

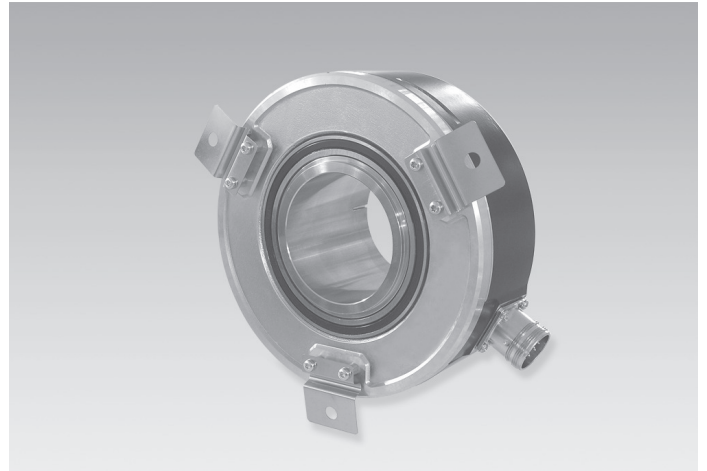
ITD 70 A 4 Y 9

Through hollow shaft $\varnothing 40$ to $\varnothing 65$ mm

1000...2500 pulses per revolution

Overview

- Encoder with through hollow shaft max. $\varnothing 65$ mm
- Max. 2500 pulses per revolution
- Optical sensing method
- Mounting by torque support
- Mounting hole circle $\varnothing 164$ mm
- TTL or HTL output signals
- Flange connector radial



Technical data

Technical data - electrical ratings

| | |
|-----------------------------|---|
| Voltage supply | 5 VDC $\pm 5\%$ 8...30 VDC |
| Reverse polarity protection | Yes |
| Consumption w/o load | ≤ 100 mA |
| Pulses per revolution | 1000 ... 2500 |
| 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 | DIN EN 61000-6-2 |
| Emitted interference | DIN EN 61000-6-3 |

Technical data - mechanical design

| | |
|-------------------------|--|
| Size (flange) | $\varnothing 150$ mm |
| Shaft type | $\varnothing 40$... $\varnothing 65$ mm (through hollow shaft) |
| Mounting kit | 051 |
| Protection DIN EN 60529 | IP 54 |
| Operating speed | ≤ 4000 rpm |
| Material | Housing: aluminium, black, powder-coated Shaft: stainless steel |
| Operating temperature | -20 ... $+70$ °C |
| Relative humidity | 90 % non-condensing |
| Resistance | DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms |
| Connection | Connector M23 type 2, 12-pin |
| Weight approx. | 2900 g |

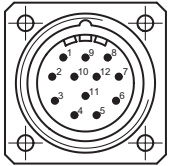
ITD 70 A 4 Y 9

Through hollow shaft $\varnothing 40$ to $\varnothing 65$ mm

1000...2500 pulses per revolution

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

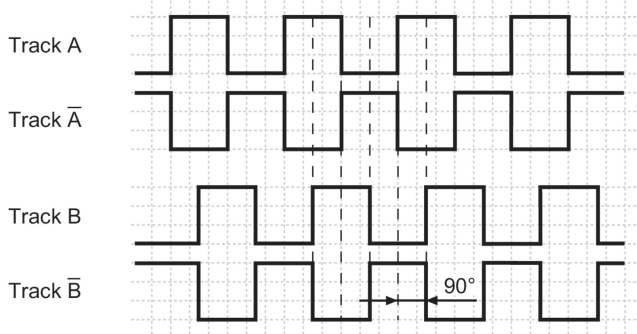
| Outputs | Linedriver |
|-------------------|--------------|
| Output level High | ≥ 2.4 V |
| Output level Low | ≤ 0.5 V |
| Load | ≤ 70 mA |

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

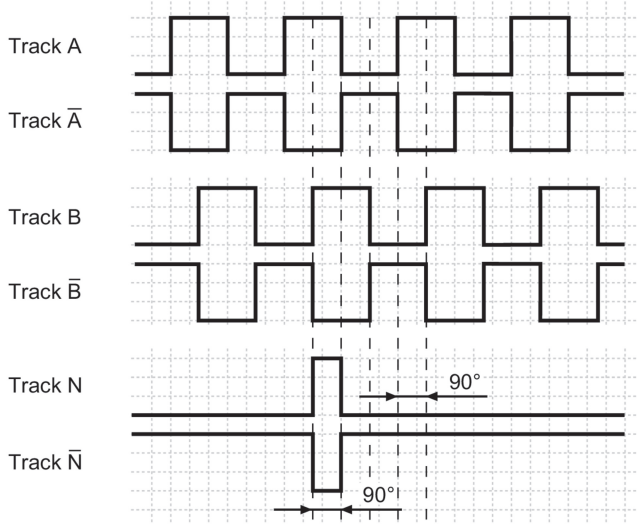
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals

