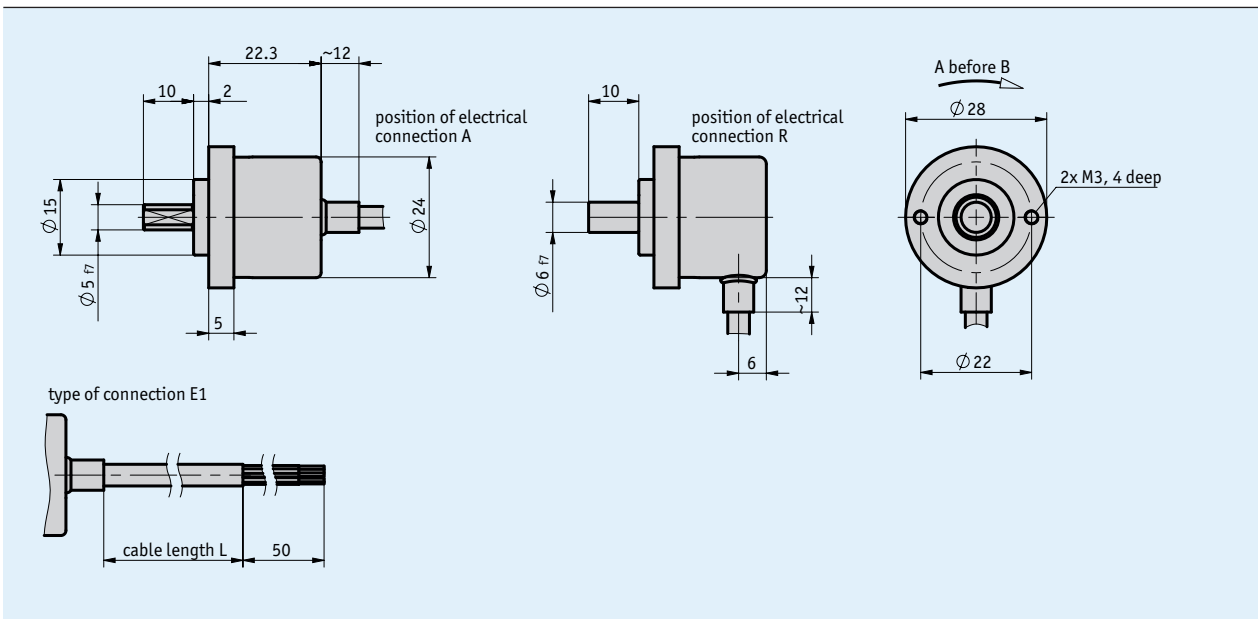


### Profile

- Small design,  $\varnothing$  28 mm
- Resolutions of max. 1024 pulses/revolution
- Robust bearing construction
- Short circuit-proof outputs



### Mechanical data

Feature	Technical data	Additional information
Shaft	stainless steel	
Housing	aluminum	
Speed	$\leq 12000$ rpm	
Moment of inertia	$\sim 0.1 \times 10^{-6}$ kgm <sup>2</sup>	
Starting torque	$< 0.01$ Nm at 20 °C	
Shaft load rating	10 N	radial
	20 N	axial
Cable sheath	PVC	$\sim \varnothing 4.5$ mm
Cable bending radius	25 mm	static
	75 mm	dynamic
Weight	$\sim 0.06$ kg	

### Electrical data

#### ■ PP output circuit

Feature	Technical data	Additional information
Operating voltage	8 ... 30 V DC	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	typical 50 mA	(no load)
Output signal level high	$\geq U_B - 3.0 \text{ V}$	short-circuit proof
Output signal level low	$\leq 0.5 \text{ V}$	short-circuit proof
Pulse frequency	$\leq 160 \text{ kHz}$	
Load	$\pm 50 \text{ mA}$	max. adm.
Type of connection	open cable end	

