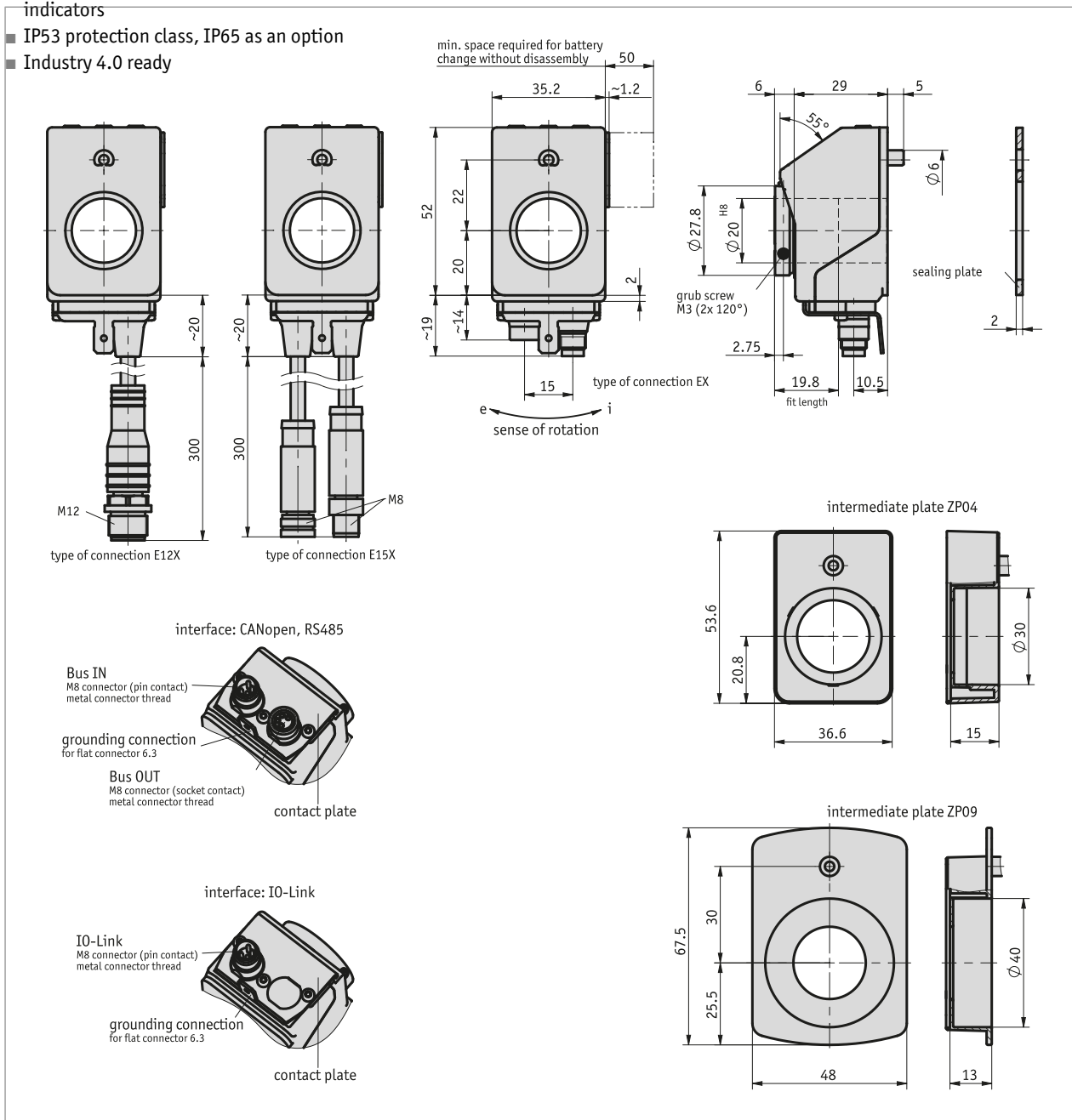
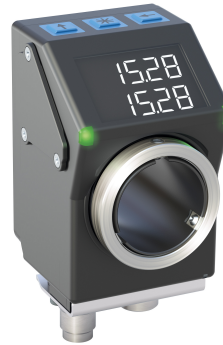


Profile

- Electronic position indicator with bus/data interface
- Backlit two-row LCD
- Display of target and actual value displays with integrated alignment
- User guidance through status LEDs
- Hollow shaft with $\varnothing 20$ mm and clamping ring made of stainless steel
- Enhanced shock resistance owing to protective display glass
- Integrated RS485 interface, CAN bus or IO-Link as an option
- Robust sensor technology unit thanks to magnetic scanning
- Mechanically compatible with the AP04 and DA04 position indicators
- IP53 protection class, IP65 as an option
- Industry 4.0 ready



Mechanical data

Feature	Technical data	Additional information
shaft	plastic	
Housing	reinforced plastic	plug thread, nickel-plated brass/cover, metal ground connection
Color	black, RAL 9005	
clamping ring	rustproof stainless steel	
Speed	≤500 min ⁻¹	
Cable sheath	PUR	E15X, E12X connection type
Cable bending radius	≥30 mm	permanently laid
Weight	~0.07 kg	

