



## AIO288/x Analog Input/Output Modules

The analog input/output module AIO288/x offers 8 analog input channels as well as 8 analog output channels.

### Features

- 8 analog inputs
- 8 analog outputs
- Connection possibility single-ended or differential
- Power supply for up to 4 potentiometers
- Temperature inputs for up to 4 Pt100/Pt1000 sensors
- 2-wire or 4-wire inputs for Pt100/Pt1000 sensors
- Wire break detection for the inputs (for voltage and temperature)
- Short circuit proof outputs
- Overload detection for potentiometer power supplies
- Monitoring of the external supplying voltage

Part type designation	Part number
AIO288	00014470-00
AIO288 CC	00016157-00
AIO288/1	00014470-10

**AIO288/x**

Voltage inputs	
Quantity	Max. 8
Input voltage	$\pm 1$ V or $\pm 10$ V
Input impedance	> 100 k $\Omega$
Digital resolution	14 bit
Permitted common mode voltage	Max. $\pm 1$ V
Accuracy at 25 °C	Max. $\pm 0.05$ % of input voltage range
Input cutoff frequency	1.5 kHz (3 dB)
Common-mode rejection	> 60 dB
Sampling time	200 $\mu$ s
Voltage outputs	
Quantity	Max. 8
Output voltage	$\pm 10$ V
Digital resolution	14 bit
Permitted common mode voltage	Max. $\pm 1$ V
Accuracy at 25 °C	Max. $\pm 0.025$ % of measuring range
Settling time of 1 % of the output current range	Max. 400 $\mu$ s
Common-mode rejection	> 60 dB
Refresh cycle time	200 $\mu$ s
Current inputs	
Quantity	Max. 8
Input current	0 mA to 20 mA
Input impedance	243 $\Omega$
Digital resolution	14 bit
Max. input current	35 mA (destruction limit)
Accuracy at 25 °C	Max. $\pm 0.1$ % of measuring range (20 mA)
Input cutoff frequency	1.5 kHz (3 dB)
Sampling time	200 $\mu$ s
Temperature inputs	
Temperature inputs	Pt100, Pt1000 selectable
Quantity	Max. 4
Connection type	2- or 4-wire, optional
Temperature range	-100 °C to +500 °C
Input impedance	> 100 k $\Omega$
Accuracy at 25 °C	Max. $\pm 0.1$ % of measuring range (600 kelvin)
Input cutoff frequency	1.5 kHz (3 dB)
Value of LSB	0.1 K
Sampling time	200 $\mu$ s
Galvanic isolation from the system	500 V
Potentiometer power supply	
Quantity	Max. 4
Voltage range	$\pm 10$ V
Error at 25°C	Max. $\pm 100$ mV
Load	Max. 40 mA

Power supply		
External voltage range	18 V DC to 34 V DC	
Galvanic isolation from the system	500 V (only AIO288)	
Approvals/Certificates		
General	CE, UKCA, cULus	
Marine	ABS, BV, DNV, KR, LR, NK, RINA	
Environmental conditions		
	Standard	ColdClimate (❄️)
Operating temperature	-30 °C to +60 °C	
Relative humidity, operation	5 % to 95 % noncondensing	5 % to 95 % with condensation
Storage temperature	-40 °C to +85 °C	
Relative humidity, storage	5 % to 95 % with condensation	
Pollution degree (IEC 60664-1)	2 (noncondensing)	2

## Order data

Part type designation	Part number	Description
AIO288	00014470-00	Analog input/output module; 8x In $\pm 10$ V $\pm 1$ V, 20 mA 4x Pt100/1000; 14 bit; 0.1 %; 200 $\mu$ s sampling time; 8x Out $\pm 10$ V; 4x Poti supply; isolated
AIO288 CC	00016157-00	AIO288; ColdClimate (❄️)
AIO288/1	00014470-10	Analog input/output module; 8x In $\pm 10$ V $\pm 1$ V, 20 mA 4x Pt100/1000; 14 bit; 0.1 %; 200 $\mu$ s sampling time; 8x Out $\pm 10$ V; 4x Poti supply; NOT isolated

## Accessories

Part type designation	Part number	Description
KS-AIO288 B+C <sup>1)</sup>	00012598-50	Terminal set cage clamp small (4x KS 35/19; 1x KZ 51/03) with labeling strip and keying elements → <b>not for new developments</b>
KZ-AIO288 B+C	00026125-00	Terminal set Phoenix cage clamp (4x KZ 35/19; 1x KZ 51/03) with labeling strip and coding elements
SS-AIO288 B+C	00012007-50	Terminal set Phoenix screw side (4x SS 35/19; 1x KZ 51/03) with labeling strip and coding elements
SV-AIO288 B+C	00010864-50	Terminal set Phoenix screw frontside (4x SS 35/19; 1x SV 51/03) with labeling strip and coding elements

<sup>1)</sup> Item is discontinued and replaced by KZ-AIO288 B+C (00026125-00).