

Weight Indicator Guide





At Rice Lake Weighing Systems, our goal is to be the best by every measure. When all else is equal, three things will make your experience with us distinctly different:

Service. Selection. Speed.

Our roots are firmly planted in the principles of quality and customer service. Through three generations of family ownership, these ideals remain unchanged. As an international leader in the manufacture and distribution of weight-related products and process-control equipment, our experts know digital weight indicators and are here to guide you to the right one.

Rice Lake's digital weight indicators are available as standard models or with custom programming and enclosures to handle everything from the most basic to the most complex of tasks. Industries such as retail, livestock, bulk weighing, shipping and logistics, as well as harsh or hostile environments can benefit from the durability and reliability of a Rice Lake indicator.

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Your service doesn't stop when the office is closed and neither does ours. Simply call 800-472-6703 and press 1 to reach on-call personnel outside of our normal business hours.

Table of Contents

PROGRAMMABLE WEIGHT INDICATORS

1280 Enterprise™ Series	4
920i® and 720i™	6
880 Performance™ Series	8

GENERAL PURPOSE WEIGHT INDICATORS

682 Synergy Plus	10
680 Synergy Plus	11
680HE Synergy	12
480/482 Legend™ Series	13

BASIC WEIGHING

380/380X Synergy Series	14
381 Synergy Series	15

SIGNAL CONDITIONING TRANSMITTERS

SCT Series	
SCT-1SX, SCT-2200, SCT-4X and SCT-1100	16

SPECIALTY WEIGHT INDICATORS

SCT-4XD/1280 HMI <i>Belt/Solid Flow Metering</i>	18
882D Performance™ Series <i>Belt Scale Integrator</i>	19
882IS Performance™ Series <i>Intrinsically Safe Indicators</i>	19
CW-90/CW-90X <i>Checkweighing Indicators</i>	20
Counterpart® Counting Indicator	21

REMOTE DISPLAYS/ LARGE-DISPLAY WEIGHT INDICATORS

LaserLT-60/LaserLT-100	22
LaserLight3™	23

1280 Enterprise[™] Series

*Programmable with iRite[™]
Color Touchscreen*



The 1280 Enterprise Series programmable indicator provides fast operation and easily expands to grow with your business. The 1280 has more than 150 built-in functions and custom applications can be created with Rice Lake's iRite[®] software. Multitasking is simple with the 1280's highly customizable graphical display, quad core processor and its ability to power up to eight scales.

The 1280 has a durable color touchscreen available as either a 7- or 12-inch LCD display that can be used even when the operator is wearing gloves. A built-in web server provides remote access, systems integration and data monitoring. The 1280 can communicate with handheld devices, printers, PLCs or PCs connected to the same network.

The 1280 is built with industrial-grade components and stainless steel enclosures. The universal mount features IP69K protection, the wall mount is rated for IP66 and the panel mount boasts IP69K with NEMA Type 4X and 12.



FEATURES

- Graphical color display adjusts for ambient light conditions
- Built-in web server for remote access, systems integration and data monitoring
- Five built-in applications with 150 functions for common processes and data tables: vehicle in/out, axle weighing, static checkweighing, counting, filling/dosing and recipe storage.
- Customize applications and data collection with event-based programming using iRite™ software
- Customizable 7- or 12-inch touchscreen display
- Three different enclosure types: universal with tilt stand, panel mount and wall mount
- On-screen keyboard available during entry mode or use an external keyboard
- Multi-language operation and text entry
- Up to eight scales supporting analog load cell scales, total scales, serial scales, iQUBE2 scales and program scales
- Six option card slots for A/D scales, digital I/O, serial ports, analog input, analog output and fieldbus interfaces
- Multi-range/interval weighing functions
- Eight digital I/O for control and pulse count
- 100 setpoints, 18 configurable setpoint kinds
- 22 softkeys with 10 user-defined
- Two RS-232 and RS-485 serial ports
- Standard USB, Ethernet TCP/IP and Wi-Fi® Direct
- Five built-in applications with 150 functions for common processes and data tables: vehicle in/out, axle weighing, static checkweighing, counting, filling/dosing and recipe storage



**Built-in
Web Server**



i Series

Programmable



The i Series programmable digital weight indicators are designed to increase productivity in a wide variety of environments and applications. Functional and easy to use, i Series indicators can manage any weighing process and are expandable for seamless system integration.

