S-DIAS AC Current Measuring Module
AI 031

with 3 analog current inputs 0-5 A AC

The S-DIAS AI 031 AC current measuring module is used to measure current in low voltage networks. To decouple from the supply, an external transformer must be used, which converts the measured current to a maximum of 5 A AC.

Analog Current Input Specifications

Number of channels	3	
Measurement range	0-5 A AC	
Measurement value	0-5000 digits	
Measuring process	average value	
Signal form	sine	
Frequency	47-63 Hz	
Resolution	12-bit (ca. 1.53 mA AC/digit)	
Conversion time per channel	1 ms	
Common mode range	±10 V	
Input filter hardware	typically 2 Hz	low pass 3rd order system
Resistive sensor	12 mΩ	
Measurement precision	±1 % of maximum measurement value	

Electrical Requirements

Voltage supply from S-DIAS bus	+5 V	
Current consumption on the S-DIAS bus (+5 V power supply)	typically 50 mA	maximum 55 mA
Voltage supply from S-DIAS bus	+24 V	
Current consumption on the S-DIAS bus (+24 V power supply)	typically 40 mA	maximum 50 mA

Article Number and Miscellaneous

Article number	20-009-031
Hardware version	12.5 x 104.2 x 72 mm (W x H x D)
Standard	UL 508 (E247993)
Approvals	CE, $_{c}$UL$_{us}$

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 1 g from 8.4-150 Hz
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20