

Servo actuator CASM-25

Miniature electric cylinder with ball screw technology



Compactness



Lightweight



High power density



Ball screw technology

Product description

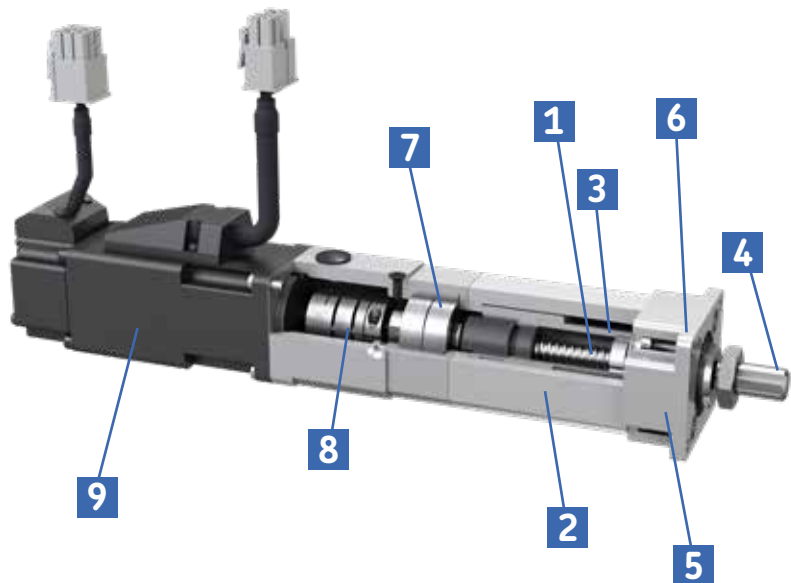
In addition to standard electrical cylinder product range, SKF Motion Technologies offers an extensive customization program that is able to fulfill specific application needs.

The CASM-25 actuator is a customized solution designed for light automation applications and electronic manufacturing industry. This miniature actuator can deliver high static and dynamic force with precise motion and long life in operation.

The SKF Motion Technologies solution is based on a high precision ballscrew SD8x2,5, with a full aluminium body, resulting in a very compact solution with high power density.

Design

- 1** High quality SKF Motion Technologies ball screw
- 2** Aluminium body
- 3** Steel push rod
- 4** Male thread on push rod (customization upon request)
- 5** Front mount
- 6** Scraper on the front to keep out contaminants
- 7** High quality SKF bearings
- 8** Motor adapter with coupling
- 9** Servomotor



Features and benefits

- Compact design: 36x36 mm body section dimension
- High load capacity (Static 2,6 kN, dynamic 300 N)
- High positioning accuracy and repeatability due to precision ball screw
- High duty cycles
- Virtually maintenance-free
- Push tube with anti-rotation function
- Designed for Automation and Electronics Industry
- Cost effective solution
- Compatible with any third party motor brand
- Easy installation
- Space saving solution
- Long life in operation

