

# Actuator AG03

The compactest actuator of its class with integrated sensor unit, control electronics and the tried and tested hollow shaft principle. Great flexibility and easy integration thanks to various control options.



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**Feature:**

- Space-saving, easy mounting
- through hollow shaft up to max.  $\varnothing$ 14mm
- Brushless 50W, 24V EC motor with long working life
- Integrated performance and control electronics with polarity and overload protection
- Integrated magnetic position encoder: incremental / absolut
- Integral Profibus-DP (Profidrive) Interface
- M12 component mounting technology

Feature	Order text	Additional information	
Gear ratio	48	25% ED (duty cycle)	
	24	25% ED (duty cycle)	
Motor power	50W-M	24VDC	
Protection	IP50		
	IP63		
	IP65		
Hollow shaft / $\varnothing$ (mm)	KR/14	clamp ring / $\varnothing$ 14mm	
	KR/12	clamp ring / $\varnothing$ 12mm	
	N/10	kayway JS9 DIN 6885/1 / $\varnothing$ 10mm	
Torque support (form)	A	bolt $\varnothing$ 6	
	B	bracket I	
Connection type	EX	plug socket on the device	
	E12	Bus-In / Bus-Out	
	E12E	Bus-In	
Position encoder	LD24	incremental encoder 1024 pulses	supply +10VDC ... +30VDC; output signals RS422
	OP	push pull with inversion	supply +10VDC ... +30VDC; output signals push pull
	ABM	absolut magnetic	
	0	without	
Motor control PWM	OMS	without	
	SD	digital	galvanically separated
	SUP	analogue unipolar 0 ... 10V	
	SBP	analogue bipolar -10 ... +10V	
Fieldbus	OFB	without	
	PB	Profibus-DP	
Software	SW	standard	only with fieldbus

Your ordering: AG03 - A - B - C - D - E - F - G - H - I - K

## Actuator AG03

### Technical data

Mechanical data:			Additional information
Hollow shaft		steel blue	
Housing		Aluminium / zinc dye casting powder coated	
Torque (max.) / speed (nom.)	at i=48	3,2Nm with output speed 100min <sup>-1</sup>	at i=24 1,6Nm with output speed 200min <sup>-1</sup>
Shock resistance		50g / 11ms	DIN-IEC 68-2-27
Vibration resistance axial / radial		10g / 50Hz	DIN-IEC 68-2-6

### Elektrical data motor incl. control:

Supply voltage		+24VDC ±10%	
Power consumption		P <sub>zu</sub> = 58W	
Rated current with adjusted value 100%		2.4A±7% (50W-M)	max. load current 2.58A (25%ED)
No-load current (with gear)		300mA ±20%	
PWM (pulse width modulation)		ca. 16kHz, continuous control, 0...100%,	soft start
Inputs		digital with LED-indication / analogue	
Digital inputs		15...30V, typical 10mA	
Analogue inputs		0...+10V; -10...+10V; impedance >1.3MΩ	

### Elektrical data encoder:

	LD24	OP
Supply voltage	+10VDC ... +30VDC	+10VDC ... +30VDC
Power consumption without load (typ.)	<20mA @ 24VDC	<20mA @ 24VDC
Output circuit	line driver (RS422)	push pull (OP)
Output signals	A, B, 0, /A, /B, I	A, B, 0, /A, /B, I
Pulse frequency max.	20kHz	20kHz

