

EWELLIX

Electromechanical EWELLIX Linear Actuator

CASM25

Product Data Sheet

We pioneer motion

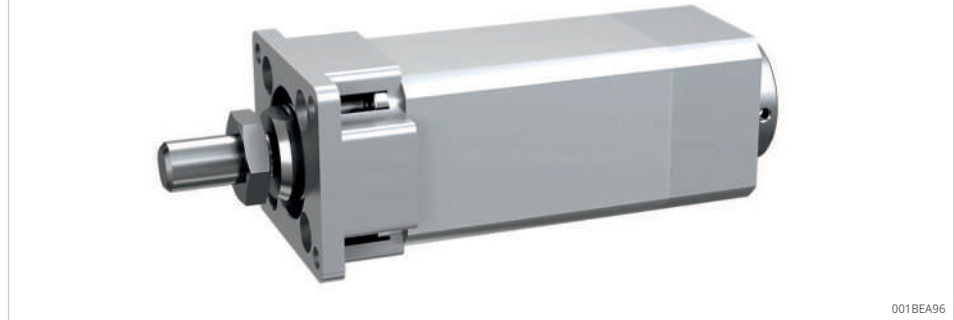
SCHAEFFLER

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1 CASM-25

1 Electromechanical linear actuator CASM-25



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Features

- compact design: 36 × 36 mm housing cross-sectional dimension
- high load capacity (static 2.6 kN, dynamic 300 N)
- high positioning accuracy and repeatability due to precision ball screw drive
- high duty cycle
- virtually maintenance-free
- push tube with anti-rotation device

Benefits

- designed for the automation and electronics industries
- cost-effective solution
- compatible with all third party motor brands
- easy installation
- space-saving solution
- long operating service life

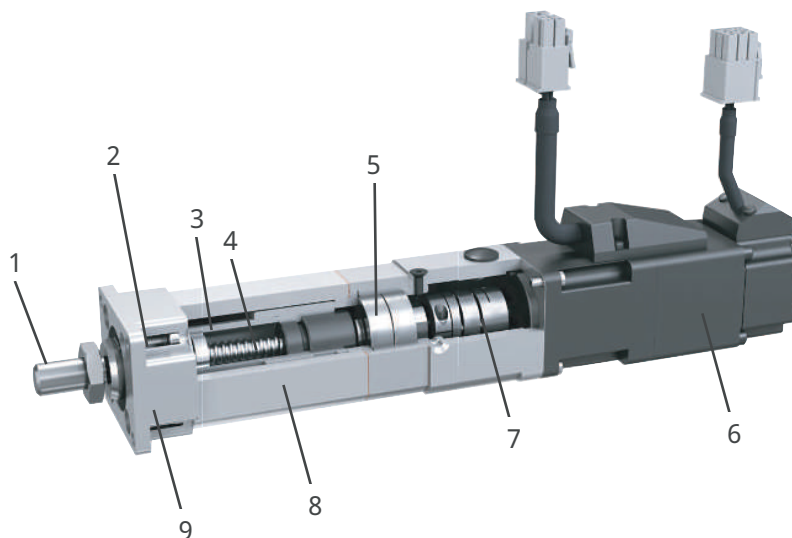
Product description

In addition to its standard electromechanical linear actuator product range, Schaeffler offers a comprehensive customization program that is able to fulfill specific application requirements.

The CASM-25 electromechanical linear actuator is a customized solution for light automation applications and the electronics industry. This miniature linear actuator can deliver high static and dynamic forces with precise motion and long operating service life.

The Schaeffler solution is based on a highly precise SD8 × 2.5 ball screw drive with a full aluminum housing, enabling a very compact solution with high power density.

2 Design of the CASM-25 electromechanical linear actuator

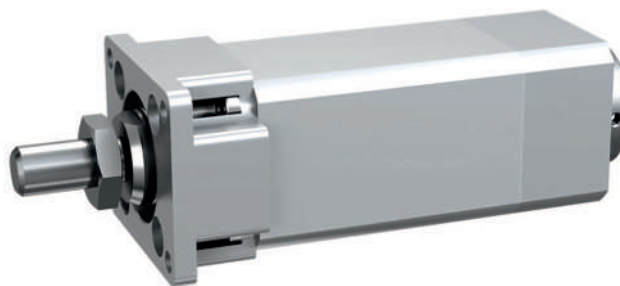


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1	External thread on the push tube (customization available upon request)	2	Front wiper for protection against contamination
3	Steel push tube	4	High-quality ball screw drive from Schaeffler
5	Bearing for supporting axial loads	6	Servo-motor
7	Motor adapter with coupling	8	Protection tube
9	Front attachment		

