

ITD 20 B14 Y 1

Solid shaft $\varnothing 6$ mm with synchro flange
50...1024 pulses per revolution

Overview

- Encoder with solid shaft $\varnothing 6$ mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Centering alignment $\varnothing 50$ mm, mounting screw hole circle $\varnothing 68$ mm
- Industrial standard
- TTL or HTL output signals
- Flange connector radial



Technical data

Technical data - electrical ratings

| | |
|-----------------------------|---|
| Voltage supply | 5 VDC ± 5 % 8...30 VDC |
| Reverse polarity protection | Yes |
| Consumption w/o load | ≤ 100 mA |
| Pulses per revolution | 50 ... 1024 |
| Reference signal | Zero pulse, width 90° |
| Sensing method | Optical |
| Output frequency | ≤ 120 kHz |
| Output signals | A, B, N + inverted |
| Output stages | TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof) |
| Interference immunity | EN 61000-6-2 |
| Emitted interference | EN 61000-6-3 |

Technical data - mechanical design

| | |
|---------------|--------------------------------|
| Size (flange) | $\varnothing 58$ mm |
| Shaft type | $\varnothing 6$ mm solid shaft |

Technical data - mechanical design

| | |
|-----------------------|---|
| Admitted shaft load | ≤ 20 N axial ≤ 40 N radial |
| Flange | Synchro flange |
| Protection EN 60529 | IP 65 |
| Operating speed | ≤ 12000 rpm |
| Starting torque | ≤ 0.01 Nm ($+20$ °C) |
| Material | Housing: aluminium, black, powder-coated Shaft: stainless steel |
| Operating temperature | $-20...+70$ °C $-20...+100$ °C |
| Relative humidity | 90 % non-condensing |
| Resistance | EN 60068-2-6 Vibration 10 g, 55-2000 Hz EN 60068-2-27 Shock 100 g, 11 ms |
| Connection | Connector M23 type 2, 12-pin |
| Weight approx. | 240 g |

Optional

- Extended operating temperature range

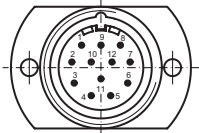
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Terminal assignment

| Connector | Assignment |
|-----------|--------------|
| Pin 5 | Track A |
| Pin 6 | Track A inv. |
| Pin 8 | Track B |
| Pin 1 | Track B inv. |
| Pin 3 | Track N |
| Pin 4 | Track N inv. |
| Pin 12 | UB |
| Pin 10 | GND |
| Pin 2 | UB-Sense |
| Pin 11 | GND-Sense |
| Pin 9 | – |
| Pin 7 | – |



Trigger level

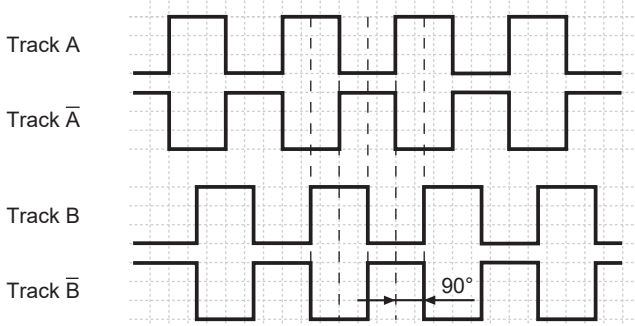
| Outputs | Linedriver |
|-------------------|--------------|
| Output level High | ≥ 2.4 V |
| Output level Low | ≤ 0.5 V |
| Load | ≤ 70 mA |

| Outputs | Push-pull short-circuit proof |
|-------------------|-------------------------------|
| Output level High | $\geq UB - 3$ V |
| Output level Low | ≤ 1.5 V |
| Load | ≤ 70 mA |

