Q.bloxx XL A108-60V

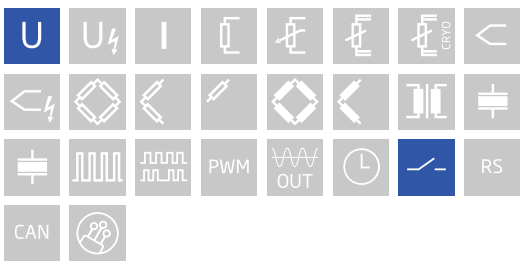
Multichannel Module for Voltages

Q.bloxx XL is a new addition to the Q.series product family - the ideal DAQ solution for widely distributed installations that require higher performance and custom sensor terminations. Q.bloxx XL products are packaged in modular, DIN Rail mountable enclosures that easily snap together for system expansion. Flexibility in distribution allows for highly synchronized data that is less prone to noise due to shorter sensor cable runs to the subject.

- RS485 fieldbus interface up to 48 Mbps: LocalBus, up to 115.2 kbps: Modbus-RTU, ASCII
- Connectable to Controller Q.station X
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- Power supply 10 ... 30 VDC
- DIN rail mounting (EN60715)

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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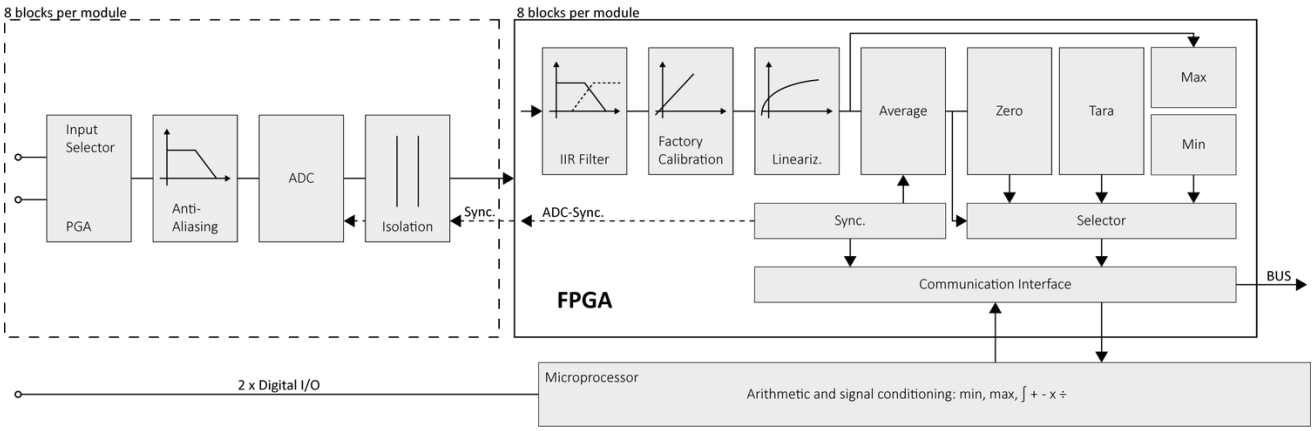
Block diagram



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	50 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	50 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	

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 (group delay time 600 µs)
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 and ABS
Measurements (W x H x D)	60x 145 x 135mm
Weight	approx. 700 g

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Multichannel Module for Voltages

Ordering Information

Article number	507828

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