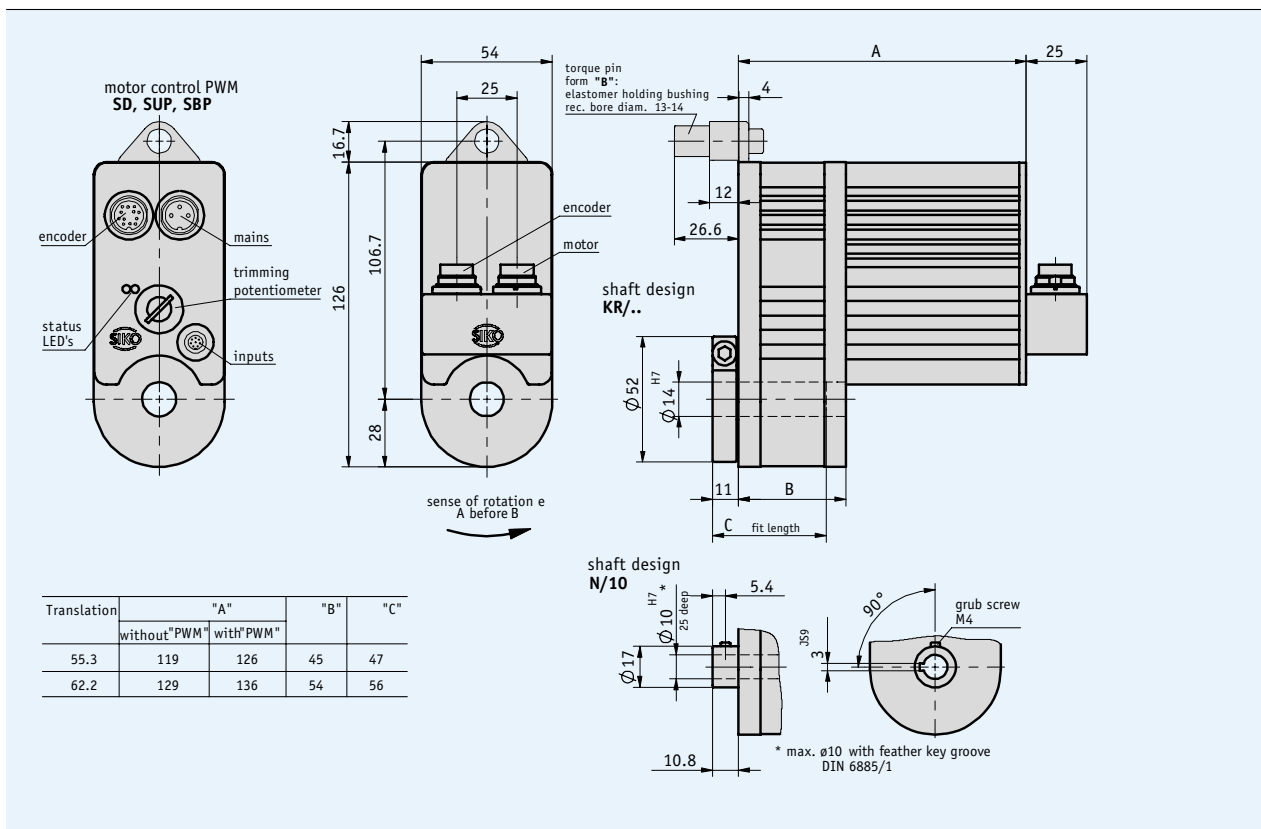


## Profile

- Easy mounting
- Through hollow shafts up to max.  $\varnothing$  14 mm
- Integrated magnetic position encoder on output shaft
- Integrated motor control (option)



## 4.1



## Mechanical data

Feature	Technical data	Additional information
Hollow shaft	browned steel	
Housing	aluminum	
Nominal torque	5 Nm, 80 rpm (motor 70 W/M)	with i = 55.3
	6 Nm, 70 rpm (motor 70 W/M)	with i = 62.2
	8 Nm, 120 rpm (motor 150 W/M)	with i = 55.3
	9 Nm, 110 rpm (motor 150 W/M)	with i = 62.2
Shock resistance	50 g, 11 ms	DIN EN 60068-2-27
Vibration resistance axial, radial	10 g, 50 Hz	DIN EN 60068-2-6
Operating temperature	-10 ... +80 °C	condensation inadmissible
Operating mode	short-time operation S2, 25 % duty cycle	according to DIN 57530, VDE 0530, part 1
Interference protection class	acc. to EN 61000-6-2 and EN 61000-6-4	
Protection category	IP50, others on request	according to DIN VDE 0470
Weight	approx. 1.6 kg	

