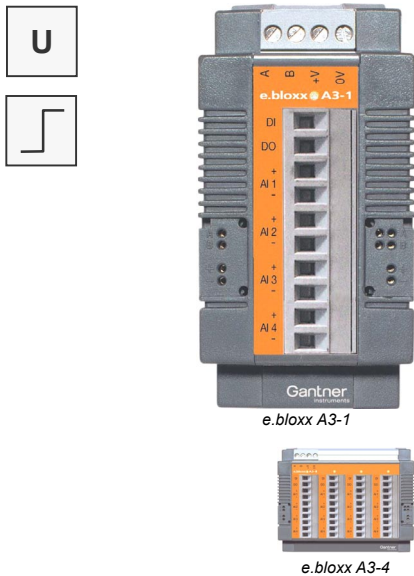


The e.bloxx series is designed for industrial and experimental test systems requiring precise high speed measurement of electrical, thermal and mechanical quantities in engine- and component test beds.

All units are based on a clean modular design and all have a wide variety of field device connection possibilities. Sample rates up to 1000 Hz and resolutions up to 19 bit are possible depending on the module and signal type used. Standardized communication protocols (Profibus-DP and Modbus-RTU) allow the e.bloxx family to work with a wide variety of application hardware and software.

With the addition of an e.gate the data throughput and connectivity options increase dramatically. The e.gate is a data concentrator and communication gateway, with 100 Mbps Ethernet and 12 Mbps Profibus-DP ports standard.



4 or 16 analog input channels

Differential voltage

Measuring rate 100 samples/sec with 4 active channels

133/sec for 3 active, 200/sec for 2 active, and 400/sec for 1 active channel

Differential inputs

Common mode voltage 100 VDC

Signal conditioning

Digital filtering, averaging, scaling, minimum/maximum store, arithmetic, alarm

RS 485 fieldbus interface

Profibus-DP, Modbus-RTU, ASCII

Order Information:

Product	Article No.
e.bloxx A3-1	235477
e.bloxx A3-4	237075

Accessories

Configuration Software	
ICP 100	633214

Interface Converter

RS232 / RS485	
ISK 200	229682
ISK 101	689326
Repeater / Converter IRK 100	236213

Additional features

- Accuracy 0,01 %
- ADC-resolution and internal calculation accuracy 19 bit
- Measuring rate 100 samples/sec per channel (4 active channels)
- Linearization, scaling, and data formatting
- Data transmission up to 1,5 Mbps
- Up to 127 modules at one two wire line via RS-485 interface
- ICP 100 software for easy configuration of the modules
- Galvanic isolation of I/O-signals, power supply and communication interface
- Power supply 10...30 VDC
- DIN rail mounting (EN 50022 rail)
- Pluggable screw terminals for field, power and communication connections
- Electromagnetic Compatibility according to EN 61000-4 and EN 55011

e.bloxx A3 Technical Data

Analog Input

Accuracy	0.01 % typical 0.02 % in controlled environment ¹ 0.05 % in industrial area ²
Repeatability	0.003 % typical (within 24 h)

Measuring range	Range	Accuracy	Resolution
Voltage	±10 V	±2 mV	40 µV

Common mode voltage	100 V permanent
Linearity deviation	0.01 % of the final value
Temperature influence	
on zero	50 µV / 10 °K
on sensitivity	0.005 % / 10 °K
Long-time drift	1 µV / 24 h

Analog/Digital Conversion

Resolution	19 bit
Sample rate	100 samples/sec at 4 active channels 400 samples/sec at 1 active channel
Conversion method	Sigma-Delta
Filter	Variable digital low pass filter 1 st order averaging

Digital In-/Output

Input	Status, tare, reset
Input voltage	max. 30 VDC
Input current	max. 6 mA
Upper switching threshold	> 10 V (high)
Lower switching threshold	< 2,0 V (low)

Output	Process or host controlled
Type of output	Open Collector
Output voltage	max. 30 V
Output current	max. 100 mA

Communication Interface

Standard	RS 485, 2-wire
Data format	8E1
Protocols	ASCII, Modbus-RTU, Profibus-DP Local-Bus
Baud rate	
ASCII and ModBus-RTU	19.2; 38.4; 57.6; 93.75; 115.2 kBaud
Profibus-DP	19.2; 93.75; 187.5; 500; 1500 kBaud
Local-Bus	19.2; 38.4; 57.6; 93.75; 115.2; 187.5; 500; 1500 kBaud
Connectable devices	up to 32 without repeater up to 127 with repeater
Galvanic isolation	500 V

Power Supply

Power supply	10 to 30 VDC overvoltage and overload protection
Power consumption	
e.bloxx A3-1	approx. 1.5 W
e.bloxx A3-4	approx. 6 W
Influence of the voltage	0.001 %/V

Mechanical

Case:	Aluminium and ABS
Dimensions (W x H x D) and weight	
e.bloxx A3-1	(45 x 90 x 83) mm, 160 g
e.bloxx A3-4	(104 x 90 x 83) mm, 500 g
Protective system	IP20
Mounting	DIN EN-Rail

Environmental

Operating temperature	-20 °C to +60 °C
Storage temperature	-30 °C to +60 °C
Relative humidity	0 % to 95 % at 50 °C non condensing

Warm Up Time

All declarations are valid after a warm up time of 45 minutes.

¹ according to EN 61326: 1997, appendix B

² according to EN 61326: 1997, appendix A

Valid from 19. April 2004. Specification subject to change without notice.

DB_EBLOXX_A3_E_10.doc