

S-DIAS Analog Input Module AI 040



with 4 inputs for vibration sensors with IEPE interface

The S-DIAS AI 040 analog input module has four constant current sources, which can be set independently of one another. The sensor signals converted to a broad frequency range with a 16-bit resolution.

IEPE Interface Specifications

Number of channels	4					
Measurement range	±5,500 V AC	±2,750 V AC	±1,375 V AC	±0,688 V AC	±0,344 V AC	±0,172 V AC
Adjustable amplification	1	2	4	8	16	32
Measurement value	±30000					
AD converter resolution	16-bit					
Conversion rate per channel	≥ 5 µs (adjustable, default setting 5 µs)					
Data recording per channel	maximum 64 Word					
Short circuit monitoring	yes					
Cable break monitor	yes					
Hardware input filter	typically 31 mHz			high pass 1 st order system		
	typically 20 kHz			low pass 3 rd order system		
Measurement precision (amplification 1 to 8)	±0,5 %					
Measurement precision (amplification 16 to 32)	±2 %					

Software Band Pass Filter Specifications

Lower frequency limit	adjustable (min 0.1 Hz)	
Upper frequency limit	adjustable (max. 10 kHz)	
Measurement values processed per cycle	configurable	
Output parameters	average value minimum value maximum value time stamp minimum value time stamp maximal value	

Supply Voltage Specifications

Adjustable current	0, 4, 8, 12 mA separately adjustable for each channel	
Setting tolerance	maximum ±5 %	
Supply voltage	+18-30 V DC	
Current consumption	typically 20 mA plus constant current setting	
Sensor voltage at 12 mA supply current	minimal 18.5 V	typically 19.1 V

Electrical Requirements

Voltage supply from S-DIAS bus	+24 V	
Current consumption on the S-DIAS bus (+24 V power supply)	typically 30 mA	maximum 40 mA

Article Number and Miscellaneous

Article number	20-009-040	
Dimensions	12.5 x 104.2 x 72 mm (W x H x D)	
Standard	UL 508 (E247993)	
Approvals	UL, cUL, CE	

Environmental Conditions

Storage temperature	-20 ... +85 °C	
Environmental temperature	0 ... +60 °C	
Humidity	0-95 %, non-condensing	
Operating conditions	pollution degree 2 altitude up to 2000 m	
EMC resistance	in accordance with EN 61000-6-2 (industrial area)	
EMC noise generation	in accordance with EN 61000-6-4 (industrial area)	
Vibration resistance	EN 60068-2-6	3.5 mm from 5-8.4 Hz 1g from 8.4-150 Hz
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20