USB to D-Sub Control Interface for FEMTO Amplifiers

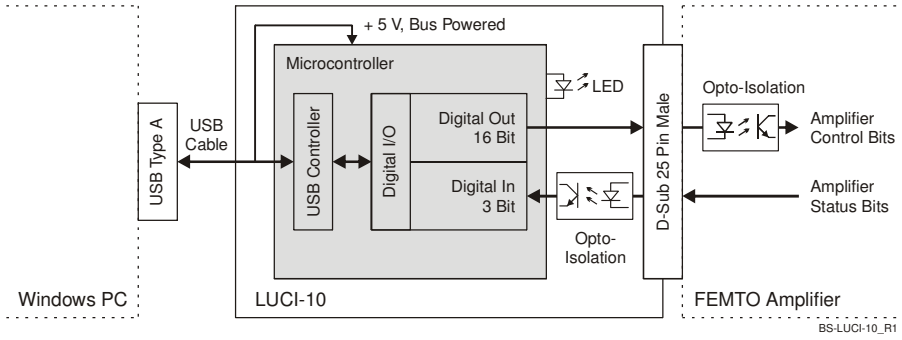
Features

- **Compact digital I/O interface for USB remote control of FEMTO amplifiers**
- **Supports opto-isolation of amplifier signal path from PC USB port**
- **16 digital outputs, 3 opto-isolated digital inputs**
- **Bus-powered operation**
- **System driver, application software and VI's for use with LabVIEW™ included**

Applications

- **Remote control of FEMTO® amplifiers and photoreceivers directly from a PC**

Block Diagram



Hardware Specifications

General Characteristics

Bus interface	USB 2.0 (full-speed)
Digital I/O channels	16 output lines 3 opto-isolated input lines
Supply	PC USB port, +5 V, typ. 100 mA, bus-powered (no auxiliary power supply required)
Connectors	USB type A D-Sub, 25 pin, male
Cable	AWG 28, length 1.8 m

Output

Number of channels	16 output lines, supporting opto-isolation inside FEMTO amplifiers and photoreceivers
Output voltage range	LOW bit: 0 … +0.5 V (@ 0 … 2 mA output current) HIGH bit: +4 … +5.5 V (@ 0 … 2 mA output current)
Max. current	6 mA per channel
Writing rate	max. 600 operations per second

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Input	Number of channels	3 opto-isolated input lines
	Input voltage range	LOW bit: –20 … +1.5 V HIGH bit: +3 … +20 V
	Switching current	1 mA typ. @ 5 V
	Reading rate	max. 300 operations per second
Power Supply	USB port, bus powered	+4.5 … +5.5 V DC
	Active current	max. 200 mA / typ. 100 mA
	Suspend current	<0.5 mA (standby mode of Windows®)
Case	D-Sub case	metal hood (EMI/RFI shielding), with jack screws
	Weight	130 g (0.3 lb.)
	Material	zinc die-cast, nickel plated
Temperature Range	Storage temperature	–40 … +100 °C
	Operating temperature	0 … +50 °C
Absolute Maximum Ratings	Max. voltage at input	±30 V
	Max. short-circuit output current	±20 mA per channel, 200 mA total
	Max. isolation voltage	±60 V (input ground to output ground)
Connectors	Device port	D-Sub, 25 pin, male Pin 1: NC Pin 2: NC Pin 3: GND (IN) Pin 4: NC Pin 5: Digital IN Pin 6: Digital IN Pin 7: Digital IN Pin 8: NC Pin 9: GND (OUT) Pin 10: Digital OUT Low Byte, LSB Pin 11: Digital OUT Low Byte Pin 12: Digital OUT Low Byte Pin 13: Digital OUT Low Byte Pin 14: Digital OUT Low Byte Pin 15: Digital OUT Low Byte Pin 16: Digital OUT Low Byte Pin 17: Digital OUT Low Byte, MSB Pin 18: Digital OUT High Byte, LSB Pin 19: Digital OUT High Byte Pin 20: Digital OUT High Byte Pin 21: Digital OUT High Byte Pin 22: Digital OUT High Byte Pin 23: Digital OUT High Byte Pin 24: Digital OUT High Byte Pin 25: Digital OUT High Byte, MSB
	PC port	USB type A