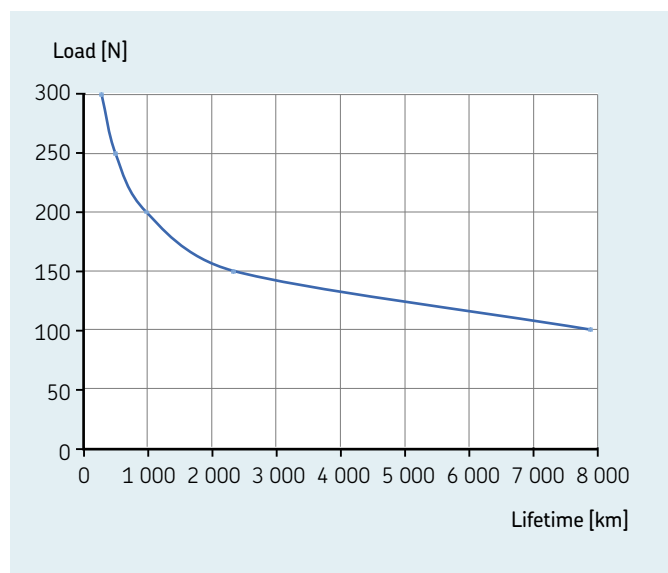
Linear unit



Technical data

Designation	Symbol	Unit	CASM-25
Performance data			
Max. dynamic axial force	F_{\max}	N	300
Max. static axial force	$F_{0\max}$	N	2 600
Dynamic load capacity	C	N	2 042
Maximum torque to reach F_{\max}	M max	Nm	0,15
Max. liner speed	V_{\max}	mm/s	125
Max. rotation speed	n_{\max}	1/Min	3 000
Max. acceleration	a_{\max}	m/s ²	4
Duty cycles	D _{unit}	%	100%
Mechanical data			
Screw type	—	—	Ball screw
Screw diameter	D screw	mm	8
Screw lead	P screw	mm	2,5
Lead accuracy	—	—	G7
Stroke	S	mm	20-50
Backlash	S backlash	mm	0,07
Efficiency	η_{lu}	%	80
Inertia @ 20 mm stroke	J	10 ⁻⁴ kgm ²	0,019
Inertia @50mm stroke	J	10 ⁻⁴ kgm ²	0,022
Weight@ 20 mm stroke	m	kg	0,5
Weight@ 50 mm stroke	m	kg	0,6
Environment			
Ambient temperature	T ambient	°C	0~+50
Max. humidity	ϕ	—	90%
IP level	—	—	54S

Performance diagrams



Servomotor, inline configuration



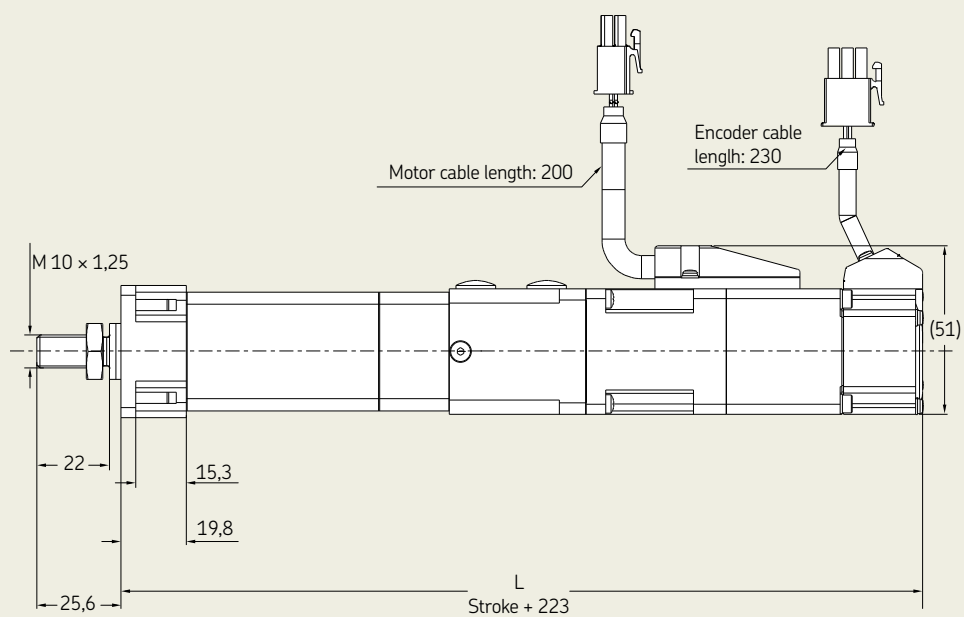
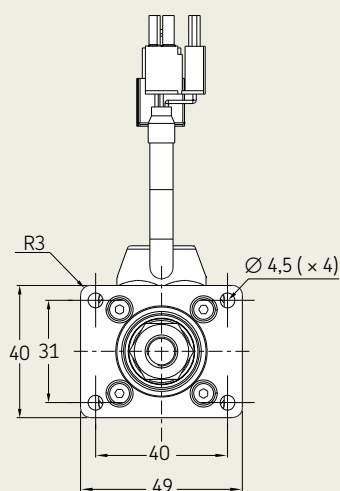
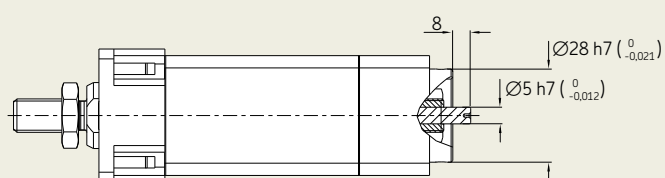
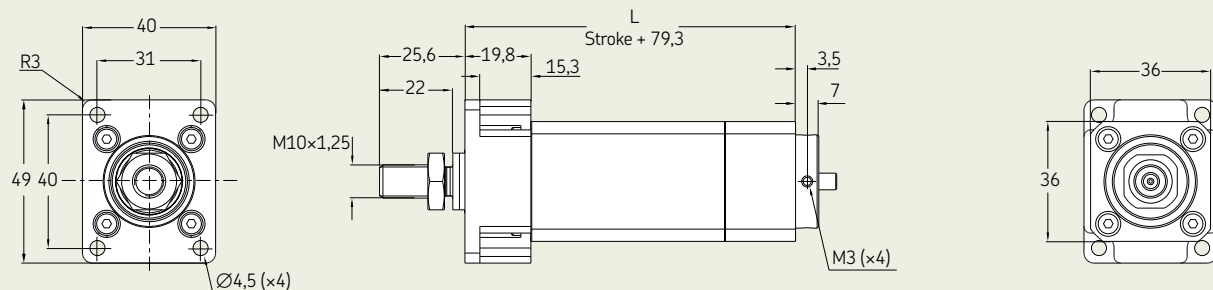
Technical data

