

# Incremental encoders

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

### 200...2048 pulses per revolution

#### ITD 20 A 4 Y114



ITD 20 A 4 Y114 with blind hollow shaft

#### Features

- Encoder with blind hollow shaft  $\varnothing 10...14$  mm
- Max. 2048 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Terminal box axial, screw connection sidewise or radial

#### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5\%$ 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 85$ mA
Pulses per revolution	200...2048
Reference signal	Zero pulse, width $90^\circ$
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

Shaft type	$\varnothing 10$ mm (blind hollow shaft) $\varnothing 12$ mm (blind hollow shaft) $\varnothing 14$ mm (blind hollow shaft)
Protection DIN EN 60529	IP 65
Operating speed	$\leq 8000$ rpm
Starting torque	$\leq 0.015$ Nm ( $+20^\circ\text{C}$ )
Materials	Housing: aluminium die-cast Shaft: stainless steel
Operating temperature	$-20...+85^\circ\text{C}$
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, 11 ms
Connection	Terminal box
Weight approx.	350 g

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## Part number

ITD 20 A 4 Y114 

		NI		S		IP65	
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Mounting kit

- 003 Mounting kit 003
- 006 Mounting kit 006
- 007 Mounting kit 007
- 028 Mounting kit 028
- 041 Mounting kit 041

Protection

IP65 IP 65

Blind hollow shaft

- 10  $\varnothing 10$  mm
- 12  $\varnothing 12$  mm
- 14  $\varnothing 14$  mm

Operating temperature

S -20...+85 °C

Connection

- VS16 Terminal box, 10-pin, M16x1.5 connection, sidewise
- VR16 Terminal box, 10-pin, M16x1.5 connection, radial

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

Pulse number - see table

## Pulse number

200	500	720	1024
360	512	1000	2048

# Incremental encoders

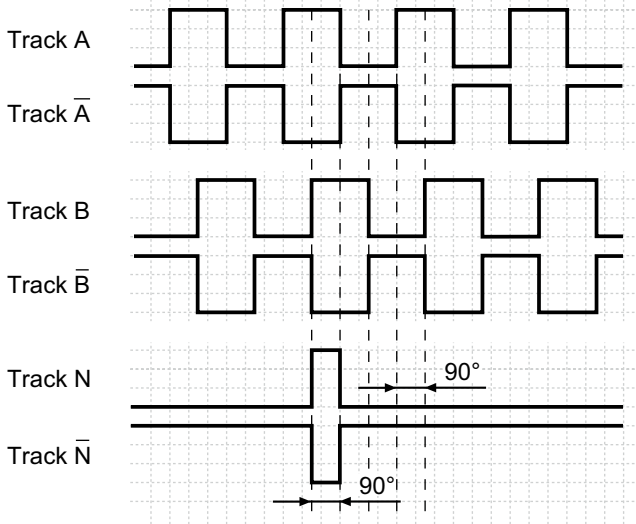
Blind hollow shaft  $\varnothing 10$  to  $\varnothing 14$  mm  
200...2048 pulses per revolution

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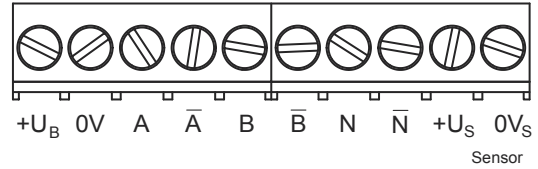
### Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



### Terminal assignment

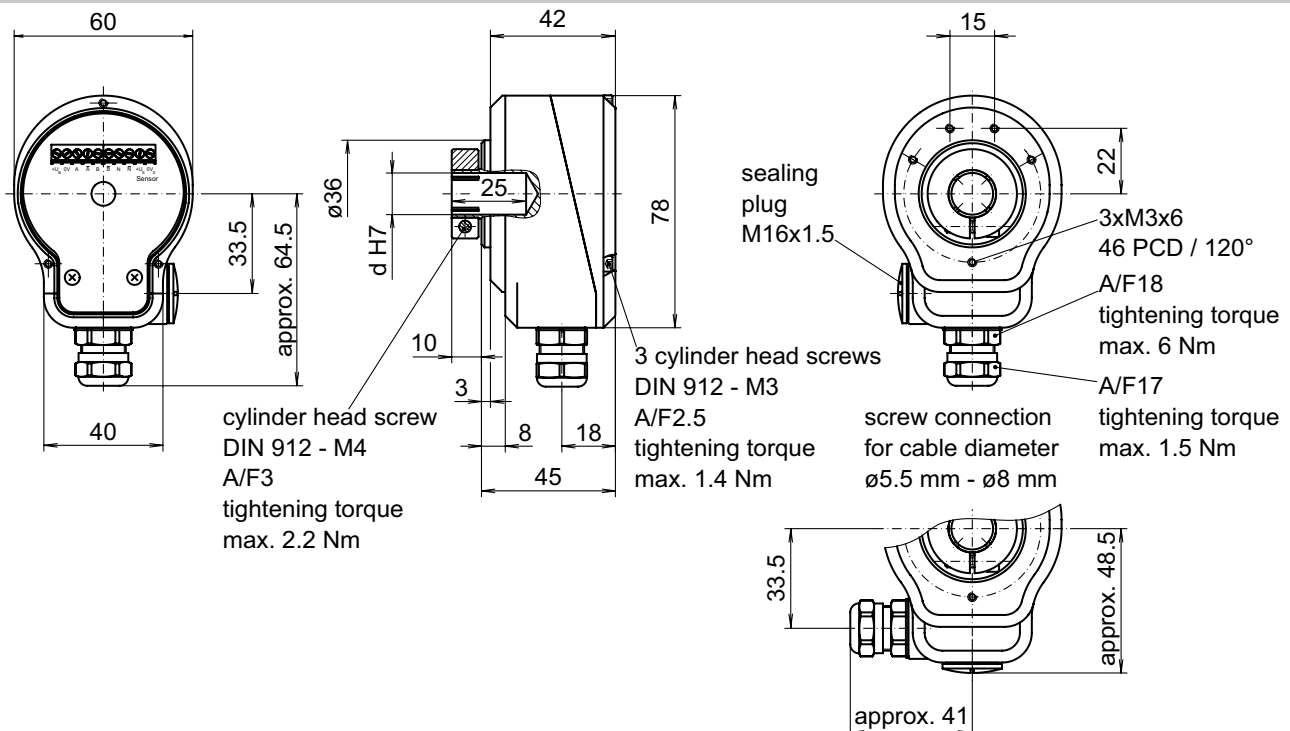


### Trigger level

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	$\geq U_B - 3$ V
Output level Low	$\leq 1.5$ V
Load	$\leq 70$ mA

### Dimensions



029- 1 Y114

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