RICE LAKE 1280 Enterprise Series Color Touchscreen Indicator User Manual

RICE LAKE
WEIGHING SYSTEMS

1280 Enterprise Series ™
Color Touchscreen Indicator
Operation Manual

Product Description

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Introduction

The 1280 Enterprise Series is a color touchscreen, programmable, multi-channel digital weight indicator/controller. Manufactured with industrial-grade components, 1280 is built to achieve top performance, even in harsh environments. 1280 features a Freescale i.MX6 microprocessor, Linux-based operating system, and 1 GB onboard memory (expandable with micro SD card). Configuration can be performed using the front panel, serial commands, or Revolution ® scale software. For applications using the 1280 indicator as a host device, Version 1.03 or later of the 1280 indicator software must be installed. Custom programs can be written with iRite ®, a domain-based programming language based on Basic, Pascal, and Ada— empowering programmers to customize display widgets, store and retrieve data with the onboard database and utilize the 150+ built-in-functions. From tailored basic weighing to complex process automation, 1280 delivers uncompromising speed for today's most demanding applications as well as vast expandability for future needs.

Manuals are available for viewing and/or downloading from the Rice Lake Weighing Systems website at www.ricelake.com/manuals
Warranty information can be found on the website at www.ricelake.com/warranties

1.1 Features

Features of 1280 include:

- Support for up to eight scales (combination of analog load cell, total, serial scales, or program scales)
- Eight programmable Digital I/O bits are available on the CPU board (connector J1) including onboard pulse input pins, with 24 additional per option card
- Two communication ports that support RS-232, RS-485 and RS-422
- Two USB host ports
- One USB device port
- AC or DC power options
- Ethernet – wired, Wi-Fi and Wi-Fi Direct
- Bluetooth

1.1.1 Other Features

- Built-in Web Server for remote access to screens

- Configurable print formats can be defined for up to 1000 characters. Additional print formats can be created with iRite.
- Truck in/out, recipe batching, counting, and checking weighing iRite programs and source code included.
- 100 configurable setpoints.
- 1280 is NTEP, OIML and Measurement Canada certified. See Specifications for more information.

1.1.2 Enclosure Types

- Universal
- Panel Mount – numeric keypad
- Panel Mount – touch only (7" and 12" display)
- Wall Mount

1.1.3 Option Cards

The CPU board provides six slots for installing scale or other option cards. Available option cards include:

- Single- and dual-channel scale cards to drive up to sixteen 350 ohm load cells per card. Scale cards support both 4- and 6-wire load cell connections.
- Single- and dual-channel analog output card for 0–10 VDC, 0–20 mA, or 4-20 mA tracking of gross or net weight values.
- 24-channel digital I/O expansion card
- Dual-channel serial port card (with RS-232, RS-422, and RS-485)
- Dual-channel analog input card for 0–100 mV, 0-10 VDC, 0–20 mA, or 4-20 mA
- 4-channel relay card
- CompactCom card that supports EtherNet/IP™, DeviceNet™, ProfiNet, Profibus® DP Modbus TCP, EtherCAT, and PowerLink networks.

1.2 Safety

Safety Signal Definitions:

DANGER Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.

WARNING Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.

CAUTION Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.

IMPORTANT Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

General Safety

Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.

WARNING Failure to heed could result in serious injury or death.

Some procedures described in this manual require work inside the indicator enclosure. These procedures are to be performed by qualified service personnel only.

Do not allow minors (children) or inexperienced persons to operate this unit.

Do not operate without an enclosure completely assembled.

Do not place fingers into slots or possible pinch points.

Do not use this product if any of the components are cracked.

Do not make alterations or modifications to the unit.

Do not remove or obscure warning labels.

Do not submerge.

Before opening the unit, ensure the power cord is disconnected from the power source.

