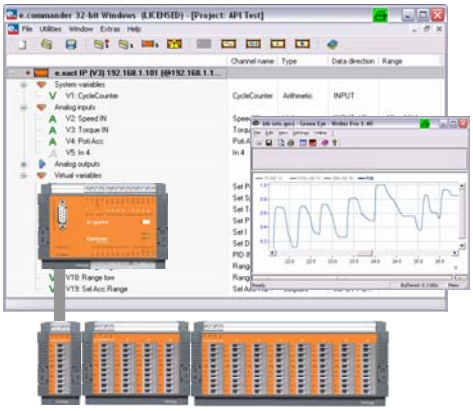
e.bloxx A9

Multi-Channel Analog Output Module



Ethernet TCP/IP

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 easily connect to the wide variety of field devices used in today's test beds. Sample rates up to 5000 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.

Adding an e.series Test Controller dramatically increases the system's throughput and connectivity options. An e.series Test Controller is a data concentrator, communication gateway, and optionally a Programmable Automation Controller (PAC) with 100Mbps Ethernet, Profibus-DP, EtherCAT, or USB ports.

e.bloxx A9-1

4 analog output channels

Selectable voltage (±10 V) or current (0 to 20 mA)

1 digital input

Status, memory reset

1 digital output

Status, alarm, limit value, tolerance band

Signal conditioning

Scaling, minimum/maximum store, arithmetic, alarm

RS 485 fieldbus interface

Profibus-DP, Modbus-RTU, ASCII

Order Information

Product	Article No.
e.bloxx A9-1	117173
Accessories	
Configuration Software	
ICP 100	633214
Interface Converter	
RS232 / RS485	
ISK 200	229682
ISK 101	689326

Additional Features

- Accuracy 0.02 %
- Scalable outputs
- DAC resolution 16 bit at a rate of up to 1000 updates/sec

- Data transmission up to 1.5 Mbps
- Up to 32 modules on a single two wire RS-485 interface
- PC-Software (ICP 100) for easy configuration of the modules

- Galvanic isolation of I/O signals, power supply, and communication interface
- Power supply 10 to 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

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e.bloxx A9 Technical Data

Analog Outputs (4 per module)

Accuracy	0.02 %
Type of output	4 configurable voltage or current output
Output voltage	±10 VDC
Valid load resistance	>2 kΩ
Temperature influence	
on zero	2 mV per 10 K
on sensitivity	0.05 % / 10 K
noise voltage in range	
0 ... 10 Hz	2 mV
0 ... 1000 Hz	10 mV
Long time drift	1 mV / 48 h
Output current	0 to 20 mA
Permitted load	<400 Ω
Temperature influence	
on zero	4 µA / 10 K
on sensitivity	0.05 % / 10 K
Noise voltage in range	
0 ... 10 Hz	4 µA
0 ... 1000 Hz	20 µA
Long time drift	2 µA / 48 h
Linearity deviation	0.01 % of final value
Resolution	16 bit
Refresh rate	1,000 samples/sec (1 channel defined)
Refresh rate	250 samples/sec (4 channels defined)
Settling time	3 ms

Digital In/Output

Input	Status, 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
Galvanic isolation	500 V

Power Supply

Power supply	10 to 30 VDC overvoltage and overload protection
Power consumption	approx. 2.3 W
Influence of the voltage	0.001 %/V

Mechanical

Case	Aluminium and ABS
Dimensions (W x H x D) and weight	45 x 90 x 83 mm (1.77 x 3.54 x 3.27 in), 160 g (0.35 lb)
Protective system	IP20
Mounting	DIN EN-Rail

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

Warm Up Time

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

Valid from January 2008. Specification subject to change without notice.
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