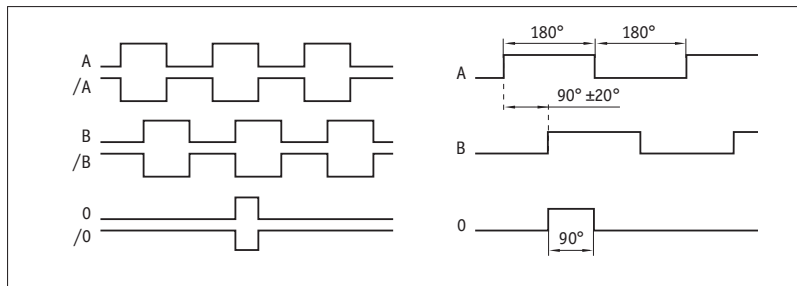
#### ■ OP output circuit

Feature	Technical data	Additional information
Operating voltage	8 ... 30 V DC	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	typical 50 mA	(without load)
Output signal level high	$\geq U_B - 3.0 \text{ V}$	short-circuit proof
Output signal level low	$\leq 0.5 \text{ V}$	short-circuit proof
Pulse frequency	$\leq 160 \text{ kHz}$	
Load	$\pm 50 \text{ mA}$	max. approval
Type of connection	open cable end	

#### ■ LD5 output circuit

Feature	Technical data	Additional information
Operating voltage	5 V DC $\pm 5 \%$	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	$\leq 90 \text{ mA}$	(without load)
Output signal level high	$\geq 2.5 \text{ V}$	short-circuit proof
Output signal level low	$\leq 0.5 \text{ V}$	short-circuit proof
Pulse frequency	$\leq 300 \text{ kHz}$	
Load	$\pm 20 \text{ mA}$	max. approval
Type of connection	open cable end	

#### ■ signal pattern



### System data

Feature	Technical data	Additional information
Approval	UL	UL 61010-1, File No. E503367

#### ■ Characteristics of functional safety

Feature	Technical data	Additional information
MTTFd	54.2 year(s)	

### Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-20 ... 85 °C	
EMC	EN 61000-6-2 EN 61000-6-3	interference resistance / immission emitted interference / emission
Safety regulations	UL 61010-1	Indoor use, outdoor use possible, not intended for use involving direct exposure to UV light. Environment dry / wet. Protection class III as per EN 61140. Pollution degree 2 as per EN 61010. Maximum humidity 93% at 40 °C.
Protection category	IP65 (housing side) IP64 (shaft side)	EN 60529 (protection type not yet reviewed by UL) EN 60529 (protection type not yet reviewed by UL)
Shock resistance	1000 m/s <sup>2</sup> , 6 ms	EN 60068-2-27
Vibration resistance	100 m/s <sup>2</sup> , 10 ... 2000 Hz	EN 60068-2-6

### Pin assignment

Signal	Cable color PP	Cable color OP, LD
GND	white	white
+UB	brown	brown
A	green	green
/A		yellow
B	yellow	gray
/B		pink
0	gray	blue
/0		red

### Order

#### Ordering table

Feature	Ordering data	Specification	Additional information
Pulses/revolution	... <b>A</b>	16, 36, 50, 100, 200, 250, 360, 400, 500, 512, 1000, 1024	
Position of electrical connection	<b>A</b> <b>R</b>	<b>B</b> axial radial	
Cable length	... <b>C</b>	00.5, 02.0, 03.0, 05.0, 08.0, 10.0, 15.0 in m	
Output circuit	<b>PP</b> <b>OP</b> <b>LD5</b>	<b>D</b> push-pull push-pull with inversion LineDriver, 5 V	
Shaft diameter	<b>5x10</b> <b>6x10</b>	<b>E</b> ø5 mm, length 10 mm ø6 mm, length 10 mm	with area

#### Order key

IV2800 - **ABO** - **A** - **E1** - **B** - **C** - **F28** - **D** - **E** - **IP64**

Scope of delivery: IV2800, Quick Start Guide

#### Accessories:

Electronic display MA10/4  
Electronic display MA48  
Electronic display MA55  
Draw-Wire Encoder SG10  
Draw-Wire Encoder SG21

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