

End-position controllers CMFL

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Key features

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At a glance

Properties

The end-position controller CMFL is used for force-controlled positioning of the short-stroke cylinder ADNE-LAS. The mode of operation therefore corresponds to that of a pneumatic cylinder, reproduced using a linear motor.

The drive technology used permits more dynamic movements compared with pneumatic cylinders; these movements additionally offer continuous monitoring including "motion complete".

The high dynamic response means that actuation is only possible via hardware inputs and outputs.

Range of applications

The following applications can be realised with the four predefined movement patterns:

- Ejecting "bad" parts from a continuous production process
- Blocking movements
- Switching deflectors

Everything from a single source

Short-stroke cylinder
ADNE-LAS

→ Internet: adne



End-position controller
CMFL

→ 3

- Short-stroke cylinder ADNE-LAS
- End-position controller CMFL
- Motor cable NEBM
- Supply cable KPWR
- Control cable KES

The short-stroke cylinder ADNE-LAS and end-position controller CMFL form one unit. Only one cable is required between them.

Movement patterns

Four movement patterns can be selected via inputs.

1. Advance



2. Retract



3. Advance and then
retract again



4. Retract and then
advance again



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Technical data



General technical data		
Display	LED	
Control elements	None	
Interface	I/O interface	
Number of digital logic inputs	4	
Number of digital logic outputs	2	
Controller operating mode	PWM MOSFET power end stage	
Digital outputs, switching logic	PNP	
Digital inputs, switching logic	Choice of PNP, NPN	
Protective function	Software end-position detection	
	Voltage failure detection	
Type of mounting	Via mounting bracket	
Product weight	[g]	470

Electrical data		
Load supply		
Nominal voltage (either)	[V DC]	24 ±5%
	[V DC]	48 ±5%
Nominal current	[A]	3
Peak current	[A]	4.5 (at 24 V DC)
	[A]	8 (at 48 V DC)
Logic supply		
Nominal voltage	[V DC]	24 ±10%
Nominal current	[A]	0.1
Peak current	[A]	0.2
Max. current of digital logic outputs	[mA]	100

Operating and environmental conditions		
Logic input	Galvanically isolated	
Digital logic outputs	Galvanically isolated	
Logic input specification	Based on IEC 61131-2	
Digital output design	To IEC 61131-2	
Protection class	IP65	
Vibration resistance	Based on DIN EN 60068-2-6	
Shock resistance	Based on DIN EN 60068-2-27	
CE mark (see declaration of conformity) ¹⁾	To EU EMC Directive	
Ambient temperature	[°C]	0 ... +40
Storage temperature	[°C]	-20 ... +60
Relative air humidity	[%]	0 ... 90 (non-condensing)
Note on materials	Contains PWIS (paint-wetting impairment substances)	
	RoHS-compliant	
Certification	C-Tick	

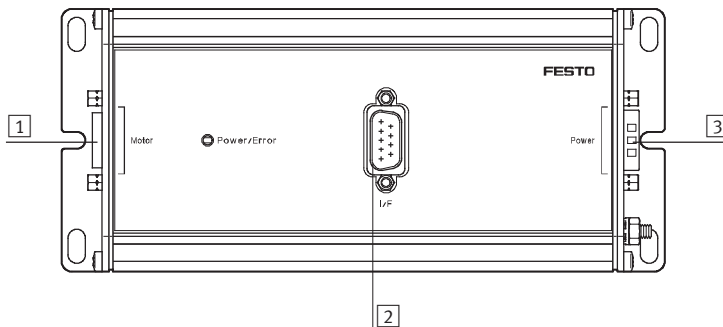
1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com → Support → User documentation.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures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

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Technical data

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Pin allocation



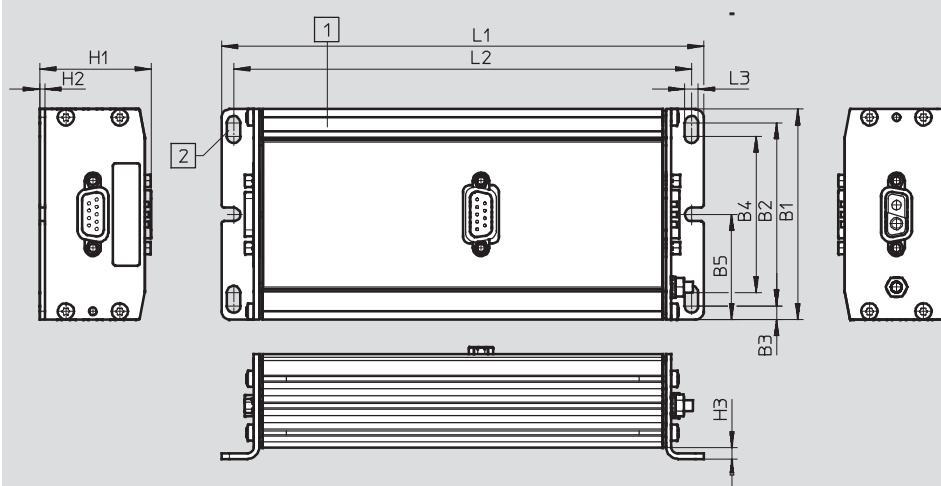
1 Motor interface, 9-pin Sub-D socket	
Pin	Function
1	Centre pick-up
2	Temperature sensor
3	Serial data
4	Motor -
5	Motor +
6	Clock
7	Supply voltage
8	Write protect
9	Reference potential 0 V
-	Cable screening

2 I/O interface, 9-pin Sub-D plug	
Pin	Function
1	Reference voltage
2	Enable
3	Control bit 2
4	Start
5	Control bit 1
6	Output supply voltage
7	Motion complete
8	Error
9	GND (connected internally with GND load)
-	Cable screening

3 Power supply, 2-pin Sub-D plug	
Pin	Function
A1	+48 VDC load
A2	GND load

Dimensions

Download CAD data → www.festo.com



- 1 Slot for inscription labels:
18182 IBS-9x20
18576 IBS-6x10
- 2 Mounting options for M4 screws

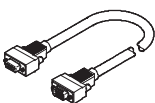
Type	B1	B2	B3	B4	B5	H1	H2	H3	L1	L2	L3
CMFL-...	78	68	5	58	39	41.4	2	4.2	178.9	169.9	5

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Technical data

Ordering data			
Motor controller	Brief description	Part No.	Type
	With I/O interface	567420	CMFL

Accessories

Ordering data – Cables				
	Brief description	Cable length [m]	Part No.	Type
	Motor cable for connecting the motor and controller	2.5	565369	NEBM-S1G9-E-2.5-N-S1G9
		5	565370	NEBM-S1G9-E-5-N-S1G9
		10	565371	NEBM-S1G9-E-10-N-S1G9
	Supply cable	2.5	537931	KPWR-MC-1-SUB-9HC-2,5
		5	537932	KPWR-MC-1-SUB-9HC-5
		10	537933	KPWR-MC-1-SUB-9HC-10
	Control cable for I/O interface, for connection to any PLC controller	2.5	537923	KES-MC-1-SUB-9-2,5
		5	537924	KES-MC-1-SUB-9-5
		10	537925	KES-MC-1-SUB-9-10

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