1.3 Weigh Mode

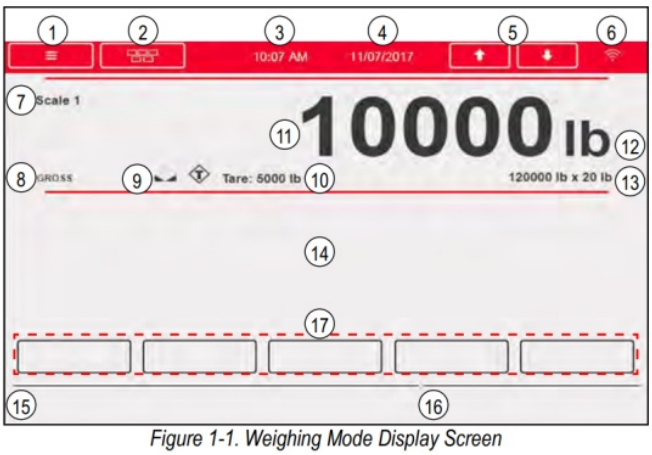

Figure 1-1. Weighing Mode Display Screen

Note The display illustrations in this manual are for reference only, they can be different from default illustrations depending on the colors, graphics, or programs that have been loaded.

Item No.	Description
Status Bar	
1	Menu keypress to enter setup menus and audit trail information.
2	Virtual keypad – press to enter; **Zero**, **Tare, Gross/Net, Print,** and **Units** keys are identical to the physical keys located on the front panel
3	Current time – press to set the time.
4	Current date – press to set the date.
5	Scale arrows – use to scroll through the attached scales in the current scale area (up to eight scales).
6	Wi-Fi Symbol – indicates Wi-Fi signal strength; when faded, Wi-Fi is not connected or out of range; press on the symbol to display the **Network Information Screen** which includes information on Wired Ethernet, Wi-Fi, Wi-Fi Direct, and Bluetooth®; allows restart of all network connections
Weight Display Area	
7	Current scale – number of currently displayed scale
8	Gross/Net – current weighing mode
9	Standstill icon – indicates scale is stable
10	Tare – the weight of tare in the system
11	Weight reading for the current scale
12	Unit of measure
13	Capacity and division size (values shown are for illustration only)
14	Application area – contains the configuration of widgets (text boxes, bar graphs, icons, etc)
15	Display line for text (messages from an iRite program)
16	System messages or status (batch running, print queued, etc)
Softkeys	
17	Softkeys – five softkeys that can be set up from the default list, or user-defined custom text and iRite programming functionality; these can be removed for more screen customization

Table 1-1. Weigh Mode Display

When a system reset is performed (Version 1.05 and later) the Weigh Mode display is populated with a scale widget and a softkey widget. This gives end-users access to softkey setup without having to use EDP commands or revolution.

1.4 Numeric/Alpha Entry
When data entry is required, a keyboard or a numeric keypad displays on the screen. The indicator's front panel is also equipped with a numeric keypad.

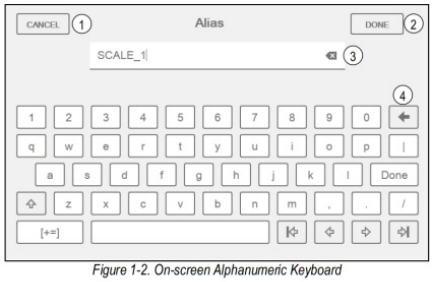

Figure 1-2. On-screen Alphanumeric Keyboard

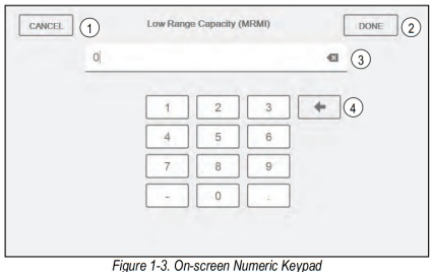

Figure 1-3. On-screen Numeric Keypad

Item No.	Description
1	Cancel – exits keyboard
2	Done – completes keyboard entry
3	Clear – delete everything in the prompt line
4	Backspace – deletes one character at a time

Table 1-2. Keyboard Descriptions

1.5 Main Menu User Interface
The Main Menu allows the operator access to Configuration, Calibration, Setpoint Values, Audit Trail, and Language.

