

Incremental encoders

Hollow shaft $\varnothing 17$ to $\varnothing 27$ mm

Resolution 200...2048 pulses

ITD 40 A 4 Y120



ITD 40 A 4 Y120 with hollow shaft

Features

- Encoder with hollow shaft $\varnothing 17$ -27 mm
- Resolution max. 2048 ppr
- Optical sensing
- Through-hollow shaft
- Mounting by torque support
- TTL or HTL output signals
- Cable output radial

Optional

- Cable with connector

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 100 mA
Resolution (steps/turn)	200...2048
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 kHz
Output signals	A, B, N + inverted
Output circuit	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 55011
Approval	UL/cULus

Technical data - mechanical design

Dimensions (flange)	$\varnothing 80$ mm
Shaft	$\varnothing 17$...27 mm hollow shaft
Motor shaft tolerance	0.25 mm axial 0.1 mm radial
Mounting kit variant	079
Protection DIN EN 60529	IP 65
Operating speed	≤ 3500 rpm
Starting torque	≤ 0.015 Nm
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20 ... $+70$ °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	Cable 1 m
Weight approx.	580 g

Incremental encoders

Hollow shaft $\varnothing 17$ to $\varnothing 27$ mm

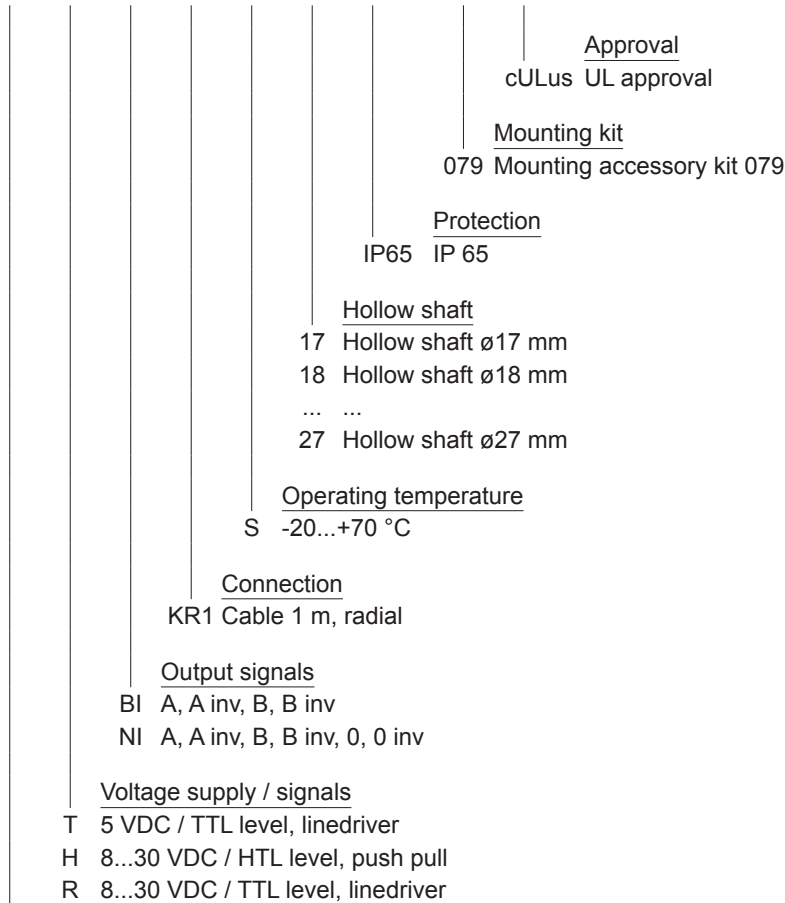
Resolution 200...2048 pulses

ITD 40 A 4 Y120

Part number

ITD 40 A 4 Y120

			KR1	S		IP65	079	cULus
--	--	--	-----	---	--	------	-----	-------



See part number (pulses)

Part number (pulses)

200	500	720	1024	2048
360	512	1000	2000	

Incremental encoders

Hollow shaft $\varnothing 17$ to $\varnothing 27$ mm

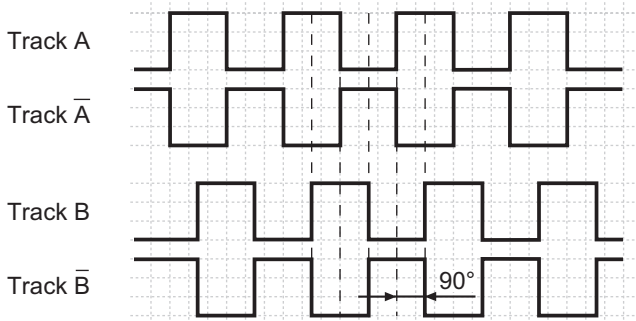
Resolution 200...2048 pulses

ITD 40 A 4 Y120

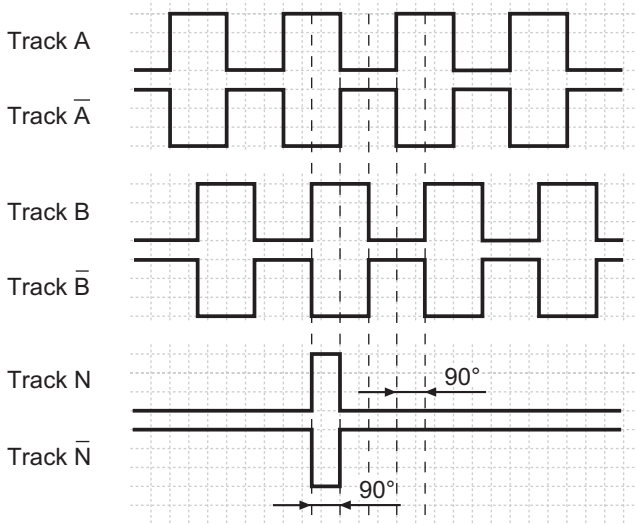
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



Terminal assignment

Core colour	Assignment
green	Track A
yellow	Track A inv.
grey	Track B
pink	Track B inv.
brown	Track N
white	Track N inv.
rot	UB
blue	GND
violet	UB-Sense
black	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	$\geq UB - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

Incremental encoders

Hollow shaft $\varnothing 17$ to $\varnothing 27$ mm

Resolution 200...2048 pulses

ITD 40 A 4 Y120

Dimensions

