



Q.bloxx A108

Multi Channel Module for Dynamic Voltages



The Q.series has been designed for demanding measurements found in today's most industrial measuring and testing environments. The range of applications starts from single stand-alone solutions up to networked multi-channel applications in the field of component testing, engine testing, process performance testing and structural monitoring.

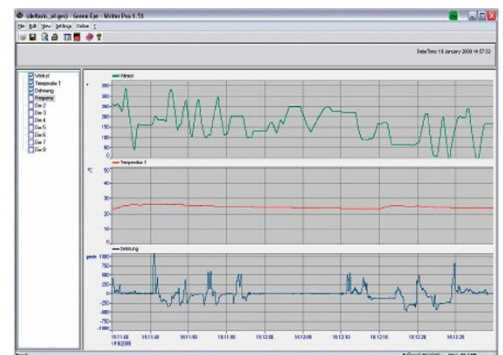
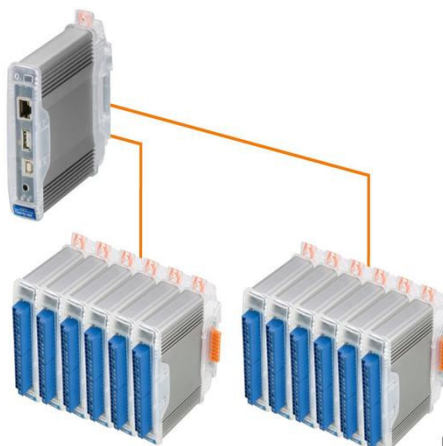
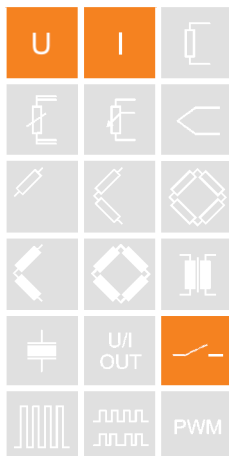
The range and flexibility of the modules allows an optimized solution for each single task:

Dynamic signal acquisition up to 100 kHz, inputs and outputs for all types of signals, galvanic isolation of inputs and outputs, multi-channel solutions, high density packaging and intelligent signal conditioning.

Data exchange between Test Controller and automation level is communicated via Ethernet TCP/IP or fieldbus systems like EtherCAT or Profibus-DP and additional Ethernet-based industrial standards.

Most important features:

- **8 galvanic isolated input channels**
differential voltage, current via shunt connector
Isolation voltage 100 VDC
- **High accuracy digitalization**
24 bit ADC, 10 kHz sample rate per channel with 8 active channels,
sum sample rate 80 kHz
- **2 digital in and 2 outputs**
input: state, tare, memory reset
output: state, alarm, threshold
- **Signal conditioning**
linearization, digital filter, average, scaling,
min/max storage, RMS, arithmetic, alarm
- **RS485 fieldbus-interface**
up to 48 Mbps: LocalBus
up to 115.2 kbps: Modbus-RTU, ASCII
- **Connectable to any Test Controller**
e.g. Q.gate or Q.pac
- **Galvanic isolation**
of I/O-signals, power supply and interface
Isolation voltage 500 VDC
- **Electromagnetic Compatibility**
according EN 61000-4 and EN 55011
- **Accuracy class 0,01**
- **Power supply 10...30 VDC**
- **DIN rail mounting (EN 50022 rail)**



