

Sensor Signal Converter S²C-3

Features and applications

- Precision temperature sensor signal converter
- Inputs configurable as 2, 3 or 4-wire resistance measurement
- Calibrated temperature measurement configurable as PT100 or PT 1000
- USB powered
- Temperature measurement range from -200°C to 850°C
- Absolute accuracy of less than 0.025%
- Up to 4 measurements per second
- Desktop device with serial interface (USB / RS232)
- Galvanic isolation between PC and sensors
- Free Dataloggersoftware "S²C-Datalogging"
- Configurable unit in Celsius or Fahrenheit, IR-Filter first order, Peak (OL) Detection, Resettable Polyfuse
- Plug and Play

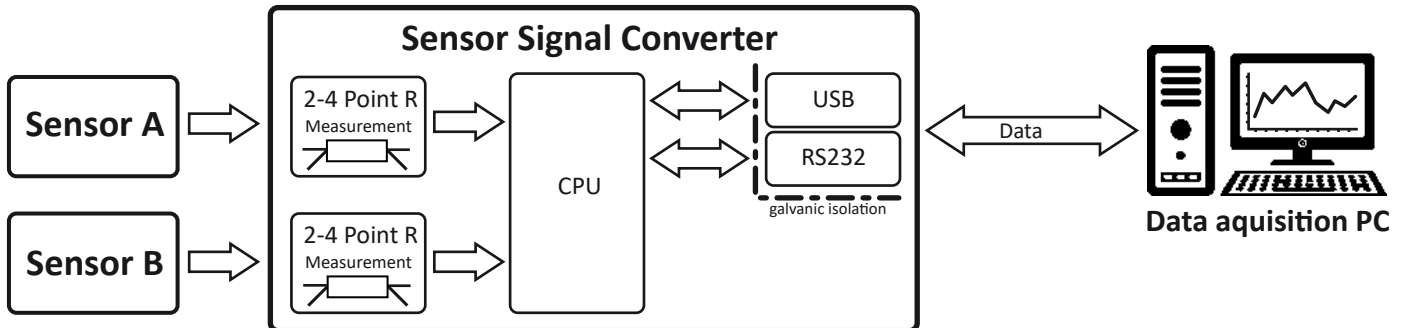


The **Sensor Signal Converter S²C-3** enables tool-free evaluation of any two PT100 or PT1000 temperature sensors. Thanks to its minimal measurement tolerances, it is the ideal solution for data logging in temperature-critical applications. With its straightforward connection and compact desktop design, the device is perfectly suited for flexible test setups in the laboratory. The S2C-3 offers exceptional flexibility through its two high-precision inputs with a wide measurement range, as well as convenient power supply via USB. The integrated RS232 interface also ensures reliable remote control over longer distances. The system is complemented by free data acquisition software that enables precise long-term measurements over several hours.

Technical Specifications

Supply voltage	5V over USB
Input Current	< 30mA
Channels	2 Channels
Measurement resolution	149.0nV/Bit
Resolution ADC	24 Bit
Conversion time of all channels	250ms
Measurements per seconds	up to 4
Filter	Moving average with up to 20 measured values
Accuracy	-200 bis 600°C: 0.020% (±0.1°C) 600 bis 850°C: 0.025% (±0.2°C)
I/O Ports	USB-B (2.0), RS232 (D-Sub 9)
Galvanic isolation PC <-> Sensor	1kV
Baudrate	up to 115200 baud
Dimensions [mm] (L x W x H)	120 x 78 x 27
Case material	Black anodized aluminium
Weight	320g
Environmental conditions (operation)	0 - 65°C, at < 60% rH, non condensing
Environmental conditions (Storage / Transport)	-20 - 70°C, at < 60% rH, non condensing
IP protection class	IP40

Block diagram



Scope of delivery

- Sensor Signal Converter
- Quick start guide
- User Manual
- Download-Link of S2C Dataloggingsoftware, Light version, Part no. 18.30100.000
- Certified driver download link

Available documents

- Datasheet
- User Manual
- Quick start guide
- Calibration certificate (optional)

Accessories

- Cable USB-A to USB-B, 1.8m (Part no. 18.20005.001)
- Cable RS232 9 Pol, 3m (Part no. 18.20006.001)
- Connector for Sensor-Port
- Datalogging-Software

Conformity / Certifications

- CE
- EMV 2014/30/EU
- NSRL 2014/35/EU
- IEC 610004-4-4:2012
- IEC 61000-4-6
- IEC 61326-1:2012
- IEC 61326-2-3:2012
- IEC 61326-2-5

EMV emissions

- EN55022
- EN55032

Device variants and accessories

■ Device variants:

Part no.:	Description:
18.0350.5.0001	S ² C-3 with 2x Weidmüller Spring clamp terminal for PT100 / PT1000
18.0350.5.0002	S ² C-3 with 2x Lemo 1 connector for PT100 / PT1000



Version with Weidmüller spring clamp terminal
18.0350.5.0001



Version with Lemo 1 connector
18.0350.5.0002

■ Accessories:

Part no.:	Description:	Supplied with 18.0350.5.0002	Supplied with 18.0350.5.0001
1ECS00001	USB Power Supply 5V/3W	/	/
1EUS00001	Cable USB A – USB B 1.8m	/	/
18.20006.001	Cable RS232 9 pin 3m		
18.30003.001	Spring clamp terminal with lever	/ 2 pcs.	
18.30002.001	Spring clamp terminal with screws		
20.30002.000	LEMO 1 Stecker 4 pin		
18.30100.000	Datalogging-Software Light Version	Free Download	Free Download
18.30101.000	Datalogging-Software Full Version		
	Quick Start Guide	/	/
	User Manual	/	/



Spring clamp terminal with screws
18.30002.001



Spring clamp terminal with lever
18.30003.001



Lemo 1 Connector 4 pin
20.30002.000

S²C-DataLogging Software

Features and applications

- Temperature values in degrees Celsius or Fahrenheit
- Y-axis unit manually adjustable
- Scale configurable
- Up to 4 decimal places
- Measurement-Log exportable as *.csv or *.xlsx
- Softwaredriver for custom applications
- Certified USB drivers
- Compatible with Windows
- Free Light-Version for maximum one Converter
- Up to four simultaneously devices with the full version



Use-Cases

Graph View:

The graph view shows measured values over time and allows the simultaneous visualization of up to 16 channels. This makes it possible to reliably analyze and compare even complex measurement profiles.

Numerical View:

The numerical view offers the flexibility to show up to six selected process values simultaneously. Thanks to the clear numerical presentation, you can keep all relevant data precisely in view at all times, even in demanding monitoring situations.

Data acquisition:

The software enables seamless documentation of all process values in a log file. For structured data evaluation, a separate file is created as standard for each test or batch, ensuring clear archiving and full traceability.

Device operation:

For each connected device, a dedicated dialog is available for intuitive operation and configuration. This ensures precise control and individual customization of all sensor signal converters directly via the userfriendly interface.

Creation of laboratory logs:

For seamless test documentation, a wide range of documentation tools is available: while you can record manual notes precisely using text markers, the software automatically logs key events. Such as starting and stopping functions into a journal.

Simple evaluation of measurement data:

The graphical view allows you to flexibly scale and shift measured values and analyze them precisely using cursors. For documentation purposes, the data can also be exported directly as a screen graphic or printed.