From the weigh mode, press to enter the main menu.

Item No.	Description
1	Configuration – may be inaccessible to the operator by password protection
2	Calibration – allows the operator to perform a calibration
3	Setpoint Values – access to setpoint targets and settings
4	Audit Trail – view the number of configuration and calibration edits, plus the last calibration date
5	Language – allows scale language to be changed

Table 1-3. Main Menu User Interface

1.5.1 Calibration
Use the following steps to perform a standard calibration on a scale.

1. Select the scale to be calibrated and enter the calibration menu.
2. Press . Calibrate Scale
3. Select the method of calibration. Press . Next >
4. Select if chains, hooks, or other items are being used with the weights during calibration.
5. Press . Next >
6. Remove all weight from the scale except for chains and hooks (if used).
7. Press . Calibrate Zero The current weight and Zero Calibration Complete displays.
8. Press . Next >

9. Enter span weight for the value of the calibration test weights that will be used to calibrate the scale. This is required prior to running the span calibration.
10. With the test weight on the scale platform and the test weight value entered into the calibration weight window, the corresponding scale span value is ready to be calibrated.
11. Press . The current span weight displays. Calibrate Span
12. Press .Next > Calibration results display.
13. Press . Finish The display returns to the Calibration menu.
14. If hooks or chains were used during calibration, remove these and the test weights from the scale. The re-zero function is used to remove a calibration offset when hooks or chains are used to hang the test weights during both zero and span calibration.
15. Press . Re-Zero

1.5.2 Setpoints

Targets are a set of values that when met, cause the setpoint to trip.

Parameter	Default	Description
Value	0	Setpoint Value: Weight-based – specifies the target weight value, 0–9999999 Time-based – specifies time in 0.1-second intervals, range 0–65535 Counter – specifies the number of consecutive batches to run, range 0–65535
Source	Scale 1	Select Scale 1-8.
Trip	Higher	Specifies if the setpoint is satisfied when the weight is higher or lower than the setpoint value, within a band established around the value, or outside of that band. In a batch sequence with: • **Trip = Higher** – associated digital output is active until the setpoint value is exceeded. • **Trip = Lower** – output is active until the weight goes below the setpoint value. • **Trip = Inband** – setpoint is satisfied when the weight is within a band established around the value. • **Trip = Outband** – setpoint is satisfied when weight is outside a band established around the value, excluding the value.

Table 1-4. Target Parameters

Settings allow the operator to select the mode of the setpoint (batch or free-running). If enabled, it can be accessed by softkey, for defining a name and optional prompt.

Parameter	Default	Description
Batch	Off	Specifies whether the setpoint is used as a batch (On) or continuous (Off) setpoint
Access	On	Specifies the access allowed to setpoint parameters shown by pressing the **Setpoint** softkey in weigh mode. If set to **Off**, values can be displayed but not changed. If set to **Hide**, values do not show.
Enable	On	Turns the setpoint on or off
Alias	—	Enter a name for the setpoint
Prompt	—	Alphanumeric message or prompt that can be displayed in a label widget

Table 1-5. Setpoint Parameters

1.5.3 Audit Trail

Audit trail support provides tracking information for configuration and calibration events. A separate calibration and configuration counter is provided for each scale; a single system configuration counter tracks all global changes that are applied to multiple scales.
To prevent misuse, unsaved configuration or calibration changes are counted as change events; restoration of the previously saved configuration or calibration is also counted.
Select to view the legally relevant version, the configuration counters, and the calibration counters.

1. Press Print to send the audit trail data out of the configured communications port (default is port 1).
2. Select Done to return to the weigh mode.

