

SCT-4X and SCT-1SX

HIGH-SPEED WEIGHT TRANSMITTERS
WITH INTEGRATED WEBSERVER



RICE LAKE®
WEIGHING SYSTEMS

800-472-6703

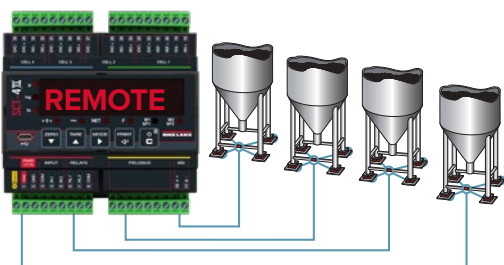
www.ricelake.com

A Leap in Speed

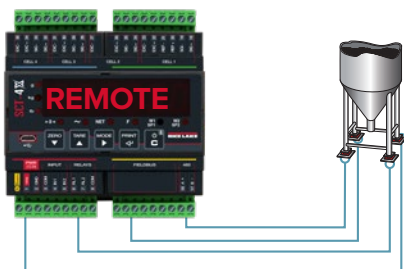
SCT-4X and SCT-1SX digital weight transmitters are high-speed solutions designed for reliable performance in a variety of applications, including belt scales, micro-dosing and multiscale systems. Serial ports, USB and built-in fieldbus make the SCT-4X and SCT-1SX ideal for automated weighing.

SCT-4X

The SCT-4X can manage up to four load cells or four scales and processes up to 2,600 weight readings per second for a single-channel system. When managing four load cells, the SCT-4X acts as a junction box to equalize the signals.



Manage Four Scales



Manage Four Load Cells

SCT-1SX

Process up to 4,800 weight readings per second for a single scale channel. A customizable weight filter supports a reliable and accurate weight signal without sacrificing high speed.



Removable terminal blocks simplify wiring.

Calibration MODES

1

Electronic adjustment without calibration weight

2

Adjustment using calibration weights by keyboard

3

Adjustment using calibration weights via serial port using with Rice Lake Tools

4

Digital equalization mode by keyboard (SCT-4X only)

5

Remote adjustment via Modbus/Fieldbus commands

6

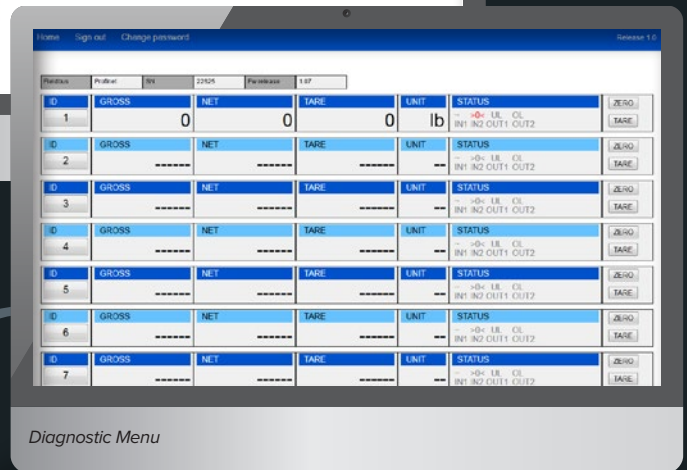
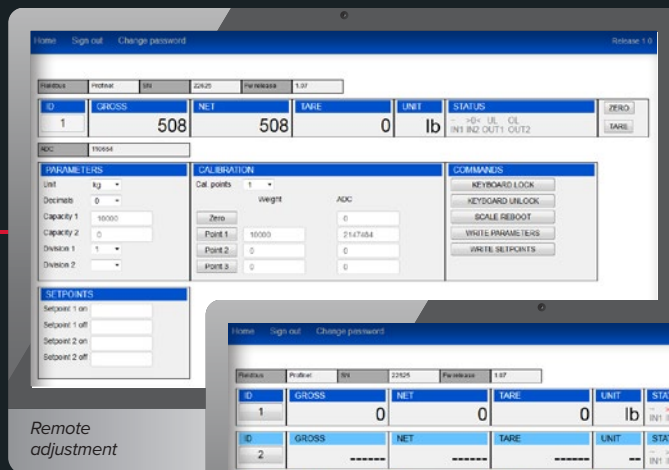
Pre-adjustment (linearization) of the weighing circuit using with Rice Lake Tools

Integrated Webserver

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

Communication Options

- ASCII
- Modbus RTU
- Modbus TCP
- PROFINET
- EtherNet/IP



XSPEED TOOL



Custom Filtering for Maximum Speed

With optional XSPEED Tool software for PCs, operators can customize weighing filters to optimize speed and accuracy for static and in-motion systems. The oscilloscope function allows operators to analyze system diagnostics, and select the best filtering mode.

