

PRODUCT DATASHEET

ES-SD-C01-S006-V002

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 12 A peak and continuous Output Current Without Auxiliary Heatsink 5 Arms.

Key Specifications

PARAMETER	VALUE	UNIT
Logic Supply Voltage	No separate logic-supply input listed	V DC
Peak Output Current	12 A peak	
Continuous Output Current Without Auxiliary Heatsink	5 Arms	
Communication Protocol	RS232; EtherCAT; CoE CiA 402	
Control Method	RS232 and EtherCAT	
Protection Class	IP20 except FD164S power terminals	
Weight	0.3	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	5 Arms	
Supported Motor Power Range	50 to +3000	W
ELECTRICAL		
Logic Supply Voltage	No separate logic-supply input listed	V DC
Peak Output Current	12 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 ² T); Short circuit; Drive overtemperature	
MECHANICAL		
Weight	0.3	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

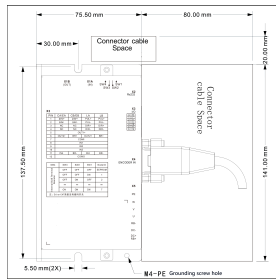
PARAMETER	SPECIFICATION	UNIT
ENVIRONMENTAL		
Atmospheric Pressure	86 to +106	kPa
Operating Temperature	0 to +40	°C
Storage Temperature	-10 to +70	°C
Installation Orientation	Vertical or horizontal	
Cooling Method	Natural cooling	
Altitude Derating Start	1000	m
Maximum Operating Humidity	90	%RH
Maximum 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	0.3	kg

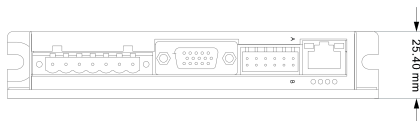
Dimensional Drawings



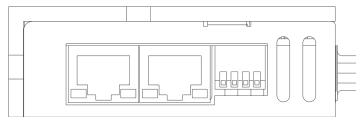
Mechanical View 1



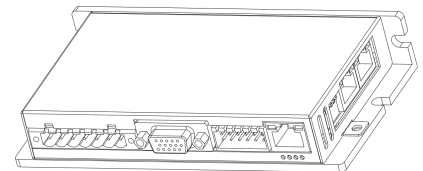
Mechanical View 2



Mechanical View 3



Mechanical View 4



Mechanical View 5

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 1	Left section width	75.50mm
	Right section width	80.00mm
	Top section depth	30.00mm
	Right side depth	20.00mm
	Overall height	137.50mm
		141.00mm
	Bottom mounting hole position	5.50mm (2 places)
	Grounding screw hole	M4 grounding screw hole (PE)
	Connector cable space	Connector cable space (reserved area for cable routing)
Mechanical View 2	Fixation hole position horizontal dimension	25.40 mm
	Fixation hole position offset dimension	13.90 mm
	Fixation hole position vertical dimension	137.50 mm
	Fixation hole width, 2 places	5.50 mm, 2 places
	Fixation hole position note	Hole position for fixation
Mechanical View 3	Right-side vertical envelope dimension	25.40 mm

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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.