

## ITD 20 A 4 Y22

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

50...1024 pulses per revolution

### Overview

- Encoder with blind hollow shaft  $\varnothing 10$ ...14 mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Flange connector radial
- High protection



### Technical data

#### 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	50 ... 1024
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	$\leq 120$ 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
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	002
Protection DIN EN 60529	IP 65
Operating speed	$\leq 8000$ rpm $\leq 5000$ rpm IP 65 ( $> 70$ °C)
Starting torque	$\leq 0,01$ 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	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Connection	Connector M23 type 2, 12-pin
Weight approx.	280 g

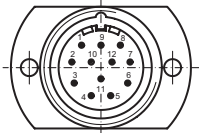
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### Terminal assignment

Connector	Assignment
Pin 5	Track A
Pin 6	Track A inv.
Pin 8	Track B
Pin 1	Track B inv.
Pin 3	Track N
Pin 4	Track N inv.
Pin 12	UB
Pin 10	GND
Pin 2	UB-Sense
Pin 11	GND-Sense
Pin 9	-
Pin 7	-



### Trigger level

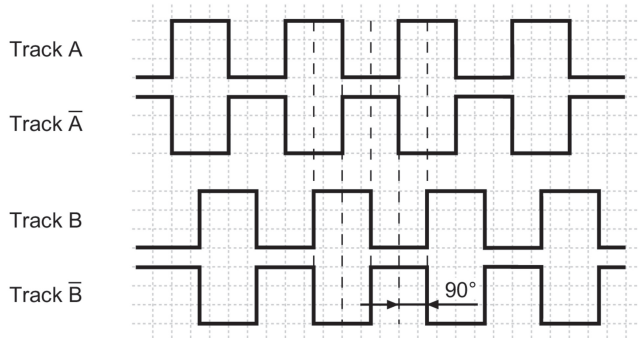
Outputs	Linedriver
Output level High	$\geq 2.4$ V
Output level Low	$\leq 0.5$ V
Load	$\leq 70$ mA

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

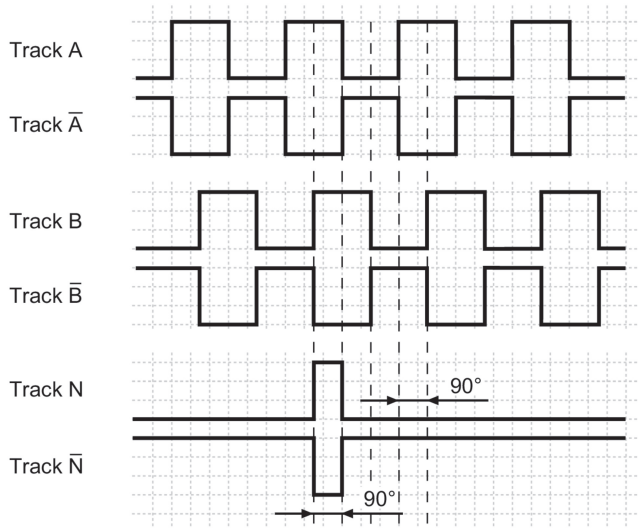
### Output signals

Clockwise rotation when looking at the mounting side.

#### BI-Output signals



#### NI-Output signals

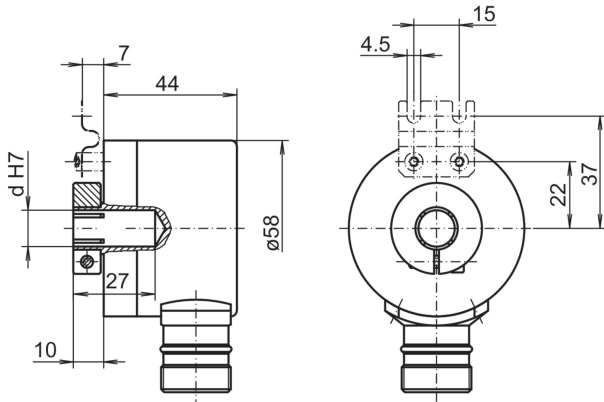


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## Dimensions



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**Ordering reference**

		ITD 20 A 4 Y22	#####	#	####	D2SR12	#	##	IP65	002
<b>Product</b>		ITD 20 A 4 Y22								
<b>Pulse number</b>		ITD 20 A 4 Y22								
	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							
<b>Voltage supply / signals</b>										
	5 VDC / TTL level, linedriver									T
	8...30 VDC / HTL level, push-pull									H
	8...30 VDC / TTL level, linedriver									R
<b>Output signals</b>										
	A, A inv, B, B inv									BI
	A, A inv, B, B inv, N, N inv									NI
<b>Connection</b>										
	Flange connector type 2, pin contacts, radial, 12-pin									D2SR12
<b>Operating temperature</b>										
	-20...+70 °C									S
	-20...+100 °C									E
<b>Blind hollow shaft</b>										
	$\varnothing 10$ mm									10
	$\varnothing 12$ mm									12
	$\varnothing 14$ mm									14
<b>Protection</b>										
	IP 65									IP65
<b>Mounting kit</b>										
	Mounting kit 002									002
<b>Accessories</b>										
<b>Connectors and cables</b>										
	11072792									Connector M23 - S2BG12, 1 m cable (incremental)