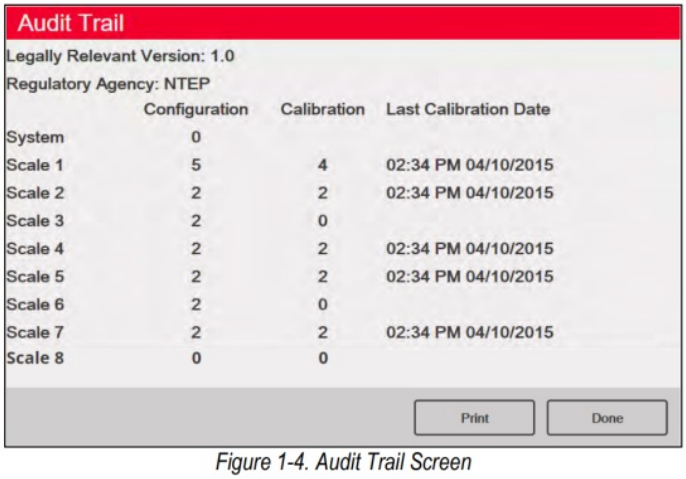

Figure 1-4. Audit Trail Screen

1.5.4 Language

The 1280 has 16 language choices, setting the language is only available in weigh mode. Configuration mode remains in English.

Figure 1-5. Language Selections

1. Press Language to display the list of available languages.
2. Select the desired language.
3. Press ‹ to save the selection and return to the weigh mode.

1.5.5 Return to Weigh Mode

When settings are complete for Configuration, Calibration, or Setpoint Values, press  .

 displays for a few seconds, then the display returns to the weigh mode.

1.6 Indicator Virtual Keypad Operation

Press  to open the virtual keypad. Zero, Tare, Gross/Net, Print, and Units function the same as the physical keys located on the front panel of the keyed 1280.

Figure 1-6. Virtual Keypad Functions

Keyed Tare is the equivalent to the keyed tare softkey. Press Keyed Tare, a numeric keypad displays to enter a tare value.

1.6.1 Toggle Gross/Net Mode

Press Gross/Net to toggle the display mode between gross and net.

- If a tared value is in the system, Net is displayed (net equals gross minus tare)
- If there is no tare in the system, Gross is displayed

1.6.2 Toggle Units

Press Units to toggle between primary, secondary, and tertiary units.

1.6.3 Zero Scale

Use the following steps to zero the scale (if it is within the acceptable zero range).

1. In gross mode, remove all weight from the scale and wait  to display.
2. Press Units. When →0← displays, the scale is zeroed.

1.6.4 Tare

Use the following instructions to acquire a tare, remove a stored tare and enter a tare using the display softkeys.

Acquire Tare

Used to store the weight currently on the scale as a tare weight and switch to net mode.

1. Place a container on the scale and wait for it  to display.
2. Press Tare. Net displays, indicating the weight has been tared.

Remove Stored Tare Value
Used to remove a stored tare value.

1. Remove all weight from the scale to show gross zero.
2. When  displaying, press Tare (in OIML mode, press Zero). Gross displays.

Alternatively, remove a stored tare value using a keyed tare of zero.

Keyed Tare
Used to add a keyed tare.

1. Press Keyed Tare. A numeric keypad displays
2. Enter a value and press Done.

1.6.5 Print Ticket

Press Print to send the gross or net ticket format to the configured serial, USB or Ethernet port associated with its ticket format. When displaying the accumulator, it prints the accumulator format.
To print tickets using auxiliary formats (1-20), press the AUX Print softkey (not part of virtual keypad).

1. Wait for  to display.
2. Press. AUX Print
3. Enter an auxiliary format-number (1-20) and press Done to send the data to the serial port.