Ensure System Performance

- Intuitive graphical interface with easy-to-understand charts and graphs
- Straightforward menus for easy navigation and access to data
- Identify mechanical disturbances and vibrations

SCT-4X and SCT-1SX

HIGH-SPEED WEIGHT TRANSMITTERS WITH INTEGRATED WEBSERVER

SPECIFICATIONS

	SCT-4X	SCT-1SX
Power:	12 to 24 VDC	12 to 24 VDC, 5 W
Power Consumption:	5W	5V, 120 mA, 16 × 350 ohm load cells
Analog Signal Input Range:	± 39 mV	± 39 mV
Analog Signal Sensitivity:	0.3 µV/graduation minimum	High resolution 0.01 µV/d Legal for trade 0.3 µV/e
A/D Sample Rate:	24-bit A/D Single-channel up to 2600 conv/sec 4 channels up to 100 conv/sec	Up to 4800 Hz
Resolution		
Internal:	3,000,000 counts	1,500,000 counts
Display:	up to 800,000 Up to 8 linearization points	800,000 Legal-for-trade divisions Up to 10,000e or multi-field 2 × 3,000e
Digital I/O		
Inputs:	Two inputs: 12/24 VDC	Two inputs, configurable: 12/24 VDC
Outputs:	Two outputs: 150 mA 48 VAC/150 mA 60 VDC	Four outputs, configurable: 150 mA 48 VAC/ 150 mA 60 VDC
Communication Ports:	1 Micro-USB port (device) for PC configuration (1) RS-485, (1) RS-232	(1) RS-485, (1) RS-232 1 micro-USB port (device) Serial port update rate: up to 1600 Hz Fieldbus update rate: up to 120 Hz
Analog Output (if equipped):		
	Opt. isolated, 16-bit 0-20mA, 4-20mA (Maximum 350 ohm) 0-5 VDC, 0-10 VDC (Minimum 10,000 ohm)	Opt. isolated, 16-bit 0-20mA, 4-20mA (Maximum 350 ohm) 0-5 VDC, 0-10 VDC (Minimum 10,000 ohm)
Annunciators:	Nine LEDs	Net, center of zero, stability
Display:	Six-digit 0.31 in (8 mm), red LED	Six-digit (8 mm), red LED
Keys/Buttons:	Five tactile keys Zeroing, Tare, Function mode, Manual data printing/sending, ON/Stand-by	Five key, membrane panel Zero (Down), Tare (Up), Mode (Right), Print (Enter), C (On/Off)
Dimensions:	(L × W × H) 4.17 x 2.20 x 4.64 inches (106 x 56 x 118 mm)	(L × W × H) 4.72 x 0.90 x 4.00 in (120 x 23 x 112 mm)
Temperature & Humidity:	Certified: 14 °F to 104 °F (-10 °C to 40 °C) Operating: -4 °F to 140 °F (-20 °C to 60 °C)	For internal use -20°C to 60°C Approved -10°C to 40°C Humidity: 85% non-condensing
Humidity:	80% RH, non-condensing	-
Rating/Material:	NEMA Type 1 plastic pluggable connectors ABS	Enclosure: ABS plastic
Weight:	1 lb (0.5 kg)	-
Warranty:	One-year limited	One-year limited
Approvals:	CE-M EN 45501 (uL upon request)	CE-M EN 45501 (uL upon request)

STANDARD FEATURES

- Integrated web server allows complete diagnostics, calibration and remote configuration
- Real-time warning of any faults or disconnections of the load cell
- Configuration and calibration through Rice Lake Tools, XSpeed software or display navigation
- Power supply circuit with protections against overloads, polarity reversal and short circuits, specific for industrial environments
- Micro USB communication & configuration port accessible from display for quick programming, diagnostics and data backup
- Onboard RS-485 communication port (SCT-1SX analog models only)
- All data and adjustments of each scale are available through integrated fieldbus with up to 120 updates per second
- Removable terminal blocks to simplify wiring in the electrical panel
- Modbus RTU protocol integrated, up to 110 updates per second
- Up to 120 updates per second on fieldbus

