

# Actuator AG03



**Feature:**

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

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Feature	Order text	Additional information	
Gear ratio	48 <b>A</b>	25 % ED (duty cycle)	
	24	25 % ED (duty cycle)	
Motor power	50W-M <b>B</b>	24 VDC	
Protection	IP50 <b>C</b>		
	IP63		
	IP65		
Hollow shaft / $\varnothing$ (mm)	KR/14 <b>D</b>	clamp ring / $\varnothing 14$ mm	
	KR/12	clamp ring / $\varnothing 12$ mm	
	N/10	kayway JS9 DIN 6885/1 / $\varnothing 10$ mm	
Torque support (form)	A <b>E</b>	bolt $\varnothing 6$	
	B	bracket I	
Connection type	EX <b>F</b>	plug socket on the device	
	E12	Bus-In / Bus-Out	
	E12E	Bus-In	
Position encoder	LD24 <b>G</b>	incremental encoder 1024 pulses	supply +10 VDC ... +30 VDC; output signals RS422
	OP	push pull with inversion	supply +10 VDC ... +30 VDC; output signals push pull
	ABM	absolut magnetic	
	0	without	
Motor control PWM	OMS <b>H</b>	without	
	SD	digital	galvanically separated
	SUP	analogue unipolar 0 ... 10 V	
	SBP	analogue bipolar -10 ... +10 V	
Fieldbus	OFB <b>I</b>	without	
	PB	Profibus-DP	
	CAN	CAN-open	
Software	SW <b>K</b>	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		black-finished steel	
Housing		Aluminium / zinc dye casting	anodized / powder coated
Torque (max.) / speed (nom.)	at i=48	3,2 Nm with output speed 100 min <sup>-1</sup>	
	at i=24	1,6 Nm with output speed 200 min <sup>-1</sup>	
Shock resistance		50 g / 11 ms	EN 60068-2-27
Vibration resistance		10 g / 50 Hz	EN 60068-2-6

### Elektrical data motor incl. control:

Supply voltage	+24 VDC ±10 %		
Power consumption	P <sub>ca</sub> = 58 W		
Rated current with adjusted value 100%	2,4 A ±7 % (50W-M)		max. load current 2,58 A (25 % ED)
No-load current (with gear)	300 mA ±20 %		
PWM (pulse width modulation)	ca. 16 kHz		continuous control, 0 ... 100 %, soft start
Inputs	digital with LED-indication / analog		
Digital inputs	15...30 V, typ. 10 mA		
Analog inputs	0...+10 V; -10...+10 V; impedance > 1,3 MΩ		
Protection	politary inversion protection		