Ethernet
TCP/IP

EtherCAT

PROFIBUS
DP

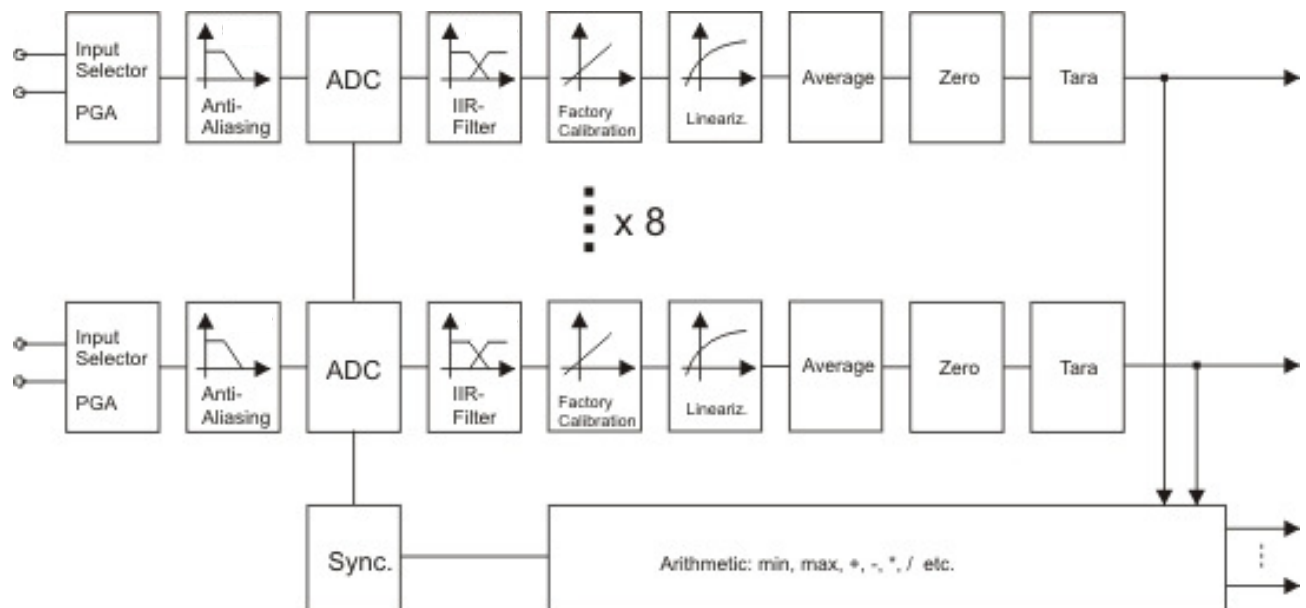
USB
UNIVERSAL SERIAL BUS



Q.bloxx A108

Multi Channel Module for Dynamic Voltages

Block Diagram



Analog Inputs			
Number	8		
Accuracy	0.01 % typical		
	0.02 % in controlled environment ¹		
	0.05 % in industrial area ²		
Linearity error	0.01 % of the final value typical		
Repeatability	0.003 % typical (within 24 h)		
Measurement Voltage	Range	max. Deviation	Resolution
	±10 V	±2 mV	40 µV
Input resistance	>10 MΩ		
Long term drift	<1 µV/24 h		
Perm. common mode voltage	100 V permanent		
Temperature influence	on zero	on sensitivity	
	<50 µV/10 K	0.05 %/10 K	
Signal-noise-ratio	>100 dB at 100 Hz		>120 dB at 1 Hz

¹ according EN 61326: 1997, appendix B

² according EN 61326: 1997, appendix A

**Q.bloxx A108**

Multi Channel Module for Dynamic Voltages

Analog/Digital-Conversion	
Resolution	24 bit
Sample rate	10 kHz at 8 active channels
Conversion method	Sigma-Delta
Antialiasing filter	low pass 3 rd order per channel (-3 dB at 4 kHz)
Digital filter	IIR, low pass, high pass, 4 th order
	1 Hz up to 1 kHz in steps 1, 2, 5, automated sample reduction for lower frequencies
Digital In/Outputs	
Number	4, 2 digital inputs, 2 digital outputs
Input	state, tare, reset
Input voltage	max. 30 VDC
Input current	max. 0,5 mA
Upper threshold	>10 V (high)
Lower threshold	<2.0 V (low)
Output	state, alarm
Contact	open drain p-channel MOSFET
Load	30 VDC/100 mA (ohmic load)
Power Supply	
Power supply	10 up to 30 VDC, overvoltage and overload protection
Power consumption	approx. 2 W
Influence of the voltage	<0.001 %/V
Environmental	
Operating temperature	-20 °C up to +60 °C
Storage temperature	-40 °C up to +85 °C
Relative humidity	5 % up to 95 % at 50 °C, non condensing
Communication Interface	
Standard	RS-485, 2-wire
Data format	8e1
Protocols	Local-Bus: 115200 bps up to 48 Mbps Modbus-RTU, ASCII: 19200 bps up to 115200 bps
Connectable devices	max. 32
Mechanical	
Case	Aluminum and ABS
Dimensions (W x H x D)	(27 x 120 x 105) mm
Weight	approx. 200 g
Mounting	DIN EN-rail



Q.bloxx A108

Multi Channel Module for Dynamic Voltages

Warm Up Time

All declarations are valid after a warm up time of 45 minutes.

Valid from April 15th 2010. Specification subject to change without notice
DB_Q.bloxx_A108_E_12.doc