

# End-position controllers CMFL



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Key features

## 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

FESTO



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) <sup>1)</sup>	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

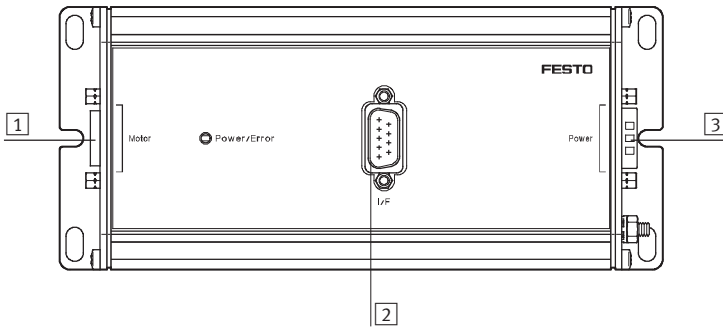
1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: [www.festo.com](http://www.festo.com) → Support → User documentation.  
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, 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

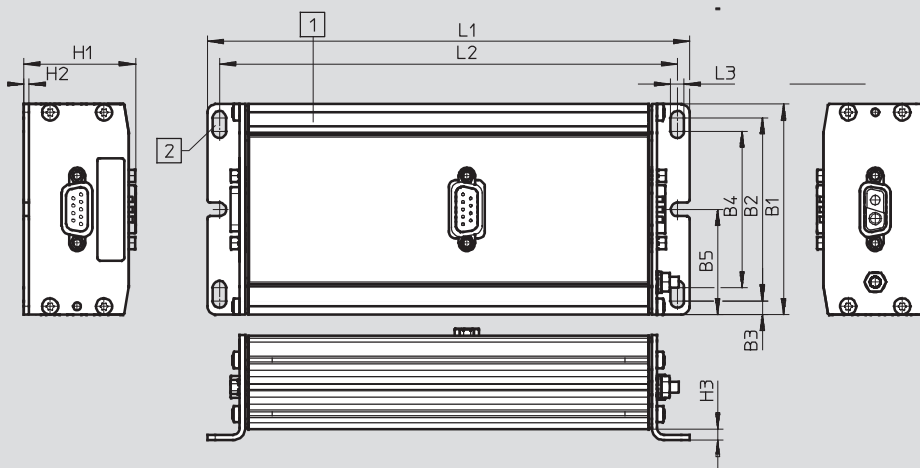
Pin	Function
1	Reference voltage
2	Enable
3	Control bit 2
4	Start
5	Control bit 1
6	Output supply voltage
7	Motion complete
8	Error
9	GND (connected internally with GND load)
-	Cable screening

### 3 Power supply, 2-pin Sub-D plug

Pin	Function
A1	+48 VDC load
A2	GND load

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



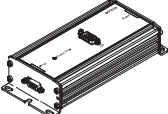
- 1 Slot for inscription labels:  
18182 IBS-9x20  
18576 IBS-6x10
- 2 Mounting options for M4 screws

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

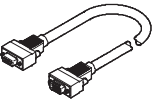


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Technical data



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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Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



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