

# Incremental encoders

End shaft  $\varnothing 6$  to  $\varnothing 16$  mm

Resolution 1000...10000 pulses

## ITD 21 A 4 Y10



ITD 21 A 4 Y10 with coupling CPS37

### Features

- Encoder with coupling max.  $\varnothing 16$  mm
- Resolution max. 10000 ppr
- Optical sensing
- Centering alignment  $\varnothing 70$  mm, mounting screw hole circle  $\varnothing 77$  mm
- TTL or HTL output signals
- Flange socket radial or axial

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5$ % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA
Resolution (steps/turn)	1000...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, N + inverted
Output circuit	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 55011

### Technical data - mechanical design

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 6...16$ mm end shaft
Motor shaft tolerance	0.25 mm axial 0.5 mm radial
Protection DIN EN 60529	IP 65
Operating speed	$\leq 8000$ rpm
Starting torque	$\leq 0.01$ Nm
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20...+70 °C -30...+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 M23 type 2, 12-pin
Weight approx.	430 g

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## Part number

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		NI			IP65
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Protection  
IP65 IP 65

End shaft  
6 End shaft  $\varnothing 6$  mm  
10 End shaft  $\varnothing 10$  mm  
11 End shaft  $\varnothing 11$  mm  
12 End shaft  $\varnothing 12$  mm  
14 End shaft  $\varnothing 14$  mm  
15 End shaft  $\varnothing 15$  mm  
16 End shaft  $\varnothing 16$  mm

Operating temperature  
S -20...+70 °C  
W -30...+70 °C

Connection  
D2SR12 Flange socket type 2, pin contacts, radial, 12-pin  
D2SA12 Flange socket type 2, pin contacts, axial, 12-pin

Output signals  
NI A, A inv, B, B inv, 0, 0 inv

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

See part number (pulses)

## Part number (pulses)

1000	1440	2048	4000	7200
1024	1500	2500	4096	8192
1200	1800	3000	5000	9000
1250	2000	3600	6000	10000

## Accessories

### Connectors and cables

11072792 Connector S2BG12 with cable (ITD) L = 1 m



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