FEATURES

- Configurable softkeys for an enhanced human machine interface
- Programmable display prompts guide operators through functions
- Backlit, graphical LCD display

Additional features include: programmability, local/remote, configurable print/stream formats, linear 5-point calibration, truck in/out modes and 16 x 350 ohm load cells per A/D card.

920i and 720i have batch and free-running setpoints.

920i



The 920i programmable digital weight indicator automates complex industrial processes without sacrificing user-friendly operation. It features multiple scale channels and accommodates many scale types, including serial scale, total scale and digital diagnostic junction box.

- Custom program can store ID numbers, transactions, formulas, label formats and PLUs
- Customizable display with 10 screens and softkeys
- Expandable with up to 14 option card slots
- Serial communication standard, USB and Ethernet available.

720i



The 720i programmable digital weight indicator is built with high-end features at a mid-level price point. It is available with programmable or batching firmware, and features truck in/out selections and advanced truck weighing features.

- Standard truck in/out selections or advanced truck mode
- Store up to 1,000 truck in/out records
- Eight onboard digital I/O
- One option card slot with eight option cards to choose from

880 Performance[™] Series

Controller



The 880 Performance Series is built for enhanced communication. With two different enclosure types to choose from, Rice Lake's 880 Performance Series exceeds your expectations wherever you need it.

Additional features include: programmability and option slot for fieldbus communications or expansion with additional serial ports or digital I/O.



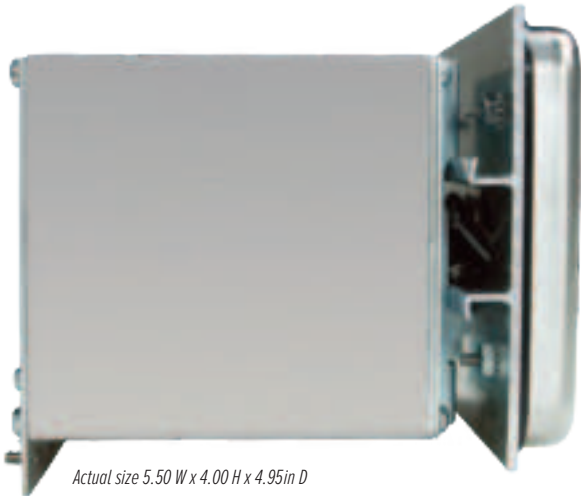
FEATURES

- Onboard USB (device), Ethernet TCP/IP (server and client) and RS-232 or RS-485
- NEMA Type 4X/IP69K enclosure
- Batch engine with 20 setpoints and 12 setpoint types
- Multi-range or multi-interval weighing
- LED display, 0.56 inch, 7-digit, 14-segment
- Four digital I/O channels
- Custom ticket and stream formatting
- Option cards and iRite programmability expand functionality for network protocols, analog output, relays, dual serial output or 24-channel digital I/O
- Panel mount DIN-rail mounted controller or door mounted display (880)
- Universal enclosure with numeric keypad (880 Plus)



Modular Controller Box

Option Slots	EtherNet/IP™	EtherCAT
	ProfiNet®	Analog Output
	ModBus TCP®	4-Channel Relay
	DeviceNet®	24-Channel I/O
	Profibus® DP	Dual Serial Ports



Actual size 5.50 W x 4.00 H x 4.95in D

Synergy Plus

General Purpose Weighing



The 682 Synergy Plus digital weight indicator pairs advanced features with the simple operation of a basic weight indicator.

A 304 stainless steel construction and IP69 rating ensure the 682 can withstand high pressure, high temperature washdown environments. Configurable softkeys and a bright LCD screen create a user-friendly interface.

Connections to external devices and networks are available through a variety of communication options while a built-in web server provides remote monitoring and process control. The 682 also has an integrated truck in/out mode specifically designed for use with vehicle scales.

