

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 performance in mechanical shock resistance. It adopts stainless steel hollow shaft design with max. shaft diameter of $\Phi 15\text{mm}$ 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, $\Phi 8\text{...}\Phi 15\text{mm}$
- Operating temperature, $-20\text{...}+80\text{C}$; IP65
- Thickness of 34.5mm, applicable for installation with limited space
- Multi signal output interfaces to meet diferent types of data aquisition of upper computer
- Reverse connection and short circuit protection to ensure the safety ¹⁾

Mechanical Characteristics

| | |
|---------------------------------|---|
| Shaft diameter (mm) | $\Phi 8/\Phi 10/\Phi 12 /\Phi 14/\Phi 15$ |
| Protection Grade | 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. $6 \times 10^{-6} \text{kgm}^2$ |
| Starting torque | $<0.03\text{Nm}$ |
| Body material | Al-alloy |
| Housing material | Al-alloy |
| Operating temperature | $-20\text{...}+80\text{ }^\circ\text{C}$ |
| Storage temperature | $-40\text{...}+95\text{ }^\circ\text{C}$ |
| 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 $10\text{...}30\text{VDC}$ | $10\text{...}30\text{VDC}$ |
| Power consumption (no load) | typ. 40mA max. 90mA | typ. 50mA max. 100mA |
| Permissible load | max. $\pm 20\text{mA}$ | max. $\pm 30\text{mA}$ |
| Pulse frequency | max. 300kHz | max. 300kHz |
| Signal level high | min. 2.5VDC | min. $U_b - 1\text{VDC}$ |
| Signal level low | max. 0.5VDC | max. 0.5VDC |
| Rise time T_r | max. 200ns | max. 1 μs |
| Fall time T_f | max. 200ns | max. 1 μs |

¹⁾ When the voltage supply within the limited range and only one signal channel is connected improperly at certain moment:
if $U_b = 5\text{VDC}$, its permitted to connect to signal channels, 0VDC or U_b ;
if $U_b > 5\text{VDC}$, its permitted to connect to signal channels or 0VDC.

Encoder

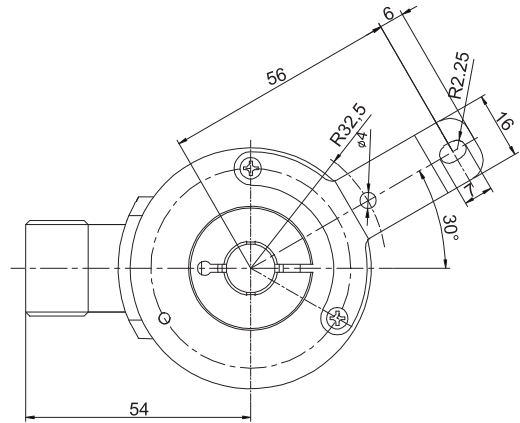
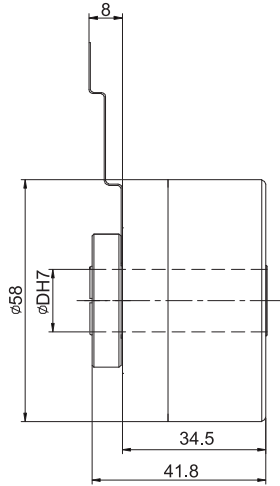
Topydic Series Hollow Shaft Incremental Encoder EV58P

Terminal Assignment

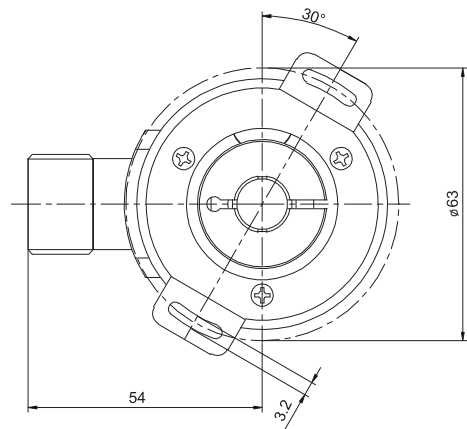
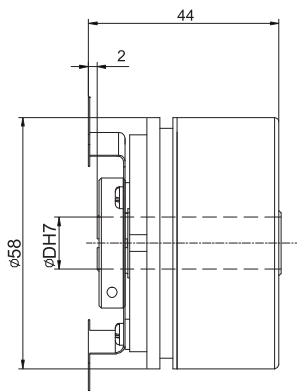
| Signal | 0V | +U _b | A | \bar{A} | B | \bar{B} | Z | \bar{Z} | 0V Sen | +U _b Sen | Shield |
|------------|----|-----------------|----|-----------|----|-----------|----|-----------|--------|---------------------|---------|
| Color Code | WH | BN | GN | YE | GY | PK | BU | RD | GY/PK | RD/BU | \perp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

Dimensions (mm):

EV58P



EV58W

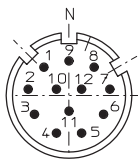


Topydic Series Hollow Shaft Incremental Encoder EV 58P

Order Code:

| | | | | | | | | | | | | | | | | | | |
|---|------------|---|-----------|---|---|----------|--------------------------------|---|--|---|--|---|--|---|--|--|--|--|
| EV | 58 | P | 10 | — | L5 | T | R | — | 1024 | XXXX | | | | | | | | |
| <p>Series</p> <p>EV=Topydic incremental</p> | | <p>Housing diameter</p> <p>58=Housing diameter</p> | | | <p>Shaft diameter</p> <p>8= Φ8mm 10=Φ10mm 12=Φ12mm 14=Φ14mm 15=Φ15mm</p> | | | <p>Flange type</p> <p>P=hollow shaft with fixing sheet W=double-winged fixing sheet</p> | | <p>Standard cable length</p> <p>P=1.5m T=M23, 12-pin plug without connector</p> | | <p>Outlets direction</p> <p>R=radial</p> | | <p>Resolution</p> <p>Pulse/r: \leq5000 Note: for other available pulse options please contact us for further information</p> | | | | |
| <p>Output & Supply voltage¹⁾</p> <table border="0" style="width: 100%;"> <tr> <td>L5=RS422 (with reverse signal)</td> <td>5VDC</td> </tr> <tr> <td>L6=RS422 (with reverse signal)</td> <td>10...30VDC</td> </tr> <tr> <td>H6=Push-pull HTL (with reverse signal)</td> <td>10...30VDC</td> </tr> <tr> <td>P6=Push-pull HTL (with reverse signal)</td> <td>10...30VDC</td> </tr> </table> | | | | | 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 | <p>XXXX=Special code Customized cable length CN00XX=cable length e.g. CN0010=1m CN0020=2m</p> | | | | | |
| 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 | | | | | | | | | | | | | | | | | |

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=5VDC;
 Short-circuit to channel or 0V is permitted when UB=10...30VDC