

S-DIAS Servo Motor Output Stage DC 062(-X)



with 1 motor output stage 6 A
1 incremental encoder input
1 holding brake

The S-DIAS DC 062(-X) axis module is used to control a synchronous servo motor with a 48-Volt supply voltage and phase current of up to 6 A. An incremental encoder input is available for position feedback. A 24 V output for connecting a holding brake is provided. External Regen brake can also be connected.

Motor Driver Specifications

Type	brushless, 4-quadrant regulator with position setting
Operating voltage	+24-55 V
Maximum continuous current	6 A
Maximum peak current (10 sec)	15 A
Controller frequency	16 kHz
PWM frequency	16 kHz
Overload protection	Short circuit cutoff Temperature monitor I ² T monitor Over and under voltage monitor

Incremental Encoder Specifications

Number of channels	1
Input signals	Incremental encoder signals RS422 (A, /A, B, /B, R, /R) RS422 signal (120 Ω termination, integrated in the module) Incremental encoder signals TTL (A, B, R) TTL-level (1200 Ω Pull-Up, integrated in the module)
Input frequency	maximum 125 kHz
Counter frequency	maximum 500 kHz
Signal evaluation	4x
Counter resolution	32 bits
Encoder power supply	+5 V/0.2 A short circuit protected

Enable Inputs Specifications

Number	2
Input voltage	+24 V DC
Input voltage range	+18-30 V DC
Signal level	low: < 5 V high: > 15 V
Switching threshold	typically +11 V
Input current	3 mA at +24 V DC
Input delay	typically 0.5 ms

Holding Brake Specifications

Output voltage	+24 V DC
Maximum continuous current	500 mA
Short-circuit protection	yes
Maximum switch-off energy (inductive load)	50 mJ

Regen Brake Specifications

Type	external power resistor
Output	GND switching
Maximum current	10 A
Lowest possible resistance	6 Ω
Short-circuit protection	yes
Threshold regen braking on/off	60 V/55 V

Electrical Requirements

	Power supply +24V	+18-30 V DC (Class 2)	
	Current consumption of the +24 V supply	load-dependent (holding brake)	
	Supply voltage motor	+18-55 V DC	
	Switching threshold for motor voltage monitor	minimum 18 V	maximum 65 V
	Current consumption of motor supply	load-dependent (motor)	
	Voltage supply from S-DIAS bus	+24 V DC	
	Current consumption on the S-DIAS bus (+24 V supply)	typically 70 mA	maximum 80 mA

Article Number and Miscellaneous

	Article number	20-014-062 20-014-062-X (printed circuit board with protective lacquer)
	Dimensions	12.5 x 104.2 x 72 mm (W x H x D)
	Standard	UL 508C (E336350)
	Approvals	UL, cUL, CE

Environmental Conditions

Storage temperature	-20 ... +85 °C	
Environmental temperature	0 ... +50 °C	
Humidity	0-95 %, non-condensing	
Installation altitude above sea level	0-2000 m without derating > 2000 m with derating of the maximum environmental temperature by 0.5 °C per 100 m	
Operating conditions	pollution degree 2	
EMC resistance	in accordance with 61000-6-7 (Generic standards - Immunity re-quirements for equipment intended to perform functions in safety-related systems (functional safety) at industrial locations) in accordance with EN 61000-6-2 (industrial area) (increased requirements in accordance with IEC 62061) Additionally tested according to EN 61800-5-2:2017 (Generic Standards for Electrical Power Drive Systems with Adjustable Speed Part 5-2: Safety Requirements – Functional Safety)	
EMC noise generation	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

Notes