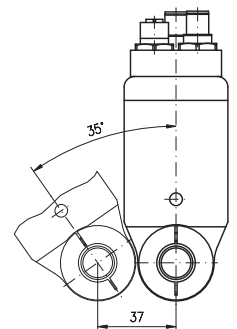
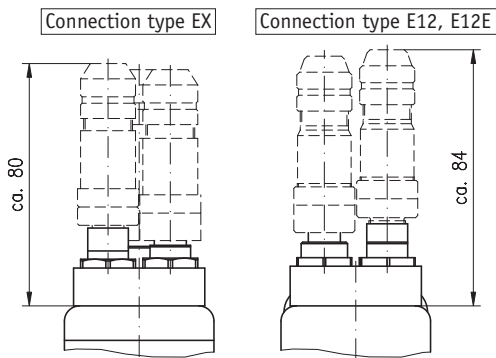
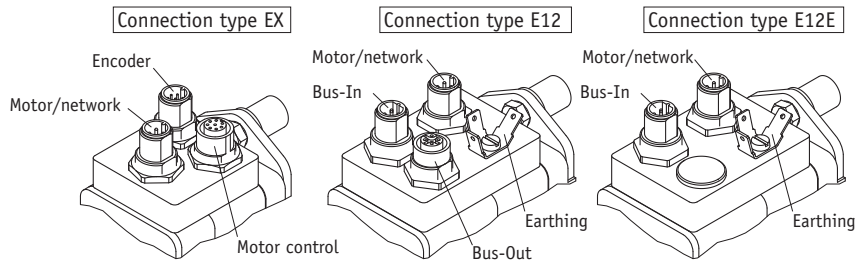
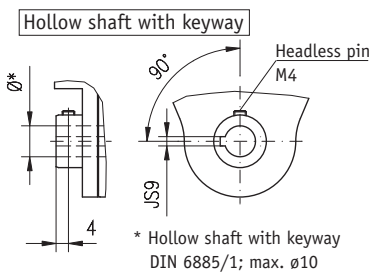
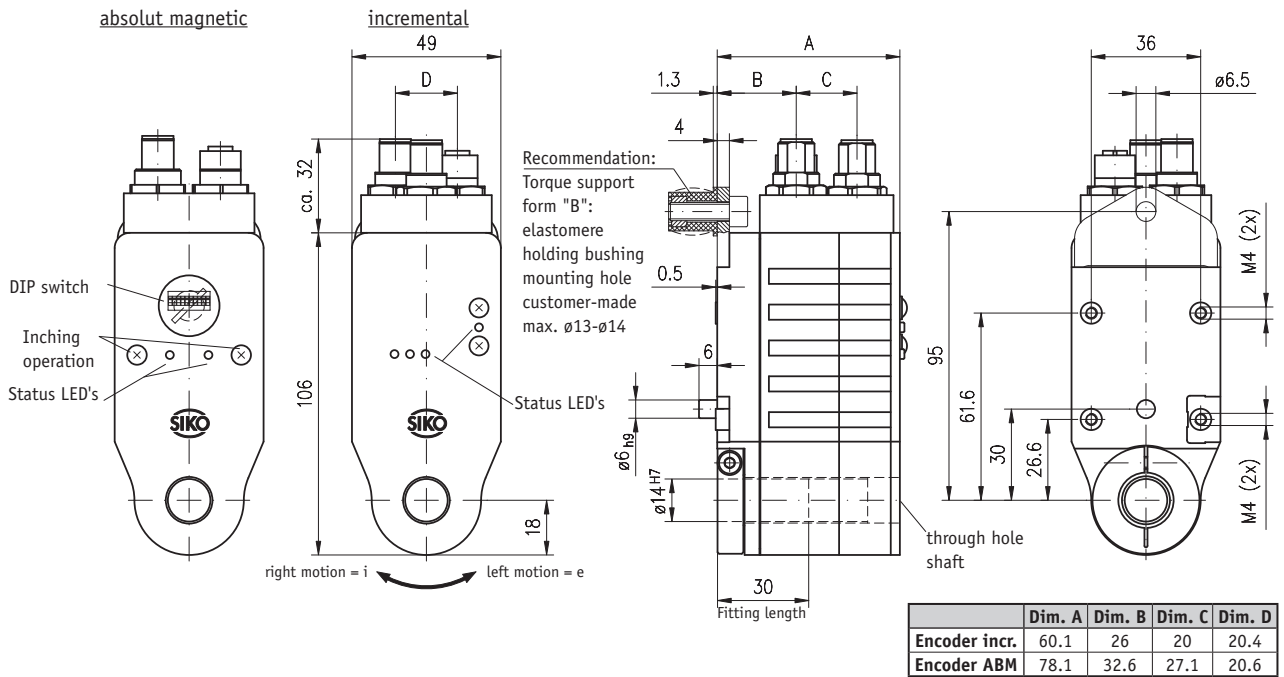
### Environmental conditions:

Operating temperature (condensation not permitted)	0° ... +80°C	
Ambient temperature:	0° ... +45°C	
Operating mode	short-time operation S2 (25%ED)	according DIN 57530 / VDE 0530 Teil 1
Certification / protection class	conforms to CE	according EN 61800-3
Protection	IP50 / IP63	according DIN VDE 0470

### Accessory

83525	Mating connector for encoder	8 pole, circular cableconnector
83526	Mating connector for motor/network	4 pole, circular cableconnector
83527	Mating connector for motor control	8 pole, circular cableconnector
82804	Mating connector for Profibus In	5 pole, angle cableconnector
83991	Mating connector for Profibus In	5 pole, circular cableconnector
82805	Mating connector for Profibus Out	5 pole, angle cableconnector
83992	Mating connector for Profibus Out	5 pole, circular cableconnector

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## Pin connection EX, E12, E12E

### Motor/network (4 pole) incremental

Pin	1	2	3	4
Signal	+	N.C.	-	N.C.

### Motor/network (4 pole) fieldbus

Pin	1	2	3	4
Signal	+	Enable	-	N.C.

### Encoder LD24/OP (8 pole)

Pin	1	2	3	4	5	6	7	8
Signal	+SUB (Sensor)	SGND (Sensor)	A	/A	B	/B	O	I

### Motor control PWM (8 pole)

Pin	1	2	3	4	5	6	7+8
Version digital	right motion plus	right motion ground	left motion plus	left motion ground	fast/creep plus	fast/creep ground	N.C.
Version analogue unipolar	enable plus	enable ground	right/left plus	right/left ground	analogue 0 ... +10V	analogue ground	N.C.
Version analogue bipolar	enable plus	enable ground	N.C.	N.C.	analogue -10V...+10V	analogue ground	N.C.

### Fieldbus (5 pole)

Pin	1	2	3	4	5
Profibus-DP	N.C.	BUS A	N.C.	BUS B	N.C.

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Notes: