

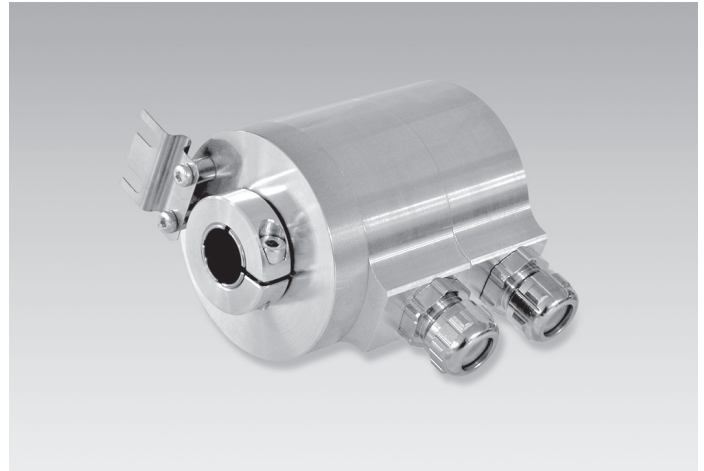
ITD 28 A 4

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

50...1024 pulses per revolution

Overview

- Encoder with blind hollow shaft up to $\varnothing 14$ mm
- Max. 1024 pulses per revolution
- Redundant version
- Mounting by torque support
- TTL or HTL output signals
- Cable output 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	50 ... 1024
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)	$\varnothing 58$ mm
---------------	---------------------

Technical data - mechanical design

Shaft type	$\varnothing 10...14$ mm (blind hollow shaft)
Mounting kit	002
Protection DIN EN 60529	IP 65
Operating speed	≤ 8000 rpm ≤ 5000 rpm IP 65 ($>70^\circ\text{C}$)
Starting torque	$\leq 0,01$ Nm ($+20^\circ\text{C}$)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	$-20...+70^\circ\text{C}$ $-20...+100^\circ\text{C}$
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Connection	Cable 1 m
Weight approx.	400 g

Optional

- Cable with connector
- Extended operating temperature range

ITD 28 A 4

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

50...1024 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

Trigger level

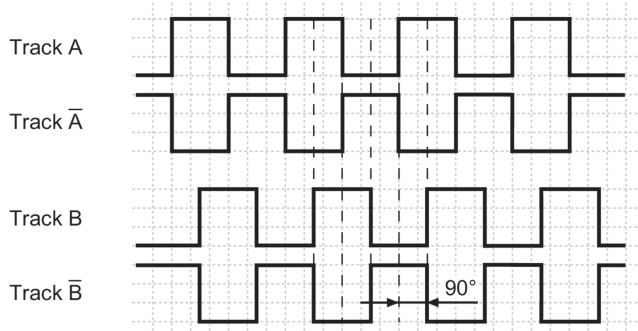
Outputs	Linedriver
Output level High	≥ 2.4 V
Output level Low	≤ 0.5 V
Load	≤ 70 mA

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

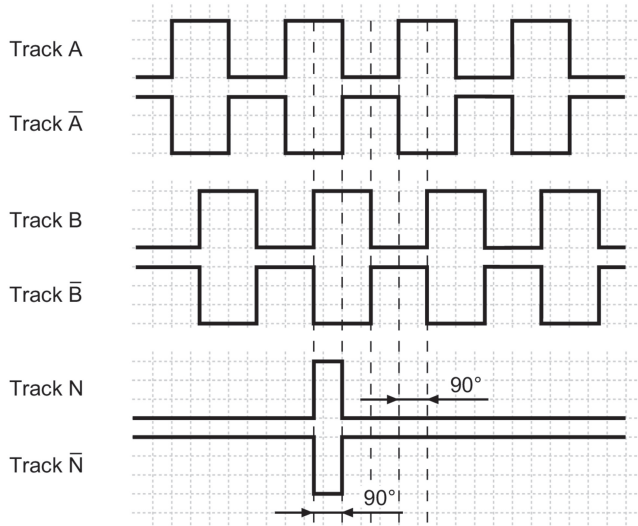
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



