

Weight conversion module CSD-892B series

2023/06/02

Features



High performance and Palmtop size Digital Conversion Module.
Fit and Smart model in FA systems.

- Best for the high speed measuring systems such as automatic weighing machine and the filling machines with 500 times/s of high speed sampling and an external output control.
- Can operate in DC24V power supply.
- 35mm width DIN rail installation.
- Achieved the lightening and minimizing.

Weight : Approx. 260g, Size 72mm x 96mm x 67.4mm (WxHxD)

- Equipped with various kinds of interfaces as a standard.

CSD-892B-73 : CC-Link interface

CSD-892B-74 : RS-232C interface

CSD-892B-76 : RS-422/485 interface

CSD-892B-07-25 : Voltage / Current analog output
and USB interface for easy system configuration.

- Enable the calibration through CC-Link interface, RS-232C interface and RS-422/485 interface..
- Equipped with simple calibration function(Calibration registration is possible with few operating procedures.)
- Special software for PC (not including in the product package) enables you to save, print, read, and write

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set data with ease.

- Products conforming to the CE mark (Conformity Directive EN61326-1:2013)
- Conforms to JIS B 7611-2:2015 Annex C (Environmental test Level H, Level L)

Specification

Specification name	Specification contents
Bridge power supply	DC5 V±0.25V within 60 mA with sensing function
Applicable transducer	Up to 4 pieces of strain gage based transducers are connectable in parallel.
Input sensitivity	0.15 μ V/d or more (d = minimum scale) *0.2 μ V/d or more (When the usage conforms to CE marking.)
Input range	-3.1 mV/V ~ 3.1 mV/V
Zero adjustment range	-2.5 mV/V ~ 2.5 mV/V
Non-linearity	0.01 %F.S.
Temperature coefficient	Zero balance \pm 0.2 μ V/ $^{\circ}$ C, Sensitivity \pm 0.001 5 %F.S./ $^{\circ}$ C (When the calibration is set at 0.15 μ V/d or more for input sensitivity.)
Noise in input signal	\pm 0.2 μ VP-P or less (At the default setting for analog filter, digital filter, or stabilization filter.)
Analog filter	Approx. 4.0 Hz (2 .0Hz ~ 10.0 Hz, it can be switched at intervals of 0.1 Hz.)
A/D sampling speed	500 times/s (Changeable to 250 times/s, 100 times/s or 50 times/s)
A/D internal resolution	24 bit
Main display	Display range : -99 999 ~ 99 999 Display increment : 1 (changeable to 2, 5, 10, 20 or 50) Display unit : FSTN liquid crystal (with amber color LED back light) Over display : [-OL] at minus over, [OL] at plus over. A/D value over display : [-OVF] at minus over, [OVF] at plus over.
Condition display	ZERO, SPAN, mV/V, STABLE, TARE, GROSS, NET, CZ, LOCK, HOLD, ERROR
Display times	4 times/s
Display judgement	OUT 1, 2, 3, 4, or 5
Decimal point display	Changeable to no display, 10 ¹ , 10 ² , 10 ³ or 10 ⁴ .
Display of unit	Changeable to no display, g, kg, t, N, kN, lb, Pa, kPa or MPa.

