

S-DIAS Gyroscope Sensor Module

BC 031



with 1 Ethernet
1 RS485

The S-DIAS gyroscope sensor module provides rotation speeds and linear acceleration information in 3 axes. To filter the raw data, the module has a micro-controller. The BC 031 also enables data exchange between 2 S2 bus systems and an S-DIAS system.

In addition, the gyroscope sensor module provides an Ethernet, as well as an RS485 interface. With the RS485 interface, is equipped with a line termination that can be enabled via software.

Bus Coupler

Functional principle	Triple Buffer
Buffer size	500 bytes
Synchronization	RT start time
Clock master	selectable, S-DIAS, S2A or S2B

Controller Performance Data

Controller	LPC1112
Internal program memory (Flash PROM)	128-kByte (Flash)

MEMS Sensor Specifications

Sensor type	LSM6DSL (STMicro)
Number of linear axes	3
Number of rotational axes	3
Linear axis resolution	0.061 mg/LSB
Rotational axis resolution	4.375 mdps/LSB
Number of temperature sensors	1
Temperature resolution	0.1 °C
Temperature measuring range	-40 ... +85 °C

Electrical Requirements

Power supply +24 V	18-30 V DC	
Voltage supply from S-DIAS bus	+5 V	
Current consumption on the S-DIAS bus (+5 V supply)	typically 0 mA	maximum 0 mA
Voltage supply from S-DIAS bus	+24 V	
Current consumption on the S-DIAS bus (+24 V supply)	typically 45 mA	maximum 55 mA

Article Number and Miscellaneous

Article number	20-045-031 (S2 connections not terminated) 20-045-031-R (S2 connections terminated)
Dimensions	12.5 x 104.2 x 72 mm (W x H x D)
Approvals	CE

Environmental Conditions

Storage temperature	-20 ... +85 °C	
Environmental temperature	0 ... +55 °C	
Humidity	0-95 %, non-condensing	
Operating conditions	pollution degree 2 indoor use 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