

## AnalogBox 32

### 32-channel analog input module with sensor excitation

- Extender device for ARCOS data logger
- Measurement modes: voltage, counter (individual for each input)
- Stand alone operation without ARCOS data logger
- 32 sensor excitations (bipolar  $\pm 20$  V, 0.5 W power)
- Cascading of several boxes supported
- Status LED at each input channel
- Measurement data output to CAN and Ethernet
- Galvanic isolation (inputs, CAN, supply, enclosure)



<b>Device</b>	
Maximum input voltage (channel)	$\pm 100$ V (indefinitely)
Channel sampling rates	1/ 2/ 5/ 10/ 100/ 200/ 500/ 1000/ 2000 Hz (CAN mode)
Channel sampling rates	1/ 2/ 5/ 10/ 100/ 200/ 500/ 1000/ 2000/ 5000/ 10000 Hz (ETH mode)
Channel sampling rates	320 kHz (ETH mode)
Voltage supply	6 ... 50 VDC
Supply voltage thresholds	Switch-on $6 \pm 0.3$ VDC / Switch-off $6 \pm 0.3$ VDC
Power consumption, typical	18 W
Working temperature range	$-40 \dots 85$ °C ( $-40 \dots 185$ °F)
Storage temperature range	$-55 \dots 125$ °C ( $-67 \dots 257$ °F)
IP-Code	IP 40 (ISO 20653 - 2013)
Relative humidity	5 ... 98 %
Dimensions	W184 mm x H190 mm x D144 mm (7.24 in x 7.48 in x 5.67 in)
Weight	3700 g (8.16 lb)
Configuration interface	CAN high speed
Data transfer rate	Software selectable up to 1 MBit/s (ISO11898-2)
Test standards	AK-LV 01
Eingangsbuchsen	Lemo FGG 1B 307 (7-pin)
Order code	111339
<b>Galvanic isolation</b>	
Input module power supply	$\pm 500$ V (peak voltage)
Input CAN	$\pm 500$ V (peak voltage)
Input enclosure	$\pm 500$ V (peak voltage)
Input input	$\pm 500$ V (peak voltage)
<b>General channel properties</b>	
A/D converter	16 bit / SAR (successive approximation register)

Channel LED	Yes
Channel impedance	25 mV ... 1 V > 10 GΩ
Channel impedance	5.0 V = 3.2 MΩ
Channel impedance	10 V = 2.5 MΩ
Channel impedance	20 V = 2.2 MΩ
Channel impedance	60 V = 2.1 MΩ
Hardware filter (fixed)	Analog-Butterworth (3-pole)
Software filter types	Butterworth, Chebyshev, Elliptic (8-pole)
Software filter types	FIR-fast, FIR-slow
Software filter (DSP selectable)	Cut-off frequency 15/ 30/ 35/ 40/ 45 %
<b>Channel SENS</b>	
Measurement range SENS	±0.025 / 0.1 / 0.5 / 1/ 5/ 10/ 20/ 60 V
Accuracy at ambient temperature 25 °C	±0.3 %
Accuracy at ambient temperature 25 °C	±0.4 % (25 mV Messbereich)
<b>Channel CNT</b>	
Adjustable trigger threshold	±55 V
Mode: frequency	0.02 ... 20 kHz (TTL-level; 0 / 10 V rectangular wave form)
Mode: event counter reset modes	Reset by overflow
Mode: event counter with direction (Encoder)(Encoder)	Up / down counting
Pulse filter	0 ... 75 μs
Hysteresis (high/low dead band)	0.1 ... 20 V
Pre-divider	1 ... 16
Time out	1 ms ... 65 s
<b>Excitation</b>	
Sensor excitation ranges	Bipolar ±5/ 8/ 10/ 12/ 20 V
Accuracy excitation at ambient temperature 25 °C	±1.0 %
Sensor excitation power	0.5 W
Derating (decrease of total output power)	-0.033 W /K for ambient temperature > 45 °C (2 channels)
Derating (decrease of total output power)	-0.125 W /K for ambient temperature > 45 °C (8 channels)
Derating (decrease of total output power)	-0.550 W /K for ambient temperature > 45 °C (32 channels)