FEATURES

- Graphical, LCD color display with configurable softkeys
- Numeric, tactile keypad for scale operations
- Formattable tickets
- Battery-backed time and date
- Multiple communication options
- Fieldbus communication using Rice Lake's SCT-2200 modules and RS-485 port
- Four onboard configurable digital I/O points, TTL logic
- Standard RS-232, RS-485, USB, wired/wireless Ethernet TCP/IP, fieldbus and Bluetooth
- Built-in web server



The 680 Synergy Plus combines the powerful features of advanced instrumentation with the easy-to-use functions of basic indicators.

Eight setpoints and four digital I/O allow the 680 to perform basic batching and filling operations. A configurable batch engine allows users to design a multi-step procedure and run it automatically from beginning to end.

With multiple onboard communication options, the 680 provides connection to several devices, including printers and computers.

FEATURES

- Bright seven-digit, seven-segment LED display
- Battery-backed time and date
- Full numeric keypad
- Three serial ports: two RS-232, one full duplex RS-485
- Formattable tickets
- Ethernet TCP/IP
- USB device
- Stainless steel IP69K enclosure



Hostile Environment



The 680HE hostile environment weight indicator is made to withstand the demands of corrosive environments. Ideal for applications with a high concentration of corrosive substances such as chlorine, the 680HE has an FRP enclosure and IP66 rating for reliable protection.

The large display size and local/remote capability give the 680HE the option to be used as a secondary display. Configure the display's color as red or green for clear visibility in any environment. The 680HE has multiple communication options to connect to devices such as printers and PCs.

FEATURES

- Bright six-digit, 2.5 in tall, seven-segment, two-color LED display
- Battery-backed time and date
- Full numeric keypad
- Three serial ports: two RS-232, one full duplex RS-485
- Numeric keyed entry allows for tare and setpoint entry
- Formattable tickets
- Ethernet TCP/IP
- USB device
- IP66 FRP enclosure
- Four onboard configurable digital I/O points, TTL logic

480 Legend®

482 Legend®

General Purpose Weighing



The 480/482 Legend Series is a valuable solution for a variety of basic applications. These indicators are equipped with an ultra-bright LED (480) or backlit LCD (482) display and basic weighing keys. Keyed tare and built-in gross/net modes provide quick flexibility for everyday needs.

An optional lithium ion rechargeable battery allows for portable applications. The Legend Plus models offer a numeric keypad for convenient data entry.

FEATURES

- LED or backlit LCD, 0.8 inch, six-digit, seven-segment
- NEMA Type 4X/IP66 stainless steel enclosure
- Create custom gross, net and setpoint print formats
- Two independent serial ports, RS-232 and 20 mA
- Single scale input for light capacity bench scales to heavy capacity industrial scales
- Local/Remote operation
- Eight setpoint steps for latched or continuous operation
- Optional internal rechargeable battery with power-saving modes
- Optional Ethernet TCP/IP and USB interface
- Optional analog output, 0-10 VDC, 0-20 mA, 4-20 mA

Synergy Synergy

Basic Weighing



The 380X Synergy Series is designed for extreme environments and features a lithium-ion battery provides up to 45 hours of continuous use. Its stainless steel construction and IP69K rating allow it to withstand washdown procedures.

The 380 Synergy Series is ideal for straightforward weighing applications. It has a 304 stainless steel, IP66 rated enclosure. Easy to use, the 380 Synergy is powered by alkaline batteries that can last up to 100 hours of continuous use.

FEATURES

- LCD display
- Two communication ports: RS-232 (three-wire) and USB 2.0
- Configurable print formats
- Five tactile buttons
- Push-button and keyed tare

380X

- Battery powered, internal charger
- IP69K, 304 stainless steel





A reliable and cost-effective solution, the 381 Synergy Series with ABS plastic enclosure is ideal for portable weighing with two battery models available.

The AA battery model provides up to 40 hours of operation and has an IP54 rating. Optional external power supply also available.

The nickel metal hydride (NiMH) battery model provides up to 80 hours of operation with an IP66 rating.

