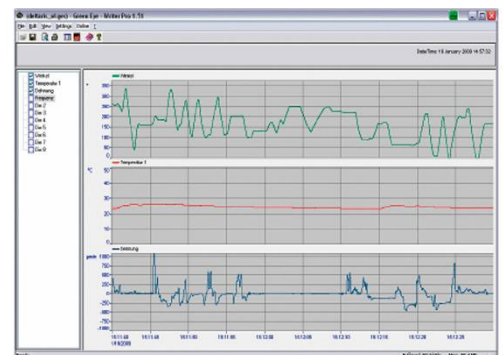
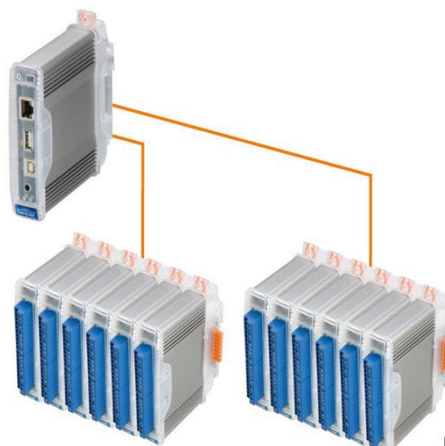
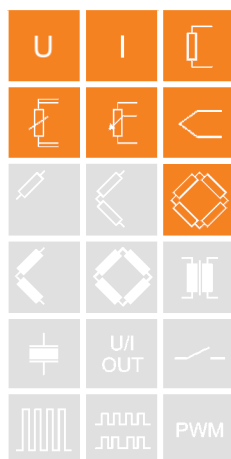


Data exchange between Test Controller and automation level is communicated via Ethernet TCP/IP or fieldbus systems like EtherCAT or Profibus-DP and additional Ethernet-based industrial standards.

- **4 universal analog input channels**
voltage, current, resistance, potentiometer, Pt100, Pt1000, thermocouples, measuring bridges
- **Fast high accuracy digitalization**
24 bit ADC, 10 kHz sample rate per channel
- **Signal conditioning**
16 virtual channels, 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
- **Electromagnetic Compatibility**
according EN 61000-4 and EN 55011
- **Power supply 10...30 VDC**
- **DIN rail mounting (EN 50022)**



