

- Meets industrial standards
- Synchro flange or clamping flange
- Up to 20000 ppr at 5000 slits
- 10 V ... 30 V with short circuit protected push-pull transistor output
- 5 V; RS 422
- Comprehensive accessory line
- Cable or connector versions



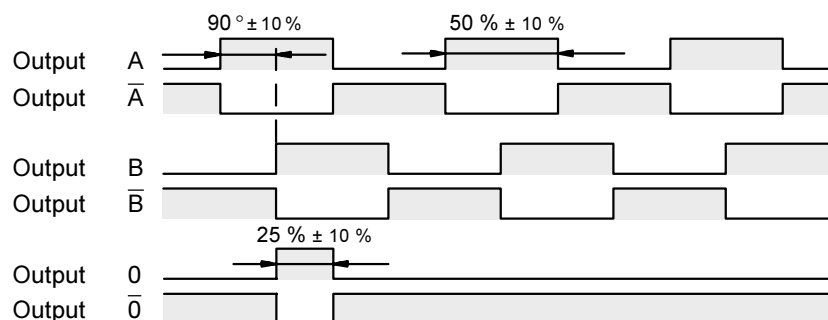
### Pulses per revolution:

Plastic disc: Every pulse per revolution: between 1 and 1500.  
 Glass disc: 60, 100, 120, 180, 200, 250, 256, 300, 314, 360, 400, 500, 512, 600, 720, 900, 1000, 1024, 1200, 1250, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 5000  
 More information available upon request.

### Electrical Specifications:

|   |       |               |                             |
|---|-------|---------------|-----------------------------|
| Measuring principle                       |       | Photoelectric |                             |
| Maximum pulse count                       | [I/U] | 5000          |                             |
|   |       | <b>RS422</b>  | <b>Push-pull</b>            |
| No-load current $I_0$ at                  |       |               |                             |
| Operating voltage $U_B = 5 V \pm 5 \%$    | [mA]  | 100           | --                          |
| Operating voltage $U_B = 10 V \dots 30 V$ | [mA]  | --            | 80                          |
| Operating current $I_L$ per channel       | [mA]  | 20            | 40, short circuit protected |
| Voltage drop $U_d$                        | [V]   | --            | < 4                         |
| Maximum output frequency $f$              | [kHz] | 160           | 160                         |
| Response times                            | [ns]  | 100           | 250                         |

### Signal Output Configuration (for clockwise rotation):

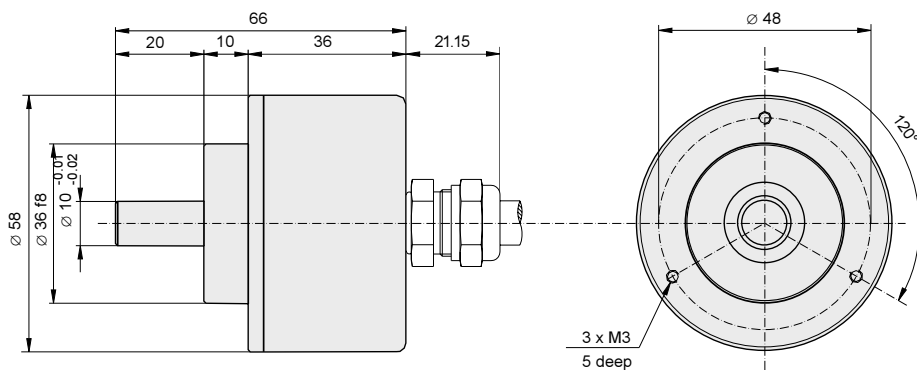
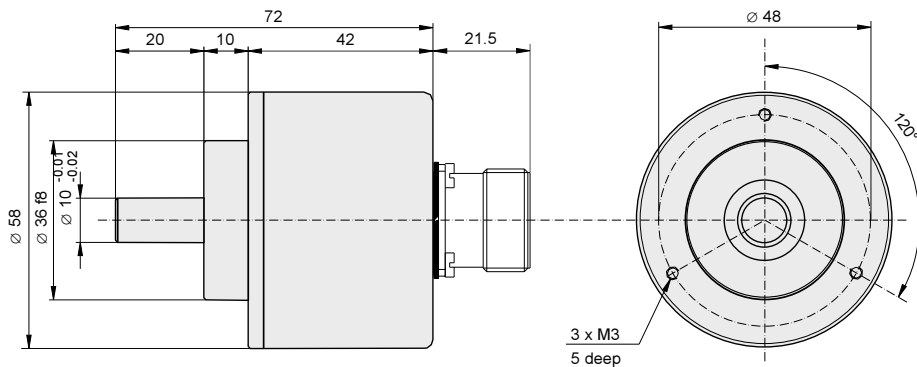