1.1 CASM-25, linear unit

3 Linear unit CASM-25



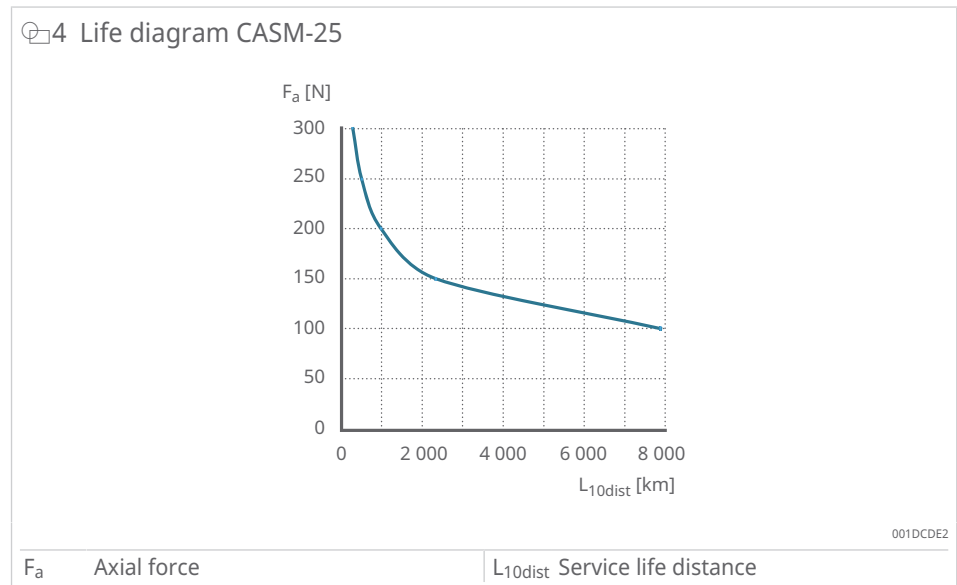
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1 Technical data CASM-25

Designation	Symbol	Unit	CASM-25
Performance data			
Max. dynamic axial force	F_{max}	N	300
Max static axial force	$F_{0 max}$	N	2600
Dynamic load capacity	C	N	2042
Torque to reach F_{max}	M_{max}	Nm	0.15
Max. linear speed	v_{max}	mm/s	125
Max. speed	n_{max}	min ⁻¹	3000
Max. acceleration	a_{max}	m/s ²	4
Duty cycle	D	%	100
Mechanical data			
Screw drive type	-	-	Ball screw drive

Designation	Symbol	Unit	CASM-25
Screw drive diameter	D_{screw}	mm	8
Screw drive lead	P_{screw}	mm	2.5
Lead accuracy	-	-	G7
Stroke	S	mm	20 to 50
Backlash	S_{backlash}	mm	0.07
Efficiency	η_{lu}	%	80
Moment of inertia at 20 mm stroke	J	$10^{-4} \text{ kg} \cdot \text{m}^2$	0.019
Moment of inertia at 50 mm stroke	J	$10^{-4} \text{ kg} \cdot \text{m}^2$	0.022
at 20 mm stroke	m	kg	0.5
at 50 mm stroke	m	kg	0.6
Environment and standards			
Ambient temperature	T_{amb}	°C	0 to +50
Max. humidity	Φ	-	90
Protection code (IP)	-	-	IP54S

