

Q.brixx XL D107

Digital Measurement Module

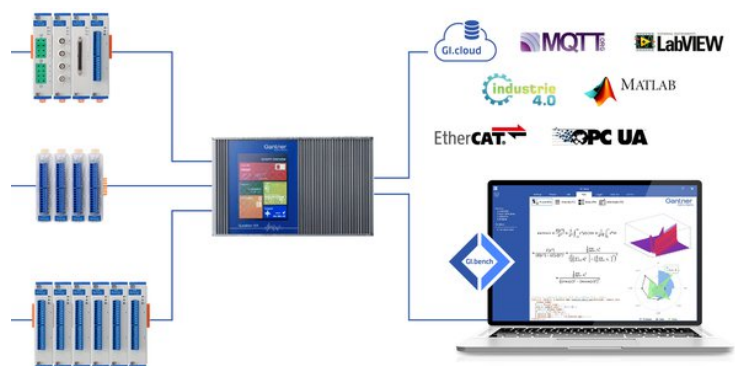
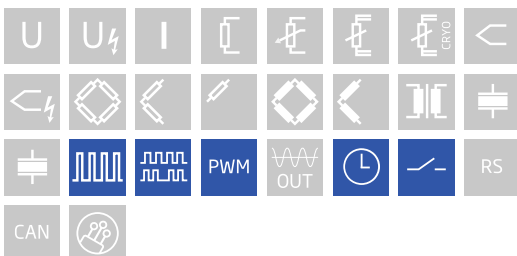
Q.brixx XL is a new addition to the Q.series product family - the ideal DAQ solution for on-the-go applications requiring higher performance in potentially harsh environments. Q.brixx XL DAQ systems consist of up to 16 measurement modules and an integrated, high-performance controller for communication, 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 with 16 modules in one system in any constellation
- Electromagnetic Compatibility according to EN61000-4 and EN55011
- Connectable to Controller Q.station
- Power supply 10 ... 30 VDC



Key Features

- 2 to 6 configurable digital inputs
number of channels depend on configuration, counter, frequency, PWM, differential or single ended
- Adjustable thresholds in 256 steps
Differential inputs: -20 V up to + 20 V
single-ended Inputs: 0 V up to +26 V
- Frequency inputs
frequency measurement up to 1 MHz (Chronos method), direction detection
- State Inputs
Adjustable Threshold Values
- Counter
for/backward counter, quadrature counter with reference zero recognition and missing teeth detection, up to 1 MHz
- PWM inputs
measurement of duty cycle and frequency, output with variable frequency and/or duty cycle
- Galvanic isolation
function group 1 to function group 2 to power supply and to interface
Isolation voltage 500 VDC



Technical Data

Digital Inputs

Channels	2 to 6 galvanic isolated inputs, configurable as differential or single ended	
Input voltage	max. 30 VDC	
Input impedance	differential	single ended
	20 kΩ	10 kΩ
Threshold adjustable in 256 steps	-20 V to +20 V	0 V to +26 V
Isolation voltage	500 VDC input 1 to input 2 to input voltage and to interface	

Function Digital Inputs

Status	
Response time	10 μs
Frequency measurement	
Method	Chronos optimized by combination of the time measurement and pulse counting, recognition of direction of rotation (0 deg./90 deg.)
Frequency range	0.1 Hz to 1 MHz
Time base	0.001 s to 10 s
Reference frequency	288 MHz
Accuracy	0.01% at timebase > 1ms (-20°C to +60°C)
Frequency measurement with recognition of direction of rotation	specification like frequency measurement, for the recognition of the rotation direction the phasing of both inputs is being used
Pulse counting	
Counter depth	32-bit (±31-bit)
Counter frequency	max 1 MHz
Up/down counter	with an additional input for the direction of counting
Quadrature counter	with an additional input for the direction recognition for phasing the inputs
Quadrature counter with zero reference and reset/enable	like quadrature counter but with two additional inputs for the 0-reference recognition and enabling the 0-reference recognition
PWM measurement (duty cycle)	
Input frequency	0.1 Hz to 1 MHz
Accuracy	0.01% Freq < 2 kHz, 0.1% 2 kHz to 20 kHz, 3% > 20 kHz (-20°C to +60°C)
Resolution	3.5 ns
Time measurement	
Function	Measuring of time between two edges, measuring of high time, low time and high/low relation
Time range	1 μs to 32 s
Resolution	3.5 ns

Sensor Excitation

Channels	2
Voltage	5 VDC
Current	<150 mA

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Communication Interface Localbus

Protocols	proprietary Localbus (115200 bps to 48 Mbps, latency <100 ns) ASCII (19200 bps to 115200 bps) Modbus RTU
Data format	BE1
Electrical standard	ANSI/TIA/EIA-485-A, 2-wire

Power Supply

Input voltage	10 to 30 VDC, overvoltage and overcurrent 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 145 x 135mm
Weight	approx. 500 g

Ordering Information

Article number	527123
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