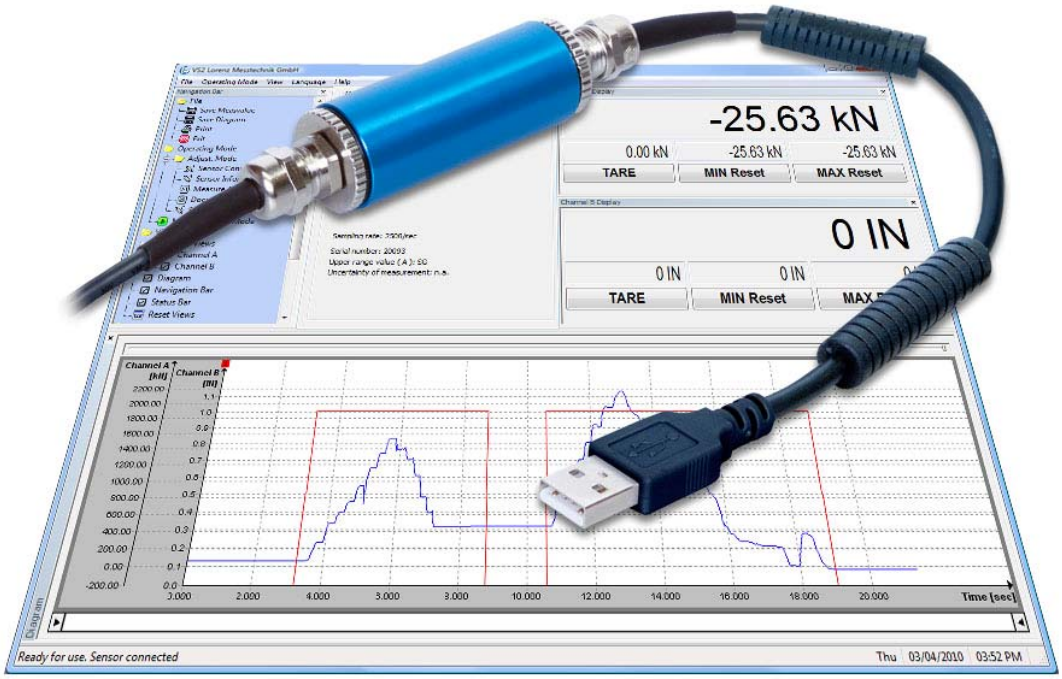
LORENZ MESSTECHNIK GmbH Obere Schloßstr.131 D-73553 Alfdorf ☎ +49 7172/93730-0 Fax +49 7172/93730-22

USB-Sensor-Interface with Configuration and Evaluation Software **LCV-USB2**

- Supply of the Measuring System via PC USB Port
- Fast Measurement of up to 5000 Measurements/s
- Up to 16 bit Resolution
- Input Ranges for mV, V and mA
- Integrable in large Sensors as Board
- Adjustment and Control Signal Switch via Software
- High Level of Protection IP67



DESCRIPTION

The sensor interface LCV-USB2 is connected between sensor and PC. By this, analog sensor signals are digitized with up to 16 bit resolution. By the measuring rate of up to 5000 measurements per second, high dynamic measuring tasks are realizable. The measured values are transferred to the PC via the USB interface and are visualized by 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 output signals can be digitally converted and comfortably be displayed and evaluated by the corresponding freely available evaluation software.

USB2/SG	Excitation 4 V ≤20 mA Input Range ±3 mV/V
USB2/U5/U10	Excitation 12 V ≤80 mA Input Range ±5 V/±10 V
USB2/I20	Excitation 12 V ≤80 mA Input Range 0/4…20 mA (Option 10±10 mA/12±8 mA)

Many commercially available sensors e.g. force, torque, displacement or pressure sensors can be used with the LCV-USB2. The sensor parameters can be stored in the LCV-USB2. After a one-time parameterization, each sensor is recognized automatically by the software. Thus, the measurement can be immediately started after the connection of the sensor through the USB-connector.

The robust metal housing with high protection level allows fast fixation by screw-clamps or cable ties. The board module can also be integrated in larger sensor.
The connection to LabVIEW and/or integration in-house programs is possible with the freely available driver package.