1.6.6 Accumulator Functions
Acquiring Weight
If the accumulator is enabled while in configuration, weight is accumulated whenever a print operation is performed by:

- pressing Print
- activating a digital input print
- receiving a KPRINT serial command
- iRite calling the PRINT ( ) function
- activating the accumulator with a setpoint

The scale must return to zero before the next accumulation.
Display or Clear the Accumulator

- A softkey can be programmed for each function
- A Display or Clear Accumulator Digital Input can be activated (ClearAccum0 iRite API, can be cleared with a setpoint)
- A serial command can be sent

Print the Accumulated Value

To print the accumulated value, press Print while displaying the accumulator.

1.6.7 Peak Hold
Peak hold is used to determine, display and print the greatest weight reading during a weighing cycle.
There are three types of peak hold: automatic, manual, and bi-directional.
To use the peak hold function:

1. Tare the scale to put it into net mode.
2. Increase the weight. As the weight increases, the indicator will capture and hold the highest weight recorded.
3. Press Gross/Net to see the real live weight (as opposed to the peak hold weight).
4. Press Print or Zero to clear the peak hold (it clears automatically when set to Automatic Mode).

1.6.8 Softkey Setup
The standard 7” panel mount has front panel keys, navigation softkeys, and a virtual keypad. The 7” and 12” key-less panel mounts only support a virtual keypad.

1. To enter navigation softkey designations for the 7” panel mount, navigate to the main menu and select Configuration/Features/Softkeys.
2. Press  .
3. Scroll to the desired softkey and press Done.

Figure 1-7. Softkeys

1.7 Keypad Operations

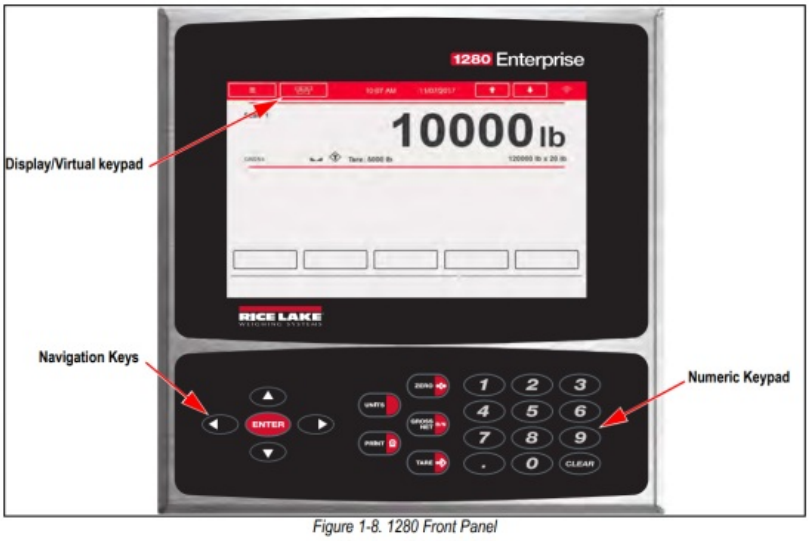

Figure 1-8. 1280 Front Panel

1.7.1 Navigation Keys
Navigation keys are primarily linked to iRite handlers. If no iRite handlers exist, the navigation keys toggle through a selection of displayed scales.

1.7.2 Numeric Keypad
Use the numeric keypad for entering numbers or keyed tares.

Press CLEAR to backspace when entering numbers/letters.

Press ENTER to save entries from the numeric keypad.

1.7.3 Toggle Gross/Net Mode

Pressing GROSS NET B/N toggles the display mode between gross and net.
- If a tared value is in the system, Net is displayed (net equals gross minus tare).
- If there is no tare in the system, Gross is displayed.

1.7.4 Toggle Units

Pressing UNITS toggles between primary, secondary, and tertiary units.

1.7.5 Zero Scale
Use the following instructions to zero the scale (if it is within the acceptable zero range).

1. In gross mode, remove all weight from the scale and wait for the stable indicator to display.
2. Press ZERO. When →0← displays, the scale is zeroed.

