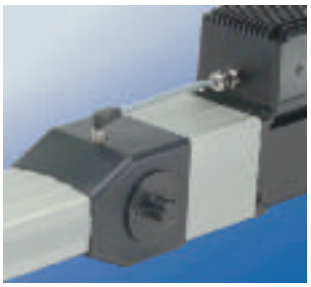
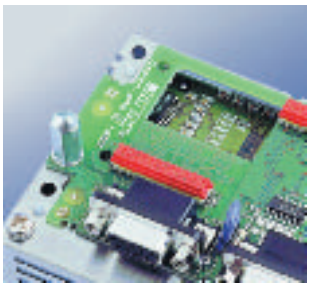
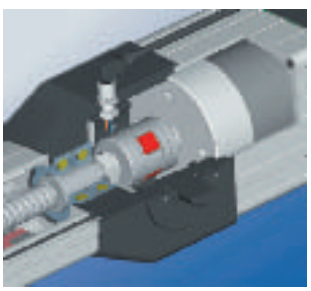
SKF ServoMove Systems





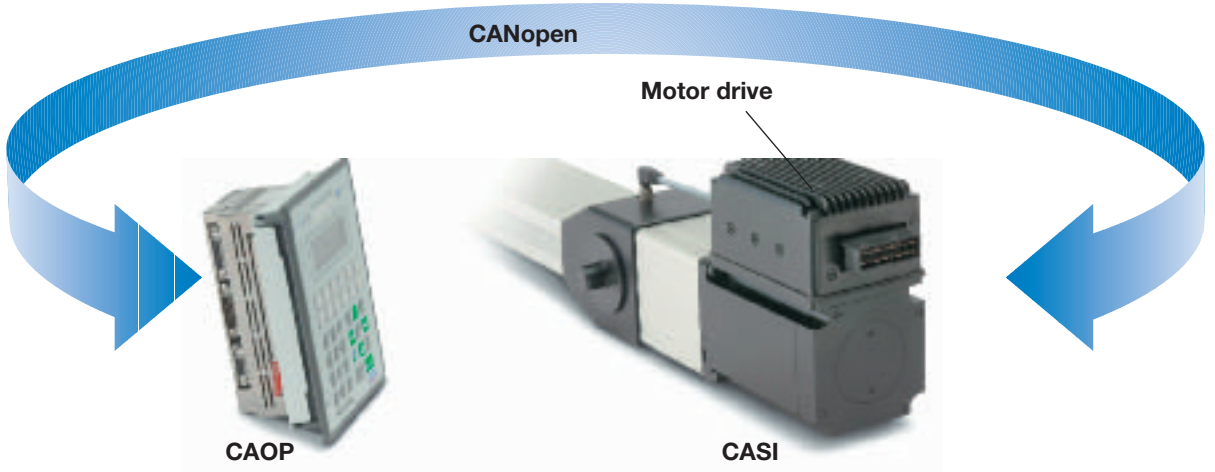




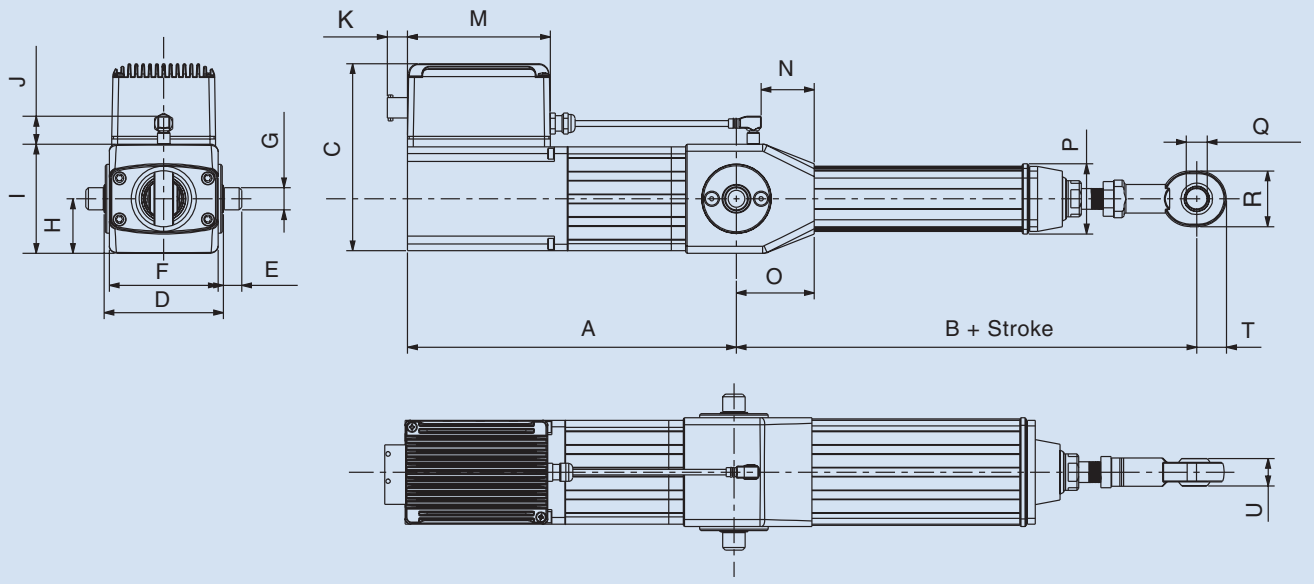


SKF ServoMove Systems

The SKF ServoMove System consists of an CAOP (Operator Interface) with integrated PLC (Programmable Logic Controller) and integrated local I/O module. The CAOP operates several newly designed linear servo actuators, as well as an unlimited number of sub-masters, offering cost effective servo solutions for any situation. The fact that CAOP is compatible with the majority and the most common PLC's on the market makes it suitable as a master or secondary unit in any other PLC system. The SKF ServoMove System communicates directly with a CANopen bus between the CAOP and the actuator. This system is compatible with nearly all bus systems on the market, i.e., Profibus DP, DeviceNet, Ethernet and its add-on module makes it, of course, possible to operate via a Web server.



CASI	Speed version	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	R	T	U
32	50 30, 10	150 224	236	134	82	14	74	ø17h7	37	74	22	16	110	44	57	48	ø12H7	34	17	16
40	80, 70 60, 50, 40, 20 30, 10	160 238 254	255	144	92	14	84	ø17h7	42	84	22	16	110	41	60	54	ø16H7	43	23	21
60	60, 50 40, 30 20, 10	203 316 337	345	154	110	17	104	ø20h7	52	104	22	16	110	70	86	90	ø20H7	50	25	25



Linear Servo Actuators type CASI

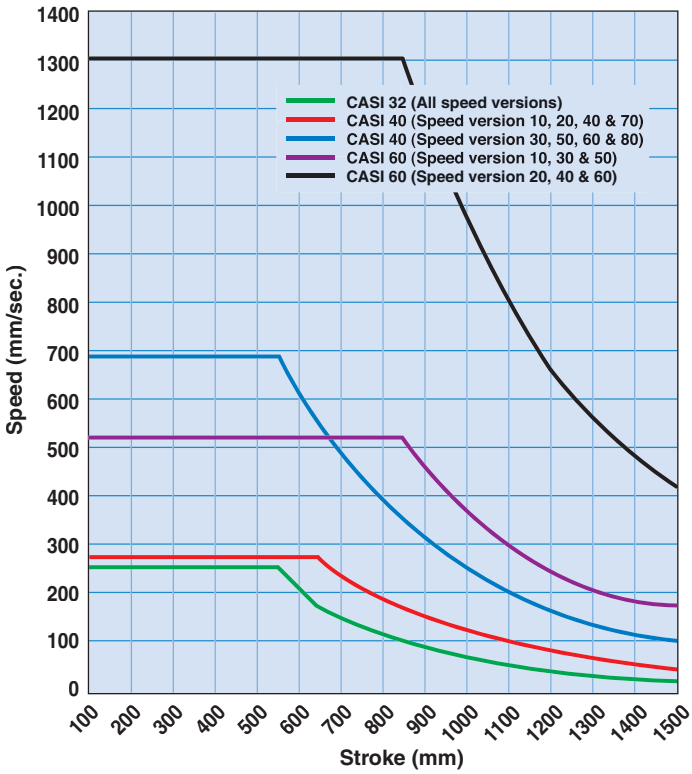
