PRODUCT DATASHEET

ES-SD-C01-S006-V005

Industrial Motion Controller

24 60 V Low Voltage Micro Servo Drives | 24-60 V Compact Servo Drive Series - ES-SD-C01-S006

Product Overview

Industrial Motion Controller with logic Supply Voltage No separate logic-supply input listed V DC, peak Output Current 48 A peak and continuous Output Current Without Auxiliary Heatsink 12 Arms.

Key Specifications

PARAMETER	VALUE	UNIT
Logic Supply Voltage	No separate logic-supply input listed	V DC
Peak Output Current	48 A peak	
Continuous Output Current Without Auxiliary Heatsink	12 Arms	
Communication Protocol	RS232; EtherCAT; CoE CiA 402	
Control Method	RS232 and EtherCAT	
Protection Class	IP20 except FD164S power terminals	
Weight	0.6	kg
Digital I/O	4 digital inputs; 2 digital outputs; brake-motor variants use 1 digital output	
Altitude Derating Rate	1.5 % per 100 m	

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Continuous Output Current Without Auxiliary Heatsink	12 Arms	
Supported Motor Power Range	50 to +3000	W
ELECTRICAL		
Logic Supply Voltage	No separate logic-supply input listed	V DC
Peak Output Current	48 A peak	
Braking Absorption Voltage	73 ±2 V VDC / 73	V DC
Braking Resistor	External braking resistor supported when required by the duty cycle, particularly for rapid start/stop operation	
External Braking Resistor Required	Yes / 1	
Overvoltage Alarm Voltage	83 ±2 V VDC / 83	V DC
Undervoltage Alarm Voltage	18 ±2 V VDC / 18	V DC
Servo Drive AC Supply Voltage	24 to +60	V DC
Protection Functions	Overvoltage; Undervoltage; Motor overtemperature (I^2T); Short circuit; Drive overtemperature	
MECHANICAL		
Weight	0.6	kg

Technical Specifications

PARAMETER	SPECIFICATION	UNIT
INTERFACES		
Communication Protocol	RS232; EtherCAT; CoE CiA 402	
Control Method	RS232 and EtherCAT	
Digital I/O	4 digital inputs; 2 digital outputs; brake-motor variants use 1 digital output	
Pulse Input Supported	No / false	
Digital Output Count	2	
RS232 Maximum Baud Rate	115.2 kbit/s	
Digital Input Count	4	
Pulse Input Voltage	Not applicable	V DC
Feedback Signal Support	2500 P/R incremental differential 5 V encoder; Magnetic encoder; Resolver	
ENVIRONMENTAL		
Protection Class	IP20 except FD164S power terminals	
Relative humidity	≤90% RH, non-condensing	
Installation Environment	Dry, dust-free enclosed location such as an electrical cabinet	

Technical Specifications

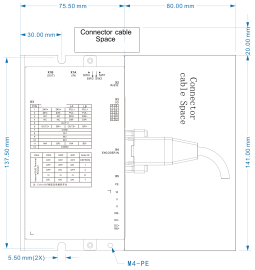
PARAMETER	SPECIFICATION	UNIT
ENVIRONMENTAL		
Atmospheric Pressure	86 to +106	kPa
Operating Temperature	0 to +40	°C
Storage Temperature	-10 to +70	°C
Installation Orientation	Vertical or horizontal	
Cooling Method	Natural cooling	
Altitude Derating Start	1000	m
Maximum Operating Humidity	90	%RH
Maximum Operating Altitude	3000	m
Altitude Derating Rate	1.5 % per 100 m	
SAFETY		
STO Support	No / false	
CONFIGURATION		
Servo Drive Axis Count	1	
Drive Architecture	Single-axis low-voltage servo drive	

Dimensional & Integration Overview

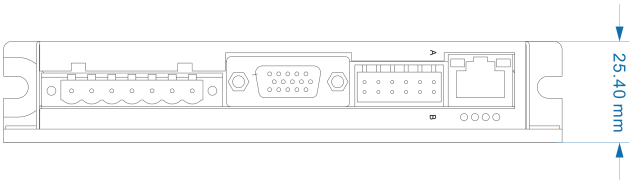
Mechanical Overview

PARAMETER	VALUE	UNIT
Weight	0.6	kg

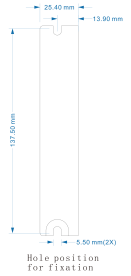
Dimensional Drawings



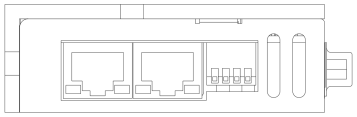
Mechanical View 1



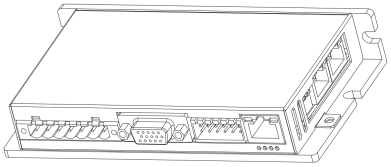
Mechanical View 2



Mechanical View 3



Mechanical View 4



Mechanical View 5

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Total horizontal length	75.50 mm
	Total horizontal width	80.00 mm
	Mounting spacing	30.00 mm
	Vertical height	20.00 mm
	Total vertical height	137.50 mm
		141.00 mm
	Mounting hole diameter	Φ5.50 mm (2 places)
	Grounding screw hole	M4 PE grounding thread
Mechanical View 2	Front panel height	25.40 mm
Mechanical View 3	Fixing hole position transverse dimension	
	Fixing hole position offset dimension	13.90 mm
	Fixing hole position vertical spacing	137.50 mm
	Fixing hole or slot width	5.50 mm, 2 places
	Fixing hole position note	Hole position for fixation

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.