

Electric linear actuators

**SBA 06, SBA 08,
SBA 12/20/45,
SBA 80, SBA 200**

Electric linear actuators for modulating and open-close duty of control and process technology to operate control valves.
The self-locking stem/stem nut is driven by an electric motor via a gearing. Load and limit switches define the stops for the end positions.



- Valve protection against excessive force due to load-dependent seating.
- Comfortable manual operation when disengaging the actuator motor.
- Mounting to valve made via yoke or mounting flange DIN 3358. The design enables easy connection to all types of valves.
- Generating a defined closing force in the end position leads to constantly tight shut-off of the valve.
- A robust metal cover protects efficiently against external contamination and manipulation.
- The actuators are in enclosure protection IP 65 and are designed for rugged industrial use.
- Stallproof synchronous motors (or brake motors for higher positioning forces) ensure highest positioning accuracy.
- Mechanical stroke indication via anti-rotation bar.
- Exact, backlash-free measurement of actual valve stroke by direct coupling to the valve stem.
- Universally usable actuators due to control via 3-point-step controllers, analogue input signals 0...10 V, 0 (4)...20 mA, or fieldbus systems.
- Easy supplement to actuator with optional devices due to modular design.
- Limit switches, easily adjustable, for stroke limitation or as signal for intermediate positions.
- Integrated, adjustable stroke setting to nominal stroke over the complete stroke range (without exchanging pinions, ...).
- German Lloyd Type Approval for shipbuilding industry.
- TÜV [German Technical Control Board] approved potentiometer mounting for fail-safe position feedback feature in burner controls.

AUMA Industry & Marine GmbH
Eichendorffstrasse 42 – 48
D-78054 Villingen-Schwenningen (Germany)
Phone +49 7720 8540-0
Fax +49 7720 8540-50
info.industry-marine@auma.com

Product overview linear actuators SBA

Technical data

Type	SBA 06-1/-2/-3			SBA 06-4		SBA 08	
Positioning force kN	0,6 / 0,9 / 1,2			2,0		4,0	
Positioning speed ¹⁾ mm/min	8 / 10	13,2 / 16	15	40	15	15	40
Power consumption (230 V) VA	4	5	11	64	64	11	64
Nominal current (230 V) A	0,017	0,029	0,045	0,280	0,280	0,045	0,280
Type of motor ³⁾	syn	syn	syn	syn	syn	syn	syn
Motor protection ⁴⁾	B	B	B	B	B	B	B
Max. stroke mm	35					40	
Supply voltages ^{2) 5)}	24 V / 115 V / 230 V / 400 V 50/60 Hz, 24 V DC						
Type of duty acc. to IEC 34-1	S1 – 100 % S3 – 30 % cfd 1200 c/h					S1 – 100 % S3 – 30 % cfd 1200 c/h	
Cable gland	3 x M16 x 1.5					3 x M20x1,5	
Electrical connection	Inside terminal board, terminal configuration according to electrical connection diagram						
Switch off in end position	2 load-dependent switches, max. 250 V AC, rating for resistive load, max. 5 A, for inductive load, max. 3 A						
Mounting position	as desired, however downward position not possible						
Ambient temperature	–20 °C to +60 °C						
Lubricant for gearing	Klüber Microlube GL 261 grease						
Position indicator	by anti-rotation bar						
Manual adjustment	crank handle						
Enclosure protection according to EN 60529	IP 43			IP 54		IP 65	
Trapezoidal thread	Tr 8 x 1.5			Tr 10 x 2		Tr 14 x 3	
Connection type	EN ISO 5210 F05 (also refer to options)						
Weight kg	2.1					8.0	

Type	SBA 12	SBA 20	SBA 45-2/-3		SBA 45-4	
Positioning force kN	1.2	2.0	3.5 / 4.5		6.0	
Positioning speed ¹⁾ mm/min	25	15	17 / 25	50	17	34
Power consumption (230 V) VA	6.6	6.6	28	32	28	32
Nominal current (230 V) A	0.029	0.029	0.135	0.160	0.135	0.160
Type of motor ³⁾	syn	syn	asyn	asyn	asyn	asyn
Motor protection ⁴⁾	B	B	B	B	B	B
Max. stroke mm	75					
Supply voltages ^{2) 5)}	24 V / 115 V / 230 V / 400 V 50/60 Hz, 24 V DC					
Type of duty acc. to IEC 34-1	S1 – 100 %		S4 – 30 % c.d.f. 600 c/h			
Cable gland	2 x M16x1.5 and 1 dummy plug M16x1.5					
Electrical connection	Inside terminal board, terminal configuration according to electrical connection diagram					
Switch off in end position	2 load-dependent switches, max. 250 V AC, rating for resistive load, max. 5 A, for inductive load, max. 3 A					
Mounting position	as desired, however downward position not possible					
Ambient temperature	–20 °C to +60 °C					
Lubricant for gearing	Klüber Microlube GL 261 grease					
Position indicator	by anti-rotation bar					
Manual adjustment	by means of lateral hand wheel					
Enclosure protection according to EN 60529	IP 65					
Trapezoidal thread	Tr 14 x 3					
Connection type	EN ISO 5210 F05 (also refer to options)					
Weight kg	8.0					

Product overview linear actuators SBA

Type	SBA 80-1/-2/-3			SBA 80-4			SBA 200-1/2			SBA 200-3	
Positioning force kN	6.0 / 8.0 / 12			15			15 / 20			25	
Positioning speed ¹⁾ mm/min	13.5	25	50	13,5	22	40	15	25	50	25	50
Power consumption (230 V) VA	25	34	152	25	34	152	32	157	218	157	218
Nominal current (230 V) A	0.11	0.15	0.78	0.11	0.15	0.78	0.14	0.73	1.0	0.73	1.0
Type of motor ³⁾	syn	syn	asyn	syn	syn	asyn	syn	asyn	asyn	aysn	asyn
Motor protection ⁴⁾	B	B	T	B	B	T	B	T	T	T	T
Max. stroke mm	80						100				
Supply voltages ^{2) 5)}	24 V / 115 V / 230 V / 400 V 50/60 Hz, 24 V DC ⁵⁾						24 V / 115 V / 230 V / 400 V 50/60 Hz, 24 V DC				
Type of duty acc. to IEC 34-1	S4 – 30 % c.d.f. 600 c/h						S4 – 30 % c.d.f. 600 c/h				
Cable gland	2 x M16x1.5 und 1 dummy plug M16x1.5						2 x M20x1.5 and 1 dummy plug M20x1.5				
Electrical connection	Inside terminal board, terminal configuration according to electrical connection diagram										
Switch off in end position	2 load-dependent switches, max. 250 V AC, rating for resistive load, max. 5 A, for inductive load, max. 3 A										
Mounting position	as desired, however downward position not possible										
Ambient temperature	–20 °C to +60 °C										
Lubricant for gearing	Klüber Microlube GL 261 grease										
Position indicator	by anti-rotation bar						by anti-rotation bar				
Manual adjustment	by means of lateral hand wheel						by means of lateral hand wheel				
Enclosure protection according to EN 60529	IP 65						IP 65				
Trapezoidal thread	Tr 20 x 4						Tr 26 x 5				
Connection type	DIN 3210 G0 (also refer to options)						DIN 3210 G0 (also refer to options)				
Weight kg	13.0						19.0				

- 1) at 60 Hz, the positioning speeds and input power increase by 20 %
 2) other supply voltages on request

- 3) syn synchronous motor
 asyn asynchronous motor
 4) B stallproof motor
 T thermoswitch for temperature monitoring