The CASI linear actuators are the electro-mechanical muscle of the SKF ServoMove systems. The CASI is a new, cost-effective, compact, in-line high-efficiency ball screw actuator with a brushless DC motor engineered with a modular concept in mind. The actuator has a build in electronic drive and hall sensor for electronic commutation. CASI has factory pre-set parameters as standard. The actuator configuration is based on the application requirements and anticipated technical performance. The flexibility of the modular concept, built with high quality SKF components, makes it possible to offer innovative technology and unrivalled value in terms of price/performance, for your servo solutions.

Technical data

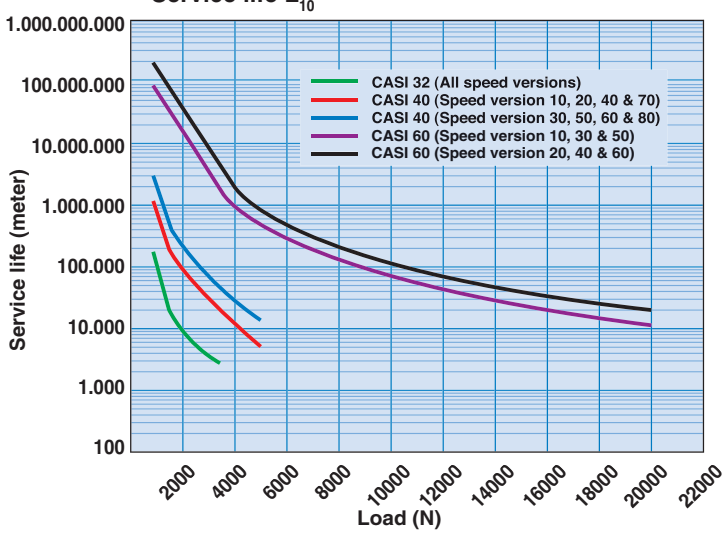
	CASI 32	CASI 40	CASI 60
Max. speed:	250mm/sec.	650mm/sec.	1200mm/sec.
Max dynamic load:	3500N	5200N	18000N
Max.stroke:	50-700mm*	50-700mm*	50-1000mm*
Duty factor:	100%	100%	100%
Service life:	>10^6 meters	>10^6 meters	>10^6 meters
System backlash:	0.07mm	0.07mm	0.12mm
Unidirectional repeatability:	0.05-0.35mm	0.03-1.06mm	0.04-1.39mm
Supply voltage:	24Vd.c (16-29V)	24Vd.c. (16-29V)	48Vd.c. (33-58V)
Peak current:	60A (5 seconds)	60A (5 seconds)	50A (5 seconds)
Communication:	CANopen, RS 232, Analogue 0-5V	CANopen, RS 232, Analogue 0-5V	CANopen, RS 232, Analogue 0-5V
Ambient temperature:	+0°C to +50°C	+0°C to +50°C	+0°C to +50°C
Standards:	EN 50081-1, EN 61000-6-2	EN 50081-1, EN 61000-6-2	EN 50081-1, EN 61000-6-2
Protection class:	In accordance with IP54	In accordance with IP54	In accordance with IP54

