

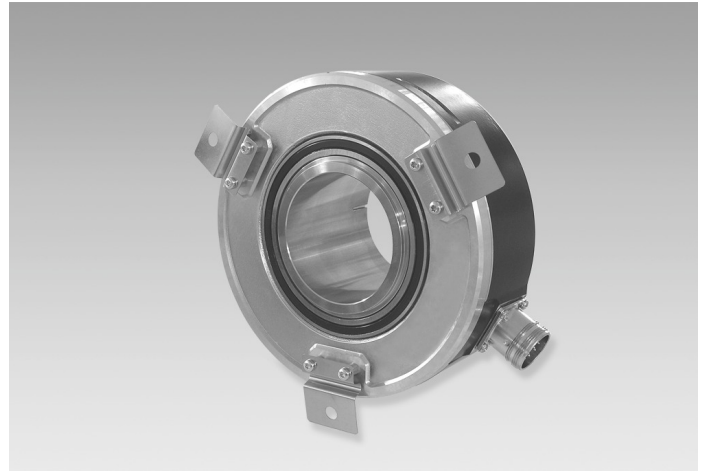
## ITD 70 A 4 Y 9

Through hollow shaft  $\varnothing 40$  to  $\varnothing 65$  mm

1000...2500 pulses per revolution

### Overview

- Encoder with through hollow shaft max.  $\varnothing 65$  mm
- Max. 2500 pulses per revolution
- Optical sensing method
- Mounting by torque support
- Mounting hole circle  $\varnothing 164$  mm
- TTL or HTL output signals
- Flange connector radial



### 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	1000 ... 2500
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	EN 61000-6-2
Emitted interference	EN 61000-6-3

#### Technical data - mechanical design

Size (flange)	$\varnothing 150$ mm
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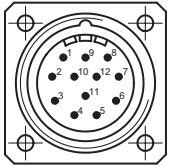
Shaft type	$\varnothing 40$ ... $\varnothing 65$ mm (through hollow shaft)
Mounting kit	051
Protection EN 60529	IP 54
Operating speed	$\leq 4000$ rpm
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-20$ ... $+70$ °C
Relative humidity	90 % non-condensing
Resistance	EN 60068-2-6 Vibration 10 g, 55-2000 Hz EN 60068-2-27 Shock 100 g, 6 ms
Connection	Connector M23 type 2, 12-pin
Weight approx.	2900 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

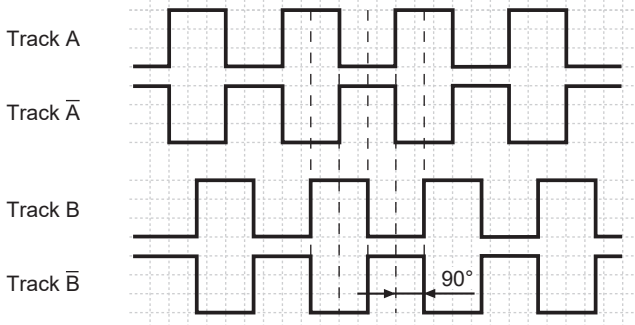
Outputs	Linedriver
Output level High	$\geq 2.4$ V
Output level Low	$\leq 0.5$ V
Load	$\leq 70$ mA

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

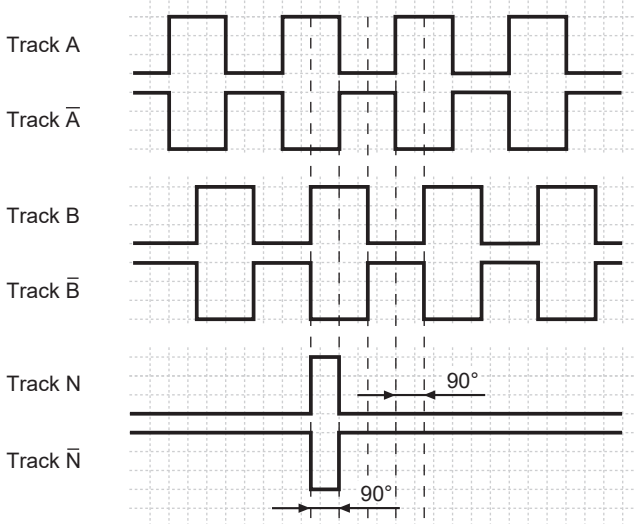
### Output signals

Clockwise rotation when looking at the mounting side.

