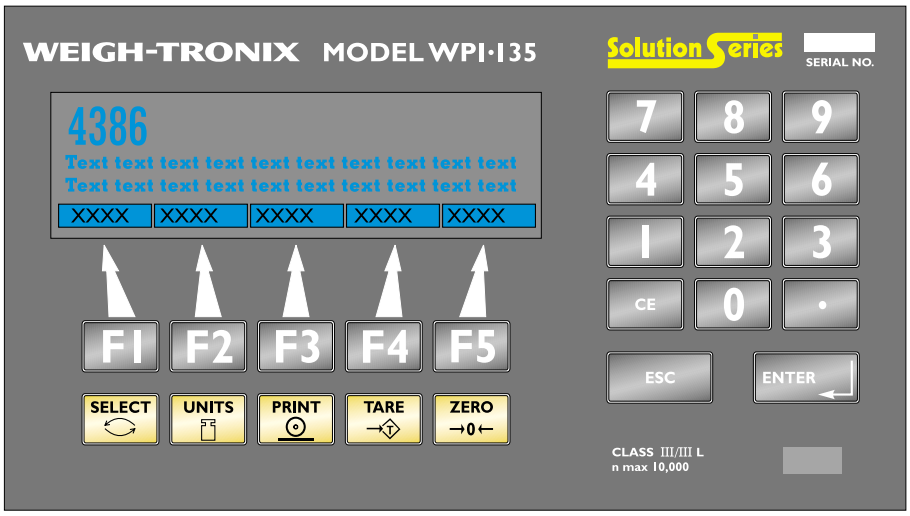
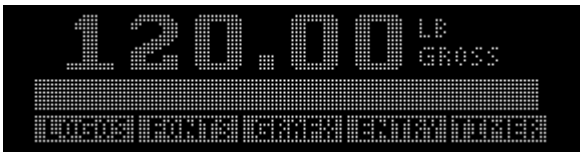


Figure 1
WPI-135 Front Panel

Main Display

The main display is a 32 x 128 dot, dot-addressable, vacuum fluorescent display. The ability to address each of the dots individually makes this display nearly as versatile as a computer screen. It can display graphics, words and numbers. This flexibility allows graphics and alphanumeric characters to be displayed at the same time. Below are a couple of examples of over 30 displays available on the WPI-135.



This screen shows a large numeric readout, LB and GROSS, a bar graph, and the soft key labels.

This screen shows the soft key labels, a checkweighing display, and a line of text for instructions.

Your system will be configured for your particular needs. The screen you see will depend on what weighing application you are performing.

Front Panel Keys

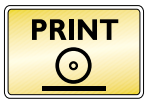
The keys on the front panel of the WPI-135 are of two types, hard keys and soft keys. Hard keys are labeled directly and soft keys are labeled F1-F5. If a soft key has a function, its label appears at the bottom the the display. Soft keys function differently at different times and their labels change as needed.

Below are brief descriptions for each of the hard key functions:

Hard Keys

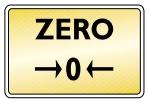
Repeatedly press the **SELECT** key to scroll through the available weight reading displays. (Examples - gross, net, tare, minimum, maximum, etc.)

Press the **UNITS** key to scroll through the available units of measure. (lb, kg, oz, etc.)



Press the **PRINT** key to send data to a connected printer.

Press the **TARE** key to enter a tare weight, then press **SELECT** to see the net display mode.

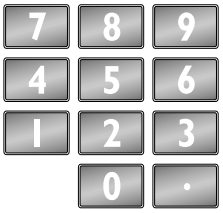


Press the **ZERO** key to establish a zero reference. A center-of-zero icon will be displayed. During motion an **M** will appear below the center-of-zero icon.

Press the **ESCAPE** key to back out of menus or cancel a numeric entry without accepting the value.

Press the **CLEAR** key to clear values from the display.

Press the **ENTER** key to enter a keyed in value or accept a displayed choice.



The numeric keypad is for entering numbers.

Soft Keys

Soft keys are so-called because their function is not fixed. Function can change as mode of operations change or as the program for your particular setup changes.

There are five soft keys located directly below the display. If the keys are needed during any operation, a label for each active key appears in the display directly above. There are only five key labels available at one time but this does not limit the potential usefulness of these keys. Programs can be created to enable one key to access another level of operation with five more key names and functions.

Weighing Operation

The following instructions step you through a typical weighing operation:

1. Power up the indicator. If the display mode is not the one you want to use, repeatedly press the **SELECT** key until the display value you want (gross, net, etc.) is displayed. . .

   Your indicator may be configured with only one display value. Selecting other display values may not be an option with your particular setup.

2. Zero the scale by pressing the **ZERO** key. . .

   Display should read zero weight and the center of zero symbol is displayed.

3. Place object to be weighed on the scale. . .

   An ***M*** appears on the display during scale motion and the weight is displayed.

Pushbutton Tare Operation

To perform a tare operation with the **TARE** key, follow these instructions:

1. Zero the scale by pressing the **ZERO** key. . .

   Display shows zero weight.

2. Place container to be tared on the scale and press the **TARE** key. . .

   The display changes to a NET display and shows zero weight.

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

   Net weight is displayed.

Keypad Tare Entry

For entry of a known tare weight follow these instructions:

1. With the indicator showing gross weight, key in the tare weight using the numeric keys. . .
   A tare entry display shows the weight that you key in.
2. Press **ENTER** to accept this tare entry. . .
   The net weight is displayed in net mode.

Specialized Operations

Due to the unlimited variety of applications available for the WPI-135, it is not practical to describe all the possible specialized operations in this manual. Each application program will be unique.

Specialized operations will be set up to offer you soft key choices specific to the application and will guide you with messages on the display.

Accessing Software Version

The time may come when you are asked by a service technician what the software version of your software is. There is a series of key strokes which will bring that number up on the screen. Below are the instructions for accessing this information.

1. Press and hold the **ESCAPE** key until the WPI-135 beeps.
2. Within five seconds, key in the number 111 and press **ENTER**.
3. Press the soft key labeled **VIEW**.
4. Press the soft key labeled **VERS**. The software version will appear on the display.

This page left intentionally blank.

This page left intentionally blank.

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