1.7.6 Tare
Use the following instructions to acquire a tare, remove a stored tare and enter a tare using the keyboard.

Acquire Tare
Used to store the weight currently on a scale as tare weight and switch to net mode.

1. Place the container on the scale and wait for the stable indicator to display.
2. Press TARE. Net displays indicating the weight has been tared.

Remove Stored Tare Value
Used to remove a stored tare value.

1. Remove all weight from the scale to show gross zero.
2. When the stable indicator displays, press TARE (in OIML mode, press) ZERO. Gross displays.

Alternatively, remove a stored tare value using a Keyed Tare of zero.

Keyed Tare
Used to add a keyed tare.
1. Enter a value from the numeric keypad or an attached keyboard.
2. Press TARE. Net displays indicating the keyed tare weight is in the system.

1.7.7 Print Ticket

Pressing PRINT sends the gross or net ticket format to the configured serial, USB or Ethernet port associated with its ticket format. When displaying the accumulator, it prints the accumulator format.
To print tickets using auxiliary formats (1-20), enter the format number with the numeric keypad.

1. Wait for the stable indicator to display.
2. Enter an auxiliary format (1-20).

3. Press  to send data to the serial port.

1.7.8 Accumulator Functions
Printing While in Accumulate
If the accumulator is enabled, weight is accumulated whenever a print operation is performed by:

- Pressing 
- Activating a digital input print
- Receiving a KPRINT serial command
- iRite calling the PRINT ( ) function
- Activating the accumulator setpoint

The scale must return to zero before the next accumulation.
Display or Clear the Accumulator

- A softkey can be programmed for each function
- A Display or Clear Accumulator Digital Input can be activated
- A serial command can be sent

Print the Accumulated Value

To print the accumulated value, press  while displaying the accumulator.

1.8 Alibi Storage
Alibi storage is a database of past transactions listed by date. This allows previous print transactions to be recalled and reprinted. Alibi storage is enabled using the **Features** menu in configuration mode. Print transactions can be recalled by assigning a softkey to Alibi.

1. Press the Alibi softkey.
2. Use the arrows to scroll to the record required.
3. Press Reprint to print the record.
4. Repeat steps 1-3 until all records required have been printed.
5. Press Done.

1.9 Peak Hold
Peak hold is used to determine, display and print the greatest weight reading during a weighing cycle.
There are three types of peak hold: automatic, manual, and bi-directional.
To use the peak hold function:

1. Tare the scale to put it into net mode.
2. Increase the weight. As the weight increases, the indicator will capture and hold the highest weight recorded.
3. Press  to see the real live weight (as opposed to the peak hold weight).
4. Press  or  to clear the peak hold (unless it is set to automatic mode in which case it clears automatically).

1.10 Rate Of Change
Rate of change is expressed in weight per time unit (weight/time).
Example: lb/sec
To view the rate of change:

1. Press the Display Rate of Change softkey.
2. To return to the live weight, press Display Rate of Change again.

1.11 Setpoint Entry
Setpoints can be configured to perform actions or functions based on specified parameter conditions.
To change the setpoint value:

1. Press Setup.
2. Press the Setpoint Values key in the Main menu or from the black drop-down list, or press the Setpoint softkey.
3. Press Setpoint 1 to select the setpoint (1-100) for which the target value needs to be changed.
4. Press the red number of the setpoint in the table. It may be necessary to use the arrows at the bottom of the screen scroll through the setpoints.
5. Press Value to bring up the numeric entry keypad.
6. Enter the new target value and press Done.
7. Press Settings to toggle between enabled and disabled.
8. Press Done and Save and Exit.

1.12 Softkey Operations
Softkeys are configured to provide additional operator functions. Softkeys are displayed as digital buttons at the bottom of the touch screen display area. See Figure 1-1 on page 3.