*** For other strokes contact SKF**

Critical speed (mm/sec.)



Service life L_{10}



L_{10} is defined as the service life that 90 % of a sufficiently large number of apparently identical CASI actuators can be expected to attain or exceed based on the ball screw data.

The values shown in the charts are approximate.

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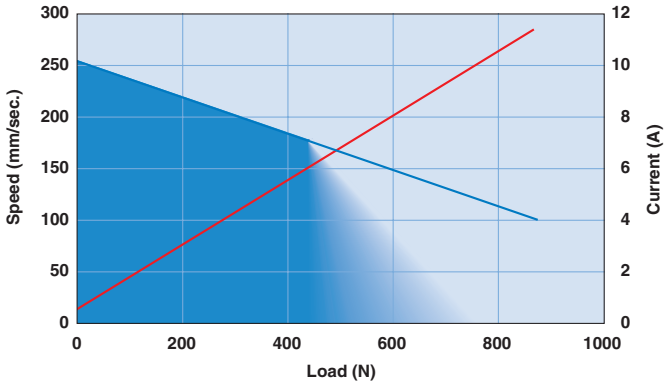
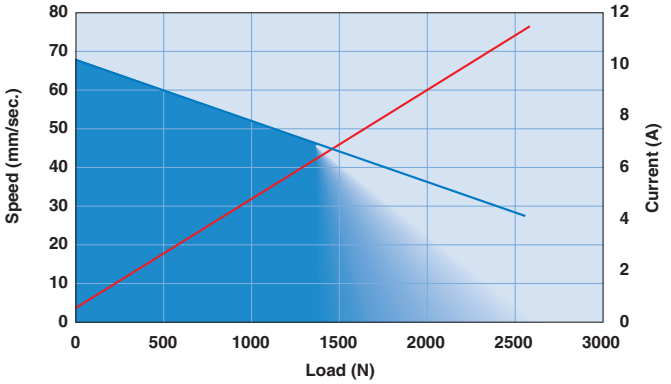
SKF

Speed version 50



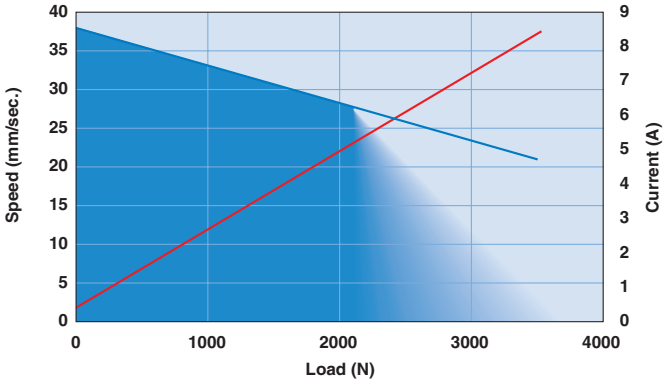
Resolution: 0.33 mm/pulse

Speed version 30



Resolution: 0.08 mm/pulse

Speed version 10



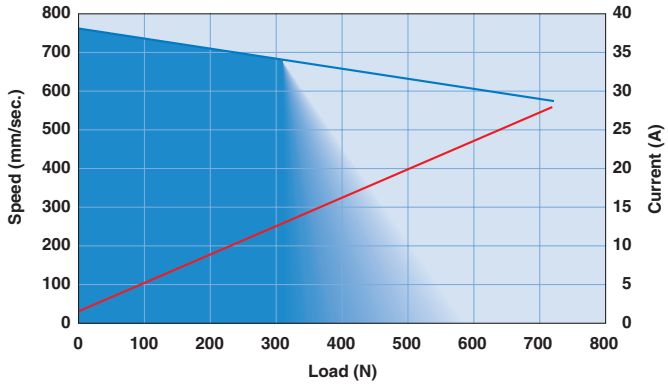
Resolution: 0.05 mm/pulse

100% duty Intermittent duty Current (A) Max. speed

All data valid at 20°C. The values shown in above charts are approximate.