### Electrical Connections

|                | GND           | $U_B$         | A     | B    | $\bar{A}$ | $\bar{B}$ | 0   | $\bar{0}$ | NC   | NC     | NC     | NC    |
|----------------|---------------|---------------|-------|------|-----------|-----------|-----|-----------|------|--------|--------|-------|
| 12-wire cable  | white / green | brown / green | brown | grey | green     | pink      | red | black     | blue | violet | yellow | white |
| Connector 9416 | 10            | 12            | 5     | 8    | 6         | 1         | 3   | 4         | 2    | 7      | 9      | 11    |

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## Mechanical Dimensions:



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Subject to reasonable modifications due to technical advances.

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## Mechanical Specifications:

|   |                      |  |
|---|----------------------|--|
| Housing                                   |                      | Aluminum or stainless steel  |
| Flange                                    |                      | Aluminum or stainless steel  |
| Pulse disc                                |                      | Glass or plastic   |
| Shaft                                     |                      | Stainless steel  |
| Bearings                                  |                      | 2 grooved ball bearings  |
| Weight (incl. connector 9412)             | [g]                  | 295  |
| Maximum rotation                          | [min <sup>-1</sup> ] | 12000  |
| Inertia                                   | [gcm <sup>2</sup> ]  | 24   |
| Starting torque (20 °C)                   | [Ncm]                | 1.0  |
| Torque (20 °C)                            | [Ncm]                | 1.0  |
| Maximum shaft load, axial F <sub>a</sub>  | [N]                  | ≤ 6000 min <sup>-1</sup> : 40  |
|   | [N]                  | ≤ 12000 min <sup>-1</sup> : 10                                       |
| Maximum shaft load, radial F <sub>r</sub> | [N]                  | ≤ 6000 min <sup>-1</sup> : 60  |
|   | [N]                  | ≤ 12000 min <sup>-1</sup> : 20                                       |
| Minimal mechanical life                   | [revolutions]        | F <sub>a</sub> ≤ 40 N, F <sub>r</sub> ≤ 60 N: 5 x 10 <sup>9</sup>    |
|   | [revolutions]        | F <sub>a</sub> ≤ 10 N, F <sub>r</sub> ≤ 20 N: 2.5 x 10 <sup>11</sup> |

## Environmental Conditions:

|                                      |      |  |
|--------------------------------------|------|--|
| Storage temperature                  | [°C] | Glass disc: -40 ... 70      Plastic disc: -40 ... 60 |
| Working temperature                  | [°C] | Glass disc: -20 ... 80      Plastic disc: -20 ... 60 |
| Climate check acc. to IEC 68-2-3     |      | 40 °C, 98 % rel. humid. (non-condensation), 6 days   |
| Interference output acc. to          |      | EN 50081-2, 1993                                     |
| Interference resistance acc. to      |      | EN 50082-2, 1995                                     |
| Shock resistance acc. to IEC 68-2-27 |      | 100 g, 1 ms  |
| Protection class acc. to DIN 40050   |      | IP 65  |

## Key to Model Number:

