

Q.staxx A108

Voltage Measurement Module

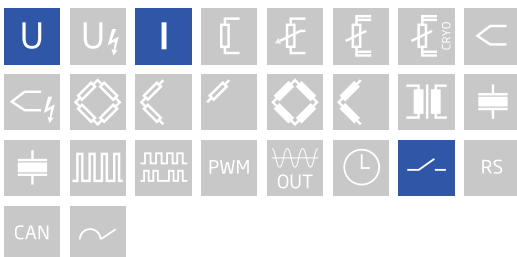
Q.staxx brings the high precision and performance of Q.bloxx into robust, pallet mount, cast aluminum (IP65) Harting enclosures - the ideal solution for extremely harsh test cell environments. Q.staxx modules are interchangeable and can be mounted directly onto pallet systems since the passive backplane does not require fans, filters or environmental conditioning further reducing setup time as sensors can remain fixed to an engine while the pallet transitions between test cells and measurement requirements.

- IP 65 (Dust Protected and water jet tested)
- Robust design for Pallet Systems
- Connectable to any Controller, e. g. Q.gate or Q.pac
- Power supply 10 ... 30 VDC

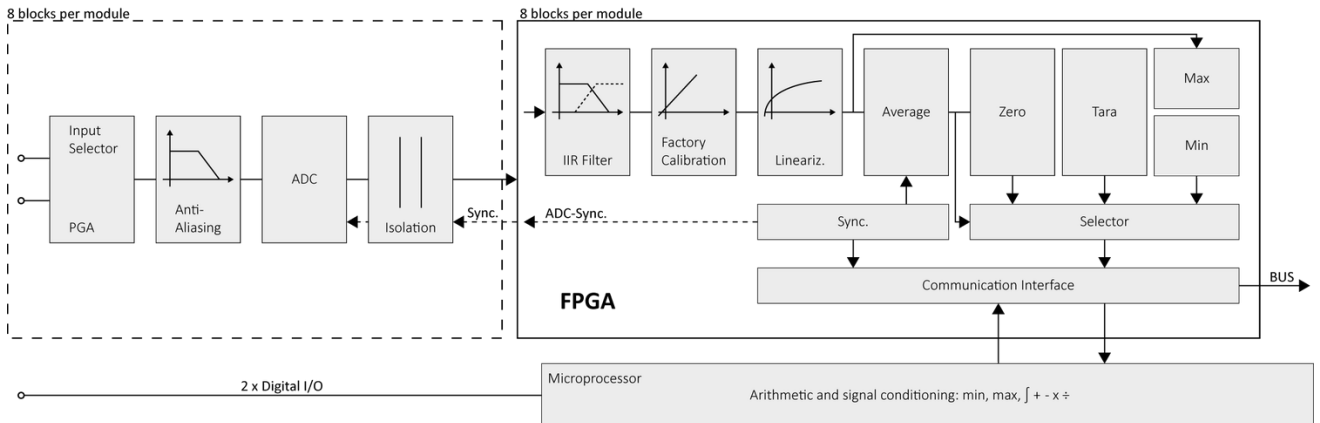


Key Features

- **8 Analog input channels**
differential voltage, current (with shunt resistor)
- **2 Digital inputs and outputs**
status, trigger, tare, alarm, command
- **High-accuracy digitization**
24-bit ADC, 10 kHz sample rate per channel
- **Signal conditioning**
linearization, filtering, average, scaling, min/max, RMS, arithmetic, alarm
- **3-Way galvanic isolation**
Channel to channel, channel to power supply, and channel to bus

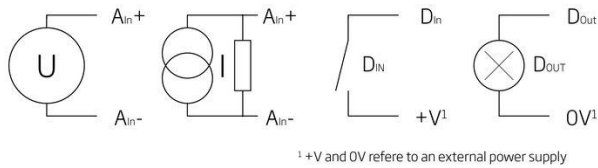
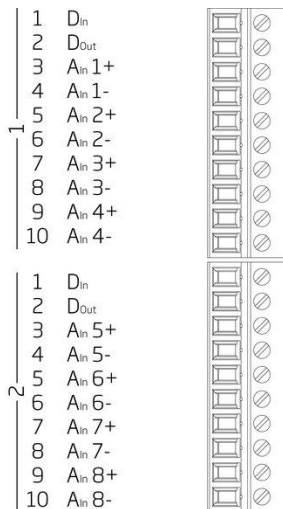


Block diagram



Technical Data

Terminal assignment 10pole screw



Analog Input

Channels	8
Isolation voltage	500 VDC channel to channel, to power supply, and channel to bus ¹

¹ noise pulses up to 1000 VDC, continuous up to 250 VDC

Voltage Measurement

Input range	±10 VDC	
Margin of error	±2 mV	
Resolution	1.5 µV	
Long-term stability	<50 µV / 24 hrs	<200 µV / 8000 hrs
Temperature drift	<200 µV / 10 K Offset drift	<100 ppm / 10 K Gain drift
Signal-to-noise ratio	>100 dB at 100 Hz	>120 dB at 1 Hz
Input impedance	> 1 MΩ	
Overvoltage protection	± 200 V	

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Measurement Mode Current (Only with Q.series Terminal SR [791989])

Input range	±25 mA
Shunt resistance	100 Ω
Shunt tolerance	0.1 %
Resolution	15 nA
Long-term stability	<500 nA / 24 hrs
Temperature drift	<150 ppm / 10 K

Digital I/Os

Channels	4 (2 digital inputs and 2 digital outputs)
Mode(s) of operation	status, tare, reset
Input voltage	30 VDC max.
Logic voltage	< 2 VDC (Low) >10 VDC (High)
Mode(s) of operation	status, alarm
Output voltage	10 to 30 VDC (external supply required)
Contact	open drain p-channel MOSFET
Load capacity	30 VDC / 100 mA (ohmic load)

Analog-to-Digital Conversion

Resolution	24-bit
Sample rate	10 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
Averaging	configurable or automatic according to the user-defined data rate

Communication Interface

Protocols	proprietary Localbus (115200 bps to 24 Mbps, latency <100 ns) ASCII (19200 bps to 115200 bps) Modbus RTU Profibus-DP (19200 bps to 12 Mbps) (special Firmware required)
Data format	8E1
Electrical standard	ANSI/TIA/EIA-485-A, 2-wire

Input Power

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

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Environmental Specifications

Electromagnetic compatibility (EMC)	according to IEC 61000-4 and EN 55011
Operating temperature	-20°C to +60°C
Storage temperature	-40°C to +85°C
Relative humidity	5 - 95 % at 50°C (non-condensing)

Remarks

Are subject to a warm-up period of at least 45 minutes

in a controlled electromagnetic environment¹

With configuration: Low-pass 10Hz²

Specifications subject to change without notice

¹ according to EN 61326 2006: appendix B

² according to EN 61326 2006: appendix A

Mechanical information

Material	Aluminum
Measurements (W x H x D)	45 x 120 x 113 mm
Weight	approx. 700 g

Ordering Information

Article number	108627
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