Q.brixx XL A108-60V

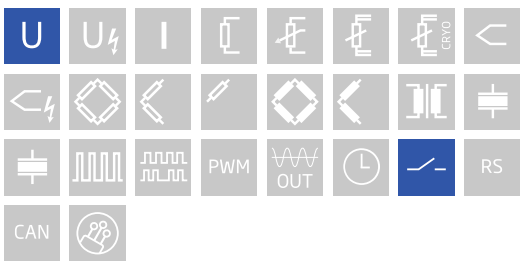
Multichannel Module for Voltages

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

- **8 galvanic isolated input channels**
  differential voltage ±60 V, isolation voltage 500 VDC
- **High accuracy digitalization**
  24 bit ADC, 20 kHz sample rate per channel
- **2 digital in and 2 digital outputs**
  input: state, tare, memory reset, output: state, Alarm, threshold
- **Signal conditioning**
  linearization, digital filter, average, scaling, min/max storage, RMS, arithmetic, alarm
- **Galvanic isolation**
  channel to channel, power supply and interface, isolation voltage 500 VDC



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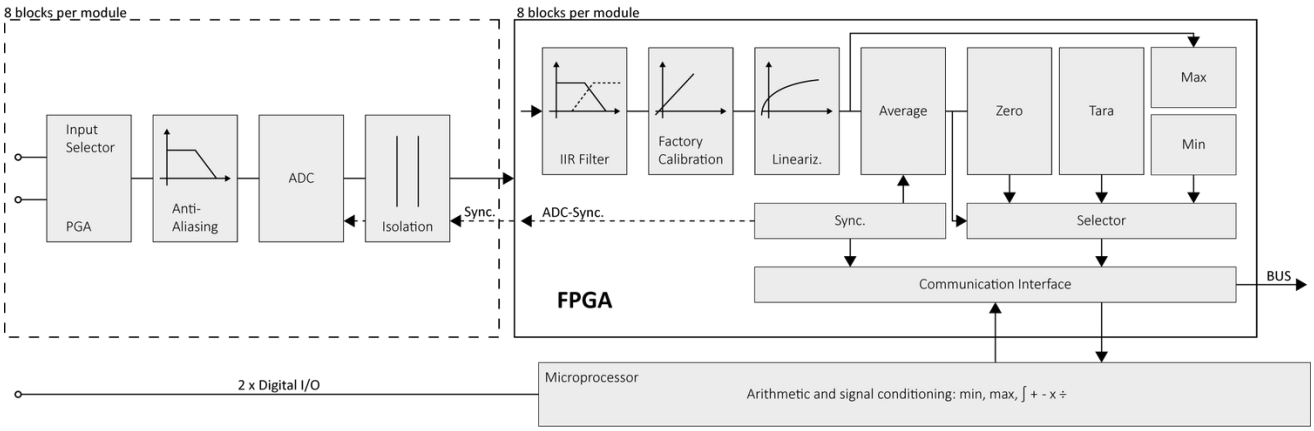
Block diagram



Technical Data

Analog Inputs

Channels	8
Accuracy	0.01 % typical 0.025 % in controlled environment[1] 0.05 % in industrial area[2]
Input range	±60 V
Max. error	±25 mV
Resolution	12 µV
Linearity error	0.01 % typical of final value
Repeatability	0.003 % typical (within 24 h)
Isolation voltage	500 VDC channel to channel to input voltage to interface[3]

1 according to EN 61326 2006: appendix B
2 according to EN 61326 2006: appendix A
3 noise pulses up to 1000 VDC, continuous up to 250 VDC

Measurement Mode Voltage

Error	range	max. error	resolution
	±60 V	±25 mV	12 µV
Input impedance	>1 MΩ		
Long-term drift	<500 µV / 24 h	<2000 µV / 8000 h	
Temperature influence	Offset drift	Gain drift	
	<500 µV / 10 K	<0.02 % / 10 K	
Signal-to-noise ratio	>100 dB at 100 Hz	>120 dB at 1 Hz	
Overvoltage protection	± 200 V		

Digital In/Outputs

Channels	4, 2 digital inputs, 2 digital outputs
Input	status, tare, reset
Input voltage / input current	max. 30 VDC / max. 0.5 mA
Lower / Upper threshold	<2.0 V (low) / >10 V (high)
Output	status, alarm
Contact	open drain p-channel MOSFET
Load capacity	30 VDC/100 mA (ohmic load)

Analog/Digital-Conversion

Resolution	24-bit
Update rate	20 kHz per channel
Modulation method	Sigma-Delta
Anti-aliasing filter	2 kHz, 3rd order
Digital filters	Infinite impulse response (IIR), low-pass, high-pass, band-pass, band-stop, Butterworth or Bessel (2nd, 4th, 6th or 8th order), frequency range 0.1 Hz to 1 kHz (adjustable via software)
Averaging	configurable or automated according the selected data rate

Communication Interface Localbus

Protocols	proprietary Localbus (115200 bps to 48 Mbps, latency <100 ns) ASCII (19200 bps to 115200 bps) Modbus RTU
Data format	8E1
Electrical standard	ANSI/TIA/EIA-485-A, 2-wire

Power Supply

Input voltage	10 to 30 VDC, overvoltage and overload protection
Power consumption	approx. 2 W
Input voltage influence	<0.001 %/V

Environmental

Operating temperature	-20°C to +60°C
Storage temperature	-40°C to +85°C
Relative humidity	5 % to 95 % at 50°C, non-condensing

Remarks

Warm-up time	Validity of all listed specifications are subject to a warm-up period of at least 45 minutes
	Specifications subject to change without notice

Mechanical information

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

Ordering Information

Article number	523321

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