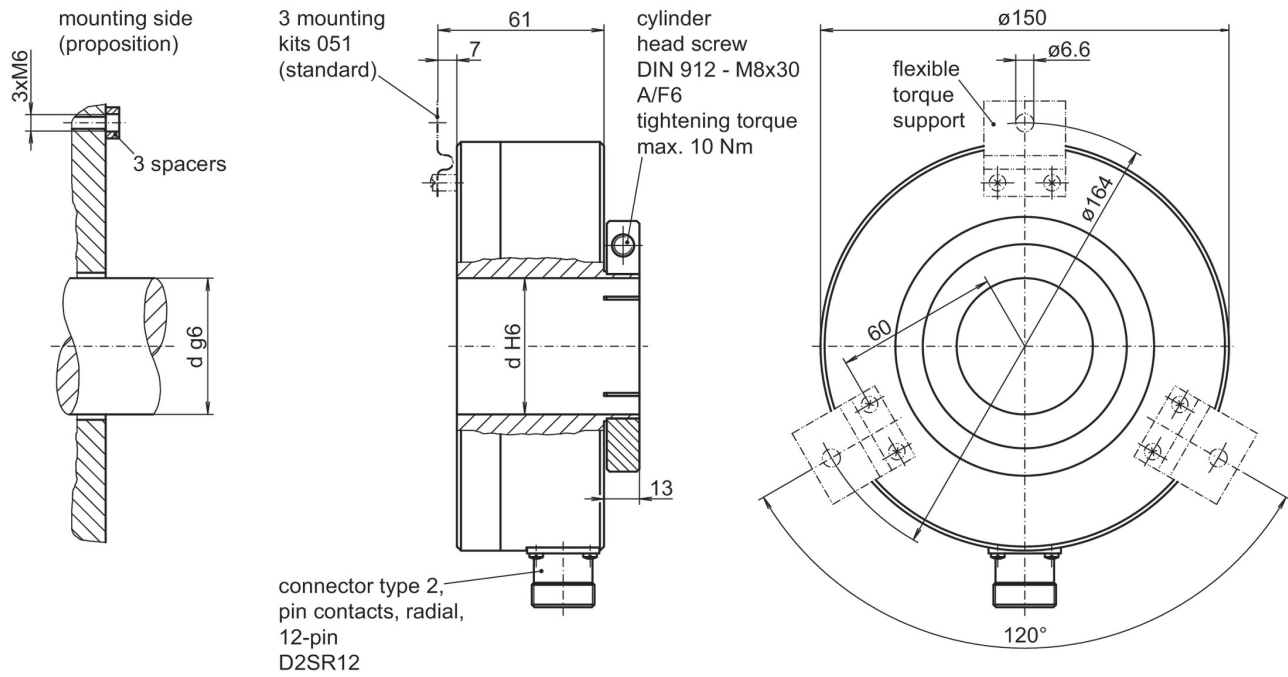


ITD 70 A 4 Y 9

Through hollow shaft $\varnothing 40$ to $\varnothing 65$ mm

1000...2500 pulses per revolution

Dimensions



ITD 70 A 4 Y 9

 Through hollow shaft $\varnothing 40$ to $\varnothing 65$ mm

1000...2500 pulses per revolution

Ordering reference

| | ITD 70 A 4 Y 9 | ##### | # | #### | D2SR12 | S | ## | IP54 | 051 |
|---|----------------|-------|---|------|--------|---|----|--------|------|
| Product | ITD 70 A 4 Y 9 | | | | | | | | |
| Pulse number | | | | | | | | | |
| 1000 | | 1000 | | | | | | | |
| 1024 | | 1024 | | | | | | | |
| 2048 | | 2048 | | | | | | | |
| 2500 | | 2500 | | | | | | | |
| 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 | |
| Through hollow shaft | | | | | | | | | |
| $\varnothing 40$ mm | | | | | | | | | 40 |
| $\varnothing 45$ mm | | | | | | | | | 45 |
| $\varnothing 50$ mm | | | | | | | | | 50 |
| $\varnothing 55$ mm | | | | | | | | | 55 |
| $\varnothing 60$ mm | | | | | | | | | 60 |
| $\varnothing 65$ mm | | | | | | | | | 65 |
| Protection | | | | | | | | | |
| IP 54 | | | | | | | | | IP54 |
| Mounting kit | | | | | | | | | |
| Mounting kit 051 | | | | | | | | | 051 |

Accessories
Connectors and cables

| | |
|----------|--|
| 11072792 | Connector M23 - S2BG12, 1 m cable (incremental) |
| 11072796 | Connector M23 - S2BG12, 2 m cable (incremental) |
| 11072804 | Connector M23 - S2BG12, 5 m cable (incremental) |
| 11072815 | Connector M23 - S2BG12, 10 m cable (incremental) |