

Motor controllers CMMB-AS, for servo motors



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Features

Performance characteristics

- Extremely small dimensions
- Complete integration of all components for controller and power section, including RS232 and pulse train interface
- Control of a holding brake
- Compliance with the latest CE, EN and UL standards
- Digital single-turn absolute encoder
- Can be operated as a torque, speed or position controller
- Integrated position control
- Time-optimised (trapezoidal) or jerk-free (S-shaped) positioning
- Absolute and relative movements
- Point-to-point positioning with and without motion path smoothing
- Position synchronisation
- Electronic gear unit
- 32 position sets
- 8 acceleration profiles
- Wide range of homing methods

Input/output

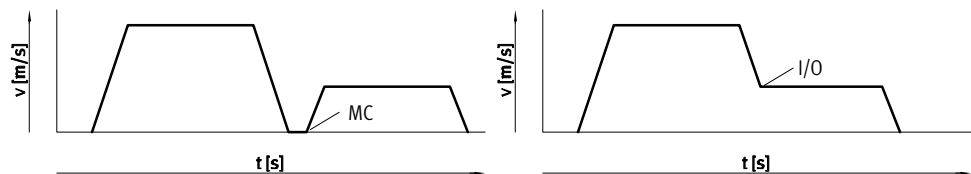
- Freely programmable I/Os
- Simple coupling to a higher-level controller via an I/O interface
- Synchronous operation
- Master/slave mode

Integrated sequence control

- Automatic sequence of position sets without a higher-order controller
- Linear and cyclical position sequences
- Adjustable delay times

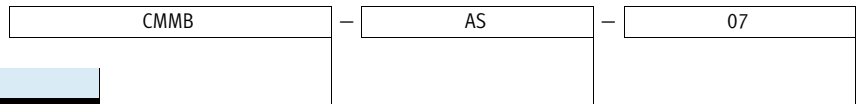
Travel program

- Linking of any number of position sets into a travel program
- Step enabling conditions for the travel program possible via digital inputs, for example
MC – motion complete
I/O – digital inputs



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Type codes



Type	
CMMB	Motor controller

Motor technology	
AS	AC synchronous

Performance class	
01	100 W
02	200 W
04	400 W
07	750 W

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Technical data



General technical data				
CMMB-AS-	01	02	04	07
Type of mounting	Screwed onto connecting plate			
Display	7-segment display			
Parameterisation interface	RS232 (up to 38400 bps)			
Encoder interface input	Nikon A-format			
Encoder interface output	Actual value feedback via encoder signals in speed control mode Setpoint specification for downstream slave drive Resolution 65536 ppr			
Braking resistor, integrated	[Ω]	100		
Braking resistor, external	[Ω]	75		
Impedance of setpoint input	[kΩ]	350		
Number of analogue inputs		2		
Operating range of analogue inputs	[V]	±10		
Characteristics of analogue inputs		Differential inputs Configurable for rotational speed / current		
Product weight	[g]	740	740	760

Technical data – I/O interface	
Number of digital logic outputs	5
Characteristics of digital logic outputs	Freely configurable in some cases
Number of digital logic inputs	7
Operating range of logic inputs	[V] 12.5 ... 30
Characteristics of logic inputs	Freely configurable
Process coupling	Pulse train For 32 position sets

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Technical data

Electrical		01	02	04	07
Output connection data					
Output voltage range	[V AC]	3x 0 ... 240			
Nominal current	[A _{eff}]	1.5	3	4.5	7
Peak current at max. peak current duration	[A _{eff}] [s]	7	7	15	15
Max. DC link voltage	[V DC]	300			
Output frequency	[Hz]	0 ... 400			
Load supply					
Nominal voltage phases		1			
Input voltage range	[V AC]	200 ... 240 ±10%			
Max. nominal input current	[A]	1.5	3	4.5	7
Rated output	[VA]	100	200	400	750
Peak power	[VA]	2100	2100	4500	4500
Mains frequency	[Hz]	50 ... 60			
Logic supply					
Nominal voltage	[V DC]	24 ±10%			
Nominal current ¹⁾	[A]	0.5			
Max. current of digital logic outputs	[mA]	100			

1) Without brake

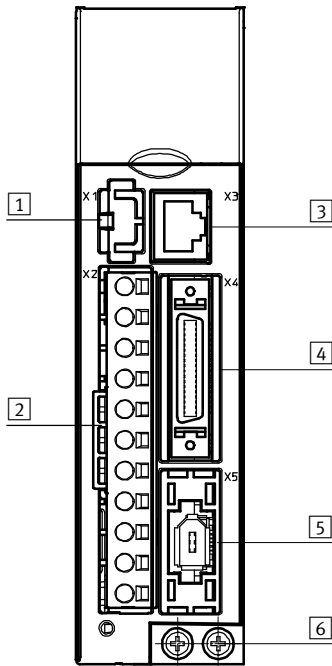
Operating and environmental conditions	
Digital logic outputs	Galvanically isolated
Logic inputs	Galvanically isolated
Degree of protection	IP20
Ambient temperature	[°C] 0 ... 40
Storage temperature	[°C] -10 ... +70
Relative air humidity	[%] 5 ... 95
Degree of contamination	2
CE marking (see declaration of conformity)	To EU EMC Directive ¹⁾ To EU Low Voltage Directive To EC Machinery Directive
Approval certificate	c UL us - listed (OL)
Note on materials	Contains paint-wetting impairment substances RoHS compliant

