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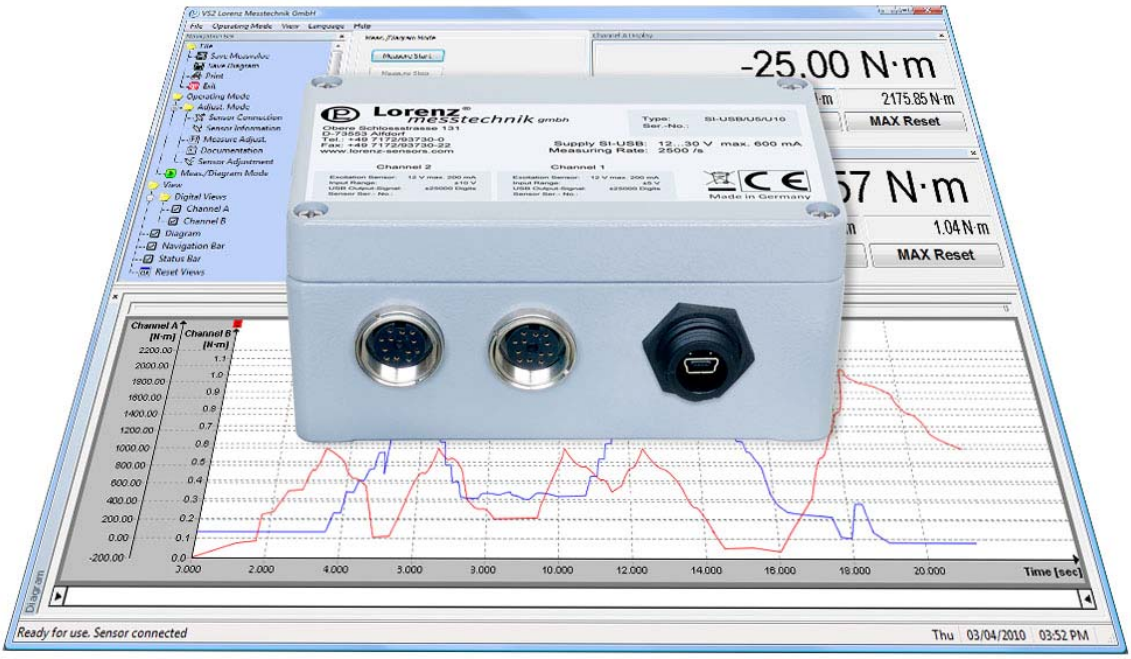
2 Channel USB-Sensor-Interface with Configuration and Evaluation Software

SI-USB

- Fast Measurement of up to 2500/s
- Up to 16 Bit Resolution
- Full Synchronism of both Measuring Channels
- Input Ranges for mV, V and mA
- Input Ranges combinable with each other
- Adjustment and Control Trigger via Software



DESCRIPTION

The sensor interface SI-USB is connected between the sensor and the PC. By this, analog sensor signals with up to 16 bit resolution are digitized. Highly-dynamic are realizable with a measuring rate of 2500 measurements/sec. The measured values are transferred to a PC via the USB interface and are visualized through the software. If a control signal is integrated in the sensor, an automatic adjustment can be carried out, which is checkable at any time (monitoring of the measuring chain).

Following sensor output signals can be digitally converted and conveniently displayed and evaluated by the freely available corresponding software:

USB/SG	Excitation 5 V ≤20 mA Input range ±3 mV/V
USB/U5/U10	Excitation 12 V ≤200 mA Input range ±5 V/±10 V
USB/I20	Excitation 12 V ≤200 mA Input range 0/4...20 mA

Many commercially available sensors such as force-, torque-, displacement- or pressure sensors can be used with the SI-USB. The sensor parameters can be stored in the SI-USB. After a one-time parameterization each sensor is automatically recognized by the software.

The voltage supply of the SI-USB occurs via an external power supply unit. Through the measuring amplifier, the connected sensors are being directly supplied with voltage directly, whereby a separate voltage of the sensors has been omitted.

Unwanted frequencies are filtered with the second-order low-pass filter. Here, a differentiation between 4 limit frequencies is possible. The connection to LabVIEW or the integration into internal programs is possible with the freely available driver package.

TECHNICAL DATA

Type	**SI-USB/SG/SG**	**SI-USB/U5/U5**	**SI-USB/U10/U10**	**SI-USB/I20/I20**	**SI-USB/SG/U5**
Art.-No.	111963	111964	113022	111966	111973
Input Range	2*SG	2*±5 V	2*±10 V	2*0/4…20 mA	SG; ±5 V
Type	**SI-USB/SG/U10**	**SI-USB/SG/I20**	**SI-USB/U5/U10**	**SI-USB/U5/I20**	**SI-USB/U10/I20**
Art.-No.	113021	111974	113023	111975	113024
Input Range	SG; ±10 V	SG; 0/4…20 mA	±5 V; ±10 V	±5 V; 0/4...20 mA	±10 V; 0/4...20 mA