FEATURES

- LCD display provides clear visibility
- Battery powered operation
- Five tactile buttons
- Push-button and keyed tare
- Two communication ports
- Configurable print formats
- ABS enclosure

SCT Series

Signal Conditioning
Transmitter



Signal condition transmitters (SCTs) offer weight data control for PLCs and are more compact than traditional weight indicators. These systems allow for the direct reading and diagnosis of each individual load cell or all system load cells summed as a whole.

Functions are shown in real-time, allowing operators to quickly analyze load cell functions whether operators are viewing remotely or in the physical location. SCTs can manage multiple load cells and Rice Lake Tools software can be implemented. A wide range of fieldbus communications can be connected, along with Bluetooth®, Wi-Fi and radio interfaces. Explore a quick menu for real and theoretical calibrations.

QUICK COMPARISON

SCT-1SX

SCT-2200

SCT-4X

SCT-1100

Analog Signal Sensitivity	A/D Sample Rate	Excitation
Minimum: 0.01 μ V/graduation Recommended: 0.3 μ V/graduation	Up to 4,800 conv/sec.	5 VDC, 16 $\times$ 35
Minimum: 0.03 μ V/graduation Recommended: 0.3 μ V/graduation	One channel A/D Up to 200 conv/sec. auto select	5 VDC, 8 $\times$ 35
Minimum: 0.01 μ V/graduation Recommended: 0.3 μ V/graduation	Up to 2,600 conv/sec. (single channel) Up to 100 conv/sec. (four channel)	5 VDC, up to 1
Minimum: 0.03 μ V/graduation Recommended: 0.3 μ V/graduation	Four channel A/D Up to 200 conv/sec. auto select	5 VDC, 8 $\times$ 35



Remote
Adjustment

The integrated web server allows operators to remotely monitor, calibrate and configure the fieldbus models of SCT-4X, SCT-1SX and SCT-2200.

ion Voltage	Communication / Serial Port	Supported Modules / Protocols*	Web Server Compatibility
, 120 mA 50 ohm load cells	1 Micro USB RS-485	EtherNet/IP™, Modbus/TCP, PROFINET	Yes
, 120 mA 0 ohm load cells	RS-485 RS-232	EtherNet/IP™, DeviceNet™, PROFIBUS® DP, Modbus/TCP, PROFINET, EtherCAT, CANopen, Ethernet TCP/IP, Wi-Fi	Yes
, 120 mA 6 × 350 ohm cells	1 Micro USB RS-485 RS-232	EtherNet/IP™, Modbus/TCP, PROFINET	Yes
, 120 mA 0 ohm load cells	RS-485 RS-232	Modbus/TCP, Ethernet TCP/IP	No

*The following references: EtherNet/IP™, DeviceNet™, PROFIBUS® DP, Modbus™, PROFINET™, EtherCAT™, and CANopen™ are the property of their respective trademark holders.

SCT-4XD

1280 Enterprise™

*Belt Scale Integrator
Solid Flow Metering*



The SCT-4XD is a high-speed integrator designed to manage up to four load cells, with up to 100 conv/sec updates.

Two operating modes, belt or solid flow metering, offer flexibility for different applications.

The SCT-4XD performs seamlessly with self-contained DIN rail integration when an operator HMI is not required.

It can also be paired with the 1280 terminal to enhance usability with a resistive touchscreen and intuitive interface for real-time diagnostics.

FEATURES

SCT-4XD

- Self-contained DIN rail integration when operator HMI is not required
- Manage up to four load cells (one scale)
- Dual encoders and outputs for automatic test weight application
- Remote calibration and configuration
- Micro-USB communication port for configuration, diagnostics and data backup (RL Tools software)

- Removable terminal blocks to simplify wiring in the electrical panel

1280 Enterprise

- Web server and system configuration menus
- Resistive touchscreen with real-time diagnostics
- Fieldbus: EtherNet/IP, PROFINET, Modbus TCP/IP
- Analog output

Performance

Performance

*Intrinsically Safe Controller
Belt Scale Integrator*



*882IS is
available with a
numeric keypad*

The 882IS and 882D are specifically designed for harsh environments. With advanced programming capabilities and I/O options, product dosing and metering can be accurately managed.