Ethernet TCP/IP

EtherCAT®

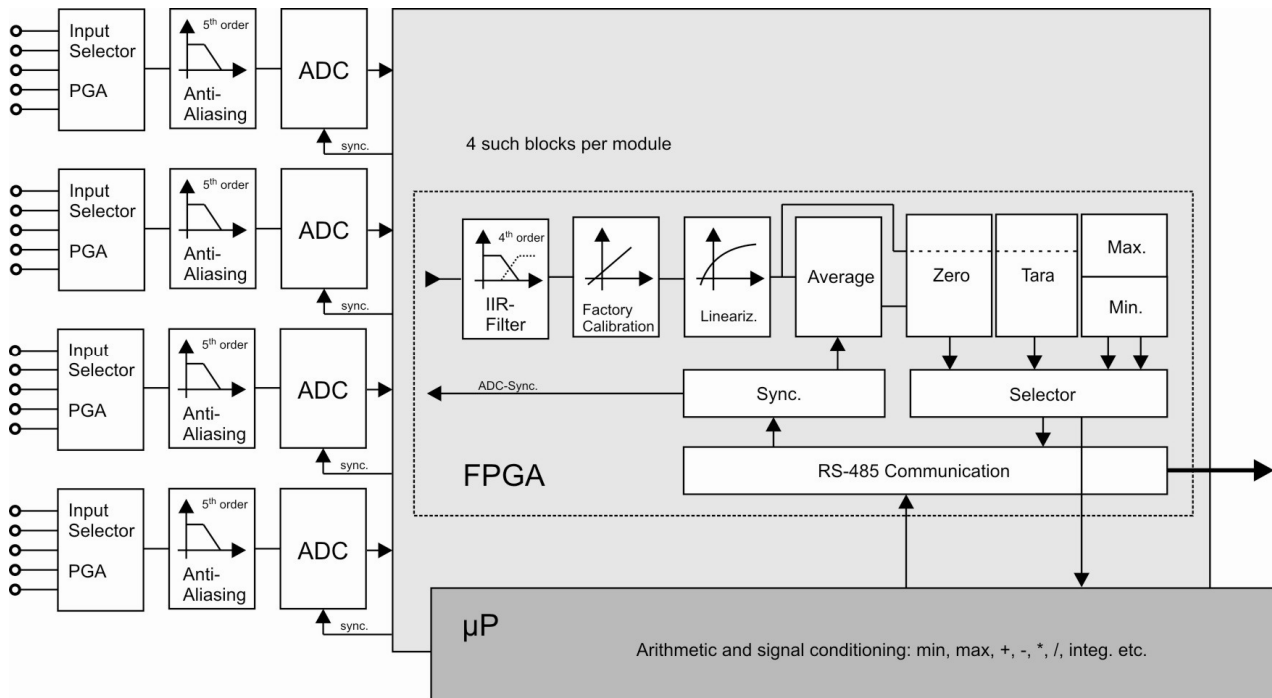




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Universal Measurement Module

Connection Diagram



Analog Inputs			
Number	4		
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	1.2 µV
	±1 V	±0.2 mV	120 nV
	±100 mV	±20 µV	12 nV
Input resistance	>10 MΩ (at range ±10 V = 1 MΩ; ±60 V = 3 MΩ)		
Noise voltage	<50 µVpp		range ±10 V
Long term drift	<1 µV/24 h		
Perm. common mode voltage	500 V permanent		
Temperature influence	on zero	on sensitivity	
	<1 µV/10 K	<0,05 %/10 K	
Signal-noise-ratio	> 90 dB at 1 kHz	>120 dB at 1 Hz	

¹ according EN 61326: 1997, appendix B

² according EN 61326: 1997, appendix A

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Universal Measurement Module

Measurement Current	Range	max. Deviation	Resolution
(internal shunt 50 Ω)	0...25 mA	±5 µA	3.0 nA
Long term drift	<0.1 µA/24 h		
Perm. common mode voltage	500 V permanent		
Temperature influence	on zero	on sensitivity	
	<0.1 µA / 10 K	<0.03 % / 10 K	
Measurement Resistance / RTD	Range	max. Deviation	Resolution
Resistance, 2-wire	100 kΩ	±100 Ω	12 mΩ
Resistance, 2- and 4-wire*	4 kΩ	±1 Ω	0.5 mΩ
Resistance, 2- and 4-wire*	400 Ω	±0.1 Ω	48 µΩ
Pt100, 2- and 4-wire*	-200 up to +850 °C	±0.5 °C	0.2 m °C
Pt1000, 2- and 4-wire*	-200 up to +850 °C	±1 °C	0.2 m °C
Linearity error	<0.05% of final value at range 100 kΩ		
Measuring Bridge			
Accuracy class	0.05		
Bridge Type	full bridge, 4-wire connection, half and quarter bridge with completion terminal		
Sensor resistance	>100 Ω		
Supply	2.5 V		
Measurement range	±2.5 mV/V	±50 mV/V	±500 mV/V
Temperature influence	on zero	on sensitivity	
	<1 µV/V/10 K	<0.05 %/10 K	
Long term drift	<1 µV/V/24h		
Measurement Thermo Couple	Whole range	-100 °C...upper limit	
Type B	better than ±5 °C	better than ±2.5 °C	
Type E, J, K, L, T, U	better than ±1 °C	better than ±0.5 °C	
Type N	better than ±2 °C	better than ±1 °C	
Type R, S	better than ±3 °C	better than ±1.5 °C	
Input resistance	> 10 MΩ		
Perm. common mode voltage	500 V permanent		
Temperature influence	on zero	on sensitivity	
	<1 µV/10 K	<0.02%/10 K	
Temperature influence	on zero	on sensitivity	
	<1 µV/10 K	0.05 %/10 K	

**Q.bloxx A107**

Universal Measurement Module

Analog/Digital-Conversion	
Resolution	24 bit
Sample rate	10 kHz
Conversion method	Sigma-Delta
Antialiasing filter	20 kHz, 5 th order
Filter	IIR, low pass or high pass, 4 th order
	1 Hz up to 1 kHz, in steps 1, 2, 5, automated sample reduction for lower frequencies
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
Galvanic Isolation	500 V
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

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
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