Designation	Symbol	Unit	Servo motor MSMF5AZL1V1M
Continuous force @zero speed	F_{c0}	N	300
Continuous force @max. speed	F_c	N	300
Peak force @zero speed	F_{p0}	N	300
Peak force @max. speed	F_p	N	300
Dynamic load	C	N	NA
Holding force	F_{hold}	N	600
Max. liner speed	V_{max}	mm/s	125
Max. acceleration	a_{max}	m/s ²	4
Duty cycles	D	%	100%
Mechanical data			
Screw type	-	-	Ball screw
Screw diameter	D_{screw}	mm	8
Screw lead	P_{screw}	mm	2,5
Lead accuracy	-	-	G7
Stroke	S	mm	20~50
Backlash	$S_{backlash}$	mm	0,07
Gear reduction	i	NA	1
Efficiency	η	%	72(not include drive efficiency)
Inertia @ 20 mm stroke	J	10 ⁻⁴ kgm ²	0,048
Inertia @ 50mm stroke	J	10 ⁻⁴ kgm ²	0,051
Weight@ 20 mm stroke	m	kg	1,1
Weight@ 50 mm stroke	m	kg	1,2
Environment			
Ambient temperature	$T_{ambient}$	°C	0~+50
Max. humidity	ϕ	-	90%
IP level	-	-	54S