- 5) see price list f or possible combinations between power and actuator type

Product overview linear actuators SBA

Accessories and options

Accessories for actuators		
	Yoke for adaptation to valves refer to dimension sheet	STALA/ FLA
	Mounting flange with connection type acc. to EN ISO 5210, F10	FLA-ISO
	Mounting flange with central attachment Mxx refer to dimension sheet (thrust rod must be secured against revolving)	ZFLA
	Compact plug 10/24 poles with additional housing at actuator Voltages ≤ 500 V	KS
	Special finish coating for use in the tropics "tropics coating"	LA-TR
	Version IP 65: with bellows at thrust rod and metal cover with seal (for SBA 06)	A-IP65
	Version with bellows at thrust rod (for SBA 12/20/45/80/200)	A-FAB
Options for actuators		
	Additional limit switches for signalling end positions or intermediate positions, freely adjustable, max. 250 V AC, rating for resistive load max. 5 A, for inductive load max. 3 A, max. 2 switches for SBA 06/12/20/45, max. 4 switches for SBA 80/200	WE
	Additional limit switches for signalling end positions or intermediate positions, freely adjustable, with gold-plated contacts for low voltage, max. 30 V AC, rating for resistive load max. 0.1 A, max. 2 switches for SBA 06/12/20/45, max. 4 switches for SBA 80/200	WE-G
	Potentiometer 100/130/200/500/1000/5000 Ohms or 10 kOhms Linearity error ≤ 0.5 %, max. 1.5 W, contact current 30 mA max. 2 pieces (max. 1 piece for SBA 06)	POT
	TÜV [German Technical Control Board] approved potentiometer mounting for fail-safe position feedback (also suitable for Lamtec coupled control systems)	C-POT
	Electronic position feedback 2-/3-/4-wire system Inductive travel measuring, output 0 (4)...20 mA Connection 24 V DC (not possible for SBA 06)	ESR
	Profibus module DP for actuator control in separate housing IP 66 mounted at actuator with plug M12 5-poles, 2 x M20 cable entries (potentiometer and 2 WE required)	PDB100
	Positioning electronics for actuator control Input 0...10 V, 0 (4)...20 mA, output 0...10 V, 0 (4)...20 mA Supply voltage 24, 115, 230 V 50/60 Hz	PEL
	Heating resistor with thermoswitch against moisture with automatic temperature regulation, max. 15 Watts Supply voltage 24, 115, 230 V 50/60 Hz	HZ/WP

