

ITD 41 B10 Y 1

Solid shaft $\varnothing 11$ mm with EURO flange
1000...6000 pulses per revolution

Overview

- Encoder with solid shaft $\varnothing 11$ mm
- Max. 6000 pulses per revolution
- Optical sensing method
- Centering alignment $\varnothing 85$ mm, mounting screw hole circle $\varnothing 100$ mm
- Industrial standard with centering flange
- TTL or HTL output signals
- Flange connector radial or axial



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 | 1000 ... 6000 |
| Reference signal | Zero pulse, width 90° |
| Sensing method | Optical |
| Output frequency | ≤ 300 kHz (TTL) ≤ 160 kHz (HTL) |
| 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) | $\varnothing 115$ mm |
| Shaft type | $\varnothing 11$ mm solid shaft |

Technical data - mechanical design

| | |
|-----------------------|----------------------------------------------------------------------------------|
| Admitted shaft load | ≤ 40 N axial ≤ 60 N radial |
| Flange | EURO flange B10 |
| Protection EN 60529 | IP 65 |
| Operating speed | ≤ 12000 rpm |
| Starting torque | ≤ 0.012 Nm (+20 °C) |
| Material | Housing: aluminium 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 30 g, 11 ms |
| Connection | Connector M23 type 2, 12-pin |
| Weight approx. | 850 g |

Optional

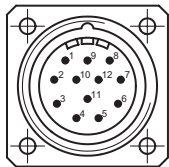
- Extended operating temperature range

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Terminal assignment

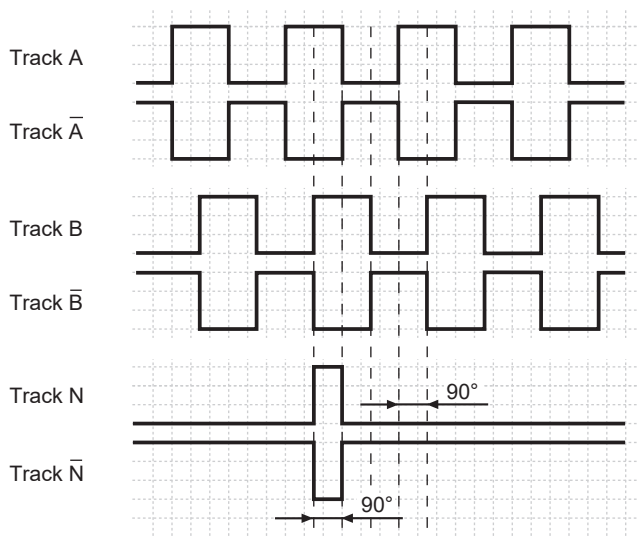
| Connector | Assignment |
|-----------|--------------|
| Pin 5 | Track A |
| Pin 6 | Track A inv. |
| Pin 8 | Track B |
| Pin 1 | Track B inv. |
| Pin 3 | Track N |
| Pin 4 | Track N inv. |
| Pin 12 | UB |
| Pin 10 | GND |
| Pin 2 | UB-Sense |
| Pin 11 | GND-Sense |
| Pin 9 | – |
| Pin 7 | – |



Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



Trigger level

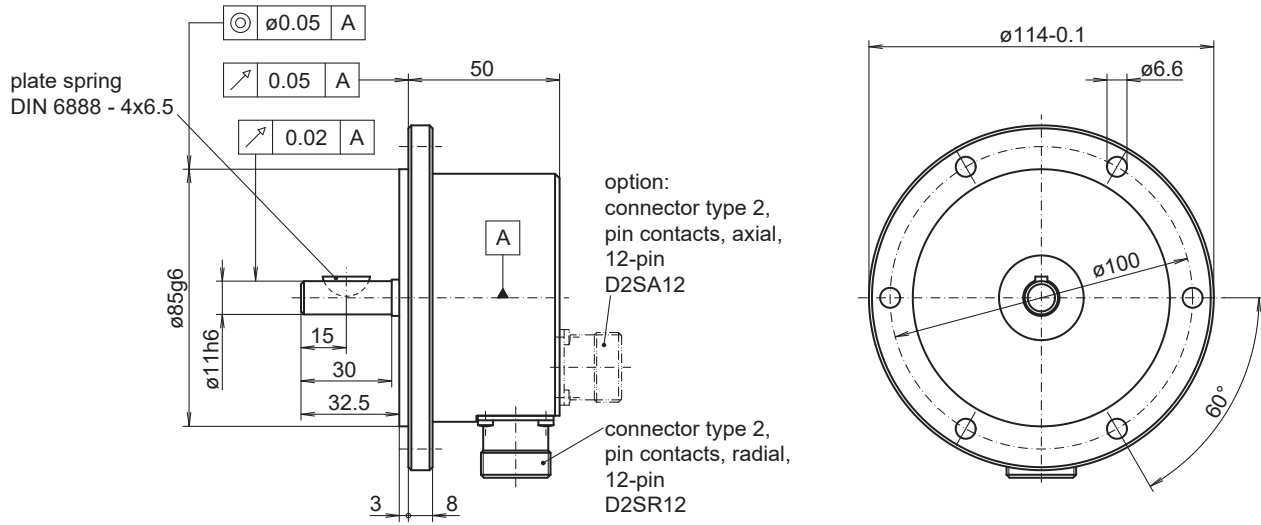
| Outputs | Linedriver |
|-------------------|--------------|
| Output level High | ≥ 2.4 V |
| Output level Low | ≤ 0.5 V |
| Load | ≤ 70 mA |

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

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Dimensions



025- 7 Y 1

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Ordering reference

| | | | | | | | | |
|-------------------------------------------------------|-----------------------|--------------|----------|-----------|--------------|----------|-----------|-------------|
| | ITD 41 B10 Y 1 | ##### | # | NI | ##### | # | 11 | IP65 |
| Product | ITD 41 B10 Y 1 | | | | | | | |
| Pulse number | ITD 41 B10 Y 1 | | | | | | | |
| 1000 | | 1000 | | | | | | |
| 1024 | | 1024 | | | | | | |
| 1200 | | 1200 | | | | | | |
| 1250 | | 1250 | | | | | | |
| 1440 | | 1440 | | | | | | |
| 1500 | | 1500 | | | | | | |
| 1800 | | 1800 | | | | | | |
| 2000 | | 2000 | | | | | | |
| 2048 | | 2048 | | | | | | |
| 2500 | | 2500 | | | | | | |
| 3000 | | 3000 | | | | | | |
| 3600 | | 3600 | | | | | | |
| 4000 | | 4000 | | | | | | |
| 4096 | | 4096 | | | | | | |
| 5000 | | 5000 | | | | | | |
| 6000 | | 6000 | | | | | | |
| 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, N, N inv | | | | NI | | | | |
| Connection | | | | | | | | |
| Flange connector type 2, pin contacts, radial, 12-pin | | | | | D2SR12 | | | |
| Flange connector type 2, pin contacts, axial, 12-pin | | | | | D2SA12 | | | |
| Operating temperature | | | | | | | | |
| -20...+70 °C | | | | | | | S | |
| -20...+100 °C | | | | | | | E | |
| Flange / Solid shaft | | | | | | | | |
| EURO flange B10 / \varnothing 11 mm | | | | | | | | 11 |
| Protection | | | | | | | | |
| IP 65 | | | | | | | | IP65 |