

Load Cell Central

1-800-LOADCEL



Time Saving Intelligent J-Box

Model: S4J1 Smart Junction Box

Features and benefits

- *Faster, easier, more reliable wiring terminations. WAGO Cage Clamp® terminals provide gas tight and vibration proof connections. Simply strip and clamp the wires, 75% faster than screw-clamp terminals. A real benefit in awkward installations.*
- *Voltage injection signal zero offset adjustment range of ± 25 mV, span trimming via signal shunt resistance, adjustment range approx. 25% of span.*
- *Switched R-Cal resistor with wiring terminals for remote R-Cal operation. When properly utilized insures scale accuracy and aids in trouble-shooting.*
- *Switched load cell isolation, greatly expedites scale installation and trouble-shooting.*
- *Onboard test jacks for signal measurement, accepts and holds standard 0.080" meter probes. No more probe juggling!*
- *Monolithic resistor arrays reduce temperature differences, helping to reduce temperature-induced errors.*
- *Expansion port for daisy-chaining multiple S4J1's in larger applications (requires minor enclosure modification).*
- *All of this is housed in a strong NEMA 4x Stainless Steel enclosure. Cover is secured by four Nylok® integral seal screws. No more lost sealing washers! Five compression cable glands are standard, accepting cables of 8-10mm (0.31"-0.39") diameter. The enclosure's 6"x6"x2" size insures ample working room. Outboard mounting tabs make installation a snap! Total unit weight is less than 2 $\frac{3}{4}$ pounds.*
- *Standard Model: S4J1. Circuit board assembly only Model: S4J1-B
Model: S4J1-EP includes expansion port. Circuit board assembly only with expansion port Model: S4J1-EP-B*

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Smart Junction Box

S4J1 Series

Specifications

Electrical

Load cell isolation resistance: 11,000 ohms each signal leg.

Load cell shunt resistance (Span Trim): min. 2,000 ohms / max. 102,000 ohms each circuit.

Shunt calibration resistance: 4,750,000 ohms typical. Provisioned for remote switching.

Zero offset adjustment range: +/- 20 millivolts minimum.

Zero offset method: Voltage injection.

Span trim range: Approximately 50% of full span.

Span trim method: Signal shunt.

Excitation burden: Approximately 135 microamps.

Load cell signal switching: 9 position dual in line rocker switch (2 switches per circuit, 1 for R-Cal) with gold plated contacts.

Sense provisions: Sense connections at Indicator port only.

Option Port: 5 position header for daisy chaining multiple S4J1's or for signal conditioner interface.

Peripheral device wiring: Via WAGO® spring / lever type quick connect headers.

Mechanical

Length: 5.0 inches

Width: 5.0 inches

Max. Component height: 0.75 inches

Weight: 100 grams (Board Only)

Supplied with a standard NEMA 4x (IP65) 304 stainless steel enclosure, fitted with five PG11 cable glands. Cover is fitted with 4 Nylok® self sealing fasteners. Enclosure dimensions: H: 2.25" W: 6.0" L: 6.0". Unit weight with circuit board 1,250 grams.

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Summing Junction Box *FAQ*

What is a summing junction box (S4J1)? An S4J1 provides a means of wiring all of the components of a modern multiple load cell, electronic analog weigh system. While this could be accomplished by simply twisting the appropriate wires together, this is just not an acceptable method in the vast majority of weighing applications. This method offers no environmental protection for the wiring terminations, poor circuit isolation, not to mention that when a weigh system fails and it will fail, troubleshooting is a nightmare.

What should a summing junction box (S4J1) do? A S4J1 should provide at minimum, mechanical and environmental protection to the system wiring terminations. Additionally it should provide adequate circuit isolation.

Why the Load Cell Central S4J1 Series Smart Junction Box? The LCC-S4J1 was designed with the customer in mind; it provides all of the basic functions of a [4JS1 series](#), but also has many advanced features that will save the customer money. These features allow the scale technician to do a faster, more accurate weigh system installation, and when repair of the system is needed, no other S4J1 offers quicker or more accurate diagnostics. Reduced technician time and increased accuracy translate into one big customer benefit ... **\$\$\$ SAVINGS!**

Features / Benefits at a glance.

Wago® terminal strips / Fast, reliable wiring terminations.

Load cell signal switching / Fast, 100% isolation of each load cell signal from the summing node.

Zero offset adjustment / Allows matching of no-load output for each load cell in the system.

Span trim adjustment / Allows matching of full-load output for each load cell in the system.

R-Cal / Allows for quick system accuracy verification and diagnostics.

R-Cal terminals / Allow for remote articulation of the R-Cal feature. Useful in DCS /PLC systems.

Signal test points / Allows reliable connection of a DMM for installation and service of the system.

Stainless Steel enclosure / Tough, corrosion resistant protection of system wiring terminations to NEMA 4x / IP65 standards