Product overview linear actuators SBA

Electrical connection

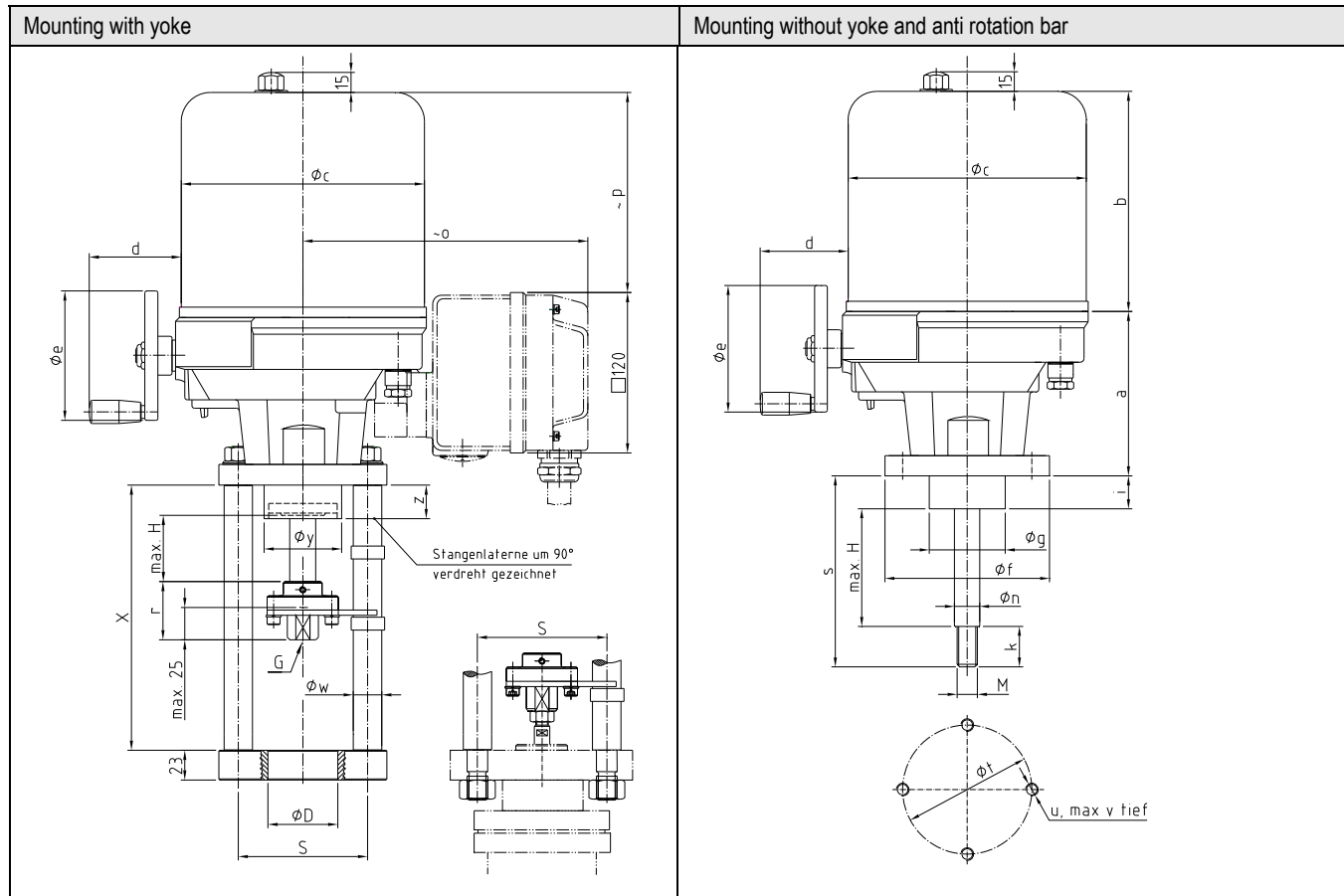
3 ~ asynchronous motor with brake and thermoswitch	1 ~ asynchronous motor with brake and thermoswitch	Synchronous motor with thermoswitch	synchronous motor	Basic wiring diagram including options
			Switch off in end position via two load-dependant switches to control e.g. three-way mixing valves.	
			Switch off in end position via a load-dependent switch and a limit switch to control e.g. full-way valves without upper stop. Monitoring blocking in OPEN direction.	
			Control of three-phase actuators with thermoswitch. Switch off in end position via two load-dependant switches to control e.g. three-way mixing valves. For motors without thermoswitch, the wiring to terminal 4 and 5 is not applicable.	
			Control of three-phase actuators with thermoswitch. Switch off in end position via a load-dependent switch and a limit switch to control e.g. full-way valves without upper stop. Monitoring blocking in OPEN direction. For motors without thermoswitch, the wiring to terminal 4 and 5 is not applicable.	

DE	Load-dependent switch
WE	Limit switch
HZ	Heater with thermoswitch
POT	Potentiometer
ESR	Electronic position feedback
PEL	Positioning electronics
WSE	External reversing contactor unit
REG	Process controller

Product overview linear actuators SBA

Dimension sheet

SBA 12/20/45/80/200



Type	SBA 12	SBA 20/45	SBA 80	SBA 200	Type	SBA 12	SBA 20/45	SBA 80	SBA 200
a	89	94,5	130	190	o	210	210	220	240
b	158	158	174	187	p	100	156	132	132
b ¹⁾	173	173	197	226	p ¹⁾	115	115	179	141 p+23
Ø c	145	145	188	216	r	45	45	45	51
d	42	42	69	70	s	156	156	150	150
Ø e	54	54	100	100	Ø w	22	22	22	22
Ø f	74	74	130	130	Ø y	26	26	60	60
Ø g	35 f8	35 f8	60	60	z ²⁾	28	28	22,5	3
Ø g ³⁾	35 f8	35 f8	70	70	z				
i	41.5	41.5	26	3	M, k	M14x1.5 LH, 40	M14x1.5 LH, 40	M16x1.5, 40 M16x1.5 LH, 40 M18x1.5 LH, 40	M20x1.5, 22 M18x1.5 LH, 40 M20x1.5 LH, 40
i ³⁾	3	3	26	3					
k			16	22					
n	14	14	20	26					
Ø t	50	50	102	102					
u	M6	M6	M10	M10					
v				16	Ø D	Ø 48, Ø 54, Ø 60		Ø 48, Ø 54, Ø 60, Ø 80	
max. G	M20	M20	M20	M20	S	100, 105, 125, 155		100, 105, 125, 155	
G	not drilled Ø 5 M6, M8, M12, M16, M20		not drilled Ø 5 M6, M8, M12, M16, M20		X	please mention when ordering			
					max. H	Stroke actuators (see technical data)			

