

Q.staxx D107

Digital Measurement Module

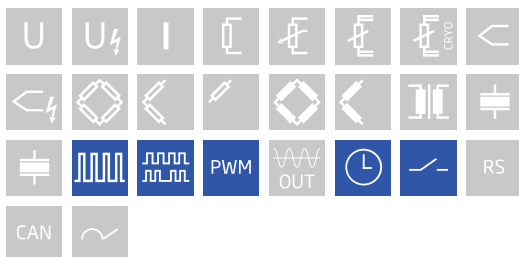
Q.staxx brings the high precision and performance of Q.bloxx into robust, pallet mount, cast aluminum (IP65) Harting enclosures - the ideal solution for extremely harsh test cell environments. Q.staxx modules are interchangeable and can be mounted directly onto pallet systems since the passive backplane 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



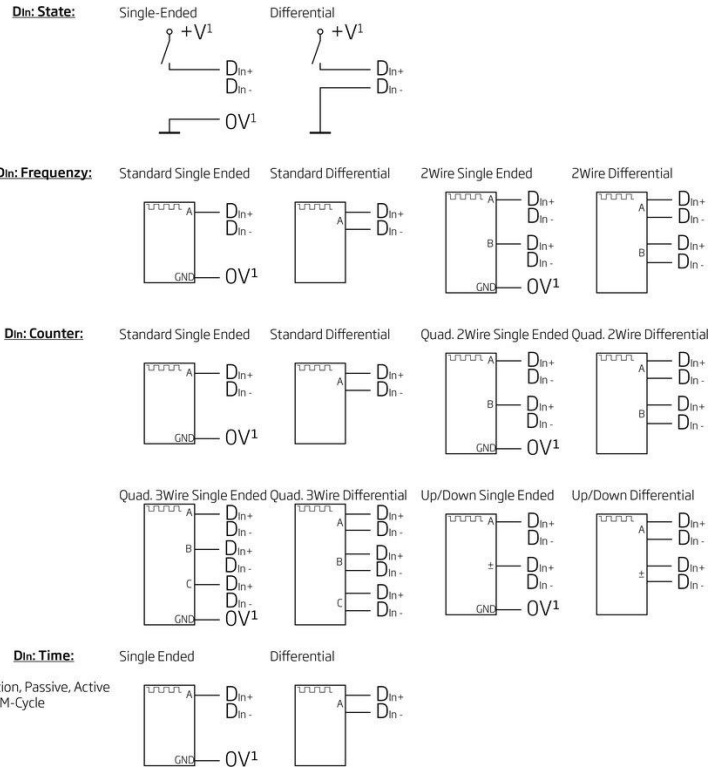
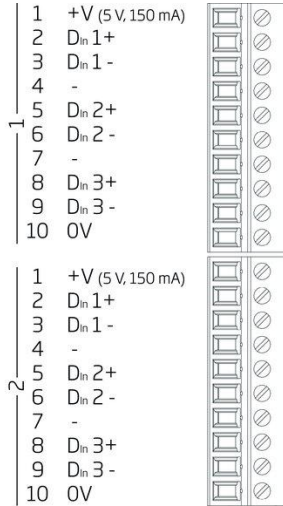
Key Features

- **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



Technical Data

Terminal assignment 10pole screw



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
Threshold accuracy	±1 %	
Isolation voltage	500 VDC input 1 to input 2 to input voltage and to interface	

Function Digital Inputs

Status	
Response time	10 μ s
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 (\pm 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 μ s to 32 s
Resolution	3.5 ns

Sensor Excitation

Channels	2
Voltage	5 VDC
Current	<150 mA

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

Power Supply

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

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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	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)	45 x 120 x 113 mm
Weight	approx. 700 g

Ordering Information

Article number	453020
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