Q.bloxx EC D105

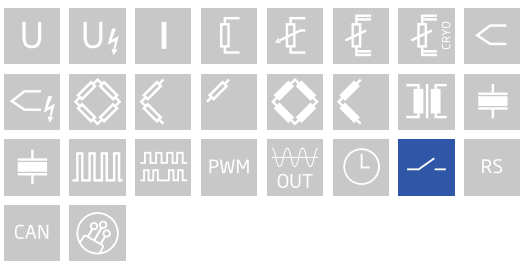
Digital Output Module

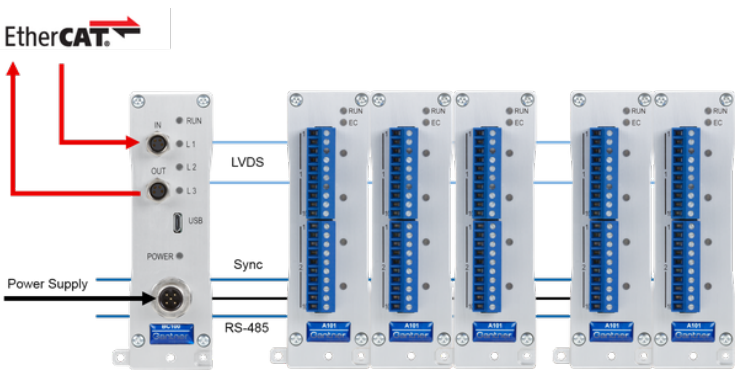
The Q.bloxx EC brings the high precision and performance of Q.bloxx to EtherCAT-based applications. Q.bloxx EC measurement modules possess integrated signal conditioning and arithmetic functions, packaged in environmentally secure (up to IP65), DIN Rail mountable enclosures that easily snap together for system expansion. With measurement speeds of up to 100 kHz per channel, short cycle times, and low jitter for accurate synchronization, Q.bloxx EC is the ideal solution for EtherCAT applications.

- CoE (CAN over EtherCAT) according to Modular Device Profil ETG.5001.1
- XFC technology for oversampling, oscilloscope function, cycle times 1 ms up to 0.1 ms, oversampling ≤100
- Configurable PDO Mapping to optimize the data throughput
- Module Configuration via SDO or FoE and alternative via configuration software
- Modular design for DIN Rail Mounting

Key Features

- **16 Digital outputs**
  status, single bit or bitset
- **Fast response time**
  up to 10 µs per channel
- **High load capacity**
  30 VDC / 500 mA, short circuit proof
- **3-Way galvanic isolation**
  500 VDC group to group, group to power supply, and group to bus





Q.bloxx EC D105

Digital Output Module

Technical Data

Digital Output

Channels	16		
Mode(s) of operation	status		
Contact	open drain p-channel MOSFET		
Output voltage	12 to 30 VDC (external supply required)		
Load capacity	30 VDC / 500 mA (ohmic load)		
Response time	10 µs (>0.5 A)	100 µs (>0.1 A)	1000 µs (<0.1 A)
Isolation voltage	500 VDC, group to group, group to power supply, group to bus [1]		

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

Communication Interface EtherCAT

Electrical standard	RS-485, 2-wire
Protocols	EtherCAT (LVDS)

Input Power

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

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

Validity of all listed specifications are subject to a warm-up period of at least 45 minutes
Specifications subject to change without notice

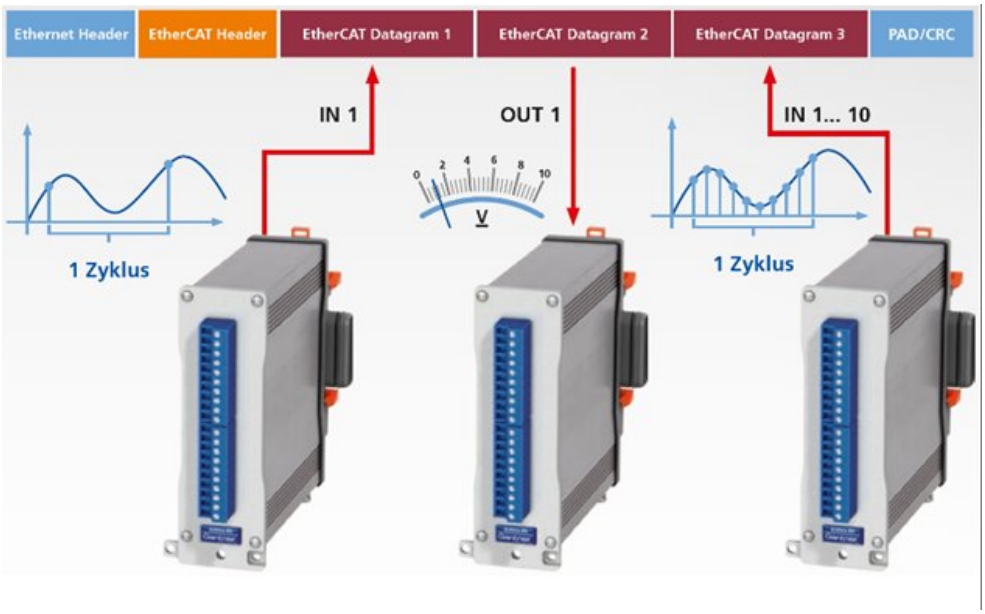
Mechanical information

Material	Aluminum and ABS
Measurements (W x H x D)	35.6 x 118.8 x 124 mm
Weight	approx. 400 g

Oversampling

EtherCAT also enables transmitting of very high data rates at low bus cycle by over sampling. In this case, a higher number of values of one channel per PDO transmitted so as to reduce protocol overhead.

Example: bus cycle 1 kHz, 100 times over sampling
=> 100 values are transferred per bus cycle
=> effective sample rate 100 kHz



Ordering Information

Article number	529230

Gantner Instruments

Austria | Germany | France | Sweden | India | USA | China | Singapore
Montafonerstraße 4 · A-6780 Schruns · T +43 55 56 · 77 463-0

office@gantner-instruments.com
www.gantner-instruments.com