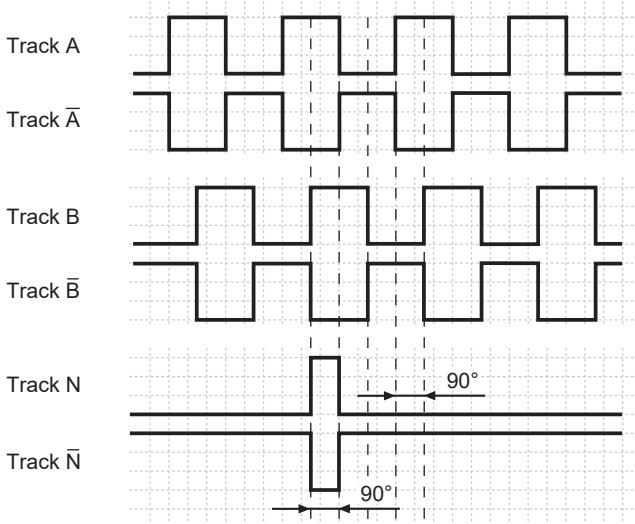
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals

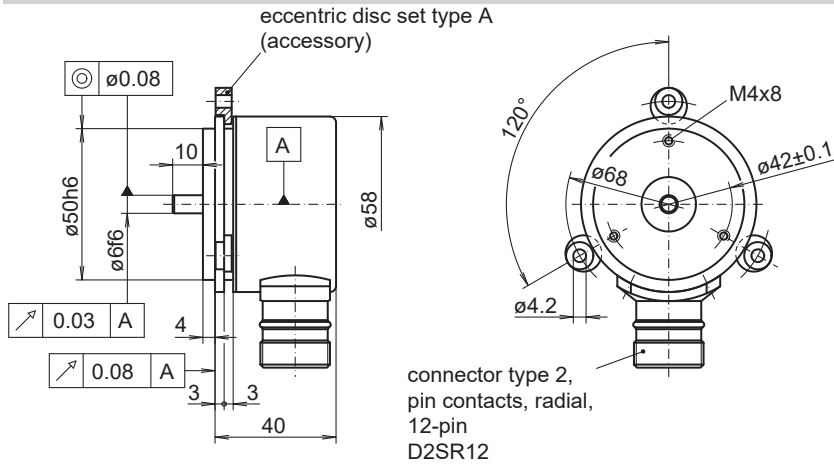


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Dimensions



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Ordering reference

| | | | | | | | | |
|---|-----------------------|--------------|----------|-------------|---------------|----------|----------|-------------|
| | ITD 20 B14 Y 1 | ##### | # | #### | D2SR12 | # | 6 | IP65 |
| Product | ITD 20 B14 Y 1 | | | | | | | |
| Pulse number | | | | | | | | |
| 50 | | 50 | | | | | | |
| 60 | | 60 | | | | | | |
| 64 | | 64 | | | | | | |
| 88 | | 88 | | | | | | |
| 90 | | 90 | | | | | | |
| 100 | | 100 | | | | | | |
| 120 | | 120 | | | | | | |
| 128 | | 128 | | | | | | |
| 200 | | 200 | | | | | | |
| 250 | | 250 | | | | | | |
| 254 | | 254 | | | | | | |
| 256 | | 256 | | | | | | |
| 360 | | 360 | | | | | | |
| 400 | | 400 | | | | | | |
| 500 | | 500 | | | | | | |
| 512 | | 512 | | | | | | |
| 600 | | 600 | | | | | | |
| 1000 | | 1000 | | | | | | |
| 1024 | | 1024 | | | | | | |
| Voltage supply / signals | | | | | | | | |
| 5 VDC / TTL level, linedriver | | | | | | | | T |
| 8...30 VDC / HTL level, push-pull | | | | | | | | H |
| 8...30 VDC / TTL level, linedriver | | | | | | | | R |
| Output signals | | | | | | | | |
| A, A inv, B, B inv | | | | | | | | BI |
| A, A inv, B, B inv, N, N inv | | | | | | | | NI |
| Connection | | | | | | | | |
| Flange connector type 2, pin contacts, radial, 12-pin | | | | | | | | D2SR12 |
| Operating temperature | | | | | | | | |
| -20...+70 °C | | | | | | | | S |
| -20...+100 °C | | | | | | | | E |
| Flange / Solid shaft | | | | | | | | |
| Synchro flange / ø6 mm | | | | | | | | 6 |
| Protection | | | | | | | | |
| IP 65 | | | | | | | | IP65 |

Accessories
Mounting accessories

11065545 Set of eccentric fixings type A