Sine encoders

Hollow shaft ø17 to ø27 mm

Resolution 1024, 2048 pulses

ITD 42 A 4 Y120

ITD 42 A 4 Y120 with hollow shaft

Features

- **Encoder with hollow shaft ø17-27 mm**
- **Resolution max. 2048 ppr**
- **Sine output signals 1 Vpp**
- **Mounting by torque support**
- **Cable output radial**

Optional

- **Cable with connector**
- **Extended operating temperature range**

Technical data - electrical ratings

Voltage supply	5 VDC ±10 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤90 mA
Resolution (steps/turn)	1024...2048
Sensing method	Optical
Output frequency	≤180 kHz (-3 dB)
Output signals	A, B, 0
Output circuit	Sine/cosine 1 Vpp
Approval	UL/cULus

Technical data - mechanical design

Dimensions (flange)	ø80 mm
Shaft	ø17...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...+85 °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 30 g, 11 ms
Connection	Cable 1 m
Weight approx.	580 g

ITD 42 A 4 Y120

Part number

ITD 42 A 4 Y120			NI	KR1			IP65	079	cULus

Approval
cULus UL approval

Mounting kit
079 Mounting accessory kit 079

Protection
IP65 IP 65

Hollow shaft
17 Hollow shaft ø17 mm
18 Hollow shaft ø18 mm
... ...
27 Hollow shaft ø27 mm

Operating temperature
S -20...+85 °C
E -20...+100 °C

Connection
KR1 Cable 1 m, radial

Output signals
NI A+, A-, B+, B-, N+, N-

Voltage supply / signals
M 5 VDC / sine 1 Vpp
S 8...30 VDC / sine 1 Vpp

See part number (pulses)

Part number (pulses)

1024	2048

Sine encoders

Hollow shaft ø17 to ø27 mm

Resolution 1024, 2048 pulses

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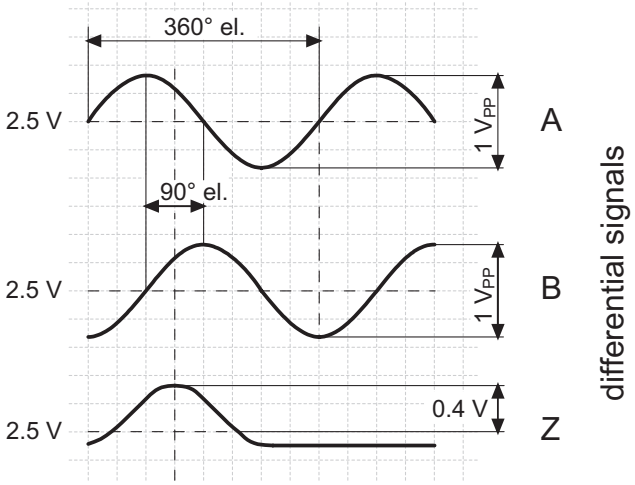
Output signals

Clockwise rotation when looking at the mounting side.



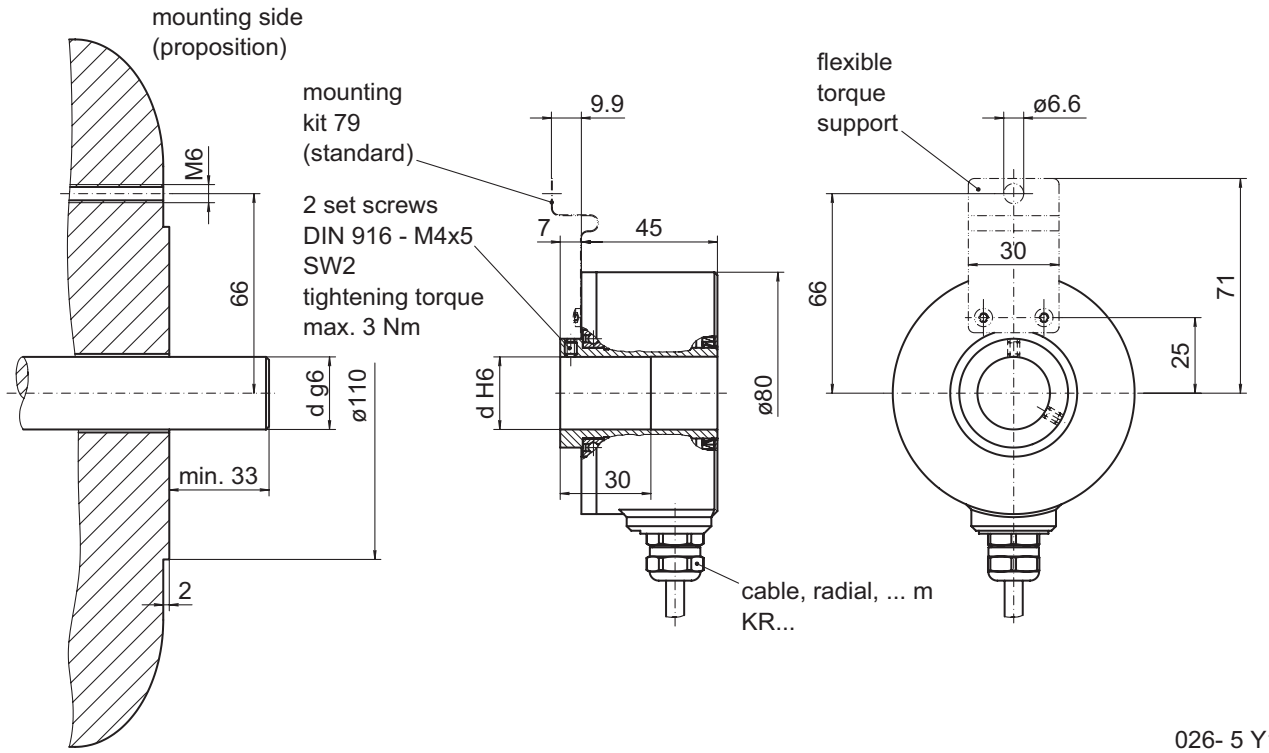
Terminal assignment

Core colour	Assignment
green	Track A +
yellow	Track A –
grey	Track B +
pink	Track B –
brown	Track N +
white	Track N –
red	UB
blue	GND
violet	UB-Sense
black	GND-Sense
transparent	Shield/Housing

Trigger level

Outputs	**Sine**
Output amplitude A + B	1 V_{PP} at Z_0 = 120 Ω
Output amplitude N	approx. 0,4 V (useable part) at Z_0 = 120 Ω

Dimensions



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ITD 42 A 4 Y120