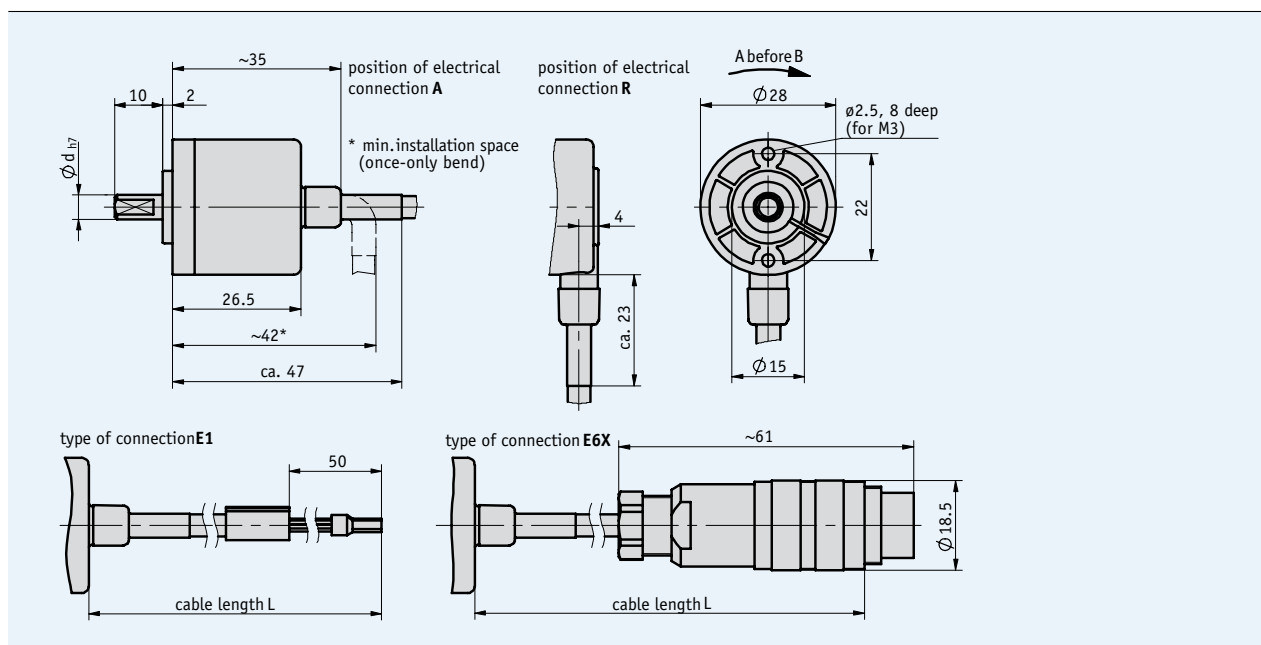


### Profile

- Small design,  $\varnothing$  28 mm
- Resolutions of max. 1000 pulses/revolution
- Solid shafts up to  $\varnothing$  6 mm, stainless steel
- IP54 protection category
- Plastic housing



2.1

### Mechanical data

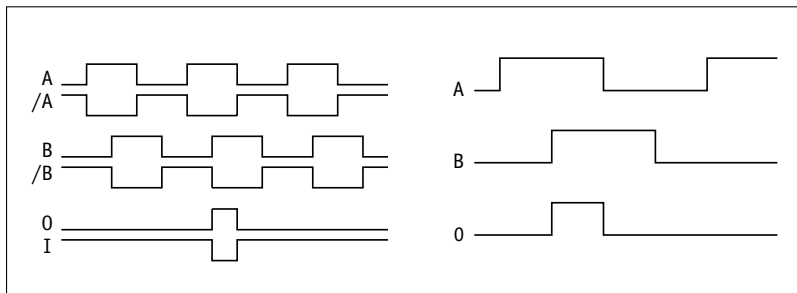
| Feature                 | Technical data                           | Additional information         |
|-------------------------|--|--------------------------------|
| Max. speed              | 3000 rpm                                 |                                |
| Shaft moment of inertia | $\sim 0.24 \times 10^{-6} \text{ kgm}^2$ |                                |
| Starting torque         | $\leq 0.1 \text{ Ncm}$                   | at 20 °C                       |
| Shaft load rating       | radial 30 N<br>axial 8 N                 |                                |
| Weight                  | $\sim 0.1 \text{ kg}$                    |                                |
| Protection category     | IP54                                     |                                |
| Operating temperature   | -20 ... +70 °C                           |                                |
| Storage temperature     | -20 ... +80 °C                           |                                |
| Shock resistance        | 200 g/6 ms                               | according to DIN EN 60068-2-27 |
| Vibration resistance    | 10 g/50 Hz                               | according to DIN EN 60068-2-6  |
| Shaft                   | stainless steel                          |                                |
| Housing                 | plastic                                  |                                |
| Cable sheath            | PUR $\varnothing$ 4.8 mm                 |                                |