Softkey	Description
Blank	No softkey available
User-Defined 1-10	Up to 10 softkeys can be created using one of the user-defined options (22 characters or less available)
Time/Date	Displays current time and date; allow time and date change.
Display Tare	Displays tare value in the entry prompt

Display Accumulator	Displays accumulator value, if enabled, for the current scale
Display Rate of Change	Displays rate-of-change value, if enabled, for the current scale
Setpoint	Displays a menu of configured setpoints; allows display and change of some setpoint parameters
Batch Start	Starts a batch from the current step if a Batch Run digital input is active or not defined; if a Batch Run digital input is defined and inactive, Batch Start resets the batch to the first step
Batch Stop	Stops an active batch and turns off all associated digital outputs; requires a Batch Start to resume processing
Batch Pause	Pauses an active batch and turns off all digital outputs except those associated with Concurrent and Timer setpoints; processing is suspended until the indicator receives a Batch Start signal; pressing the BATSTRT digital input, BATSTART serial command, Batch Start softkey or the StartBatch function (iRite) resumes the batch and re-energizes all digital outputs turned off by the Batch Pause
Batch Reset	Stops an active batch and resets the current step to the first batch step; all digital outputs associated with batch setpoints are deactivated; if a batch is stopped or paused, Batch Reset resets the current step to the first step
Select Scale	Enter the scale number (use numeric keypad) to be displayed for multi-scale applications, followed by the select scale softkey
Diagnostics	Opens the iQube2 diagnostics screen
Alibi	Allows previous print transactions to be recalled and reprinted
Contrast	Adjusts the screen backlight intensity
Test	Not available in version 1.00
Stop	Sends AuxFmt13 out its configured port to display a red light on a LaserLight
Go	Sends AuxFmt12 out its configured port to display a green light on a LaserLight
Off	Sends AuxFmt14 out its configured port to turn a LaserLight red/green light off
Display Unit ID	Displays the Unit ID in the lower-left corner of the screen
Zero	Zeros the indicator
Gross/Net	Toggles between gross and net modes
Tare	Tare the scale by using the on screen numeric keypad
Keyed Tare	Tare the scale by using the on screen numeric keypad

Units	Toggles between primary, secondary, and tertiary units
Print	Prints the configured print format
Aux Print	Auxiliary printing by entering the Auxiliary Format number (1-20)
Screen	Display a different screen by entering a value (1-99) and pressing the Screen softkey
Database	Accesses the import and export database feature from the weigh mode

Table 1-6. Configurable Softkeys

Specifications

Power AC	
Line Voltages	100-240 VAC (Range 85-265 VCA)
Frequency	50 or 60 Hz
Power Consumption	60 Watts
Power DC	
Line Voltages	11-30 VDC (Range 9-36 VDC)
Power Consumption	60 Watts
Scale Card Specifications	
Excitation Voltage	10 ± 0.5 VDC bi-polar 16 x 350W or 32 x 700W load cells per scale card
Analog Signal Input Range	–60 mV to +60 mV
Analog Signal	1.0 mV/graduation minimum Sensitivity at 7.5 Hz -120 Hz 4.0 mV/graduation typical @ 960 Hz
A/D Sample Rate	7.5–960 Hz, software selectable
Input Impedance	>35 MW typical
Internal Resolution	8 000 000 counts
Wt Display ResolutioInput Sensitivity	9,999,999
System Linearity	10 mV per internal count
Input Voltage	±0.01% of full scale
Differential	±800 mV referenced to earth ground
Input Overload	Load cell signal lines ±10 V continuous, ESD protected
RFI/EMI Protection	Short circuit protection, 600W transient voltage suppression Protection for ESD, EFT (electrical fast transients), tertiary lightning, and system-generated transients per IEC 60001-4-2, 60001-4-4, and 60001-4-5; European standards EN50082 and EN61000-4
Digital Filter	Software selectable: Three Stage, Adaptive or Damping

