

KiDAQ Module 5505A

Measurement module for voltage, current and status



Description

KiDAQ is a general purpose data acquisition system to measure more than 20 different analog and digital signal types. The wide selection of signal conditioning and data acquisition modules enables perfectly fitted system configurations, exactly to the customer's requirements. All modules are available in the KiDAQ housing options Rack, Portable and DIN Rail which allows the use in different applications and environments.

Key features

- **8 analog input signals**
Voltage till 10 V, current
- **2 digital input signals**
Status
- **A/D conversion**
20 kSps sampling rate per channel, 24 Bit resolution
- **Galvanic isolation**
Channel to channel to power supply and to interface isolation voltage 500 VDC



Technical data

Analog inputs

Number	8			
Input connector type	Terminal strip, 2x10 pole, color blue			
Accuracy	0.01% typical			
	0.025% 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 [V]	Frequency range (-3 dB) [Hz]	Max. deviation [mV]	Resolution [µV]
	±10	0 ... 3,000	±2	1.5
Input resistance	>1 MΩ			
Long term drift	<25 µV/24 h; <100 µV/8,000 h			
Temperature influence	on zero		on sensitivity	
	<50 µV/10 K		<0.01%/10 K	

Analog/digital-conversion

Resolution	24 bit
Sample rate	20 kSps per channel
Conversion method	Sigma-Delta (group delay time 600 µs)
Digital filter	IIR, low pass, high pass, band pass, Butterworth 4 th order, 0.1 Hz up to 1 kHz in steps 1, 2, 5
Averaging	configurable or automated according the selected data rate

Digital in/outputs ⁴⁾

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: 2006, appendix B

²⁾ according EN 61326: 2006, appendix A

³⁾ noise pulses up to 1,000 VDC, permanent up to 250 VDC

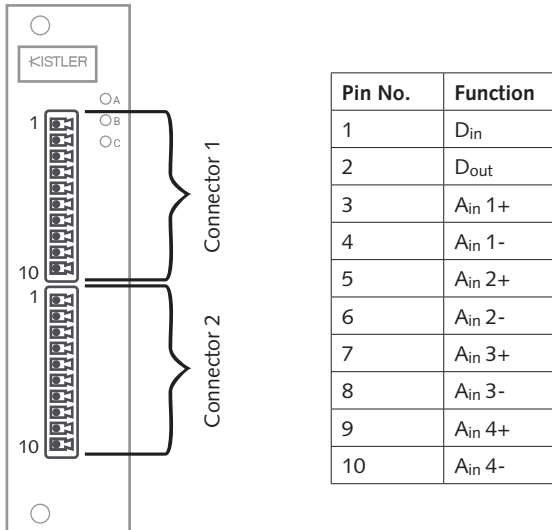
⁴⁾ Digital outputs are not yet supported in the software

Further technical data please refer to data sheet “KiDAQ System Datasheet” 003-335e.

Warm up time

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

Pin assignment

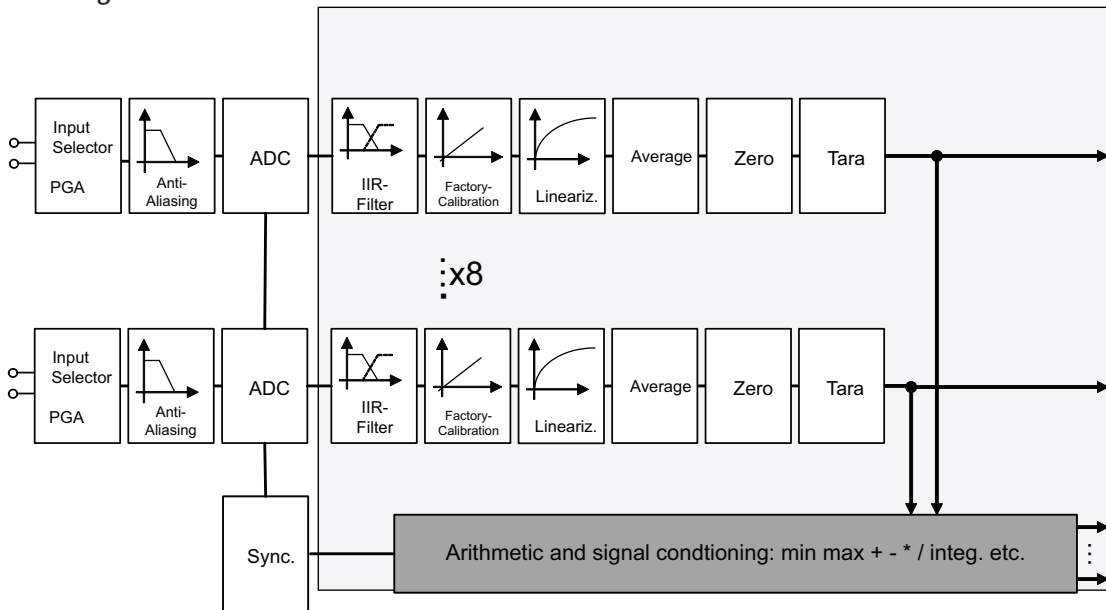


Measurement	Pin assignment
Voltage	
Current	With external shunt terminal Type 5584A1

Digital I/O	Pin assignment
Digital input	
Digital output	

KiDAQ Module 5505A_003-367e-01.20

Block diagram



Optional accessories

- Shunt Terminal for current measurement Terminal for 4 current measurements (4x100 Ω shunt resistor for measurement range ±25 mA) 2 terminals each module required (8 current measurements)

Type
5584A1

