Q.brixx XL boost LH

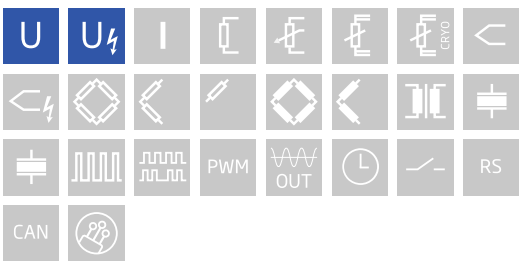
High Speed Measurement Module

Q.brixx XL is a new addition to the Q.series product family - the ideal DAQ solution for on-the-go applications requiring higher performance in potentially harsh environments. Q.brixx XL DAQ systems consist of up to 16 measurement modules and an integrated, high-performance controller for communication, control, and data logging purposes, all within a robust aluminum housing capable of withstanding severe shock and vibration without sacrificing performance.

- High density and flexibility with16 modules in one system in any constellation
- Connectable to Controller Q.station
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- Power supply 10 ... 30 VDC

Key Features

- 4 MHz sample rate per channel with 1.7 MHz Bandwidth
- 2 channels with up to +/- 1000 VDC input range
- Extremely high precision: ± (0.015% Signal + 0.015% Range)
- 2000 VDC continous isolation voltage on input channel
- must be Supplement with Coupling Module Q.bloxx XL boost BC-S
- up to 16 channels on one Coupling Module
- Multiple Coupling Modules connectable to Q.core
- ICP/IEPE, charge input, quarter, half and full bridge, puls counting optional



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Technical Data

Analog Input

Q.boost A101	2-Channel precision data acquisition system with 2 analog inputs: - 4 MHz // 24 Bit ADC per channel - ±500 mV, ±10 V AC/DC - ±1000V DC - ICP®/IEPE with 4 mA supply * - Charge input * - full-, quarter- and half-bridge * - Pulse/Pulse counting-inputs with 1.20 ns resolution * - Digital-I/O (LVCMOS/LVTTL 0 V to 3.3 V) * - 2.5 kV galvanic isolation - Coupling Module necessary for Power Supply, USB3.0 data interface, LinkUp/LinkDown-Sync.-Interface - Sampling rate max. 2MHz per channel with 4 boost modules, max. 1 MHz per channel with 6 boost modules on one coupling module
Modul Size	ca. 31 x 140 x 146 mm (W x H x D)

Technical specifications – Optional specifications marked with *

Input Characteristics

Quantization	24 bits			
max. sample rate	4 MSamples/s per channel			
max. Bandwidth	DC - 1.7 MHz			
Filter	Analog: 1.7 MHz low-pass filter Digital: a variety of selectable filters			
Iinter-Channel-Phase-Difference	< 1 ns			
galvanic isolation	± 2500 V			
input voltage Impedance	1 MΩ_50 pF, [10 MΩ_5 pF at ± 1000 V]			
input voltage range	Channel 1 (Top) ± 500 mV and ± 10 V. Optional BNC or low voltage banana Channel 2 (Bot) ± 500 mV and ± 10 V with BNC or ± 1000 V with high voltage banana, adjustable via software			
Dynamic range	Range	Bandwidth		
		5 kHz	50 kHz	1 MHz
	± 1000 V	110 dB	104 dB	94 dB
	± 10 V	115 dB	109 dB	98 dB
	± 500 mV	102 dB	94 dB	82 dB
ENOB (THD + noise)	Range	effective bits	dB @ 125 Hz sample rate	
effective number of bits	± 1000 V	typ 15.3 Bit	- 95 dB	
	± 10 V	typ 15.6 Bit	- 97 dB	
	± 500 mV	typ 14.3 Bit	- 89 dB	
Crosstalk	< - 120 dB (DC - 200kHz)			
Input protection	± 17.5 V @ range ± 500 mV, ± 10 V ± 2000V @ range ± 1000 V			

Technical specifications – Optional specifications marked with *

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Signal Conditioning

IEPE (ICP®) *	constant current supply 4 mA input coupling AC and DC
Charge *	1 mV/pC range ± 5 nC (optional up to ± 500 nC) High-pass 0.15 Hz auto charge clear; manual clear
Strain-Gage	Quarter (120 Ω, 350 Ω) / Half / Full-bridge Selectable sensor supply 0 up to 10 V
pulse/counter Input *	Input signal TTL time resolution 1.20 ns (832 MHz)

Operations Conditions

input voltage	12 to 16 VDC in standard temperature range 10 to 35 VDC in extended temperature range
	5 W typical per channel
Environmental temperature	Standard: +10 °C to 30 °C Extended: +10 to 45 °C (requires air inlet and outlet openings if mounted in a cabinet)

Data Recording

RAM	64 MByte per channel 512 MByte RAM with 8 channels
interface to Host	via couple module
recording media	Q.core or Computer hard disk

Data Transfer Rates

Internal SSD	256 MByte/s *
PC with USB	170 MByte/s (USB 3.0) - 35 MByte/s (USB 2.0)

Technical specifications – Optional specifications marked with *

Number of Channels

max. number-of-devices	Up to 8 Q.boost one one Coupling Module Q.bloxx XL boost BC-S, multiple Coupling Modules on Q.core or Computer

High Voltage Warnings

- Attention High voltage device, Danger for life and health in case of non regular use.
- Only special and sufficient educated persons are permitted to handle this device only.
- all metal housing parts must be safely and continuous connected to protected earth (PE)
- Only contact protection plugs and cables may be used. All parts must be approved for voltages up to 1200 VDC.
- During installation, the whole system must be without voltage and safely be disconnected from the mains.
- All relevant safety regulations must be considered.

Base is the european standard EN61010-1

Mechanical information

Material	Aluminum
Measurements (W x H x D)	30x 137 x 135mm
Weight	approx. 500 g

Ordering Information

Article number	581325

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