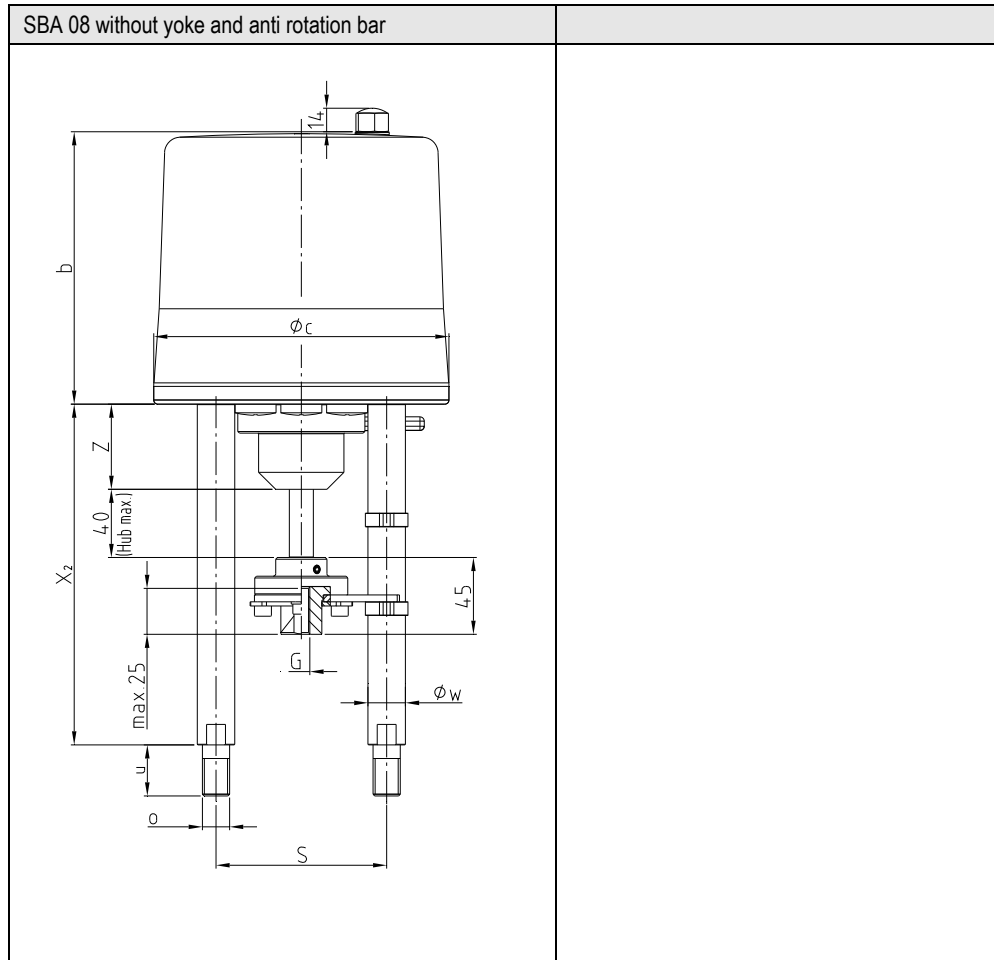
- 1) Dimensions with PEL (positioning electronics)
2) Dimensions for distance S = 100, 105
3) Dimensions for connection flange acc. to EN ISO 5210

