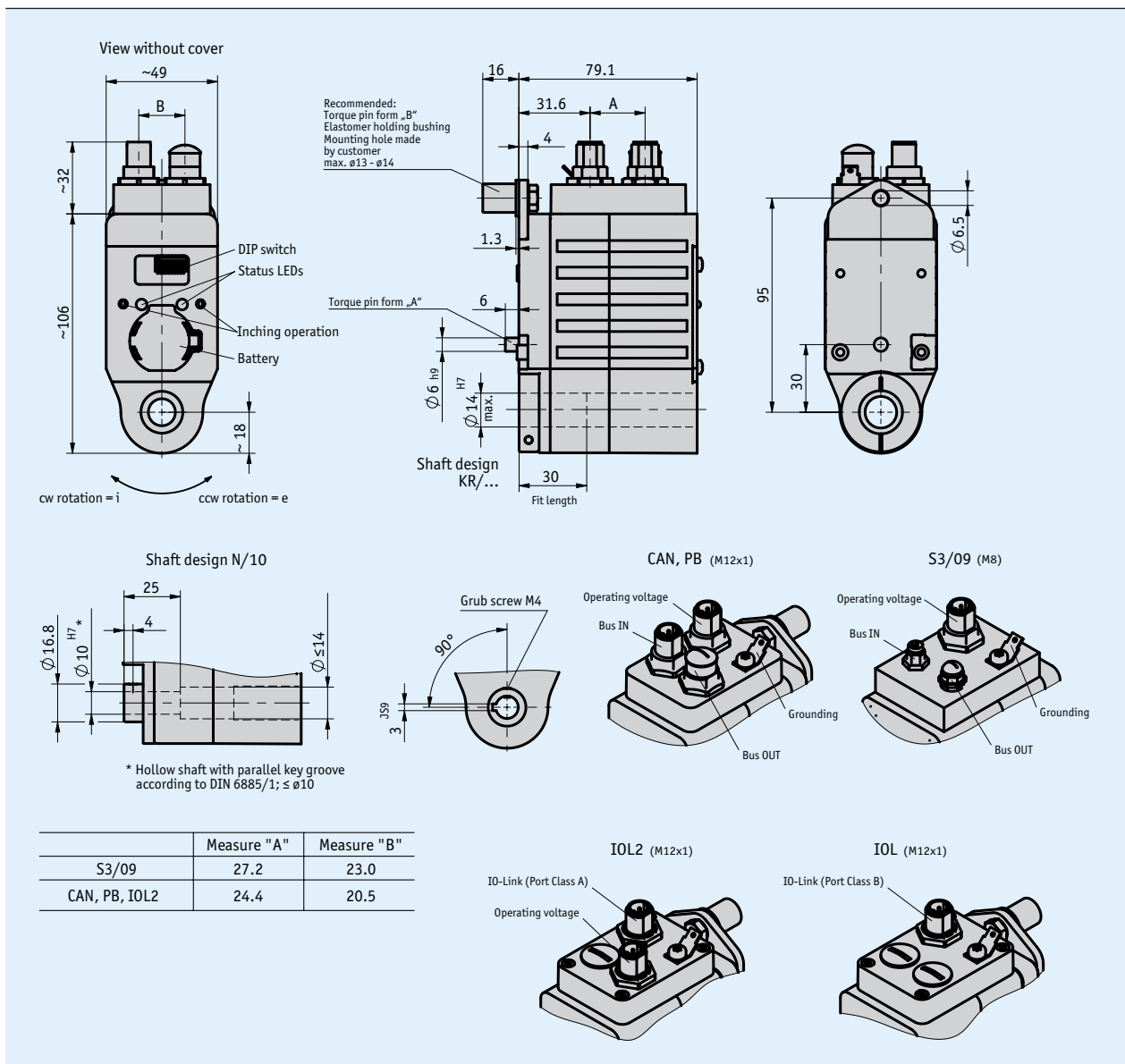
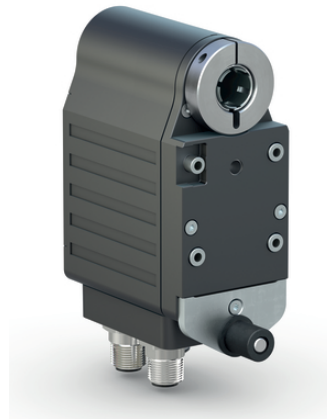


Profile

- Space-saving, easy mounting
- Through hollow shafts up to max. $\varnothing 14$ mm
- Brushless 50 W, 24 V EC motor with long service life
- Integrated power and control electronics with inverse polarity and overload protection
- Integrated absolute position encoder on the output shaft
- interfaces CANopen, Profibus-DP, RS485/SIKONETZ5 or IO-Link
- IO-Link optionally with 1 cable or 2 cable interface
- Industry 4.0 ready



Mechanical data

Feature	Technical data	Additional information
Shaft	black-finished steel	
Housing	aluminum/zinc die cast	anodized / powder-coated
Nominal torque/rated speed	3.2 Nm at 100 rpm	i = 48
	1.6 Nm at 200 rpm	i = 24
Operating mode	S3 intermittent operation: 25 % DC, 10 min.	EN 60034-1
Weight	~1.2 kg	

Electrical data

Feature	Technical data	Additional information
Operating voltage	24 V DC $\pm 10\%$	reverse polarity protected, output stage
	24 V DC $\pm 10\%$	reverse polarity protected, control (only CAN, PB, S3/09, IOL, IOL2)
Power input	58 W	output stage
Battery	CR2477N, 3 V lithium, 950 mAh	
Battery service life	~5 year(s)	depending on ambient conditions
Parameter storage	10 ⁵ cycles	also applies to calibration operations
Rated current	2.4 A $\pm 10\%$	at max. adm. torque (output stage)
	<100 mA	at 24 V DC (control), only CAN, PB, S3/09, IOL, IOL2
Status display	two LEDs	
Keys	touch keys	for setting-up mode
Bus connection	CANopen, Profibus-DP, SIKONETZ5	galvanic isolation of interface
	Profibus-DP	galvanic isolation of interface
	SIKONETZ5	galvanic isolation of interface
	IO-Link, IOL	galvanic isolation between operating voltage, output stage and control
	IO-Link, IOL2	galvanic isolation between operating voltage, output stage and control
Type of connection	2x M12-plug connectors (A-coded)	5-pole, 1x socket, 1x pin (CAN)
	2x M12 plug connectors (B-coded)	5-pole, 1x socket, 1x pin (PB)
	2x M8-plug connectors	4-pole, 1 x socket, 1 x pin (S3/09)
	1x M12-plug connector (A-coded)	4-pole, 1x pin (CAN + PB + S3/09 + IOL2)
	1x M12-plug connector (A-coded)	5-pole, 1x pin (IOL + IOL2)
	grounding via flat connector 6.3 mm	

System data

Feature	Technical data	Additional information
Resolution	1600 increments/revolution	
System accuracy	$\pm 0.8^\circ$	unidirectional
Repeat accuracy	± 1 increment(s)	unidirectional / bidirectional
Travel range	± 8182 revolution(s)	

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	0 ... 45 °C	
Storage temperature	-20 ... 60 °C	
Height above NHN (standard elevation zero)	<2000 m	
Relative humidity		condensation inadmissible
EMC	EN 61800-3, second environment	interference resistance / immission, shielded line required
	EN 61800-3, C3	emitted interference / emission
Protection category	IP50 / IP54 / IP65	EN 60529, mating connectors mounted
Shock resistance	500 m/s ² , 11 ms	EN 60068-2-27
Vibration resistance	≤ 100 m/s ² , 5 ... 150 Hz	EN 60068-2-6

Pin assignment

Operating voltage

	IOL2	IOL2	PIN
	IOL2		
+UB (output stage)	1		
+UB (output stage)	2		
GND (output stage)	3		
GND (output stage)	4		
	IOL2		

S3/09

Signal	PIN
DÜB/TxRx-	1
DÜA/TxRx+	2
N.C.	3
SGND	4

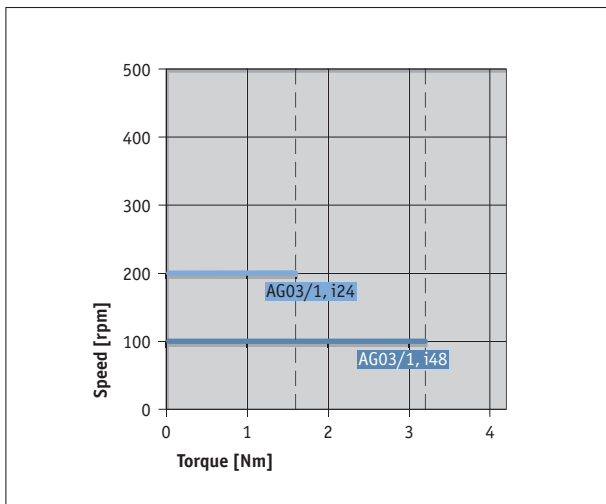
PB, CAN

PB	CAN	PIN
N.C.	N.C.	1
BUS A	N.C.	2
N.C.	CAN_GND	3
BUS B	CAN_H	4
N.C.	CAN_L	5

IOL, IOL2

IOL	IOL2	PIN
L+ (+UB control)	L+ (+UB control)	1
P24 (+UB output stage)	N.C.	2
L- (GND control)	L- (GND control)	3
C/Q	C/Q	4
N24 (GND output stage)	N.C.	5

Performance curve



Industry 4.0

In most cases, data exchange with the actuators is limited to the exchange of process data. In addition to the process data, intelligent drives provide additional information that can be evaluated for condition monitoring up to predictive maintenance:

Process Data	Smart Value	Smart Function
Actual position	Temperature	Overload, ambient temperature
Target position	Current	Torque, overload
Speed	Voltage load Voltage control	Voltage drop, line break
	On/Off time	Operating time
	Battery voltage	Battery change planning

Order

Ordering table

Feature	Ordering data	Specification	Additional information
Gear ratio	48	i = 48	
	24	i = 24	
Protection category	IP50	IP50	
	IP54	IP54	
	IP65	IP65	
Shaft design/diameter	KR/14	clamping ring ø14 mm	
	KR/12	clamping ring ø12 mm	
	N/10	keyway JS9 DIN 6885/1 ø10 mm	
Torque pin	A	bolt, ø6 mm	
	B	lug	incl. elastomer bushing
Fieldbus	CAN	CANopen	
	PB	Profibus-DP	Profidrive
	S3/09	RS485 / SIKONETZ5	
	IOL	IO-Link, 1 plug version	
	IOL2	IO-Link, 2 plug version	

Order key

AG03/1 - A - B - C - D - ABM - E - SW

Scope of delivery: AG03/1, Quick Start Guide

Accessories:

- Cable extension KV04S1
- Cable extension KV04S2
- Easy Touch Control ETC5000
- Programming software ProTool DL
- Mating Connector Overview
- Mating connector, operating voltage, 4-pole, socket
- Mating connector, operating voltage, 4-pole, angle socket
- Mating connector, Profibus IN, 5-pole, angle socket
- Mating connector, Profibus IN, 5-pole, socket
- Mating connector, Profibus OUT, 5-pole, angular pin
- Mating connector, Profibus OUT, 5-pole, pin
- Mating connector, CANopen IN, IOL IN, IOL2 IN, 5-pole, angle socket
- Mating connector, CANopen IN, IOL IN, IOL2 IN, 5-pole, socket
- Mating connector, CANopen OUT, 5-pole, angular pin
- Mating connector, CANopen OUT, 5-pole, pin
- Mating connector, bus IN, 4-pole, socket
- Mating connector, bus OUT, 4-pole, pin

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