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/s, 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 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 sensors.

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

Supply	from USB	4…6 V DC ≤350 mA
Excitation	SG U5/U10 I20	4 V ≤20 mA 12 V ≤80 mA 12 V ≤80 mA
Measured Values	SG U5/U10 I20	±3 mV/V = ±30,000 digits ±5 V/±10 V = ±25,000 digits 0…20 mA = 0…+20,000 digits
Resolution	SG U5 U10 I20	1 mV/V = 10,000 digits 1 V = 5000 digits 1 V = 2500 digits 1 mA = 1000 digits
Zero Point	SG/U5/U10/I20	0 digits
Output Format		16bit signed int.
Input Resistance	SG U5/U10 I20 burden	>1 MΩ >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	1m (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)
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

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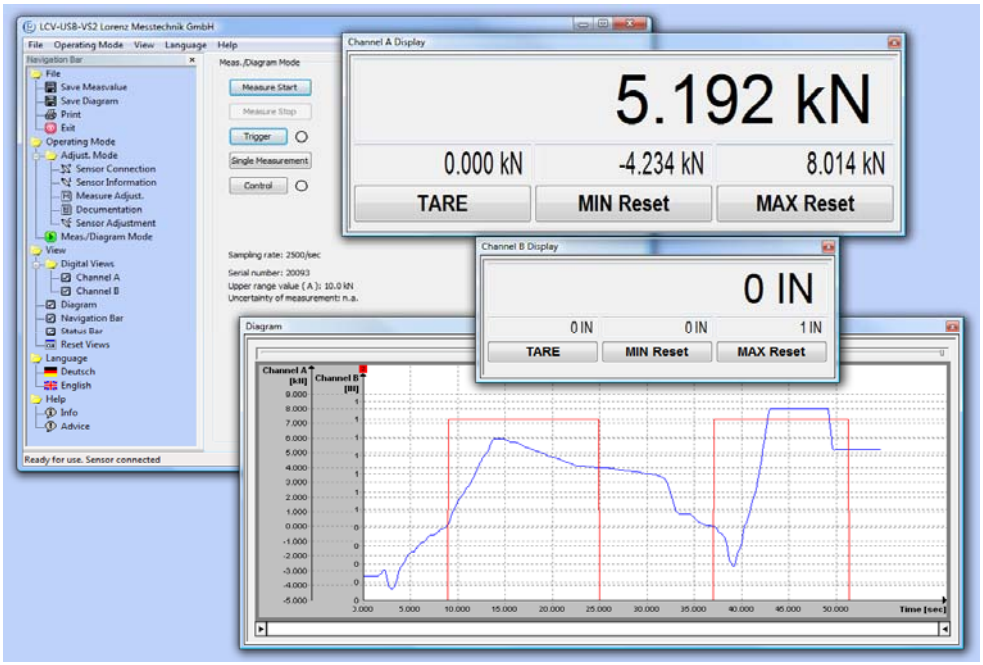
Configuration and Evaluation Software

LCV-USB-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 Values[1]
- Automatic Storage Function of the Measured Values as CSV- and BMP-File



DESCRIPTION

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

The software for the LCV-USB2 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	**LCV-USB-VS2**[2][3][4]
Interface	USB (for operation with LCV-USB2)
Protocol	Lorenz standard protocol
System requirements	ex Win2000®[5] Single-Core ex 2.0 GHz (without diagram) Dual-Core ex 1.8 GHz (with diagram)

Conversion in physical variables	✓
Simultaneous measurement	1 Sensor (optional add. 1 digital input)
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] The corresponding software and driver are downloadable from www.lorenz-sensors.com in column "Software".
[3] Support LCV-USB2.
[4] Does not support torque sensor type DR-3000.
[5] Windows® is either a registered brand or brand of the Microsoft Corporation in the USA and/or other countries.
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