

Product Datasheet - Technical Specifications



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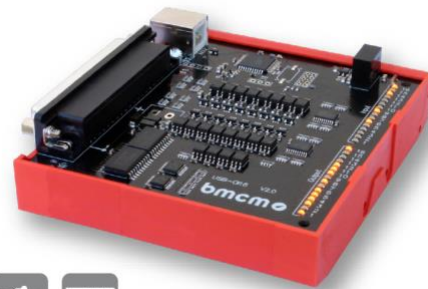
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are only a few applications the two 32-bit counters (incremental decoders) of the USB-OI16 can be used for. The integrated pulse time measurement function produces precise results especially in the low-frequency range.

Get Connected.

The digital channels of the application-specific hardware (sensor, machine, etc.) are connected at a 37-pin D-Sub female.

Plug & Play.

The connection to the PC is realized via USB. The USB-OI16 provides all typical USB features (e.g. Plug&Play, Hot-Plug). Up to 127 devices can be connected and installed during operation.

Self-Powered.

The device is internally supplied with 5V provided by the USB interface. This reduces cabling efforts to a minimum and makes mobile measurements a lot easier. An external supply unit can be connected for higher output switching voltages at the digital outputs (7..32V).

Open for Everyone.

Widely supported: The USB-OI16 can be used under Windows® XP/7/8/10 as well as under Mac OS X, Free BSD, and Linux. The software for installation and programming is included for free.

NextView®. Try for Free.

The device is supported by NextView®, the software for data acquisition and analysis. A fully functional 14-day trial is included with delivery to directly test the functionality of the USB-OI16.

■ USB-OI16

Isolated Digital I/O Interface (USB)

32 Channels. Monitor & Control. Galvanically Isolated.

Record and output digital signals electrically isolated. The USB-OI16 features two 16-bit ports with 16 digital inputs and outputs each. Besides that, up to 2 counters or incremental encoders can be connected at the first digital inputs.

16 Optocoupler Inputs.

16 Semiconductor Switches.

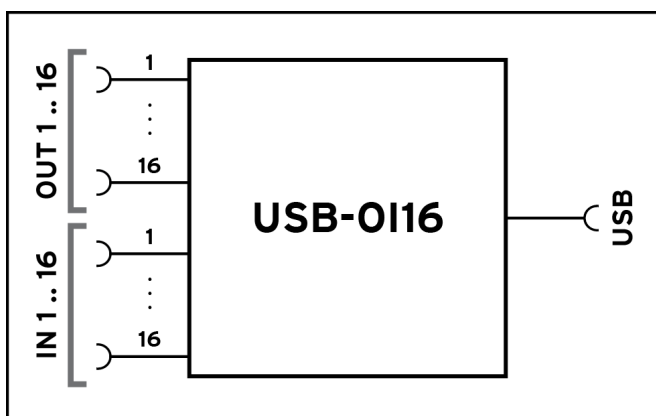
16 digital states in the 3..32V voltage range can be sampled and recorded. The 16 semiconductor switches of the USB-OI16 are realized with high-side drivers for voltages in the 5..32V range.

Enlightened.

The state of the input and output lines is indicated by LEDs.

Count and Measure: Pulses. Frequency. Position. Period.

If for the acquisition of large quantities, speed measurement, or determination of position: These



Functional diagram

Technical Data

(typical at 20°C, after 5min., +5V supply)

• Digital Inputs

Number:	16 digital inputs, galvanically isolated by 16 optocouplers
Counters:	2 counters/incremental encoders (32 bit, opt. counter reset) can be connected at the first digital inputs
Counter frequency:	max. 250kHz
Input voltage:	3..32V DC (>2.5V = high)
Surge protection:	max. 60V DC for 10sec.
Input current // Input resistance:	max. 0.35mA // app. 100k Ω

• Digital Outputs

Number:	16 digital outputs, galvanically isolated by 16 optocouplers with 2 high-side drivers
Switching voltage:	5V DC (internal supply) or 7..32V DC (external supply)
Voltage drop (with ext. supply):	app. 1.5V at the high-side driver
Switching current (with ext. supply):	max. 0.25A per output, max. 0.8A in total per 8-bit high-side driver at 25°C

• General

Power supply:	internal: 5V DC; external: 7..32V DC at 37-pin D-Sub female
Digital connection:	37-pin D-Sub female
USB interface:	attach to PC at USB connector (type B), USB 2.0
CE standards:	EN61000-6-1, EN61000-6-3, EN61010-1
ElektroG // ear registration:	RoHS and WEEE compliant // WEEE Reg.-No. DE75472248
Max. perm. potentials (galv. isolation):	60V DC acc. to VDE, max. 1kV ESD on open lines
Temperature ranges:	operating temp. -25..60°C, storage temp. -25..70°C
Relative humidity:	0..90% (not condensing)
Dimensions (L x W x H):	app. 97mm x 105mm x 30mm
Delivery:	device with DIN rail carrier and bracket, USB cable
Available accessories (optional):	connecting cables ZUKA37SB, ZUKA37SS, D-Sub plug ZU37ST, gender changer ZU37SS, waterproof housings ZU-PBOX-PG
Warranty:	2 years from date of purchase at bmcm, claims for damages resulting from improper use excluded

• Software

Software free of charge download:	LIBAD4 SDK for C/C++ programming on Windows® XP/7/8/10, Mac OS X, Unix (FreeBSD, Linux); trial version of the measuring software NextView® to test and operate the hardware
NextView® (optional):	professional software (versions: Professional, Lite) for the acquisition and analysis of measurement data on Windows® 8/10