Topydic Series Hollow Shaft Incremental Encoder EV58P

Descriptions

Topydic series encoders EV58P, with double-bearing design, are widely used in industrial environments. It delivers outstanding preformance in mechanical shock resistance. It adopts stainless steel hollow shaft design with max. shaft diameter of Φ15mm and is able to withstand higher axial and radial loads requirements. Its wide voltage range, reverse connection and short circuit protection can effectively.

Features

- Resolution up to 5000ppr; pulse frequency up to 300kHz
- Wide range of shaft diameter, Φ8...Φ15mm
- Operating temperature, -20°C...+80°C; IP65
- Protection class IP65
- Thickness of 34.5mm, applicable for installation with limited space
- Multi signal output interfaces to meet different types of data acquisition of upper computer
- Reverse connection and short circuit protection to ensure the safety [1)]

Mechanical Characteristics

Shaft diameter (mm)	Φ8/Φ10/Φ12 /Φ14/Φ15
Protection class	IP65
Speed	6000rpm
Max. load capacity of the shaft	40N axial
	80N radial
Shock resistance	50G/11ms
Vibration resistance	10G 10...2000Hz
Bearing life	10^9 revolution
Moment of inertia	approx. $6x10^{-6}$ kgm²
Starting torque	<0.03Nm
Body material	Al-alloy
Housing material	Al-alloy
Operating temperature	-20°C...+80°C
Storage temperature	-40°C...+95°C
Weight	approx. 400g

Regular resolution: 256，300，360，400，500，512，600，800，1000，1024，1200，1250，2000，2048，2500，3600，4096，5000

Note: other resolutions on request.

Electrical Characteristics

Output circuit	RS422	Push-pull
Supply voltage (Vdc)	5±0.25 or 10~30	10~30
Power consumption (no load)	typ. 40mA	typ. 50mA
	max. 90mA	max. 100mA
Permissible load	max. ±20mA	max. ±30mA
Pulse frequency	max. 300kHz	max. 300kHz
Signal level high	min. 2.5V	min. Ub-1V
Signal level low	max. 0.5V	max. 0.5V
Rise time Tr	max. 200ns	max. 1μs
Fall time Tf	max. 200ns	max. 1μs

1) When the voltage supply within the limited range and only one signal channel is connected improperly at certain moment:

if U_B=5V, it's permitted connect to signal channals, 0V or U_B;

if U_B＞5V, it's permitted connect to signal channals or 0V.

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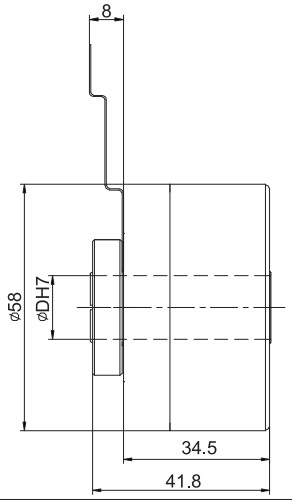
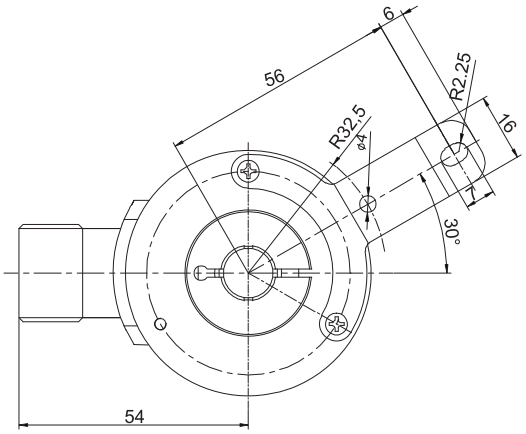
Terminal Assignment

Signal	0V	$+U_b$	A	$\bar{A}$	B	$\bar{B}$	Z	$\bar{Z}$	0V Sen	$+U_b$ Sen	Shield
Color Code	WH	BN	GN	YE	GY	PK	BU	RD	GY/PK	RD/BU	⏚
12-pin	10	12	5	6	8	1	3	4	11	2	PH

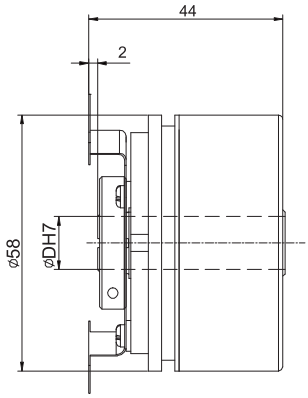
Dimension (mm):

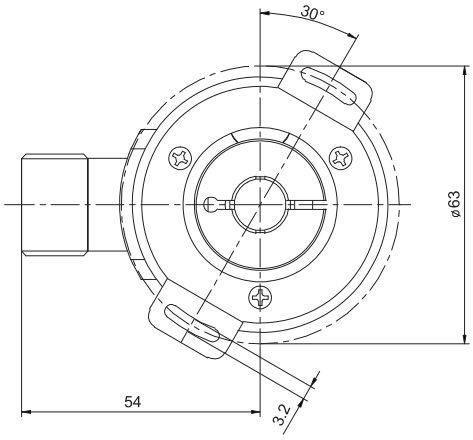
EV58P





EV58W





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Order Code:

EV 58 P 10 – L5 T R – 1024 . XXXX

Series
EV=Topydic incremental

Housing diameter
58mm=Housing diameter

Flange type
P=hollow shaft with fixing sheet
W=double-winged fixing sheet

Shaft diameter
8= Φ8mm
10=Φ10mm
12=Φ12mm
14=Φ14mm
15=Φ15mm

Output & Supply voltage[1)]

L5=RS422 (with reverse signal)	5Vdc
L6=RS422 (with reverse signal)	10...30Vdc
H6=Push-pull HTL (with reverse signal)	10...30Vdc
P6=Push-pull HTL (with reverse signal)	10...30Vdc

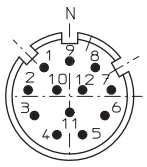
Standard cable length
P=1.5m
T=M23, 12-pin plug without connector

Outlet direction
R=radial

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

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

T type connection:
12-pin M23 Connector



TMSP1612F
Field attachable connector

[1)] When provided power voltage is correct:
Short-circuit to channel, 0V, or +UB is permitted when UB=5V;
Short-circuit to channel or 0V is permitted when UB=10…30V.