SALES AND TECHNICAL ASSISTANCE

RICE LAKE®
WEIGHING SYSTEMS

HEADQUARTERS

230 West Coleman Street
Rice Lake, Wisconsin 54868 - USA
Tel: (715) 234 9171 | Fax: (715) 234 6967
www.ricelake.com



Standard Features

- Load cell status diagnostics
- USB port for quick programming
- Integrated fieldbus and web server for configuration, diagnostics and data backup
- Process up to 4800 weight readings per second. The high speed allows an extremely accurate weight filtering even with weighing being performed in milliseconds.
- Up to 120 updates per second on Fieldbus
- New power supply circuit of the load cells (up to 16) for a better weighing stability
- Power supply circuit with protections against overloads, polarity reversal and short circuits, specific for industrial environments
- Micro-USB communication port for configuration, diagnostics and data backup is available on all versions
- Modbus RTU protocol integrated on all versions, up to 110 updates per second
- Real-time warning of any faults or disconnections of the load cell
- The integrated web server allows full diagnostics, calibration and remote configuration of the weight transmitter from an Ethernet network
- Calibration via theoretical (mV/V), with sample weights, Web server or xSpeed software tool
- Easy configuration with Rice Lake Tools software

Optional xSpeed Software

- Customization of the weighing filter, to maximize the speed and accuracy in static and dynamic applications
- Graphical weighing analysis for the identification of mechanical disturbances and vibrations. Oscilloscope function for system diagnostics and filter optimization.

Part Number/Price

Part #	Description	Est. Weight	Price
216820	SCT-1SX-AN weight transmitter and analog output for DIN rail mount with digital I/O 2 IN and 4 OUT		Consult
216822	SCT-1SX-ETHIP weight transmitter and EtherNet/IP port for DIN rail mount with digital I/O 2 IN and 4 OUT, integrated web server		Consult
216821	SCT-1SX-PRONET weight transmitter and PROFINET port for DIN rail mount with digital I/O 2 IN and 4 OUT, integrated web server		Consult
216823	SCT-1SX-MODTCP weight transmitter and Modbus/TCP port for DIN rail mount with digital I/O 2 IN and 4 OUT, integrated web server		Consult

Options/Accessories

Part #	Description	Est. Weight	Price
88792	12 VDC 1.2 A DIN rail mount power supply	1 lb	Consult
119244	24 VDC 1.3 A DIN rail mount power supply	1 lb	Consult
Consult	Alibi Memory for type-approved communication to PC/PLC (fiscal memory, max 120,000 weighs) built-in real time clock to print the date/time with PCB, screw terminal, plastic box		Consult
Consult	Real time clock for printing/displaying of date and time		Consult

Specifications

Power:

12 to 24 VDC, 5 W

Power Consumption:

70 mA min to 100 mA max

Excitation Voltage:

5V, 120 mA, 16 × 350 ohm load cells

Analog Signal Input Range:

± 39 mV

Analog Signal Sensitivity:

High resolution 0.01 μ V/d

Legal for trade 0.3 μ V/e

A/D Sample Rate:

Up to 4800 Hz

Resolution:

Internal: 1,500,000 counts

Display: 800,000

Legal for Trade divisions

Up to 10,000 e or multi-field 2 × 3,000 e

Digital I/O:

Two inputs, configurable: 12 to 24 VDC

Four outputs, configurable: 150 mA 48 VAC/ 150 mA

60 VDC

Communication Ports:

(1) RS-485, (1) RS-232

1 micro-USB port (device)

Serial port update rate: up to 1600 Hz

Fieldbus update rate: up to 120 Hz

Analog Output (if equipped):

Opto. isolated, 16-bit

0 to 20 mA, 4 to 20 mA (maximum 350 ohm)

0 to 5 VDC, 0 to 10 VDC (minimum 10,000 ohm)

Annunciators:

Net, center of zero, stability

Display:

Six-digit (8 mm), red LED

Keys/Buttons:

Five key, membrane panel

zero (down), tare (up), mode (right), print (enter),

C (on/off)

Dimensions:

(L × W × H)

4.72 × 0.9 × 4.0 in

(120 × 23 × 112 mm)

Temperature:

Certified: 14 °F to 104 °F (-10 °C to 40 °C)

Operating: -4 °F to 140 °F (-20 °C to 60 °C)

Humidity:

85% non-condensing

Rating/Material:

Enclosure: ABS plastic

Warranty:

One-year limited

Approvals:

CE-M EN 45501

2014/30/EU EMC

2014/35/EU LVD

2011/65/EU RoHS

OIML R61 - MID

OIML R76