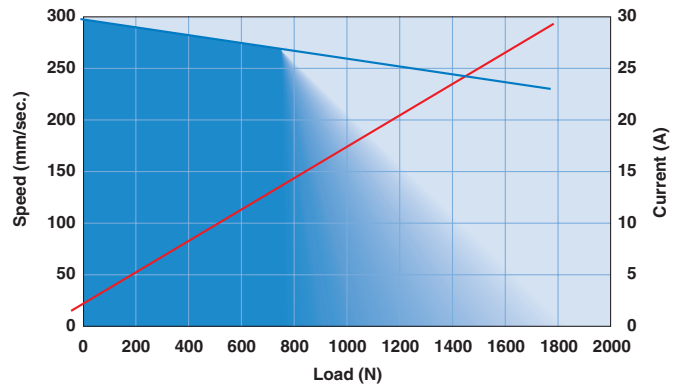
Notes

Speed version 80



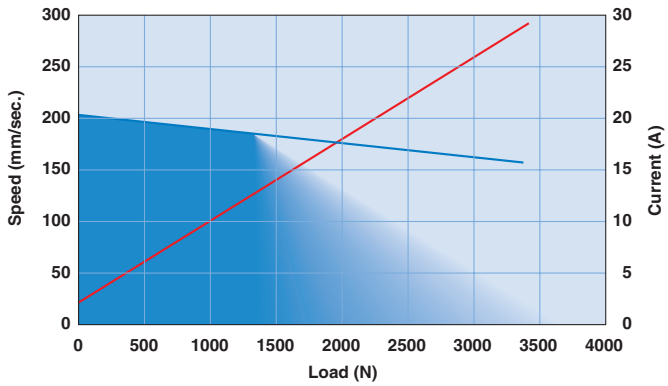
Resolution: 1.06 mm/pulse

Speed version 70



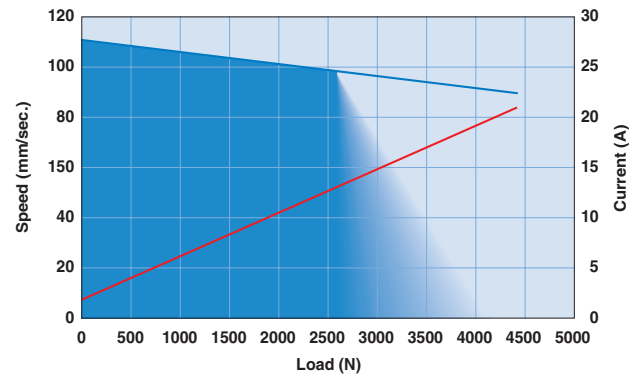
Resolution: 0.42 mm/pulse

Speed version 60



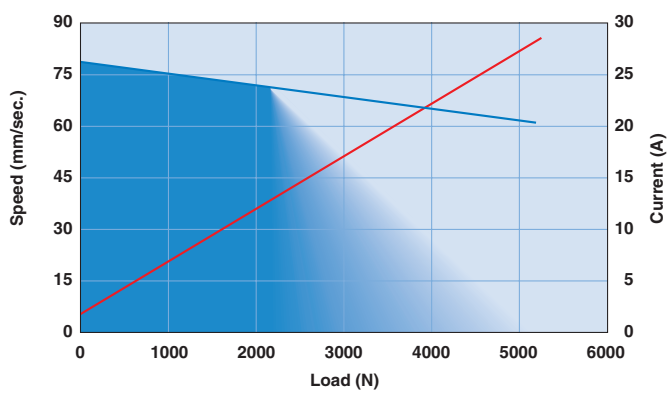
Resolution: 0.27 mm/pulse

Speed version 50



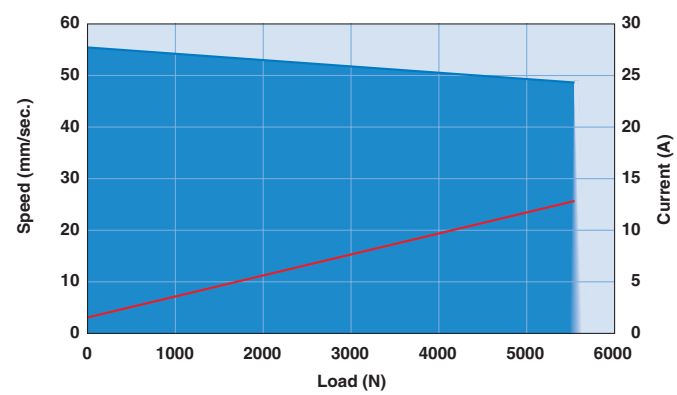
Resolution: 0.15 mm/pulse

Speed version 40