Ordering key

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

Dimensional drawing

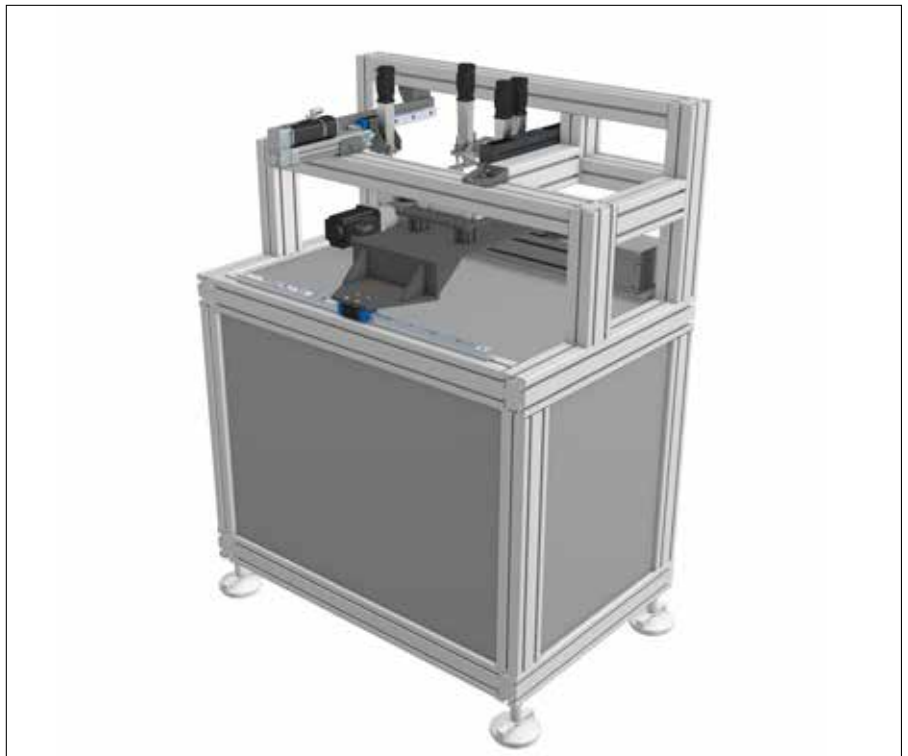
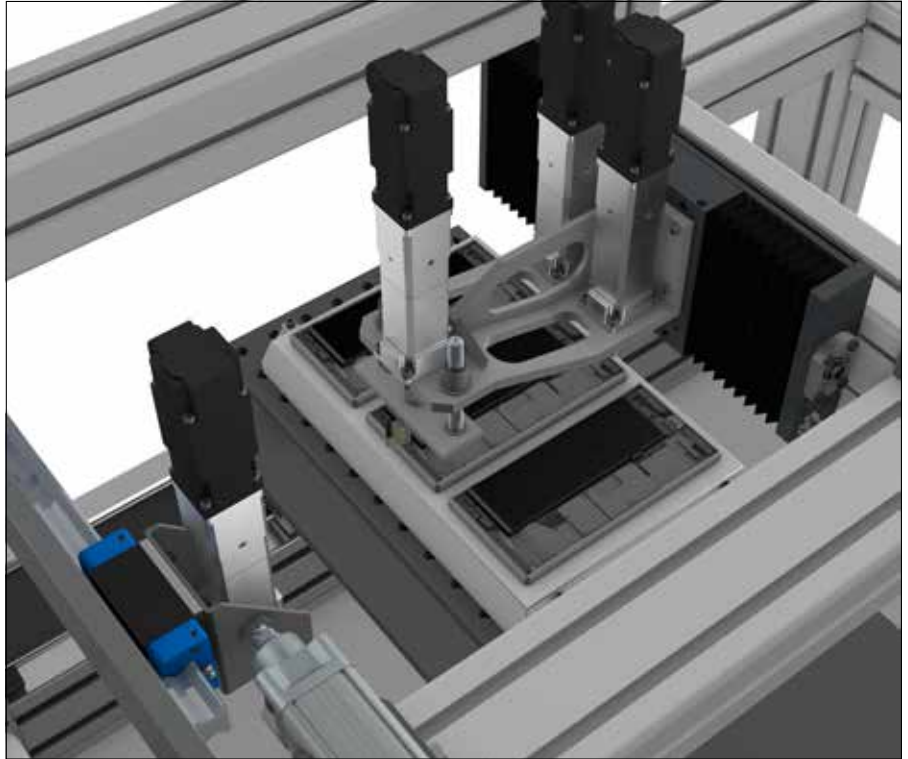


Optimized for your application

Factory automation – Electronics assembly lines

Electronic products like smartphones or monitors are built in fully automatized lines. The complexity of the product requires a reliable process to grant a constant quality of the final product, across the different assembly operations.

CASM-25 electric cylinders can be used to automatize horizontal or vertical axis on quality inspection stations, normally used in processes like smartphones camera or speaker quality checks. Thanks to their small dimension and precise positioning, they can effectively be used as plug and play positioning capability solutions.





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