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External control input signal	<p>3 functions in the following can be arbitrarily selected.</p> <p>OFF, Zero set, Zero clear, Tare, Tare clear, Hold, Net weight / Gross weight</p> <p>*Above are pulse input, and effective once at a pulse width of 50 ms or more.</p> <p>Hold, Display of NET value. (With ON, the net value is displayed when the GROSS value is shown.)</p> <p>* Above are level input, and effective during short input of 50 ms or more.</p>
External control output signal	<p>ZERO, A/Z, A/Z OFF, HOLD, LOCK 5 functions in the following can be arbitrarily selected.</p> <p>OFF, RUN, STABLE, During TARE, Display of GROSS, Display of NET, Center zero, During the hold, ERROR, Abnormal weight, Zero band, OK(S0), Full flow (S1), Midium flow(S2), Dribble flow, OVER, UNDER, FULL</p>
Function of comparator	<p>'Set value : -99 999 ~ 99 999</p> <p>No. of set points : 5 points of S0, S1, S2, S3 and S4</p> <p>Set value of hysteresis data width : 0 to 99 digits</p> <p>Direction of hysteresis : Selectable from 'On delay' or 'Off delay'</p> <p>Conversion times of comparator : Changeable to synchronous with the A/D sampling rate or display rate.)</p>
[CSD-892B-73] CC-Link interface	<p>Version of CC-Link : Ver. 1.10</p> <p>Occupied station No. : Selectable from 1, 2 or 4 stations.</p> <p>Baud rate : Selectable from 156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps or 10Mbps.</p> <p>Communication method : Poling method</p> <p>Synchronous method : Bit synchronous method</p> <p>Transmission route : RS-485 bus</p> <p>Transmission format : HDLC conforming</p> <p>Remote station : 01 ~ 64 when one station is occupied. 01 ~ 63 when two stations are occupied. 01 ~ 61 when four stations are occupied.</p> <p>Connectable units : 64 units at maximum with occupied one station. 32 units at maximum with occupied two stations. 16 units at maximum with occupied four stations.</p> <p>Connectable cable : Shielded twist pair special cable for CC-Link</p> <p>Termination : Attached with resistance externally.</p> <p>Status LED : Display the communication status by four (4) LEDs of [RUN], [ERR], [SD] and [RD].</p>
[CSD-892B-74] RS-232C interface	<p>Baud rate : Selectable from 1 200, 2 400, 4 800, 9 600, 19 200 or 38 400 bps.</p> <p>Data bit length : Selectable from 7 bit or 8 bit.</p> <p>Parity bit : Selectable from none, even or odd.</p> <p>Stop bit : Selectable from 1 bit or 2 bit.</p> <p>Terminator : Selectable from CR+LF or CR.</p> <p>Communication method : Half duplex</p> <p>Synchronizing method : Start - Stop synchronized method</p> <p>Cable length : Within 15 m</p> <p>Data transmission mode : Selectable from Command, Stream or Modbus.</p>
[CSD-892B-76] RS-422/485 interface	<p>Baud rate : Selectable from 1 200, 2 400, 4 800, 9 600, 19 200 or 38 400 bps.</p> <p>Data bit length : Selectable from 7 bit or 8 bit.</p> <p>Parity bit : Selectable from none,even or odd.</p> <p>Stop bit : Selectable from 1 bit or 2 bit.</p> <p>Terminator : Selectable from CR+LF or CR</p> <p>Communication method : Half duplex</p> <p>Synchronizing method : Start - Stop synchronized method</p> <p>Cable length : Approx.1 km</p> <p>Adoress : select one from 0 ~ 31.</p> <p>Numbers of connectable units : 32 units at the maximum (RS-422 : 10 units)</p> <p>Termination : Built-in (Selects the presence by the connection of terminal board.)</p> <p>Data transmission mode : Selectable from Command, Stream or Modbus.</p> <p>Changeover of RS-422 and RS-485 : Set by function</p>
	<p>Output : Current 4 mA ~ 20 mA, Voltage DC ±10 V</p>

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[CSD-892B-07-25] Voltage / Current interface	Load resistance : Current 510 ohm or less, Voltage : 5 k-ohm or more Resolution : Approx. 1/12 000 or more, Non-linearity : 0.02 %F.S. Over range : When [-OL] is displayed; Current Approx. DC2.4 mA, Voltage Approx. DC -11 V When [OL] is displayed; Current Approx. DC21.4 mA, Voltage Approx. DC11 V Output frequency : 50 times/s, 100 times/s, 250 times/s, 500 times/s (Synchronizing to sampling rate) Temperature effect : Current Zero ± 0.005 %F.S./ $^{\circ}\text{C}$, Sensitivity ± 0.01 %F.S./ $^{\circ}\text{C}$ Voltage Zero ± 0.015 %F.S./ $^{\circ}\text{C}$, Sensitivity ± 0.015 %F.S./ $^{\circ}\text{C}$
USB interface	Conforms to USB 2.0 (Can also use with the standard of USB 1.1) Connector : mini USB B type (female). *) Please use the USB interface after installing a special driver in the host.
Various function	<ul style="list-style-type: none"> Stabilize the fluctuation of zero point in a constant condition. Data is stabilized through the calculation process with the software in CPU. The digital filter is reinforced and stabilized only when the width of the change of the load is constant. Execute the compensation of the non-linearity by the max. 3 points or less.
Operating temp. /humidity range	Temperature -10 $^{\circ}\text{C}$ ~ 50 $^{\circ}\text{C}$, Humidity 85 %RH or less (Non condensing)
Power supply voltage	24 VDC (Permissible variable range : 20.4 VDC ~ 27.6 VDC)
Power consumption	Approx. 2.4 W (at 24 VDC, Representative value of CSD-892B series)
Outline dimensions (WxHxD)	72 mm x 96 mm x 67.4mm (excludes protruding parts)
Weight	Approx. 260 g

Start guide

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Options

[PC Software for communication with Digital Indicator](#)

[PC Software for Communication with Digital Indicator](#)

Latest News

2023.03.24 New Product [\[New Product\]Digital Indicator "CSD-701C" is released ! Great improvement on Temperature Characteristics and Non-linearity!](#)

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