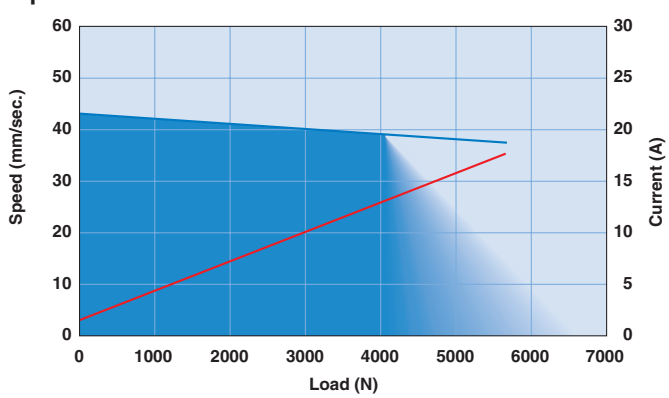
Resolution: 0.10 mm/pulse

Speed version 30



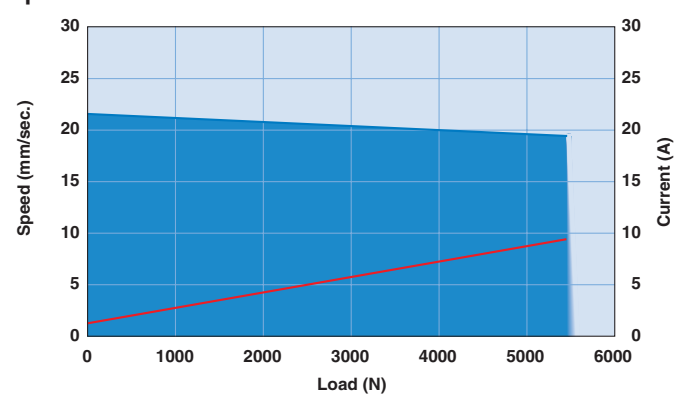
Resolution: 0.08 mm/pulse

Speed version 20



Resolution: 0.06 mm/pulse

Speed version 10



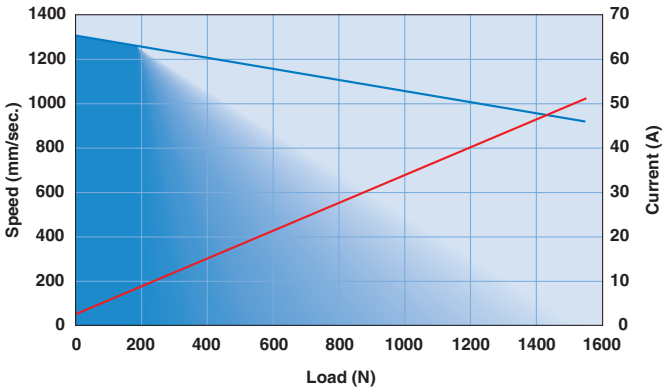
Resolution: 0.03 mm/pulse

100% duty Intermittent duty Current (A) Max. speed

All data valid at 20°C. The values shown in above charts are approximate.

