

# Incremental encoders

Through hollow shaft  $\varnothing 28$  to  $\varnothing 30$  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  $\varnothing 28...30$  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 $\pm 5\%$ 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	1024...10000
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 300$ kHz (TTL) $\leq 160$ 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)	$\varnothing 80$ mm
Shaft type	$\varnothing 28...30$ 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	$\leq 7000$ rpm
Starting torque	$\leq 0.01$ Nm ( $+20^\circ\text{C}$ )
Materials	Housing: aluminium Shaft: stainless steel
Operating temperature	$-20...+70^\circ\text{C}$
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

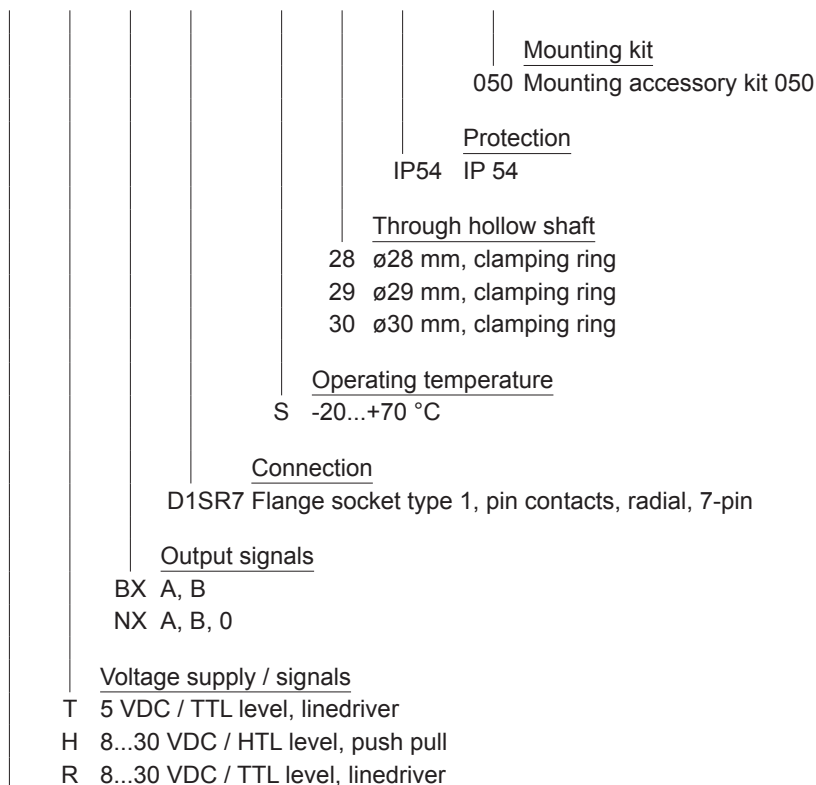
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## Part number

ITD 41 A 4 Y70       **D1SR7** **S**   **IP54** **050**



Pulse number - see table

## Pulse number

1024	2048	3072	4096	10000
2000	2500	3600	5000	

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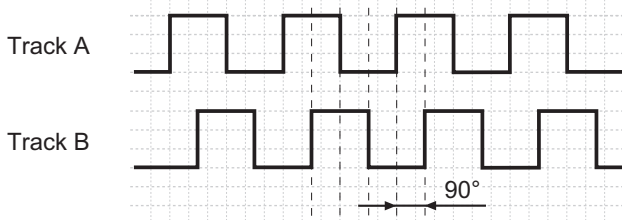
1024...10000 pulses per revolution

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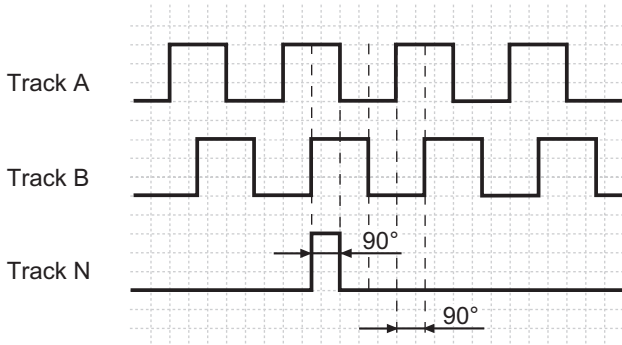
### Output signals

Clockwise rotation when looking at the mounting side.

BX-Output signals

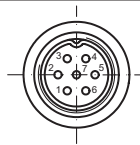


NX-Output signals



### 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

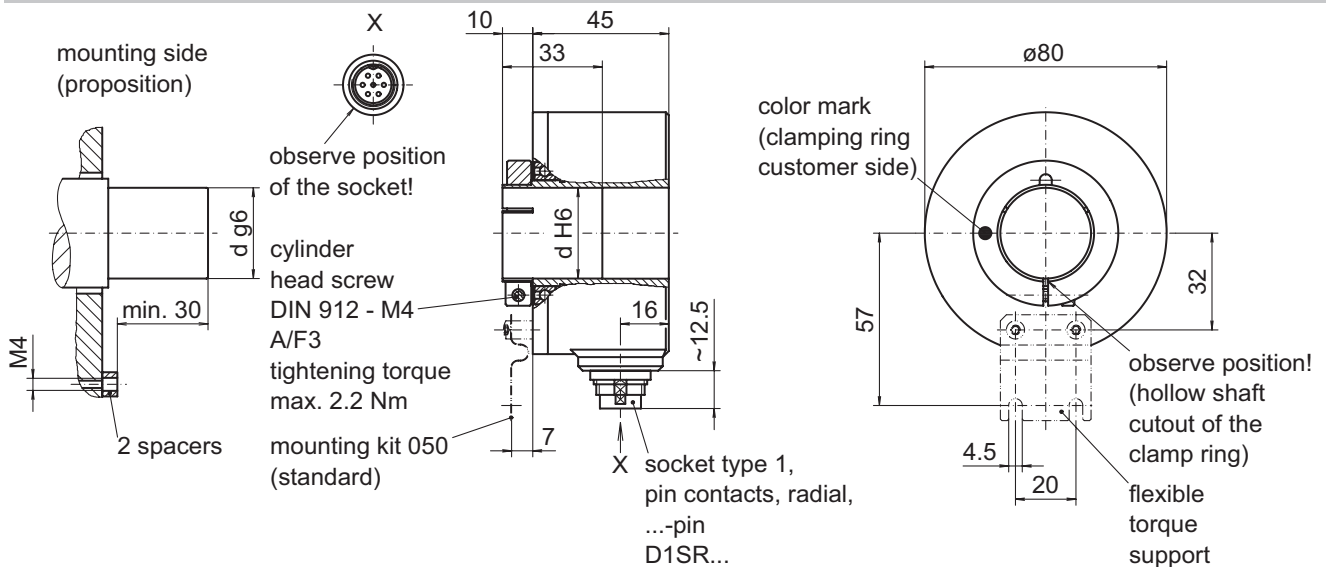


### Trigger level

Outputs	Linedriver
Output level High	$\geq 2.4$ V
Output level Low	$\leq 0.5$ V
Load	$\leq 70$ mA

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

### Dimensions



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