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp → Certificates.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

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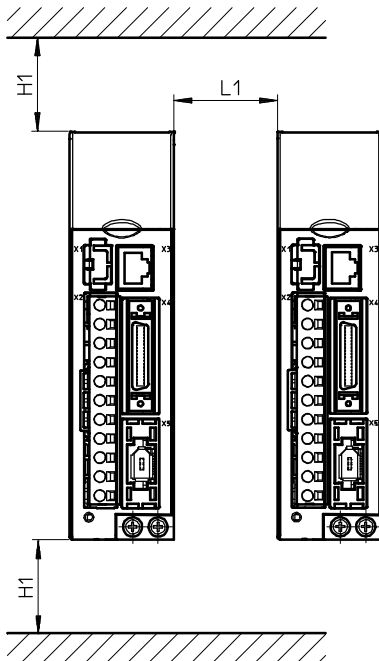
Technical data

View of motor controller



- 1 Reserved connection
- 2 X2 power supply/motor connection
- 3 X3 interface RS232
- 4 Multi-functional connection:
 - Digital inputs/outputs
 - Analogue inputs
 - Encoder output
 - Pulse train input
- 5 X5 encoder input
- 6 PE connection

Installation clearance for motor controller



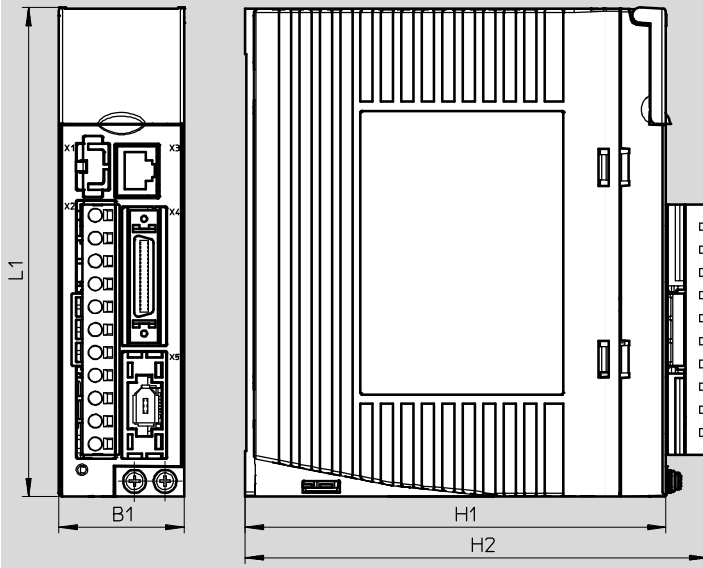
H1	L1
50	10

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Technical data

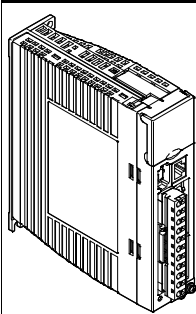
Dimensions

Download CAD data → www.festo.com



Type	B1	H1	H2	L1
CMMB-AS-01	41	138	152	160.5
CMMB-AS-02				
CMMB-AS-04				
CMMB-AS-07				

Ordering data

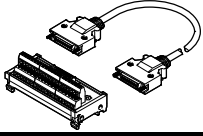
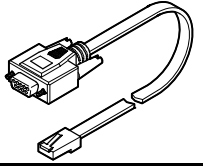
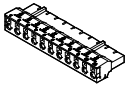


Description
The plug assortment NEKM-C-11 (→ page 8) is included in the scope of delivery of the motor controller.

Part No.	Type
5105641	CMMB-AS-01
5105642	CMMB-AS-02
5105643	CMMB-AS-04
5105644	CMMB-AS-07

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Accessories

Ordering data – Connection options from the I/O interface to the controller				
	Description	Cable length [m]	Part No.	Type
Connection block with connecting cable				
	<ul style="list-style-type: none"> For I/O interface to any controller The connection block ensures simple and clear wiring. The connection to the motor controller is established through the control cable NEBC-S2G36-.... 	0.5	5105646	NEBC-S2G36-K-0.5-N-C2W36-S7
Ordering data – Cable				
		Cable length [m]	Part No.	Type
Programming cable				
	-	1.5	5105645	NEBC-S1G9-K-1.5-N-R3G8
Ordering data – Assortment of plugs				
	Description		Part No.	Type
	<ul style="list-style-type: none"> Comprising a plug for power supply and motor connection The plug assortment is included in the scope of delivery of the motor controller 		5105647	NEKM-C-11