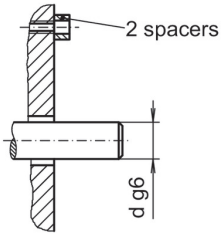
ITD 28 A 4

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

50...1024 pulses per revolution

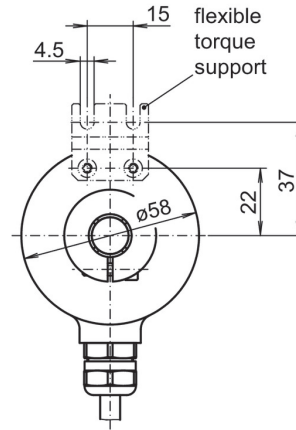
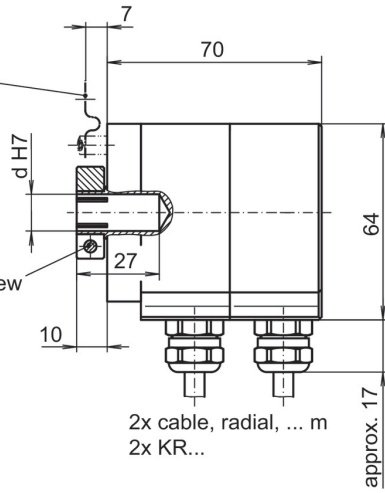
Dimensions

mounting side
(proposition)



mounting kit 002
(standard)

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



ITD 28 A 4

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

50...1024 pulses per revolution

Ordering reference

Product	ITD 28 A 4	##	##	#	####	2xKR1	#	##	IP65	002
	ITD 28 A 4									
Pulse number 1										
50		50								
60		60								
64		64								
88		88								
90		90								
100		100								
120		120								
128		128								
200		200								
250		250								
254		254								
256		256								
360		360								
400		400								
500		500								
512		512								
600		600								
1000		1000								
1024		1024								
Pulse number 2										
50		50								
60		60								
64		64								
88		88								
90		90								
100		100								
120		120								
128		128								
200		200								
250		250								
254		254								
256		256								
360		360								
400		400								
500		500								
512		512								
600		600								
1000		1000								
1024		1024								

ITD 28 A 4

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

50...1024 pulses per revolution

Ordering reference

	ITD 28 A 4	##	##	#	####	2xKR1	#	##	IP65	002
Voltage supply / signals										
2x 8...30 VDC / HTL level, push-pull										
2x 5 VDC / TTL level, linedriver										
2x 8...30 VDC / TTL level, linedriver										
1x 8...30 VDC / HTL level, push-pull; 1x 5 VDC / TTL level, linedriver										
1x 8...30 VDC / HTL level, push-pull; 1x 8...30 VDC / TTL level, linedriver										
1x 5 VDC / TTL level, linedriver; 1x 8...30 VDC / HTL level, push-pull										
1x 5 VDC / TTL level, linedriver; 1x 8...30 VDC / TTL level, linedriver										
1x 8...30 VDC / TTL level, linedriver; 1x 8...30 VDC / HTL level, push-pull										
1x 8...30 VDC / TTL level, linedriver; 1x 5 VDC / TTL level, linedriver										
Output signals										
2x A, A inv, B, B inv										
2x A, A inv, B, B inv, N, N inv										
1x A, A inv, B, B inv; 1x A, A inv, B, B inv, N, N inv										
1x A, A inv, B, B inv, N, N inv; 1x A, A inv, B, B inv										
Connection										
Cable 1 m, radial, cable 1 m, radial						2xKR1				
Operating temperature										
-20...+70 °C										S
-20...+100 °C										E
Blind hollow shaft										
$\varnothing 10$ mm										10
$\varnothing 12$ mm										12
$\varnothing 14$ mm										14
Protection										
IP 65										IP65
Mounting kit										
Mounting kit 002										002