## Electrical data

### Motor/voltage supply data

Feature	Technical data	Additional information
Voltage supply	0 ... 24 V DC, 24 V DC $\pm$ 10 %	
Power consumption, fed	150 W; 70 W	
Max. load current	5.8 A $\pm$ 4 % (150 W)	with $i = 55.3$
	2.9 A $\pm$ 4 % (70 W-M)	with $i = 62.2$
PWM (pulse width modulation)	$\sim$ 16 kHz continuous, 0 ... 100 %	soft start
Inputs	analog, digital	digital with LED indicator
Digital inputs	15 ... 30 V, typically 10 mA	
Analog inputs	0 ... +10 V, -10 ... +10 V	impedance >1.3 M $\Omega$

### Encoder data

Feature	LD5	LD24	OP
Voltage supply	5 V DC $\pm$ 5 %	24 V DC $\pm$ 20 %	24 V DC $\pm$ 20 %
Power consumption	$\leq$ 50 mA	$\leq$ 25 mA	$\leq$ 25 mA
Output circuit	line driver (RS422)	line driver (RS422)	push-pull (OP)
Output signals	(A, B, 0, /A, /B, /0)	(A, B, 0, /A, /B, /0)	(A, B, 0, /A, /B, /0)
Pulse frequency max.	20 kHz	20 kHz	20 kHz

## Pin assignment

### Motor/voltage supply

Signal	PIN
Motor +/ +Ub	1
N.C.	2
Motor - / 0V	3

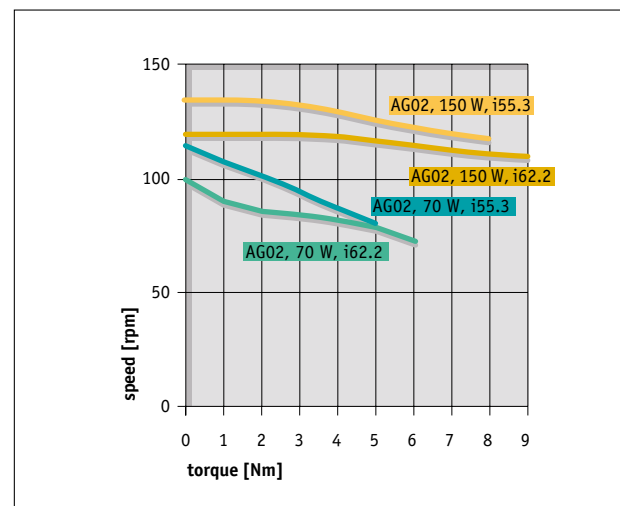
### Encoder

LD24, OP	LD5	PIN
/B	/B	A
N.C.	+SUB (sensor)	B
0	0	C
I	I	D
A	A	E
/A	/A	F
B	B	H
GND	GND	K
N.C.	SGND (sensor)	L
+UB	+UB	M
N.C.	N.C.	G, J

### Motor control PWM

Digital	Analog unipolar	Analog bipolar	PIN
Clockwise plus	enable plus	enable plus	1
Clockwise ground	enable ground	enable ground	2
Counter-clockwise plus	cw/ccw plus	N.C.	3
Counter-clockwise ground	cw/ccw ground	N.C.	4
Fast/creep plus	analog 0 ... +10 V	analog -10 ... +10 V	5
Fast/creep ground	analog ground	analog ground	6
			7, 8

## Performance curve



**Order**

■ **Order table**

Feature	Order text	Specification	Additional information
Gear ratio	55.3	i = 55.3	
	62.2	i = 62.2	
Motor rating	150 W		
	70 W-M		only with SD, SUP or SBP motor controls
Shaft design	KR/14	clamp ring, Ø 14 mm	
	N/10	keyway, Ø 10 mm	not with gear ratio 62.2 and motor rating 150 W
		others on request	
Torque support (form)	B	lug	incl. elastomer bushing
	OD	without	
Position of electrical connection	LR	radial	with external motor control
	LA	axial	with integrated motor control
Position encoder	LD24	incremental encoder 1000 pulses	24 V DC ±20 %
	LD5	incremental encoder 1000 pulses	5 V DC ±5 %
	OP	push-pull with inversion	24 V DC ±20 %
	0	without	only with "Position of electrical connection" LR
Motor control PWM	OMS	without	only with motor rating 150 W
	SD	digital input	
	SUP	analog input, unipolar 0 ... 10 V	
	SBP	analog input, bipolar -10 ... +10 V	

■ **Order code**

AG02 -   -   -   - D -   -   -   -   -   - XX/XX - OFB

A  
 B  
 C  
 D  
 E  
 F  
 G

*Scope of delivery: AG02, User information*

**Accessories:**

Mating connectors Page 48  
 Cable extension Page 50  
 Motor control MS02 Page 42

**Additional information:**

General information and areas of application Page 4 cont.