Incremental encoders

Through hollow shaft ø28 to ø30 mm

1024…10000 pulses per revolution

ITD 41 A 4 Y70

ITD 41 A 4 Y70 with through hollow shaft

Features

- **Encoder with through hollow shaft ø28...30 mm**
- **Max. 10000 pulses per revolution**
- **Optical sensing**
- **Mounting by torque support**
- **TTL or HTL output signals**
- **Cable output radial**

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	1024...10000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤300 kHz (TTL) ≤160 kHz (HTL)
Output signals	A, B, 0
Output stage	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)	ø80 mm
Shaft type	ø28...30 mm (through hollow shaft)
Motor shaft tolerance	0.25 mm axial 0.05 mm radial
Mounting kit	050
Protection DIN EN 60529	IP 54
Operating speed	≤7000 rpm
Starting torque	≤0.01 Nm (+20 °C)
Materials	Housing: aluminium 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 30 g, 11 ms
Connection	Connector M16, 7-pin
Weight approx.	580 g

ITD 41 A 4 Y70

Part number

ITD 41 A 4 Y70				D1SR7	S		IP54	050

Mounting kit
050 Mounting accessory kit 050

Protection
IP54 IP 54

Through hollow shaft
28 ø28 mm, clamping ring
29 ø29 mm, clamping ring
30 ø30 mm, clamping ring

Operating temperature
S -20...+70 °C

Connection
D1SR7 Flange socket type 1, pin contacts, radial, 7-pin

Output signals
BX A, B
NX A, B, 0

Voltage supply / signals
T 5 VDC / TTL level, linedriver
H 8...30 VDC / HTL level, push pull
R 8...30 VDC / TTL level, linedriver

Pulse number - see table

Pulse number

1024	2048	3072	4096	10000
2000	2500	3600	5000	

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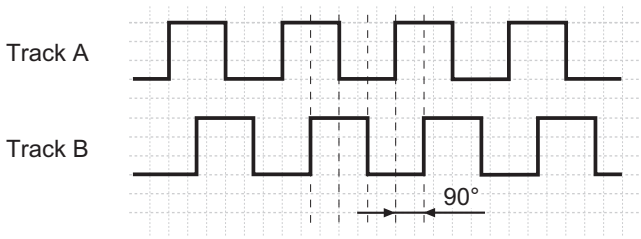
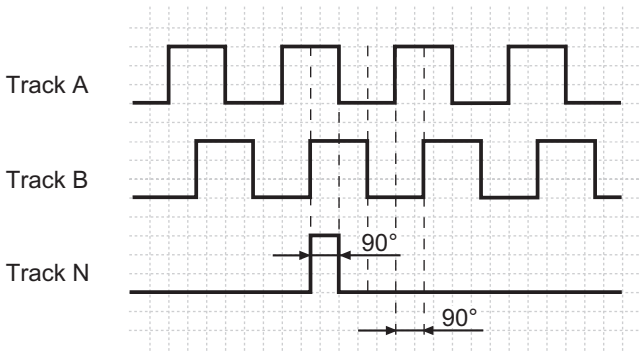
Output signals

Clockwise rotation when looking at the mounting side.

BX-Output signals

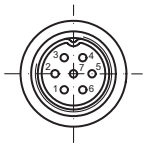


NX-Output signals



Terminal assignment

Connector	Assignment
Pin 3	Track A
Pin 4	Track B
Pin 5	Track N
Pin 2	UB
Pin 1	GND
Pin 6	–
Pin 7	Shield/Housing

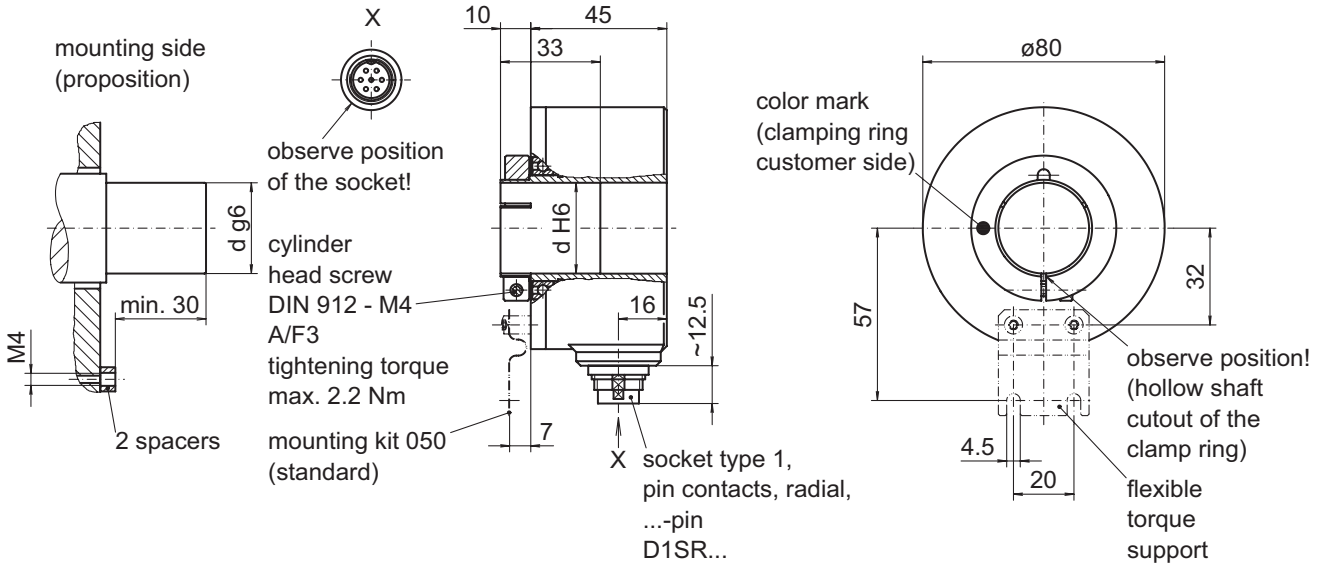


Trigger level

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	≥UB -3 V
Output level Low	≤1.5 V
Load	≤70 mA

Dimensions



026- 5 Y70

ITD 41 A 4 Y70