Electrical data

■ CANopen interface

Feature	Technical data	Additional information
Operating voltage	24 V DC ±20 %	reverse polarity protection
Current consumption	~30 mA	
Battery service life	~8 Year(s)	
Parameter storage	10 ⁵ cycles	also applies to calibration operations
Display/display range	5-digit LCD 7-segment, ~6 mm height	decimal points, 2 rows, special characters (backlit LED red/white)
Special character	cw arrow, ccw arrow, incremental measurement, battery	
Status display	2x two-color LED (red/green)	position status, configurable
Keys	chain dimension function, parameterization, calibration	
Interface	CANopen	no galvanic isolation
Type of connection	2x M8 plug connectors (A-coded) grounding via flat connector 6.3 mm	4-pole, 1x socket, 1x pin

■ RS485 interface

Feature	Technical data	Additional information
Operating voltage	24 V DC ±20 %	reverse polarity protection
Current consumption	~30 mA	
Battery service life	~8 Year(s)	
Parameter storage	10 ⁵ cycles	also applies to calibration operations
Display/display range	5-digit LCD 7-segment, ~6 mm height	decimal points, 2 rows, special characters (backlit LED red/white)
Special character	cw arrow, ccw arrow, incremental measurement, battery	
Status display	2x two-color LED (red/green)	position status, configurable
Keys	chain dimension function, parameterization, calibration	
Interface	RS485	no galvanic isolation
Type of connection	2x M8 plug connectors (A-coded) grounding via flat connector 6.3 mm	4-pole, 1x socket, 1x pin

■ IO-Link interface

Feature	Technical data	Additional information
Operating voltage	18 ... 30 V DC	reverse polarity protection
Current consumption	~30 mA	
Battery service life	~8 Year(s)	
Parameter storage	10 ⁵ cycles	also applies to calibration operations
Display/display range	5-digit LCD 7-segment, ~6 mm height	decimal points, 2 rows, special characters (backlit LED red/white)
Special character	cw arrow, ccw arrow, incremental measurement, battery	
Status display	2x two-color LED (red/green)	position status, configurable
Keys	chain dimension function, parameterization, calibration	
Interface	IO-Link version 1.1	according to IEC 61131-9 V1.1.2, incl. Package 2015 & Corrigendum
Type of connection	1x M8-plug connector (A-coded) 1x M12-plug connector (A-coded) grounding via flat connector 6.3 mm	4-pole, 1x pin (EX connection type) 4-pole, 1x pin (E12X connection type)

System data

Feature	Technical data	Additional information
Scanning	magnetic	
Resolution	720 Increments/revolution	displayed value/rotation freely configurable
Measuring range	≤932067 rotation(s)	

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	immunity requirement of industrial applications, emission limit class B
Safety regulations	DIN EN 61010-1 (VDE 0411-1), UL 61010-1	Limited power supply according to DIN EN 61010-1 Section 9.4. Protection class II Surge category II Pollution level 2
Protection category	IP53 IP65	EN 60529, in the fitted condition, with mating connector mounted EN 60529, in the fitted condition, with mating connector mounted
Shock resistance	≤500 m/s ² , 11 ms	EN 60068-2-27, half-sine, 3 axes (+/-), each 3 shocks
Vibration resistance	≤100 m/s ² , 10 ... 2000 Hz	EN 60068-2-6, 3 axes, each 10 cycles

pin assignment

■ Interfaces

IO-Link	RS485	CAN	PIN
L+ (+UB)	TxRx-/DÜB	CANL	1
nc	TxRx+/DÜA	CANH	2
L- (GND)	+24 V DC	+24 V DC	3
C/Q	GND	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"	Speed	Overload

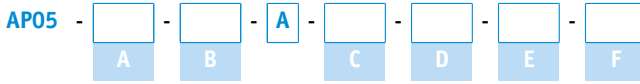
Order

■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
interface/protocol	A IOL S3/09 CAN	IO-Link RS485/SIKONETZ5 CANopen	
hollow shaft/diameter	B 20 ...	ø20 mm RH12, RH14, RH15, RH16 others on request	reducing bushes
Intermediate plate	C OZP ZP04 ZP09	without adaptation DA09S	
Protection category	D IP53 IP65	IP53 IP65	
Type of connection	E EX E12X E15X	industrial connector cable outlet cable outlet	without cable only with IO-link only with S3/09, CAN

Feature	Ordering data	Spezifikation	Additional information
Software	F	standard software	
	S	compatible to AP04-CAN	
	SW04	compatible to AP04-SN5	
	SW05	compatible to AP04-SN3/4	
	SW06		

■ Order key



Scope of delivery:

AP05, Installation Instructions



Accessories you can find:

Pneumatic clamping plate KP09P
 Clamping plate KPE04
 Easy touch control ETC5000
 Cable extension KV04S1
 Battery unit ZB1027
 Adapter sleeve RH09
 Overview, Mating connector
 Mating connector, 4-pole, socket
 Mating connector, 4-pole, pin
 Bus terminating connector, 4-pole, pin

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