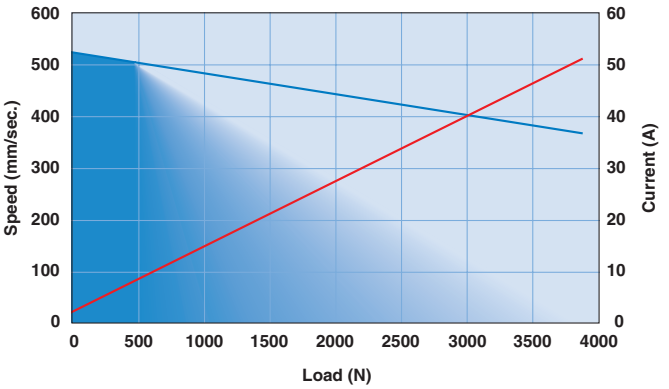
CASI 60

Speed version 60



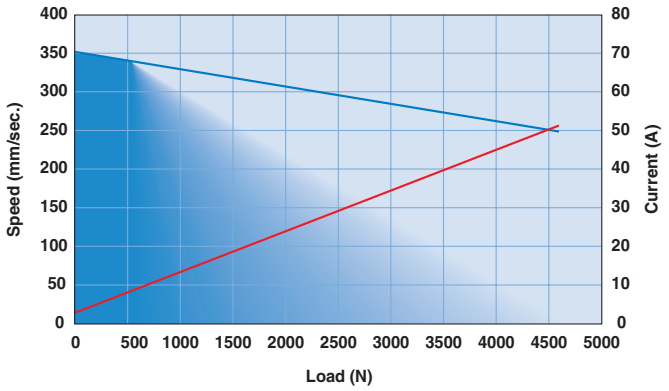
Resolution: 1.39 mm/pulse

Speed version 50



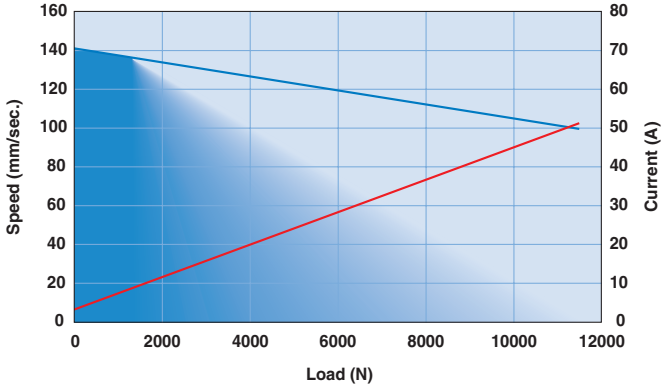
Resolution: 0.56 mm/pulse

Speed version 40



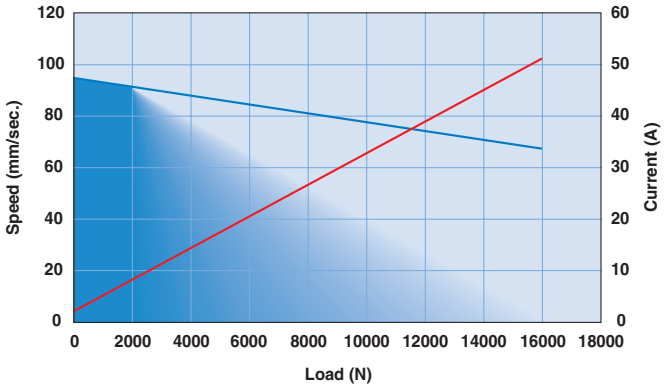
Resolution: 0.35 mm/pulse

Speed version 30



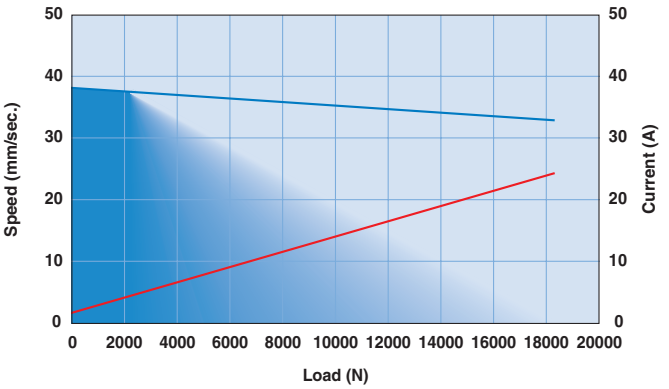
Resolution: 0.14 mm/pulse

Speed version 20



Resolution: 0.10 mm/pulse

Speed version 10



Resolution: 0.04 mm/pulse

100% duty Intermittent duty Current (A) Max. speed

All data valid at 20°C. The values shown in above charts are approximate.

Operator Interface type CAOP KP10

The CAOP series is the platform for controlling the servo actuators and has the ability to include other I/O's and control programs in the application - i.e., the basic version is expandable with additional I/O (remote I/O) modules. CAOP is pre-programmed with software for the servo actuators to enable an easy start-up and expansion of functions.

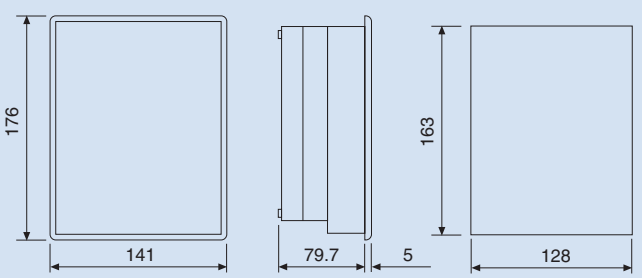
- Up to 4 servo actuators per CAOP
- Readable parameters in panel window
- Selection of drive modes (auto, semi-automatic or manual)
- 10 operations per sequence as standard
- Adjustable parameters (position, speed, load limits or resting time)

Techical data CAOP

CAOP KP10	
Display:	Monochrome LCD
Graphics:	120 x 32 pixels
Display dimensions:	70 x 21 mm
Function keys:	12
System keys:	23
User LEDs:	13
PLC port (RS):	232, 422, 485
Alarms:	1024
Password:	Yes
Hardware RTC:	Yes
Supply voltage:	18-30 V DC
Power, typical:	0.3 A
Protection class:	IP65 (front panel)
Front dimensions W x H:	141 x 176 mm
Standards:	CE approved



