

Encoders without bearings - incremental

Through hollow shaft $\varnothing 70$ to $\varnothing 140$ mm

256...8192 pulses per revolution

ITD89H00 - Rectangular signal



ITD89H00 - for heat-shrink or adhesive mounting

Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5\%$ 8...26 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes
Consumption w/o load	≤ 50 mA
Pulses per revolution	256...8192
Interpolation	1-fold (single), 2-fold, 4-fold, 8-fold, 16-fold, 32-fold
Output signals	A 90° B + inverted A 90° B, N + inverted
Output current	≤ 30 mA
Output frequency	≤ 300 kHz (TTL) ≤ 160 kHz (HTL)
System accuracy	$\pm 0.1^\circ$
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

Features

- Bearingless magnetic encoder
- Max. 8192 pulses per revolution
- Output circuits: HTL or TTL
- Fast, easy and space saving installation
- Maintenance-free
- High accuracy - error max. $\pm 0.1^\circ$
- Rotation speed max. 7500 rpm
- High resistance to dirt and vibrations

Optional

- Cable with connector
- Redundant sensing

Technical data - mechanical design

Dimensions W x H x L	12 x 16 x 48 mm
Shaft type	$\varnothing 70$...140 mm (through hollow shaft)
Motor shaft tolerance	± 0.5 mm axial ± 0.05 mm radial
Protection DIN EN 60529	IP 67 (relating to sealed elec- tronics)
Operating speed	≤ 7500 rpm
Materials	Housing: plastic Shaft: stainless steel
Operating temperature	-40 ... $+100$ °C (fixed cable)
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Weight approx.	2200 g (at $\varnothing 70$ mm), 619 g (at $\varnothing 140$ mm)
Connection	Cable 1 m
Admitted cable length	15 m

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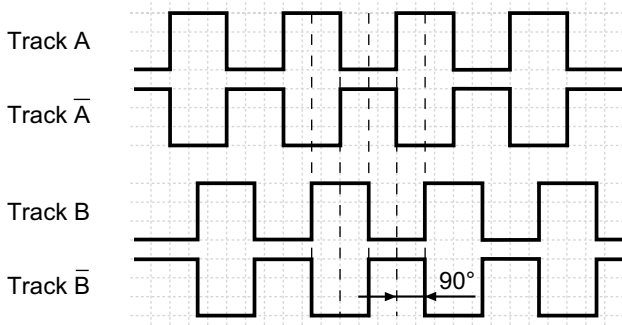
256...8192 pulses per revolution

ITD89H00 - Rectangular signal

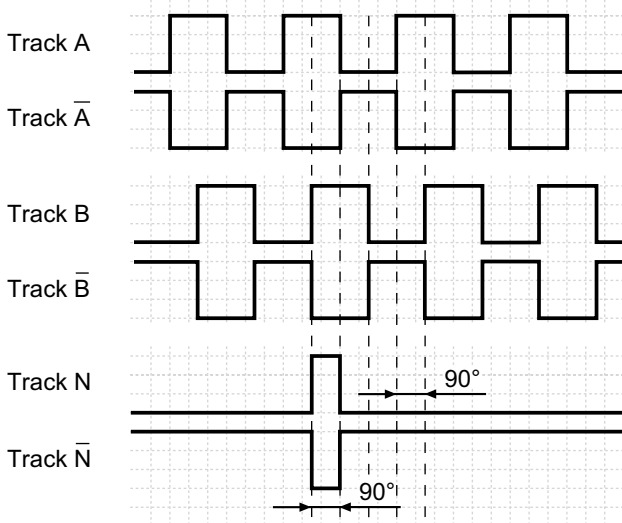
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



Trigger level

Outputs	Linedriver
Output level High	$\geq 2,5$ V
Output level Low	$\leq 0,5$ V
Load	≤ 30 mA

Outputs	Push-pull short-circuit proof
Output level High	$\geq U_B - 3$ V
Output level Low	$\leq 1,5$ V
Load	≤ 30 mA

Terminal assignment

With BI-signals, cable [4x2x0,08 mm²]

Core colour	Assignment
green	Track A
yellow	Track A inv.
grey	Track B
pink	Track B inv.
red	UB
blue	GND
transparent	Shield/Housing

With NI-signals, cable [4x2x0,08 mm²]

Core colour	Assignment
green	Track A
yellow	Track A inv.
grey	Track B
pink	Track B inv.
brown	Track N
white	Track N inv.
red	UB
blue	GND
transparent	Shield/Housing