Evaluation Side

Supply Power Supply[1] Output Power Supply Supply voltage SI-USB	Voltage	100…240 V AC 24 V DC 1.25 A 12...30 V DC ≤600 mA
Excitation Sensor	SG U5/U10/I20	5 V ≤20 mA 12 V ≤200 mA
Measured Values	SG U5/U10 I20	±3 mV/V = ±30000 Digits ±5 V/±10 V = ±25000 Digits 0/4…20 mA = 0/4000…20000 Digits
Resolution	SG U5 U10 I20	1 mV/V = 10000 Digits 1 V = 5000 Digits 1 V = 2500 Digits 1mA = 1000 Digits
Zero Point	SG/U5/U10/I20	0 Digits
Output Format		16 Bit Signed Int.
Input Resistance	SG/U5/U10 I20 burden	>1 MΩ 62 Ω
Second-order low-pass filter	Hz	30/300/1000/3000
Measuring Rate		max. 2500 Meas./s
Temperature Drift		4 Bit/10 K
Linearity Error		±32 Digits
Accuracy		±32 Digits

Miscellaneous

Cable Length SI-USB-Evaluation[2]		3 m
Cable Length SI-USB-Sensor		1 m (max. 3 m)
Nominal Temperature Range		+10…+40 °C
Service Temperature Range		0...+50 °C
Storage Temperature Range		-10...+70 °C
Dimensions (L x B x H)		125 x 80 x 57 mm
Weight		480 g
Level of Protection		IP40
Electrical connection	SG U5/U10/I20 USB	Female socket 6-pin Female socket 12-pin PX0446 IP68 B Mini USB

Art.-No.	**Option/Accessory**	**Description**
110564	mV/V	mV/V adjusted sensitivity
10302	KS6	Male cable connector 6-pin
10303	KS12	Male cable connector 12-pin

[1] Power Supply in scope of delivery.
[2] Cable SI-USB-Evaluation in scope of delivery.

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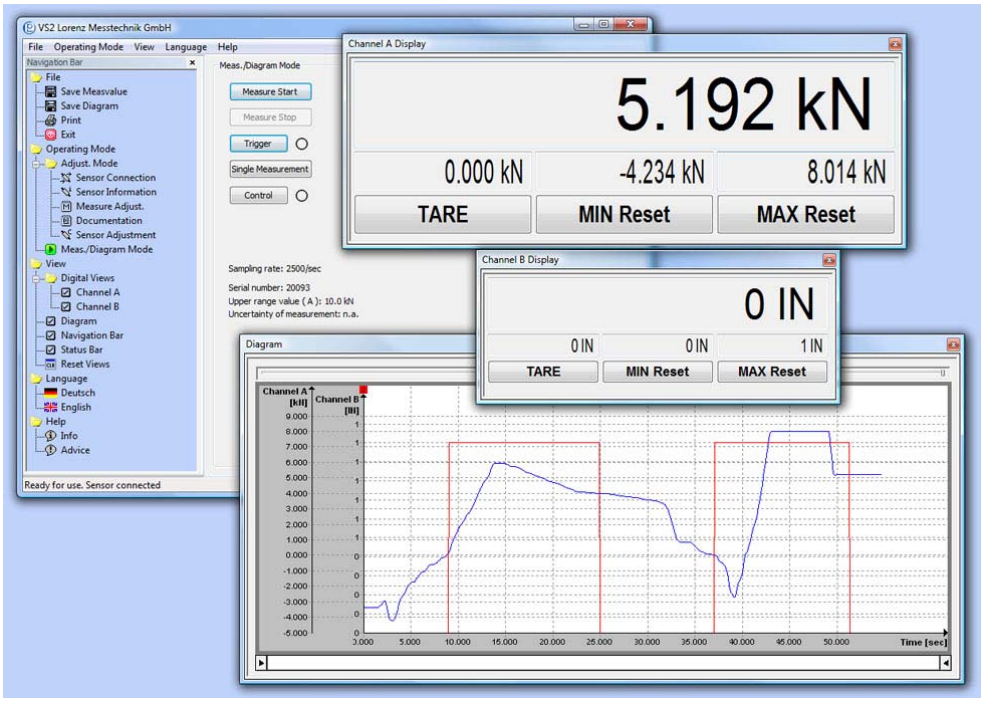
Configuration and Evaluation Software

VS2

- Comfortable Configuration and Evaluation Software
- Graphical Presentation of up to 2 Input Channels max.
- Automatic Scaling of Y-axis
- Simultaneous Storage of up to 2 Input Channels
- Automatic Storage Function of the Measured Values as CSV- and BMP-File



DESCRIPTION

Configuration and evaluation software for analysis and graphical presentation on a PC.

The software allows direct read-in of measured data into a text file in CSV-Format through the USB-Port of a PC. This enables further analyses with a commercially available spreadsheet program at any time.

TECHNICAL DATA

Type	**VS2**[3]
Interface	USB
Protocol	Lorenz standard protocol
System requirements	Windows '00/ '03/ '08/ XP/ Vista 32/64/ 7 32/64®[4] Single-Core ex 2.0 GHz (without diagram) Dual-Core ex 1.8 GHz (with diagram)

Conversion in physical variables	✓
Simultaneous measurement	Up to 2 input channels
Graphical presentation of the measured variables	✓
Automatic or manual storage in a CSV- and BMP-file	✓
Print-out of the diagram with date and definable headline	✓
Scaling function of the input variable to any display value with unit	✓
Resettable minimum value memory for any measured variable	✓
Resettable maximum value memory for any measured variable	✓
Variable average determination	✓
Tare for each measured value	✓

[3] Software/driver download: www.lorenz-sensors.com.
[4] Windows® is either a registered brand or brand of the Microsoft Corporation in the USA and/or other countries.
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