Dimensions CAOP KP 10

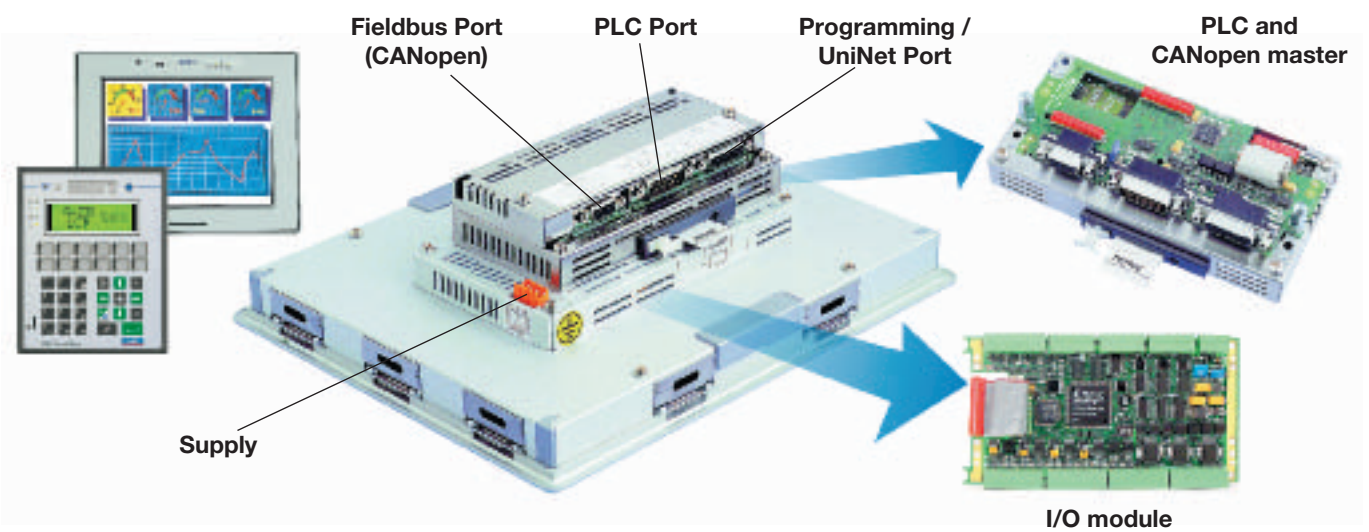


PLC

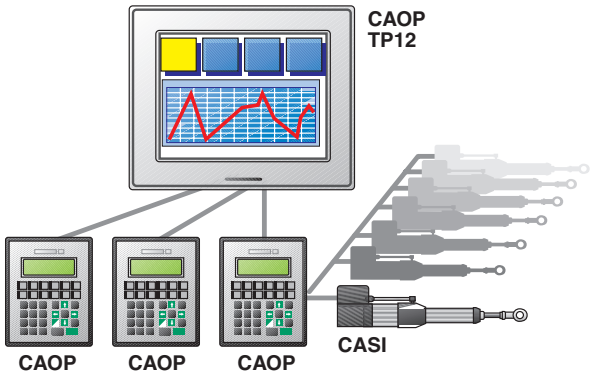
- High-performance 32 bit MIPS CPU, 128 KB memory, 512 byte EEPROM (system parameters).
- Typical scan time: 3 ms per 1000 instructions.
- EC 61131-3 standard programming LD, FB, SFC, IL, ST with software ISaGRAF.
- Up to 2 M x 16 bits flash EPROM.
- Up to 4 M x 16 bits SDRAM.

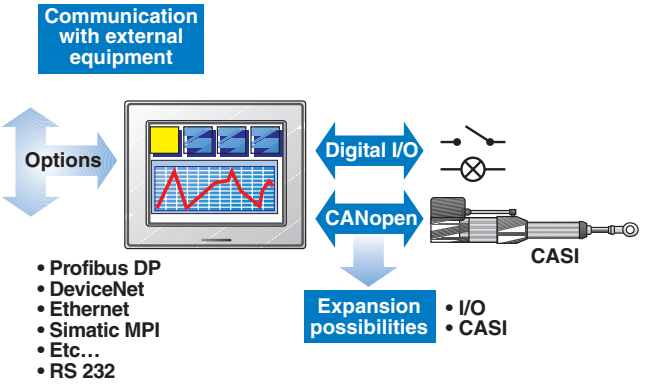
I/O

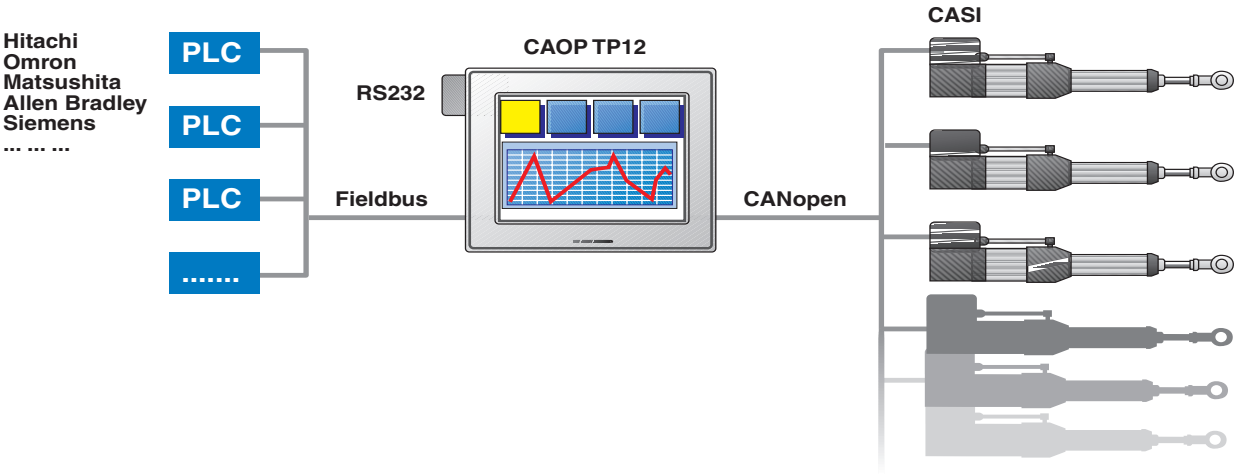
- 16 digital inputs (24 V DC), 16 digital outputs (relay 1A) or multi-function digital and analogue I/O module (option).

