



Q Series - Q.raxx A108 Multi Channel Plug-in for Dynamic Voltages

Gantner
instruments



The Q.raxx product is based on the standardised 19" technology and is designed for measurements with a high level of flexibility, reliability and accuracy. The range of applications starts from small stand-alone solutions up to networked multi-channel applications in the field of stationary testing and assembly.

The wide range of available plug-in modules and the flexibility of the system configuration allows an optimised solution for each single task. Up to 13 plug-in modules in one system plus a Controller Unit provide a powerful package with PAC functionality, logging possibilities and an Ethernet TCP/IP interface.

Conclusion:

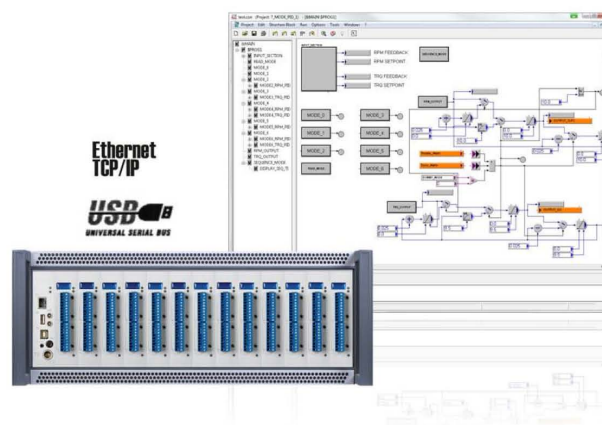
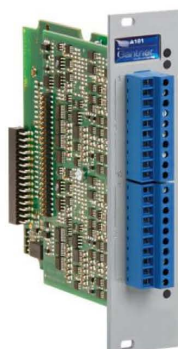
Dynamic signal acquisition up to 100 kHz, inputs and outputs for all types of signals, galvanic isolation of inputs and outputs, multi-channel solutions, high density packaging and intelligent signal conditioning for all kind of test applications.

Most important features of the system:

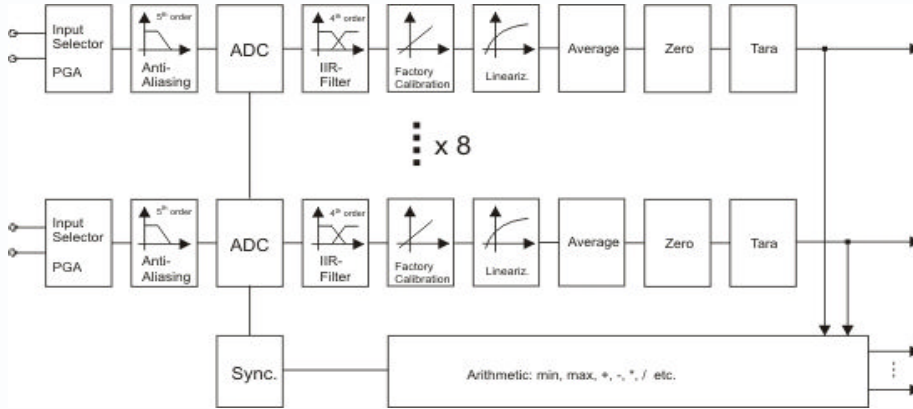
- **High density and flexibility**
Up to 16 modules in one system in any constellation, flexible plug selection
- **Test Controller inclusive**
Ethernet TCP/IP for configuration and data transfer, 16 MByte data memory, expandable by USB device, logging features, PAC functionality, IRIG synchronization
- **Robust and reliable**
Stable and compact aluminum housing, easy to carry electromagnetic compatibility according EN 61000-04 and EN 55011
Temperature range -20 up to +60°C
Power supply 10 up to 30 VDC

Most important features of the plug-in A108:

- **8 galvanic isolated input channels**
differential voltage, current via shunt connector
Isolation voltage 100 VDCes
- **High accuracy digitalisation**
24 bit ADC, 10 kHz sample rate per channel with 8 active channels, sum sample rate 80 kHz
- **2 digital in and 2 outputs**
input: state, tare, memory reset
output: state, alarm, threshold
- **Signal conditioning**
linearisation, digital filter, average, scaling, min/max storage, RMS, arithmetic, alarm
- **Galvanic isolation**
channel to channel to power supply and to interface, V_{iso} 500 VDC



Block Diagram



Specifications

Analog Inputs			
Number	8		
Accuracy	0.01 % typical		
	0.02 % in controlled environment ¹		
	0.05 % in industrial area ²		
Linearity error	0.01 % of the final value typical		
Repeatability	0.003 % typical (within 24 h)		
Isolation voltage	500 VDC channel to channel to power supply to interface ³		
Measurement Voltage	Range	max. Deviation	Resolution
	±10 V	±3 mV	40 µV
Input resistance	>1 MΩ		
Long term drift	<100 µV / 24 h; <250 µV / 8000 h		
Temperature influence	on zero	on sensitivity	
	<50 µV/10 K	0.05 %/10 K	
Signal-noise-ratio	> 100 dB at 100 kHz	>120 dB at 1 Hz	
Analog/Digital-Conversion			
Resolution	24 bit		
Sample rate	10 kHz at 8 active channels		
Conversion method	Sigma-Delta (group delay time 600 µs)		
Anti-aliasing filter	2 kHz, 5th order		
Digital filter	IIR, low pass, high pass, band pass, 4th order, 1 Hz up to 1 kHz in steps 1, 2, 5		
Averaging	configurable or automated according the selected data rate		
Digital In/Outputs			
Number	4, 2 digital inputs, 2 digital outputs		
Input	state, tare, reset		
Input voltage	max. 30 VDC		
Input current	max. 0,5 mA		
Upper threshold	>10 V (high)		
Lower threshold	<2.0 V (low)		
Output	state, alarm		
Contact	open drain p-channel MOSFET		
Load	30 VDC/100 mA (ohmic load)		

¹ according EN 61326: 1997, appendix B

² according EN 61326: 1997, appendix A

³ noise pulses up to 1000 VDC, permanent up to 250 VDC

Power Supply	
Power supply	10 up to 30 VDC, overvoltage and overload protection
Power consumption	approx. 2 W
Influence of the voltage	<0.001 %/V
Environmental	
Operating temperature	-20°C up to +60°C
Storage temperature	-40°C up to +85°C
Relative humidity	5 % up to 95 % at 50°C, non condensing
Dimension	
Front plate (W x H)	(30 x 128) mm
Depth	118 mm

Warm Up Time

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

Valid from January 2011. Specification subject to change without notice