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Software Specifications

Software (included on CD)

Device driver	dynamic link library (DLL) for integration in Microsoft Windows® 32 bit & 64 bit operating system for use with C/C++, LabWindows™ /CVI™ or LabVIEW™
Application software	GUI (graphical user interface) programs for simple remote control of FEMTO amplifiers and photoreceivers provided as executable programs and LabVIEW projects
LabVIEW programs	sample programs to control and test the LUCI-10 hardware (including front panel and block diagram)
LabVIEW library	special VI toolkit for integration in LabVIEW 32 bit & 64 bit development environment

Note: A National Instruments LabVIEW™ license is not included in this software package. For use of the GUI application programs the LabVIEW Run-Time Engine is required. If not detected on the host PC during the installation process the LabVIEW Run-Time Engine will be installed automatically from the CD.

System Requirements

Operating system	Microsoft Windows XP with Service Pack 3, or higher
Processor	Intel Pentium III or AMD Athlon, or better
System memory	1 GB of RAM, or more
Hard disk space	about 5 GB
Interface port	USB 1.1 or USB 2.0
Supported FEMTO modules	any standard FEMTO amplifier or photoreceiver with 25 pin D-Sub socket, except model HLVA-100

Optional Requirements

For development of own application programs an additional development environment like LabVIEW Version 2012 (or higher) or C/C++ is required.

Legal Notice

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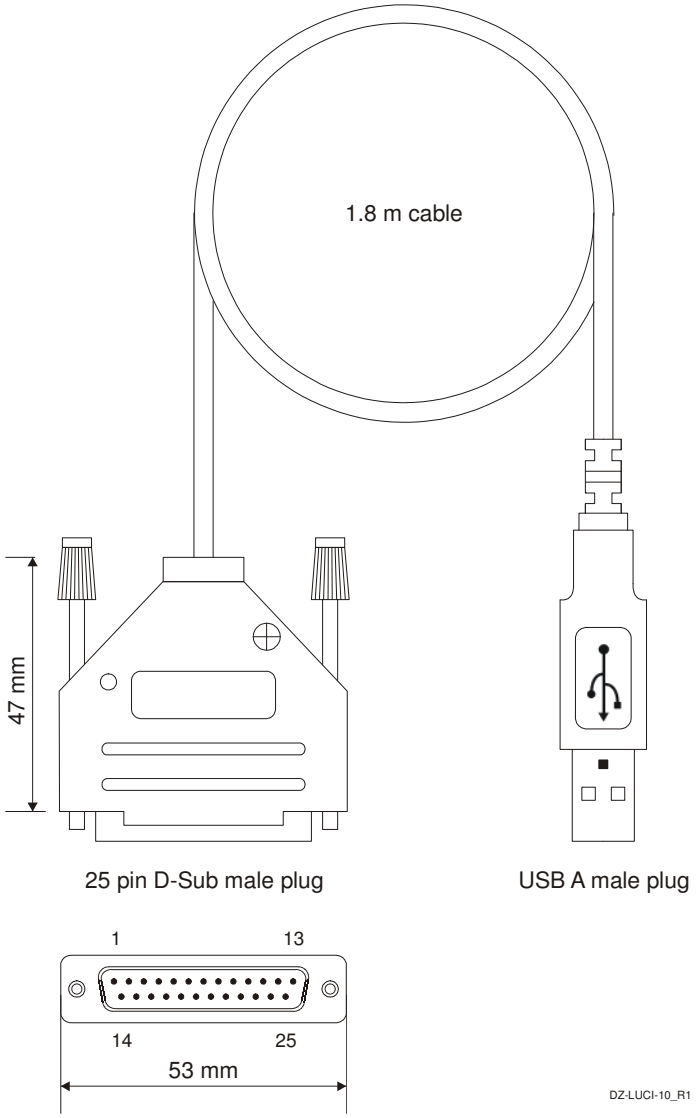
Dimensions



FEMTO Messtechnik GmbH
Klosterstr. 64
10179 Berlin · Germany
Phone: +49 30 280 4711-0
Fax: +49 30 280 4711-11
Email: info@femto.de
www.femto.de