#### BI-Output signals



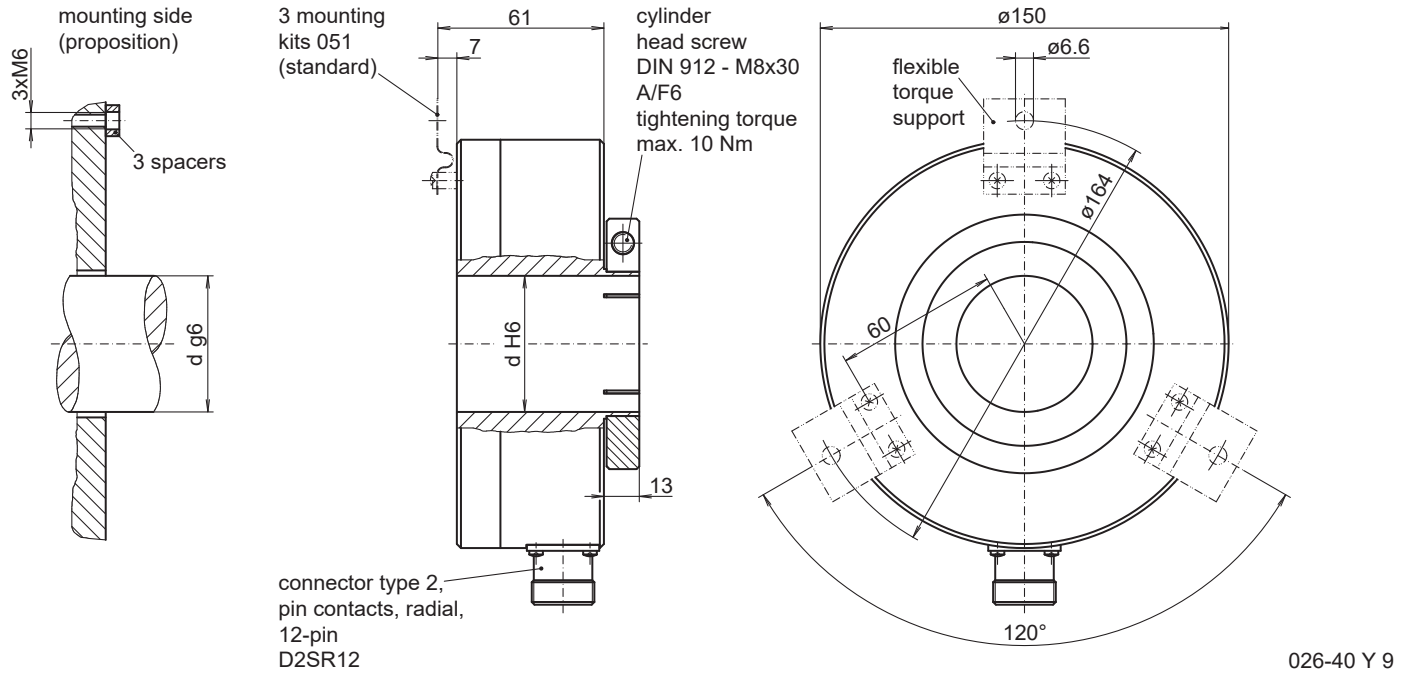
#### NI-Output signals



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## Dimensions



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**Ordering reference**

		ITD 70 A 4 Y 9	#####	#	####	D2SR12	S	##	IP54	051
<b>Product</b>		ITD 70 A 4 Y 9								
		ITD 70 A 4 Y 9								
<b>Pulse number</b>										
	1000		1000							
	1024		1024							
	2048		2048							
	2500		2500							
<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			
<b>Through hollow shaft</b>										
	$\varnothing 40$ mm							40		
	$\varnothing 45$ mm							45		
	$\varnothing 50$ mm							50		
	$\varnothing 55$ mm							55		
	$\varnothing 60$ mm							60		
	$\varnothing 65$ mm							65		
<b>Protection</b>										
	IP 54								IP54	
<b>Mounting kit</b>										
	Mounting kit 051									051