

S-DIAS Multi I/O Module Smart IO 011S



- with 6 digital inputs
- 8 short-circuit proof digital outputs
- 1 analog voltage input
- 1 analog current input

The module has 6 digital inputs (+24 V/3.5 mA/1 μ s) and 8 short circuit proof digital outputs (+24 V/0.5 A), these support read-back (150 μ s). The voltage supply for the digital outputs are monitored for under voltage.

Additionally, the module has an analog ± 10 V input and an analog current input (0-20 mA). The resolution of the two analog inputs is 16 bits.

Digital Input Specifications

Number	6	
Input voltage	typically +24 V	maximum +30 V
Signal level	low: < +8 V	high: > +14 V
Switching threshold	typically +11 V	
Input current	3.7 mA at +24 V	
Input delay	typically 1 μ s	

Digital Output Specifications

Number	8
Short-circuit proof	yes
Maximum permitted continuous load current / channel	0.5 A
Maximum total current (all 8 outputs)	4 A (100 % of on-time)
Maximum braking energy of outputs (inductive load)	maximum 1 Joule/channel

Residual current output (off)	$\leq 10 \mu$ A	
Turn-on delay	< 100 μ s	
Turn-off delay	< 150 μ s	
Read-back signal level	low: < +8 V	high: > +14 V
Input delay	typically 1 μ s	
Maximum allowed voltage on the digital output when switched off	An external voltage supplied to the digital output pin must not exceed the voltage on the supply pin (24 V) by more than 0.7 V.	

Voltage Monitor

Power supply +24 V	supply voltage > 18 V (DC OK-LED lights green)
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Analog ± 10 V Input Specifications

Number of channels	1	
Measurement range	-10 ... +10 V	0 ... +10 V
Measurement value	-30.000 ... +30.000	0 ... +30.000
Input type	differential input	
Resolution	16-bit (ca. 0.3 mV/LSB)	
Conversion time for all channels	default mode: 10 μ s (current input disabled) default mode: 20 μ s (current input enabled) time-trigger mode: 15 μ s (current input disabled/enabled) latch mode: 10 μ s (current input disabled, 1-4 latch registers enabled) latch mode: 20 μ s (current input disabled, 5-8 latch registers enabled) latch mode: 20 μ s (current input enabled, 1-8 latch registers enabled)	
Common mode range	± 12 V	
Input resistance	typically 660 k Ω	
Cable break monitor	yes	
Input filter hardware	typically 100 kHz, low pass 3rd order system	
Input filter software	configurable low pass 1st order system (in standard mode only)	
Basic accuracy	± 0.20 % of maximum measurement value	
Total accuracy (0-60 °C)	± 0.30 % of maximum measurement value	