S-DIAS Stepper Module
ST 011

with 1 incremental encoder input
- 1 output channel for the motor control
- 2 digital optic coupler outputs
- 2 digital inputs

The S-DIAS ST 011 stepper module can be used to control stepper motors and servo motor power components. The digital inputs are provided for the reference motion and monitoring the end positions. The ST 011 also has two digital optic coupler outputs. An incremental encoder connection with A/B/R analysis is available as well as the corresponding +5 V incremental encoder supply.

Incremental Encoder Specifications

Number	1
Input signals	Incremental encoder signals RS422 (A, /A, B, /B, R, /R) RS422 signal (150 Ω connection, 330 Ω spread, integrated in the module)
Input frequency	maximum 125 kHz
Counter frequency	maximum 500 kHz
Signal analysis	4X
Counter resolution	32-bit
Encoder power supply	+5 V/0.2 A short circuit protected

Power Component Control Output Specifications

Number	1
Output signals	Activation signals RS422 (C, /C, D, /D, E, /E) RS422 signal
Output frequency	maximum 500 kHz
Maximum continuous current allowed	40 mA

Digital Input Specifications

Number	2	
Input voltage	typically +24 V	maximum +30 V
Signal level	low: < +5 V	high: > +15 V
Input current	3 mA at +24 V	
Input delay	typically 0.1 ms	

Digital Optic Coupler Specifications

Number	2
Configuration	potential-free (output 1 is either back readable or can be used as an input)
Switching voltage	maximum +30 V DC
Current load	maximum 100 mA
Residual voltage	< 2 V at 100 mA

Electrical Requirements

Power supply +24 V from S-DIAS bus	+18-30 V DC	
Current consumption of the +24 V supply on the S-DIAS bus	typically 80 mA (incl. incremental encoder supply)	maximum 90 mA (incl. incremental encoder supply)
Voltage supply from S-DIAS bus	+5 V	
Current consumption on the S-DIAS bus (+5 V supply)	typically 180 mA	maximum 200 mA

Article Number and Miscellaneous

Article number	20-014-011 20-014-011-X (Printed circuit board with protective lacquer)
Dimensions	12.5 x 104.2 x 72 mm (W x H x D)
Standard	UL 508 (E247993)
Approvals	UL, cUL, CE