Option Cards

Six slots support following options and loads:

Fieldbus EtherNet I/P, PROFINET, Modbus/TCP, DeviceNet, Profibus DP

Single Analog Output	16 bit, voltage output 0-10 VDC, current output 0-20mA, 4-20mA
Dual Analog Output	16 bit, voltage output 0-10 VDC, current output 0-20mA, 4-20mA
Analog Input	2 channel, 16 bit, voltage input ±10 VDC, 0-100 mVDC, current input 0-20mA,
Serial	2 channel, full-duplex RS-232 with CTS/RTS, RS-485 or RS-422, 1200-115,200 baud
Digital I/O	24 channels, configurable as inputs or outputs Inputs- 5 VDC max, active low Outputs- 20 mA max per channel, active low 5 VDC source available – 500 mA max
Relay	4 channel, dry contact, max current 3A @ 30 VDC, 3A @250VAC

Digital I/O

8 channels	Configurable as inputs or outputs
Inputs	5 VDC max, active low, maximum pulse input frequency is 5 kHz
Outputs	20 mA max per channel, active low 5 VDC source available – 500 mA max

Communications

Port 1 & 2	Full duplex RS-232 with CTS/RTS, RS-422/485 full and half-duplex
Baud Rate (Ports 1 & 2)	1200, 2400, 4800, 9600, 19200, 38400, 57600 and 115200
Port 3	USB 2.0 Device (Micro)
Port 4	Bluetooth® SPP 2.1+EDR Standards 4Mbaud
USB Host	(2) Type A Connectors max 500 mA

Networking

Wired Ethernet	802.3 10/100 Auto – MDI/MDI-X
Wi-Fi	802.11 b/g/n 2.4 GHz
Wi-Fi Network Type	Infrastructure
Security Types	Open/Shared Key/ WPA-Personal/WPA2-Personal
Encryption Types	None/TKIP/AES

Operator Interface

Display	TFT WVGA Color
7 inch	800 x 480 Resolution White LED Backlight 500 NIT – Standard 1000 NIT – Viewable Outdoors
12 inch	1280 x 800 Resolution White LED Backlight 1500 NIT – Standard
Keyboard	22-key membrane panel, tactile feel
Touchscreen	5-wire resistive

Memory

Onboard	8GB eMMC (system use),1GB DDR3 460 MB onboard database storage
Micro SD Card	Up to 32 GB

Environmental

Operating Temp.	Legal 14 to 104°F (–10 to +40°C) Industrial -4 to 131°F (–20 to +55°C) *Depending on enclosure and load
Storage Temp.	-4 to 158°F (–20 to +70°C)
Humidity	0–95% relative humidity

Enclosure

7” with Keypad	Universal Mount, Panel Mount, Wall Mount
7” Touch Only	Panel Mount
12” Touch Only	Panel Mount

Certifications and Approvals

NTEP
CoC Number15-001
Accuracy Class III/IIIL n max: 10,000d

Measurement Canada
Approval AM-5980C
Accuracy Class III/IIIHDn max: 10,000d

File Number: R76/20006 – NL1 – 16.04
European: TC8596,

Accuracy Class III/IIIInmax: 10,000d

4d Panel Mount and Universal

4a Panel Mount
Approvals for 7” and 12” touch-only panel mounts – pending

Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at **www.ricelake.com/training** or obtained by calling 715-234-9171 and asking for the training department.
Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit **www.ricelake.com/webinars**

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230 W. Coleman St. • Rice Lake, WI 54868 • USA
U.S. 800-472-6703 • Canada/Mexico 800-321-6703 • International 715-234-9171 • Europe +31 (0)26 472 1319
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Documents / Resources

RICE LAKE 1280 Enterprise Series Color Touchscreen Indicator [pdf] User Manual
1280 Enterprise Series Color Touchscreen Indicator

References