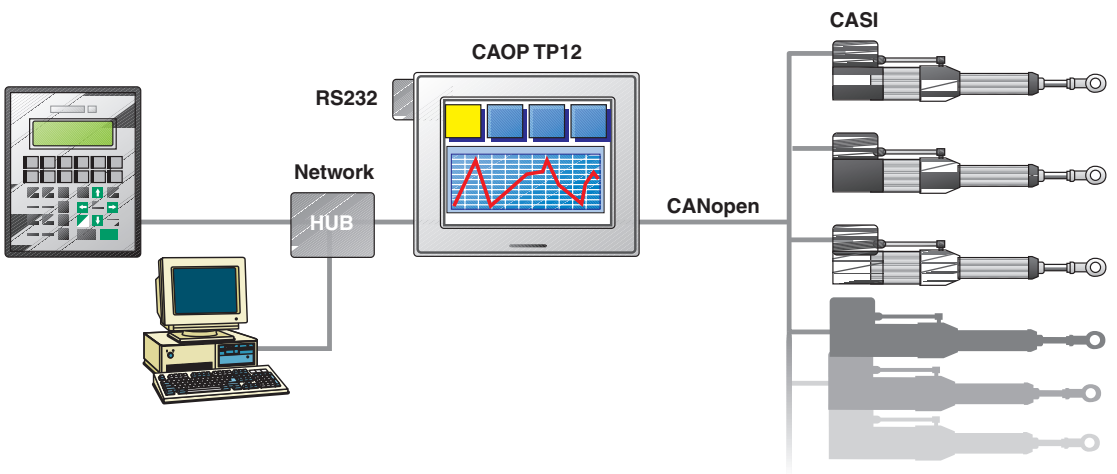


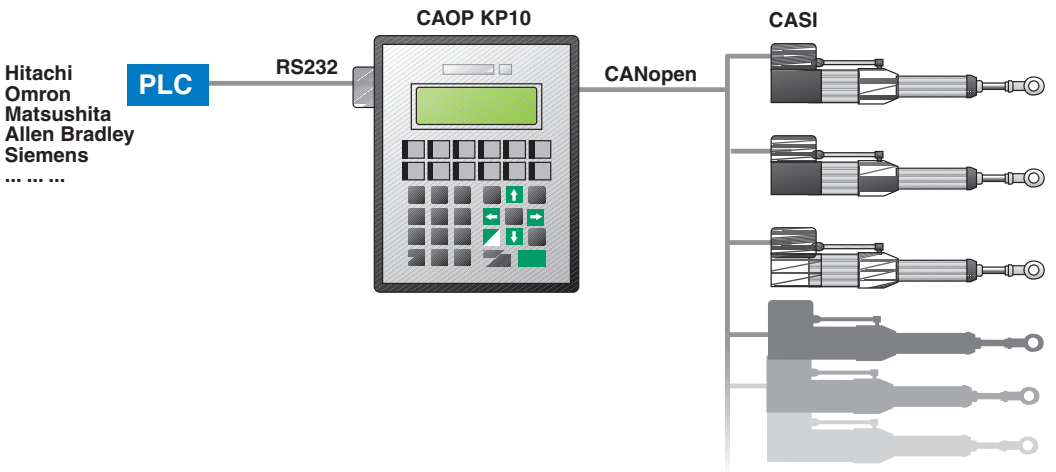
SKF ServoMove Systems - configuration examples











Ordering key CASI

C A S I [ ][ ] X [ ][ ][ ] X [ ][ ] J 1 G 7 / [ ][ ]

Actuator size
32 — 32
40 — 40
60 — 60

Stroke*
300mm — 300
500mm — 500
700mm — 700
1000mm, only for CASI 60 — 1000

Speed version (actuator size — see charts)
10 — 10
20 — 20
30 — 30
40 — 40
50 — 50
60 — 60
70 — 70
80 — 80

Mid attachment
Standard type 1 — J 1

Front attachment
Ball joint (zero play) — G 7

Supply voltage
24Vd.c. (CASI 32 and 40) — 24
48Vd.c. (CASI 60) — 48

*For other stroke, contact SKF.

Ordering key CABLE

C A B L E 0 1 A 0 3

Cable type
Standard execution* — 0 1

Connector type
One 16-pol — A

Length (m)
3.0 m, straight — 0 3

*Connection for one single CASI actuator

Ordering key CAOP

C A O P [ ][ ][ ][ ] X [ ][ ][ ][ ]

Comunication module***
CANopen* — CAN1
CANopen & Profibus DP** — PRO1
CANopen & DeviceNet** — DEV1
CANopen & Ethernet** — ETH1
CANopen & Simatic MPI** — SIM1

Control panel
Key panel — KP10
Touch panel — TP12

*Compatible with KP10
**Compatible with TP12
***For other comunication modules, contact SKF

Notes

Notes

SKF

SKF Actuation Systems - Product groups



Systems



Linear actuators



Telescopic pillars



Rotary actuators

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