FEATURES

882 Series

- LCD, 7-digit display
- Stainless steel IP66
- I/O modules
- Analog outputs

882IS

- FM/cFM
- ATEX/IECEX
- Duplex fiber-optic interface
- Optional FM approved rechargeable battery

882D

- Polled or continuous EtherNet™ TCP/IP
- Speed inputs
- Audit trail tracking
- Option slots: ProfiNet®, DeviceNet®, ProfiBus® DP, ModBus TCP®, EtherCAT

CW-90 CW-90X

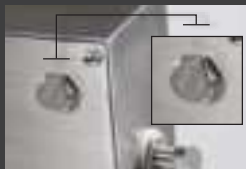
Checkweighing



The CW-90 and CW-90X checkweighing indicators are designed to help speed up your weighing process and reduce production downtime. The configuration menus of the CW-90 and CW-90X are accessible through the front keypad, eliminating the need to open the back of the indicator and expose the device to moisture or contaminants.

FEATURES

- Gore™ PreVent® breather vent inhibits pressure buildup from environmental changes
- LED display, 0.8 in, six-digit, 14-segment
- Over/under light indicators
- Two full duplex serial ports
- Four digital I/O points
- Storage for up to 50 IDs, expandable with WeighVault™
- WeighVault PC software
 - Target weight
 - Over/under weight
 - Tare weight
 - Unit of measure
 - ID number
 - Description
- CW-90X only
 - IP69K stainless steel enclosure
 - Stainless steel tilt knobs
 - Stainless steel Gore breather vent



- Vibrant power cord for easy cleaning
- Meets washdown environment and HACCP requirements
- Piezo keypad withstands knife-point contact and is liquid-resistant

Counterpart®

Counting



Counterpart is a configurable indicator with precise internal resolution. It counts any part, from tiny resistors to heavy engine parts, accurately, quickly and easily. Offered in a choice of dual scale or single scale, the Counterpart can be connected to analog scales or serial scale/balance inputs. Easy to transport throughout a plant and ideal for seasonal or permanent installations, the Counterpart is rugged, lightweight and portable.

FEATURES

- LCD graphical display, transmissive for indoor viewing
- Single or dual channel models with serial scale input
- Four setpoint outputs
- Onboard storage up to 150 IDs, expandable with WeighVault™ PC software option
- Two standard RS-232 ports
- Optional battery power

Shown with scale, printer and scanner.



LaserLT-60 and LaserLT-100

*Remote Displays/
Large Display Weight Indicators*



The LaserLT-60 and LaserLT-100 clearly display weight data up to 150 feet and can also be used as large-display weight indicators. The incoming data format can be interfaced through a set function or with a manual setup. The LaserLTs have adjustable display brightness, stainless steel enclosures and anti-condensation air valves to regulate humidity.

FEATURES

- Available as a 2.4 in (60 mm) or 4 in (100 mm) display
- Six-digit display with high-intensity LEDs
- Auto Learn identifies and interprets the source weight data string for maximum compatibility with a wide range of indicators
- Configuration for format length, weight location, termination character
- Integrated waterproof keypad
- The removable back wall mount bracket has a 15-degree viewing angle
- Anti-condensation air valve regulates humidity and pressure
- Power from 12 to 24VDC, comes with 110-240VAC internal power supply

LASERLIGHT 3

*Remote Displays/
Large Display Weight Indicators*



LaserLight3 has a full-color display for weight, symbols and messages—available as either a remote display or large-display weight indicator.

The vibrant 128 by 32-pixel LED display features a non-glare lens, mirror mode for reverse images, and adjustable intensity for clear visibility day or night. Auto-learning mode enables LaserLight3 to process communication protocols from a wide range of indicators. Mounting options include VESA, flange and pole configurations for application flexibility.

FEATURES

- High-intensity characters, up to 5-inch height, with color commands for background, foreground and text
- Versatile layout choices include 1-line, 2-line and 4-quadrant format
- Dynamic messaging views can scroll, slide or flash
- Software selectable time/date when the displayed weight is at zero
- Durable IP66 weathertight enclosure with Gore-Tex® breather vent to inhibit internal moisture
- Ethernet TCP/IP, RS-232, RS-485, 20 mA passive loop



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