

ITD 21 A 4 Y36

Blind hollow shaft $\varnothing 10$ to $\varnothing 14$ mm
200...6000 pulses per revolution

Overview

- Encoder with blind hollow shaft $\varnothing 10$...14 mm
- Max. 6000 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Cable output radial
- High protection



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	200 ... 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)	$\varnothing 58$ mm
Shaft type	$\varnothing 10$ mm (blind hollow shaft) $\varnothing 12$ mm (blind hollow shaft) $\varnothing 14$ mm (blind hollow shaft)

Technical data - mechanical design

Mounting kit	006
Protection EN 60529	IP 65
Operating speed	≤ 8000 rpm ≤ 5000 rpm IP 65 (> 70 °C)
Starting torque	≤ 0.01 Nm ($+20$ °C)
Material	Housing: aluminium, black, powder-coated 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 100 g, 11 ms
Connection	Cable 1 m
Weight approx.	280 g

Optional

- Cable with connector

ITD 21 A 4 Y36

Blind hollow shaft $\varnothing 10$ to $\varnothing 14$ mm

200...6000 pulses per revolution

Terminal assignment

Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm ²	UB
white 0,5 mm ²	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

Cable with 2 brown and 2 white wires: PUR, [5x2x0.14 mm² + 2x0.5 mm²], bending radius > 60 mm, outer diameter 7.5 mm $\pm$ 0.2 mm

Encoder with connector on cable end after 1 March 2015

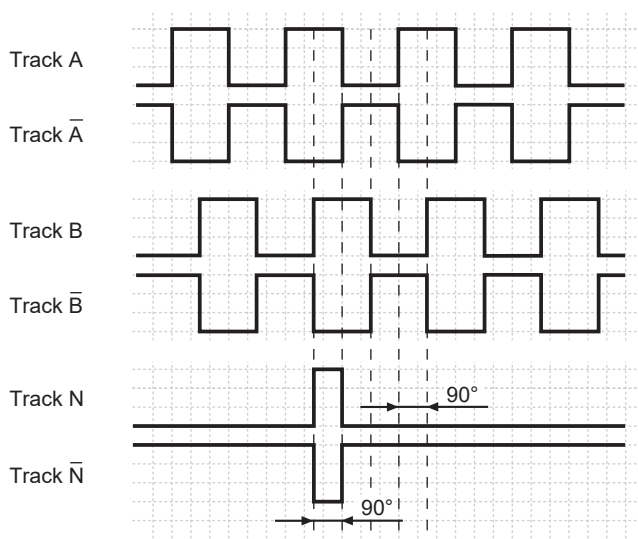
Core colour	Assignment
green	Track A
brown	Track A inv.
grey	Track B
black	Track B inv.
pink	Track N
white	Track N inv.
red	UB
blue	GND
yellow	UB-Sense
violet	GND-Sense
transparent	Shield/Housing

Cable with violet wire: PUR, [5x2x0.14 mm²], bending radius > 60 mm, outer diameter 7 mm $\pm$ 0.2 mm

Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



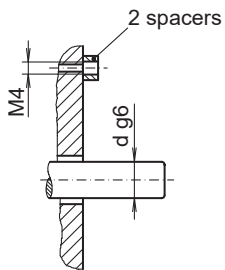
Trigger level

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

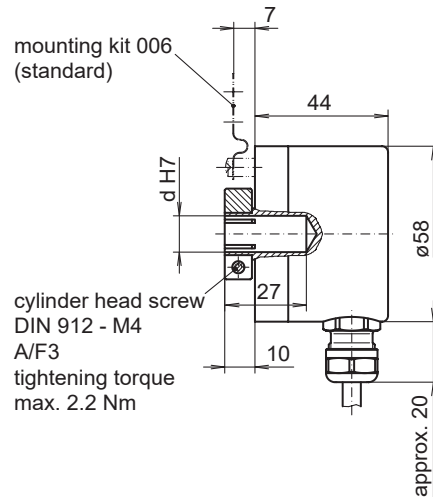
Outputs	Push-pull short-circuit proof
Output level High	$\geq U_B - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

Dimensions

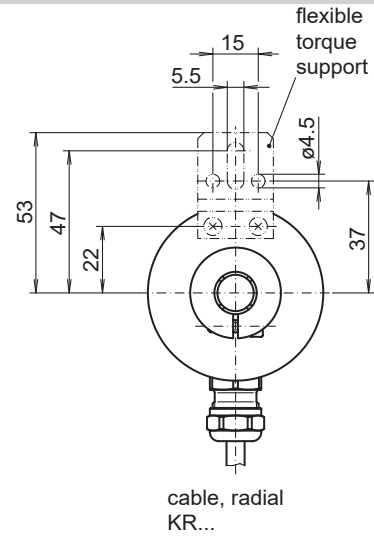
mounting side
(proposition)



mounting kit 006
(standard)



cylinder head screw
DIN 912 - M4
A/F3
tightening torque
max. 2.2 Nm



cable, radial
KR...

029- 1 Y36

ITD 21 A 4 Y36

Blind hollow shaft ø10 to ø14 mm

200...6000 pulses per revolution

Ordering reference

Product		ITD 21 A 4 Y36	#####	#	NI	KR1	#	##	IP65	006
Pulse number		ITD 21 A 4 Y36								
200			200							
250			250							
256			256							
300			300							
360			360							
400			400							
500			500							
512			512							
600			600							
720			720							
800			800							
900			900							
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										
Cable 1 m, radial						KR1				
Operating temperature										
-20...+70 °C								S		
-20...+100 °C								E		
Blind hollow shaft										
ø10 mm									10	
ø12 mm									12	
ø14 mm									14	
Protection										
IP 65									IP65	
Mounting kit										
Mounting kit 006										006