Dimensions printed in bold are considered as standard values

Product overview linear actuators SBA

Dimension sheet

SBA 08



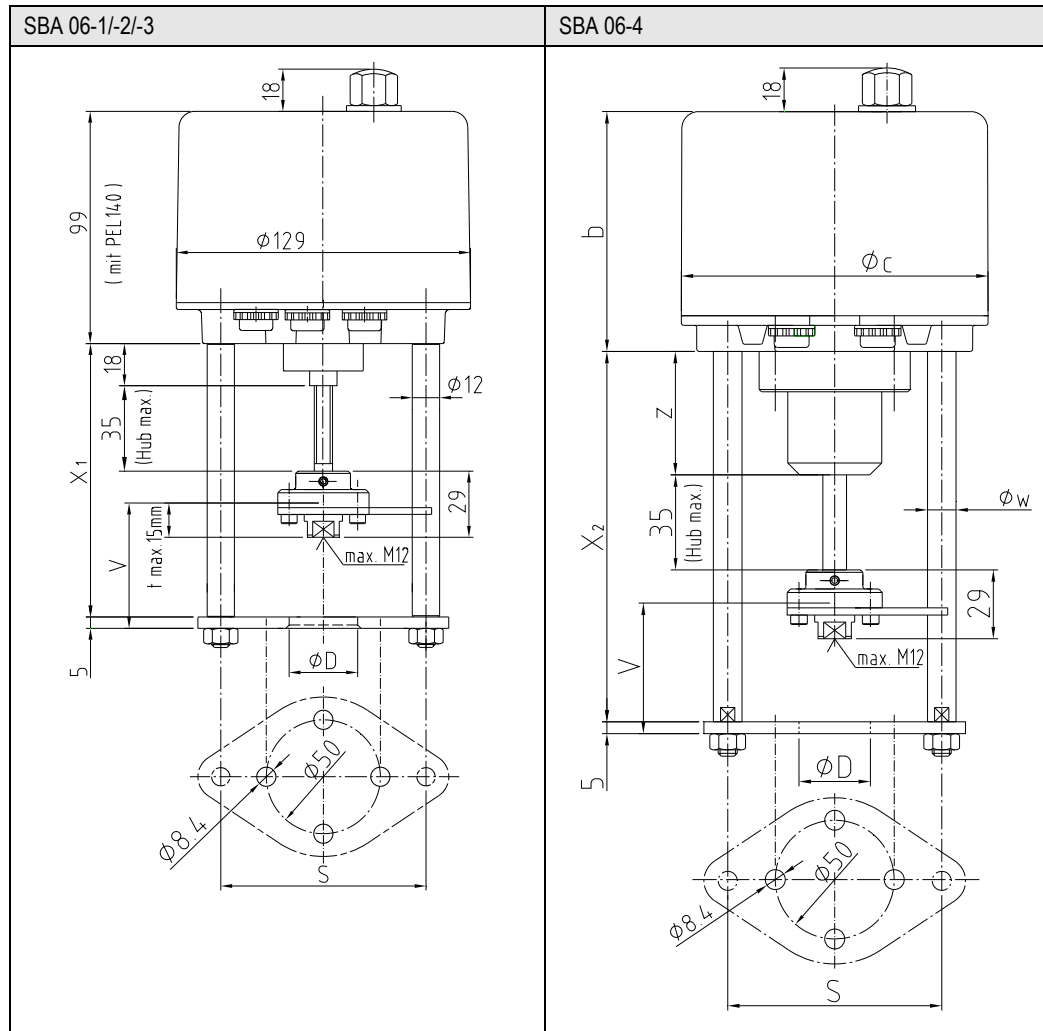
Type	SBA 08
Ø D	-
S	100
X1	120
X2	-
V	-
b	-
b ¹⁾	-
c	-
w	-
Z	-
u	30
o	M12 / M16

¹⁾ Dimensions with PEL (positioning electronics)

Dimensions printed in bold are considered as standard values

Dimension sheet

SBA 06



Type	SBA 06-1/-2/-3	SBA 06-4
Ø D	30, 35	30, 35
S	90, 100	90, 100
X1	120	–
X2	–	156
V	55	55
b		99
b ¹⁾		140
c		129
w		12
z		52

¹⁾ Dimensions with PEL (positioning electronics)

Dimensions printed in bold are considered as standard values