### Electrical data

#### Output circuit

| Feature                           | PP, OP Push-pull | LD5 Line driver   | LD24 Line driver | Additional information  |
|-----------------------------------|------------------|-------------------|------------------|-------------------------|
| Operating voltage                 | +10 ... +30 V DC | +5 V DC $\pm 5\%$ | +10 ... +30 V DC |                         |
| Current consumpt. w/o load (typ.) | <25 mA           | <25 mA            | <25 mA           | ABO variant             |
| Maximum load/channel              | $\pm 30$ mA      | $\pm 30$ mA       | $\pm 30$ mA      |                         |
| Max. pulse frequency              | 100 kHz          | 100 kHz           | 100 kHz          |                         |
| Phasing                           | 90°              | 90°               | 90°              |                         |
| Signal level high (min.)          | 29.2 V DC        |                   |                  | UB = 30 V, IOH = -30 mA |
| Signal level low (max.)           | 0.5 V DC         |                   |                  | UB = 30 V, IOL = 30 mA  |
| Signal level                      |                  | RS422 A spec.     | RS422 A spec.    |                         |
| Inverse-polarity protection on UB | yes              | no                | yes              |                         |

#### Signal image



**!** The state of the signals A and B with regard to the reference signal 0 is not defined and can deviate from the signal image.

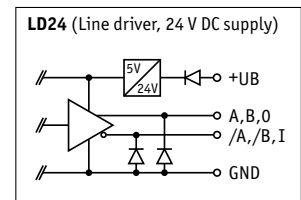
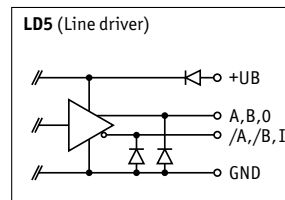
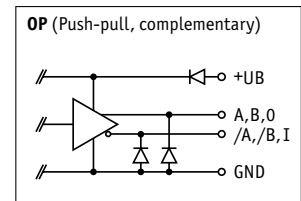
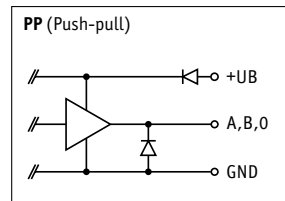
### Pin assignment

#### Output circuit PP

| Signal | E1     | E6X  |
|--------|--------|------|
| B      | white  | 1    |
| +UB    | brown  | 2    |
| O/I    | green  | 3    |
| A      | yellow | 4    |
| GND    | gray   | 5    |
| N.C.   |        | 6, 7 |

#### Output circuit OP, LD5, LD24

| Signal | E1     | E6X |
|--------|--------|-----|
| /B     | blue   | A   |
| N.C.   |        | B   |
| O      | green  | C   |
| /O     | red    | D   |
| A      | yellow | E   |
| /A     | pink   | F   |
| N.C.   |        | G   |
| B      | white  | H   |
| N.C.   |        | J   |
| GND    | gray   | K   |
| N.C.   |        | L   |
| +UB    | brown  | M   |



### Order

#### Order table

| Feature                               | Order data                   | Specification  | Additional information |
|---------------------------------------|------------------------------|--|------------------------|
| Output signals                        | ...<br>A                     | ABO, ABI, ABX  |                        |
| Pulses/revolution                     | ...<br>B                     | 36, 50, 200, 250, 400, 500, 800, 1000<br>others on request                 |                        |
| Type of connection                    | E1<br>E6X<br>C               | flying leads<br>connector  |                        |
| Position of the electrical connection | A<br>R<br>D                  | axial<br>radial  |                        |
| Cable length L (m)                    | ...<br>E                     | 0.07, 0.3, 0.35, 1, 2, 2.5, 3, 4, 5, 8, 10                                 |                        |
| Output circuit                        | PP<br>OP<br>LD5<br>LD24<br>F | push-pull<br>push-pull with inverted signals<br>line driver<br>line driver |                        |
| Shaft diameter                        | 5x10<br>6x10<br>G            | ∅ 5 mm, length 10 mm<br>∅ 6 mm, length 10 mm, bush glued on                |                        |

2.1

#### Order code

IV28M/1 -  -  -  -  -  -  -

A      B      C      D      E      F      G

**Scope of delivery:** IV28M/1, User information

#### Accessories:

Mating connectors Page 106  
 Cable extension Page 108  
 Electronic display MA10/4 Page 96  
 Electronic display MA55 Page 94

#### Additional information:

General information and areas of application Page 8 cont.