Topydic Small Hollow Shaft Incremental Encoder EV40P

Description

Topydic series small shaft incremental encoder-EV40P delivers oustanding performance in mechanical shock-resistance and can withstand higher axial and radial loads to suit various industrial environments. Its special position of cabling fits to the limited installation space. Combining advanced signal processing technology with multiple types of electrical output, EV40P are capable of matching various upper control computers.

Features

- Stainless steel shaft ensures safety and stability in operation
- Optional types of flange connection offers more flexibility
- Metal casting housing for greater shock resistance
- Side cabling design greatly saves the installation space and simplifies wiring
- Reverse connection protection; short circuit protection

Mechanical Parameters

Shaft diameter	Ø 6H7 / Ø 8H7 mm
Protection class	IP66 standard, IP67 optional
Max. speed / minute	6000 rpm
Max. load capacity of the shaft	60 N axial, 100 N radial
Shock resistance	50 G/11 ms
Vibration resistance	10 G 10 ... 2000 Hz
Bearing life	10^9 revolution
Moment of inertia	1.9×10^{-6} kgm^2
Starting torque	< 0.08 Nm
Body material	AL-alloy
Housing material	Zn-alloy
Operating temperature	-20 ... +85 °C
Storage temperature	-25 ... +100 °C
Relative humidity / condensation	90%, condensation not permitted
Weight	110 g

Regular resolution: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 360, 400, 500, 512, 600, 800, 1000, 1024, 1200, 1250, 2000, 2500, 4000, 5000

Attention: the products with above resolutions are available from stock, others on request.

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Electrical Parameters

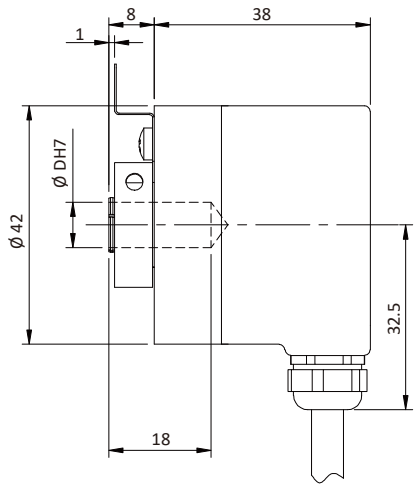
Output circuit	RS422	Push-pull
Resolution	Max. 5000 ppr	Max. 5000 ppr
Supply voltage	5±0.25 or 10 ... 30 V DC	10 ... 30 V DC
Power consumption (no load)	≤ 80 mA	≤ 100 mA
Permissible load (channel)	± 50 mA	± 30 mA
Pulse frequency	Max. 800 kHz	Max. 800 kHz
Signal level high	Min. 3.4 V	Min. Ub-1.8 V
Signal level low	Max. 0.4 V	Max. 2.0 V
Rise time Tr	Max. 200 ns	Max. 1 µs
Fall time Tr	Max. 200 ns	Max. 1 µs

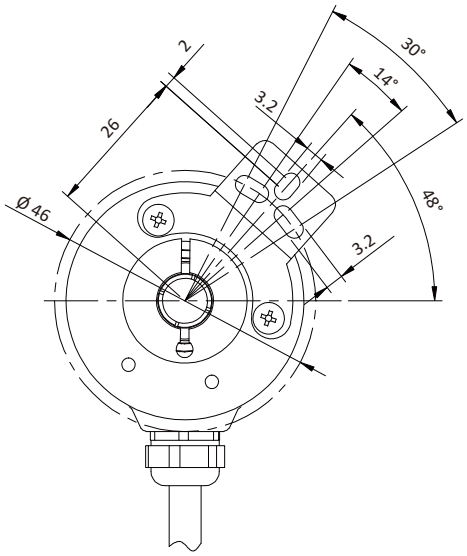
Terminal Configuration

Signal	0 V	$+U_B$	A	$\overline{A}$	B	$\overline{B}$	Z	$\overline{Z}$	Shield
Color	WH	BN	GN	YE	BN	PK	BU	RD	⏚
Pin	10	12	5	6	8	1	3	4	PH

Dimensions (mm)