Life diagram



1.2 CASM-25, servo-motor, inline configuration



2 Technical data – CASM-25, inline configuration

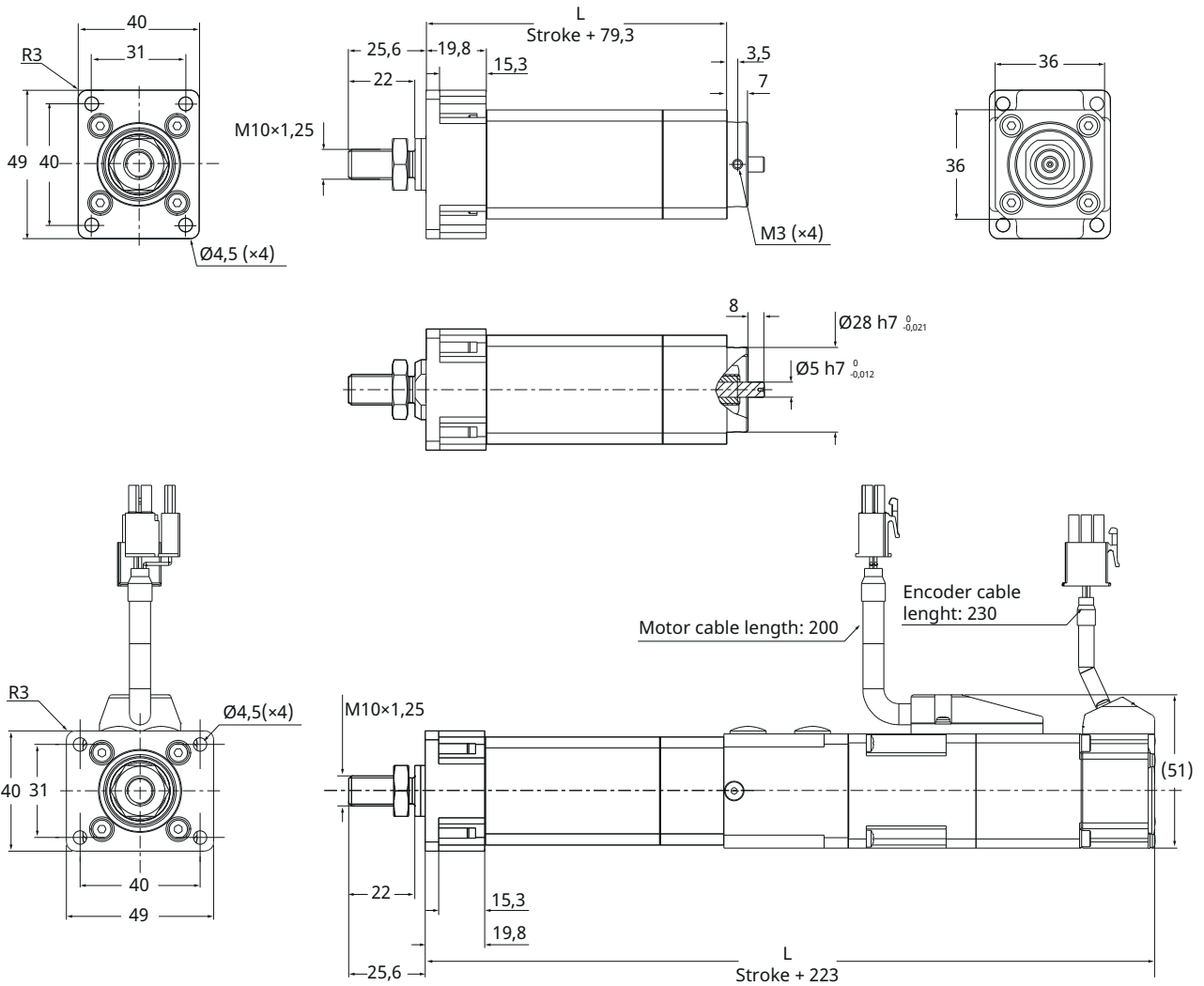
Designation	Symbol	Unit	Servo-motor MSMF5AZL1V1M
Performance data			
Continuous force at zero speed	F_{c0}	N	300
Continuous force at max. speed	$F_{c\ vmax}$	N	300
Peak force at zero speed	F_{p0}	N	300
Peak force at max. speed	$F_{p\ vmax}$	N	300
Dynamic load capacity	C	N	2042
Holding force	F_{hold}	N	600
Max. linear speed	v_{max}	mm/s	125
Max. acceleration	a_{max}	m/s^2	2.6
Duty cycle	D	%	100
Mechanical data			
Screw drive type	-	-	Ball screw drive
Screw drive diameter	D_{screw}	mm	8
Screw drive lead	P_{screw}	mm	2.5
Lead accuracy	-	-	G7
Stroke	S	mm	20 to 50
Backlash	$S_{backlash}$	mm	0.07
Gear reduction	i	N/A	1
Efficiency ¹⁾	η	%	72
Moment of inertia at 20 mm stroke	J	$10^{-4} \text{ kg} \cdot \text{m}^2$	0.048
Moment of inertia at 50 mm stroke	J	$10^{-4} \text{ kg} \cdot \text{m}^2$	0.051
at 20 mm stroke	m	kg	1.1
at 50 mm stroke	m	kg	1.2
Ambient			
Ambient temperature	T_{amb}	°C	0 to +50
Max. humidity	φ	%	90
Protection code (IP)	-	-	IP54S

¹⁾ Value without controller efficiency

Dimensional drawings

1

6 Dimensions of electromechanical linear actuator CASM-25, inline configuration



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3 Motor and drive for linear unit CASM-25

Component	Ordering key	Model
Motor	M0112375	Panasonic MSMF5AZL1V1M
Drive	M0112381	Panasonic MADLT05SF
Motor interface	M0112374	Inline adapter

1.3 Ordering designation

7 Structure of the order designation for linear unit CASM-25

CASM - 25 - BS - 020 A - 000

Screw

BS Ball screw 8 × 2.5

Stroke

020 mm

030 mm

040 mm

050 mm

Option¹⁾

A Motor adapter and accessories separately delivery

B Motor, adapter and accessories pre-mounted

¹⁾ Motor, adapter kit and accessories must be ordered separately

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