

Incremental encoders

End shaft $\varnothing 6$ to $\varnothing 16$ mm

Resolution 50...1024 pulses

ITD 20 A 4 Y10



ITD 20 A 4 Y10 with coupling CPS37

Features

- Encoder with coupling max. $\varnothing 16$ mm
- Resolution max. 1024 ppr
- Optical sensing
- Centering alignment $\varnothing 70$ mm, mounting screw hole circle $\varnothing 77$ mm
- TTL or HTL output signals
- Flange socket radial or axial

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)	50...1024
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

Technical data - mechanical design

Dimensions (flange)	$\varnothing 58$ mm
Shaft	$\varnothing 6...16$ mm end shaft
Motor shaft tolerance	0.25 mm axial 0.5 mm radial
Protection DIN EN 60529	IP 65
Operating speed	≤ 8000 rpm
Starting torque	≤ 0.01 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	Connector M23 type 2, 12-pin
Weight approx.	430 g

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Part number

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Protection
IP65 IP 65

End shaft
6 End shaft $\varnothing 6$ mm
10 End shaft $\varnothing 10$ mm
11 End shaft $\varnothing 11$ mm
12 End shaft $\varnothing 12$ mm
14 End shaft $\varnothing 14$ mm
15 End shaft $\varnothing 15$ mm
16 End shaft $\varnothing 16$ mm

Operating temperature
S -20...+70 °C

Connection
D2SR12 Flange socket type 2, pin contacts, radial, 12-pin
D2SA12 Flange socket type 2, pin contacts, axial, 12-pin

Output signals
BI A, A inv, B, B inv
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
R 8...30 VDC / TTL level, linedriver

See part number (pulses)

Part number (pulses)

50	90	200	360	600
60	100	250	400	1000
64	120	254	500	1024
88	128	256	512	

Accessories

Connectors and cables

11072792 Connector S2BG12 with cable (ITD) L = 1 m

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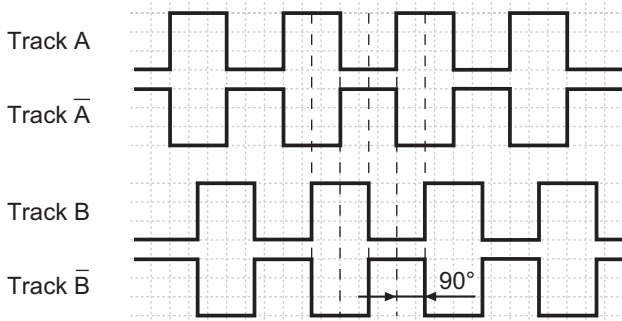
Resolution 50...1024 pulses

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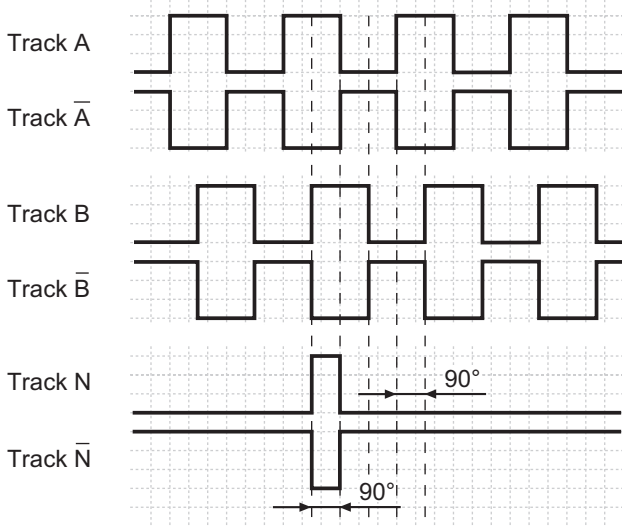
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals

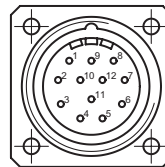


NI-Output signals



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	-

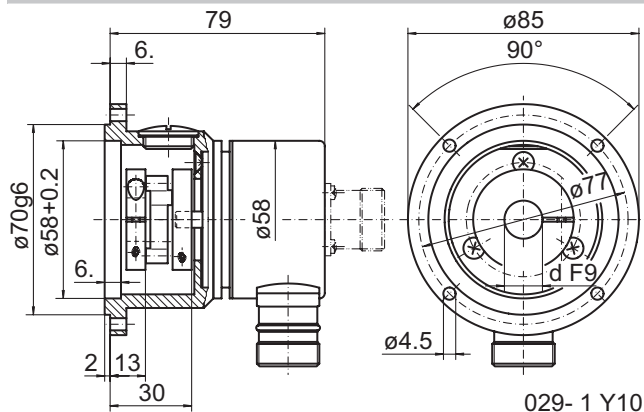


Trigger level

Outputs	Linedriver
Output level High	≥ 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

Dimensions



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