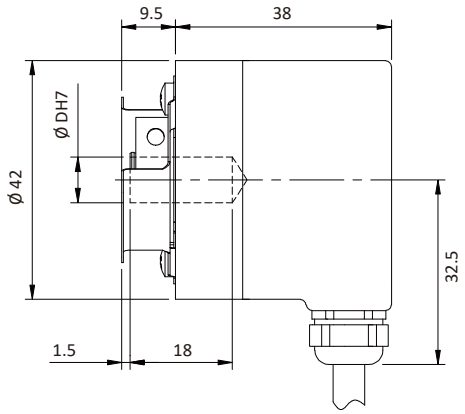
EV40P

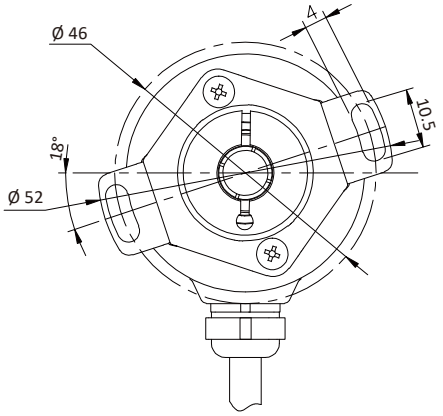




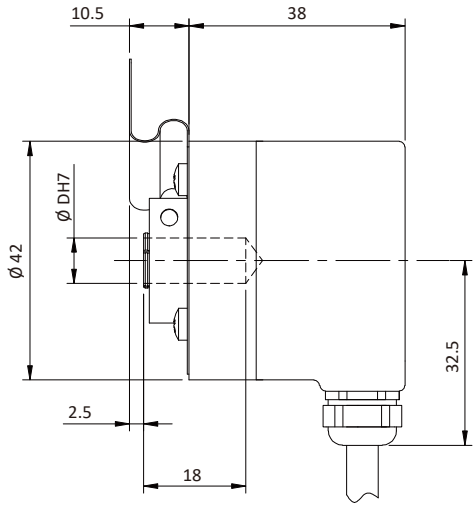
Dimensions (mm)

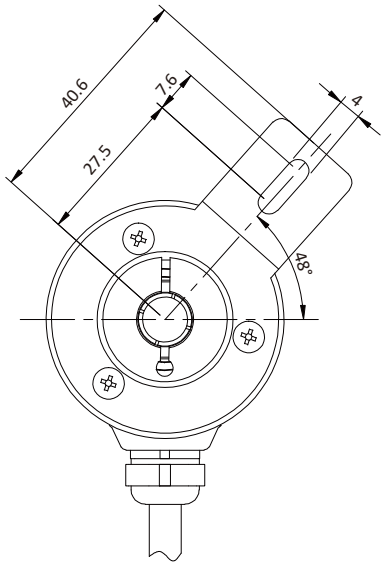
EV40W



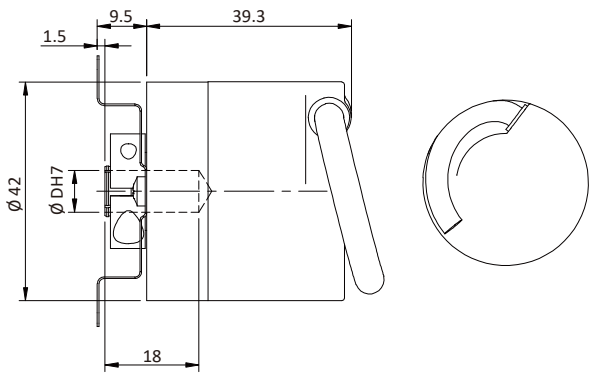


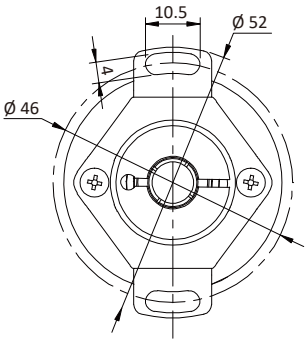
EV40H





EV40W side pre-wired cable





Order Code

EV 40 P 6 - L5 P R - 1024 TP .XXXX

Series
EV = Topydic incremental

Housing diameter
40 = housing diameter

Shaft diameter
6 = Ø 6 mm
8 = Ø 8 mm

Flange type
P = with single-wing fixing plate
W = with double-wing fixing plate
H = long fastening arm

Encoder output & power supply [1)]

L5 = RS422 (with inverted signal)	5 V DC
L6 = RS422 (with inverted signal)	10 ... 30 V DC
H6 = Push-pull HTL (with inverted signal)	10 ... 30 V DC
P6 = Push-pull (without inverted signal)	10 ... 30 V DC

Standard cable length
P = 0.5 m

Outlets direction
R = radial

Resolution
Pulse/r: ≤ 5000
Attention: for other available pulse options please contact us for further information

Side output cable length
TP = 0.5 m
Attention: If blank here, it means P = 0.5 m

XXXX=Special code
Customized cable length
CN00XX = cable length
e.g.
CN0010 = 1 m
CN0015 = 1.5 m
CN0020 = 2 m

[1)]
When the voltage supply within the limited range and only one signal channel is connected improperly at certain moment:
if U_b = 5 V, it's permitted to connect to signal channels, 0 V or U_b;
if U_b > 5 V, it's permitted to connect to signal channels or 0 V.