TECHNICAL DATA

Type	LCV-USB2/SG	LCV-USB2/U5	LCV-USB2/U10	LCV-USB2/I20
Art.-No.	112311	112312	112705	112313
Input Range	±3 mV/V	±5 V	±10 V	0/4…20 mA

Evaluation Side

Supply	from USB	4…6 V DC ≤350 mA
Excitation Sensor	SG U5/U10/I20	4 V ≤20 mA 12 V ≤80 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 1 mA = 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
Measuring Rate		max. 5000 Meas./s
Temperature Drift		4 Bit/10 K
Linearity Error		±32 Digits
Accuracy		±32 Digits

Miscellaneous

Cable Length LCV-USB2-Evaluation	2 m
Cable Length LCV-USB2-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 (Ø x L)	25 x 115 mm (incl. screw joint)
Weight	250 g
Level of Protection	IP67

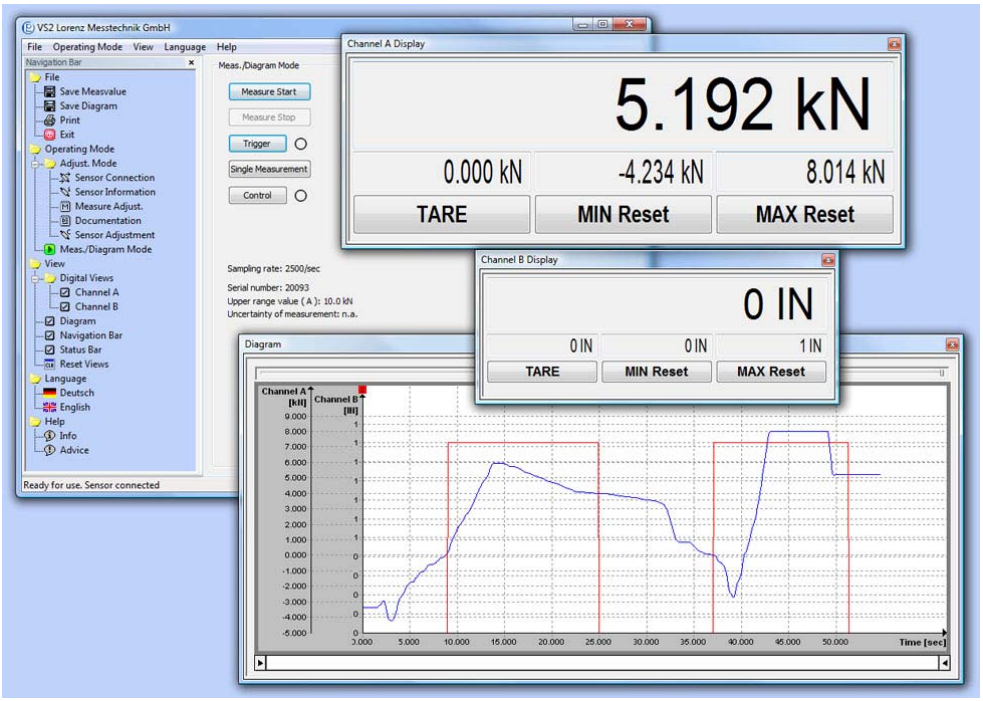
Art.-No.	Options	Description
110564	mV/V	mV/V adjusted sensitivity
110120	LCV-USB2/TR-EXT	Digital input at channel B

LORENZ MESSTECHNIK GmbH Obere Schloßstr.131 D-73553 Alfdorf ☎ +49 7172/93730-0 Fax +49 7172/93730-22

Configuration and Evaluation Software

VS2

- Comfortable Configuration and Evaluation Software
- Graphical Presentation of up to 2 Input Channels[1] max.
- Automatic Scaling of Y-axis
- Simultaneous Storage of up to 2 Input Channels[1]
- 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**[2]
Interface	USB
Protocol	Lorenz standard protocol
System requirements	Windows '00/ '03/ '08/ XP/ Vista 32/64/ 7 32/64®[3] 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	✓

[1] LCV-USB2 with option "LCV-USB2/TR-EXT" has two input channels.
[2] Software/driver download: www.lorenz-sensors.com.
[3] Windows® is either a registered brand or brand of the Microsoft Corporation in the USA and/or other countries.