### Elektrical data encoder:

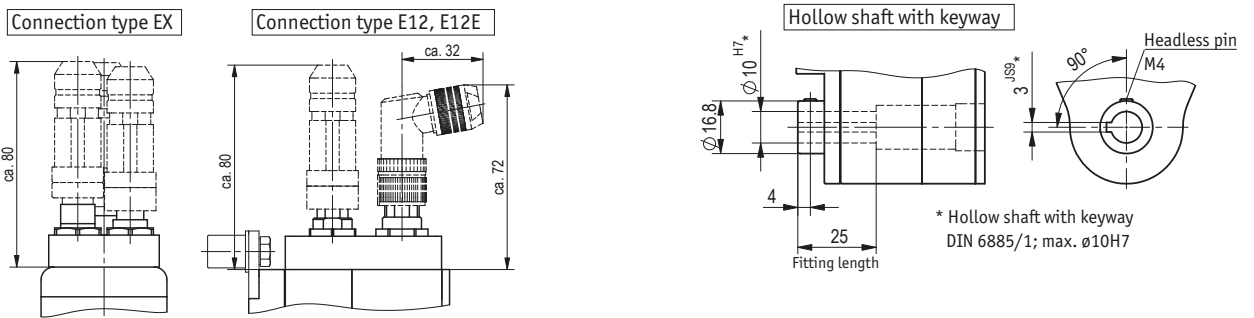
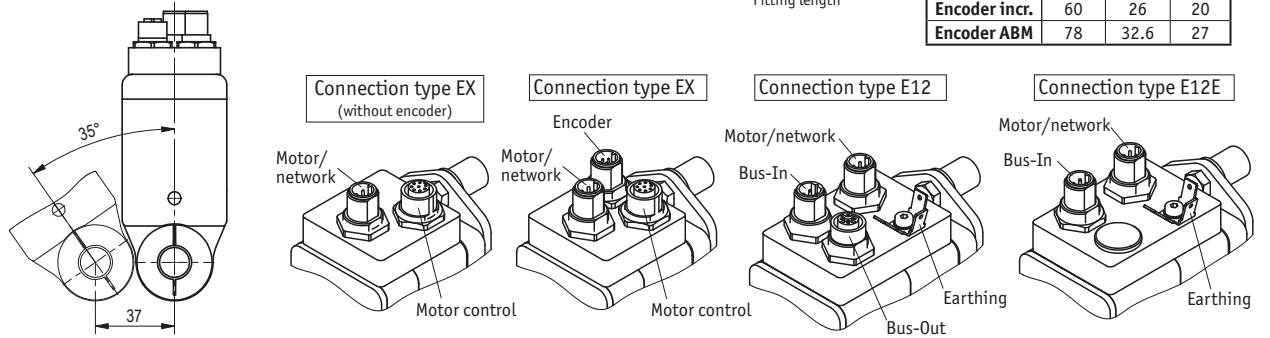
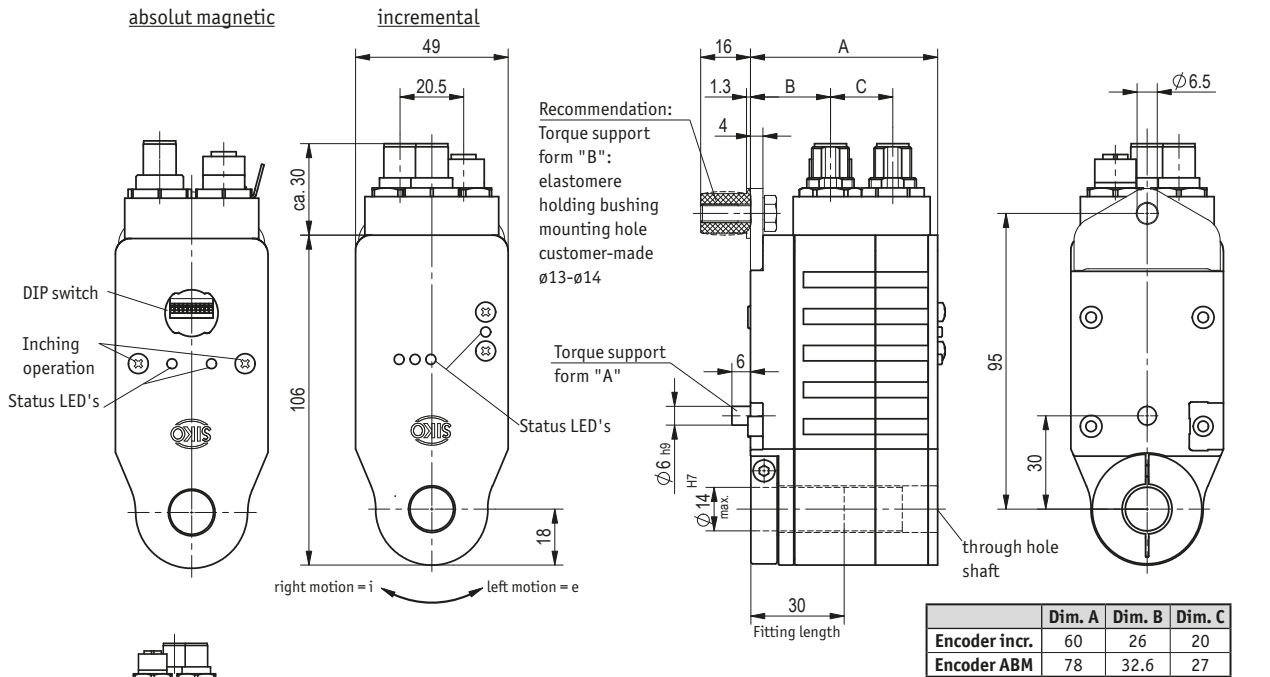
	LD24	OP	
Supply voltage	+10 VDC ... +30 VDC	+10 VDC ... +30 VDC	
Power consumption without load (typ.)	< 20 mA @ 24 VDC	< 20 mA @ 24 VDC	
Output circuit	line driver (RS422)	push pull (OP)	
Output signals	A, B, 0, /A, /B, I	A, B, 0, /A, /B, I	
Pulse frequency max.	20 kHz	20 kHz	

### Environmental conditions:

Operating temperature	0 °C ... +80 °C	condensation not permitted
Ambient temperature	0 °C ... +45 °C	
Operating mode	duty type S3: 25 % ED, 10 min.	according EN 60034-1
Certification / protection class	conforms to CE	according EN 61800-3 category C2
Protection	IP50 / IP63 / IP65	according EN 60529 (with mounted mating connectors)

Accessory			
83525	Mating connector for encoder		8 pole, circular cableconnector
83526	Mating connector for motor/network		4 pole, circular cableconnector
83091	Mating connector for motor/network		4 pole, angle 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
83006	Mating connector for CAN-open In		5 pole, angle cableconnector
84109	Mating connector for CAN-open 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
83007	Mating connector for CAN-open Out		5 pole, angle cableconnector
84732	Mating connector for CAN-open Out		5 pole, circular cableconnector

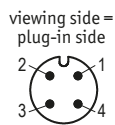
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## Pin connection EX, E12, E12E

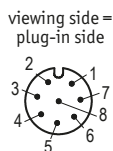
### Motor/network (4 pole)

Pin	Incremental	Fieldbus
1	+	+
2	N.C.	Enable
3	-	-
4	N.C.	N.C.



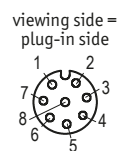
### Encoder LD24/OP (8 pole)

Pin	Signal
1	+SUB (Sensor)
2	SGND (Sensor)
3	A
4	/A
5	B
6	/B
7	0
8	I



### Motor control PWM (8 pole)

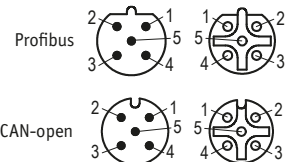
Pin	Version digital	Version analogue unipolar	Version analogue bipolar
1	right motion plus	enable plus	enable plus
2	right motion plus	enable ground	enable ground
3	left motion plus	right/left plus	N.C.
4	left motion ground	right/left ground	N.C.
5	fast/creep plus	analogue 0 ... +10 V	analogue -10 V...+10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



### Fieldbus (5 pole)

Pin	Profibus-DP	CAN-open
1	N.C.	N.C.
2	BUS A	N.C.
3	N.C.	CAN_GND
4	BUS B	CAN_H
5	N.C.	CAN_L

viewing side = plug-in side



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Notes: