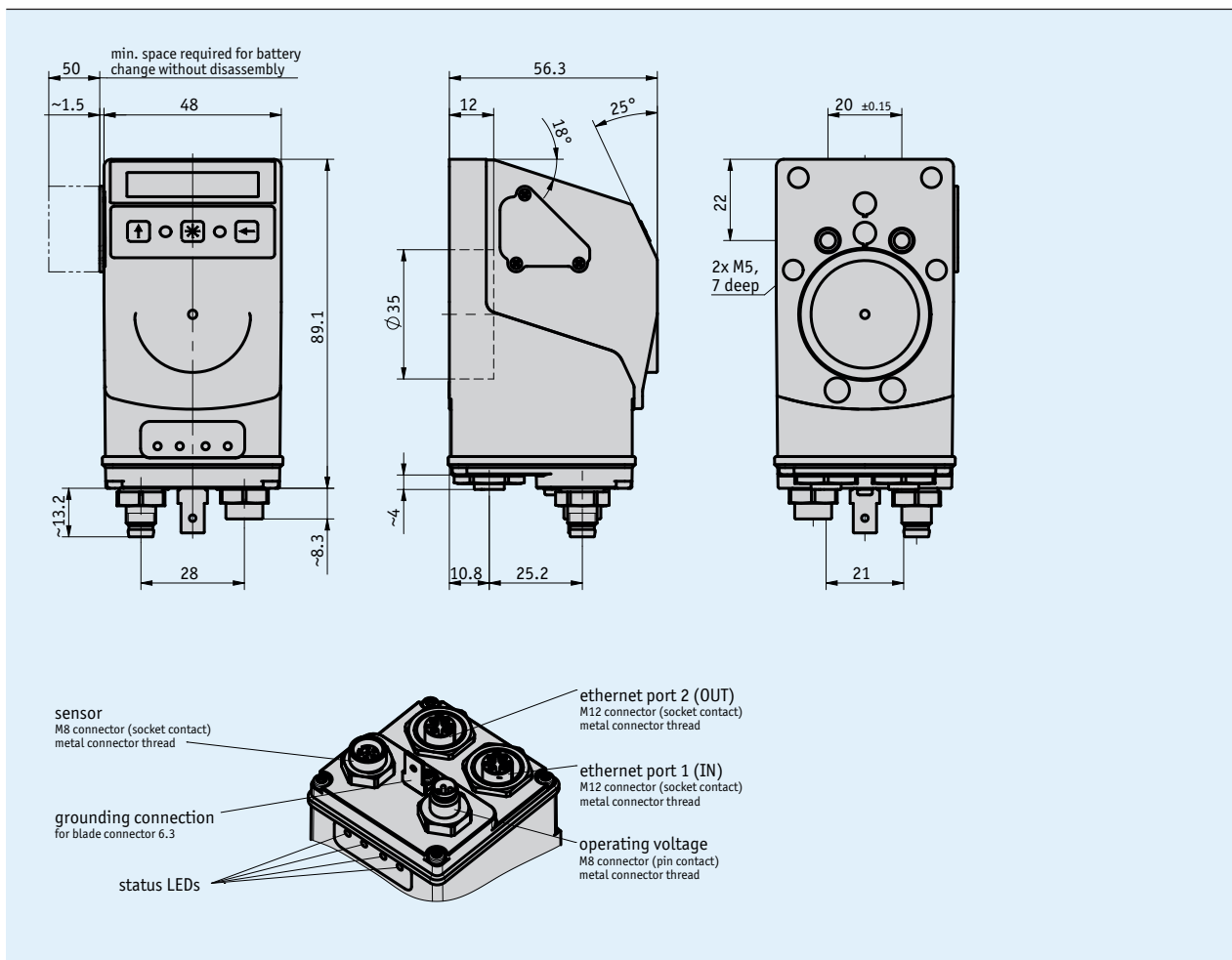


Profile

- Electronic position indicator with plug connection for magnetic sensor
- Integrated Industrial-Ethernet-Fieldbus
- Backlit two-row LCD
- Display of target and actual value displays with integrated alignment
- Display accuracy up to 0.01 mm
- Absolute function via internal backup
- Robust sensor technology unit thanks to magnetic scanning
- User guidance through status LEDs
- IP53 type of protection, IP65 as an option
- Industry 4.0 ready



Mechanical data

Feature	Technical data	Additional information
Housing	reinforced plastic	plug thread, nickel-plated brass/cover, metal ground connection
Color	black	
Weight	~0.2 kg	

Electrical data

Feature	Technical data	Additional information
Operating voltage	24 V DC $\pm 20\%$	reverse polarity protected
Current consumption	~100 mA	
Battery service life	~8 year(s)	
Parameter storage	10 ⁶ cycles	also applies to calibration operations
Display/display range	6-digit LCD 14-segment, ~8 mm high -199999 ... 999999	decimal points, 2 rows, special characters (backlit LED red/white) expanded display area to -999999
Special character	cw arrow, ccw arrow, incremental measurement, battery	
Status display	2x two-color LED (red/green)	position status, configurable
Keys	incremental measurement function, parameterizing, resetting	
Interface	Ethernet/IP PROFINET EtherCAT POWERLINK	
Type of connection	1x M8-plug connector (A-coded) 1x M8-plug connector (A-coded) 1x M12-plug connector (D-coded) grounding via flat plug 6.3 mm	4-pole, 1x pin 6-pole, 1x socket (sensor) 4-pole, 2x socket

System data

Feature	Technical data	Additional information
Scanning	external sensor	
Resolution	0.01 mm 720 increments/revolution	use with MS500H displayed value/revolution freely configurable (use with GS04)
System accuracy	$\pm 35\ \mu\text{m}$	use with MS500H
Measuring range	$\pm 10485\ \text{m}$ $\leq 233016\ \text{revolution(s)}$	use with MS500H use with GS04

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	0 ... 60 °C	
Storage temperature	-20 ... 80 °C	
Relative humidity		condensation inadmissible
EMC	EN 61326-1	industrial immunity requirements, class B emission limit
Protection category	IP53 IP65	EN 60529, with mating connector only EN 60529, with mating connector only
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

■ Ethernet

Signal	PIN
Tx+	1
Rx+	2
Tx-	3
Rx-	4

■ Operating voltage

Signal	PIN
reserved	1
reserved	2
+UB	3
GND	4

Industry 4.0

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

Process Data	Smart Value	Smart Function
Actual position	Battery voltage	Battery change planning
Target position	Presence, distance, alignment sensor	Counting error

Order

Ordering information

One or more system components are required:

Magnetic sensor MS500H
Hollow shaft sensor GS04

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Ordering table

Feature	Ordering data	Specification	Additional information
Interface/protocol	ECT	EtherCAT	
	EIP	EtherNet/IP	
	EPL	POWERLINK	
	EPN	PROFINET	
Protection category	IP53	IP53	
	IP65	IP65	
Viewing window	SF	front foil	
	K	plastic	impact protection

Order key

AP20S - A - B - C - S

Scope of delivery: AP20S, Mounting instructions

Accessories:

Battery unit ZB1027

Cable extension KV04S1

Mating Connector Overview

Mating connector, operating voltage, 4-pole, socket

Mating connector, port 1 + port 2, 4-pole, pin

Mating connector, port 1 + port 2, 4-pole, angular pin

Intermediate plate

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Order key 87601

Order key 87600

Order key 89908