

MAIN FEATURES

ø 36 mm series of encoders, recommended for feedback control systems on AC servomotors, interchangeable with the size 15 resolver at the rear of the motor.

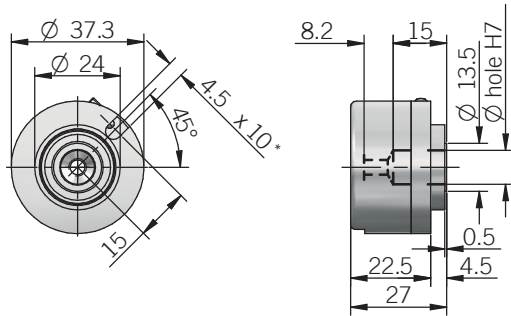
- 6 channel encoder with optical generation of "Hall effect phases" (commutation signals)
- Signal transmission via bit-parallel bus
- Easy mechanical mounting
- Small dimensions
- Wide range of resolutions available
- High temperature resistance



ORDERING CODE

| EF | 36K | 4 | L | 512 | S | 5 | L | 8 | X | 6 | PR | .XXX |
|---|-----|---|---|-----|---|---|---|---|---|---|----|------|
| SERIES incremental encoder with Hall phases EF | | | | | | | | | | | | |
| MODEL blind hollow shaft with rear fixing 36K | | | | | | | | | | | | |
| MOTOR POLES 4 poles (2 poles pair) 4 6 poles (3 poles pair) 6 8 poles (4 poles pair) 8 | | | | | | | | | | | | |
| ELECTRICAL INTERFACE FOR COMMUTATION SIGNALS NPN open collector C line driver RS-422 L | | | | | | | | | | | | |
| INCREMENTAL RESOLUTION ppr from 500 to 1024 refer to the available pulses list | | | | | | | | | | | | |
| ZERO PULSE without zero pulse S with zero pulse Z | | | | | | | | | | | | |
| POWER SUPPLY 5 V DC 5 | | | | | | | | | | | | |
| ELECTRICAL INTERFACE FOR INCREMENTAL SIGNALS line driver RS-422 L | | | | | | | | | | | | |
| BORE DIAMETER mm 8 (3/8") mm 9,52 mm 10 | | | | | | | | | | | | |
| ENCLOSURE RATING IP 40 X | | | | | | | | | | | | |
| MAX ROTATION SPEED 6000 rpm 6 | | | | | | | | | | | | |
| OUTPUT TYPE radial cable (standard length 0,3 m) PR preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5) | | | | | | | | | | | | |
| VARIANT custom version XXX | | | | | | | | | | | | |

36K



* \varnothing 4 mm torque pin min 0.5mm from bottom end

for size 15 Resolver flange please refer to Accessories

recommended mating shaft tolerance g6
dimensions in mm

ELECTRICAL SPECIFICATIONS

| | |
|--|---|
| Incremental resolution | from 500 to 1024 ppr |
| Power supply¹ | 4,5 ... 5,5 V DC |
| Current consumption without load | 150 mA max |
| Max load current | 20 mA / channel (line driver RS-422) 30 mA / channel (NPN open collector) |
| Electrical interface for incremental signals² | line driver RS-422 (AELT-5000 or similar) |
| Electrical interface for Hall phases² | NPN open collector (pull-up max +30V DC) line driver RS-422 (AELT-5000 or similar) |
| Max output frequency | 150 kHz |
| Mean time to dangerous failure (MTTF)³ according to EN ISO 13849-1 | 300 years |
| Mission time (Tm)³ | 20 years |
| Diagnostic coverage (DC)³ | 0% |
| Counting direction | A leads B clockwise (shaft view) |
| Index signal | 180°e (gated A) |
| Cable type | shielded - fixed installation conductors section 0,14 mm ² / AWG 26 bending radius min 50 mm |
| Electromagnetic compatibility | according to 2014/30/EU directive |
| RoHS | according to 2011/65/EU directive |
| UL / CSA | file n. E212495 |

RESOLUTIONS

500 4 / 6 poles
512 4 / 6 poles
1000 6 / 8 poles
1024 4 / 6 / 8 poles

please directly contact our offices for other pulses

MECHANICAL SPECIFICATIONS

| | |
|--|---|
| Bore diameter | \varnothing 8 / 9,52 (3/8") / 10 mm |
| Enclosure rating | IP 40 (IEC 60529) |
| Max rotation speed | 6000 rpm |
| Shock | 50 G, 11 ms (IEC 60068-2-27) |
| Vibration | 5 G, 10 ... 500 Hz (IEC 60068-2-6) |
| Moment of inertia | 0,5 x 10 ⁻⁶ kgm ² (12 x 10 ⁻⁶ lbf ²) |
| Starting torque (at +20°C / +68°F) | < 0,01 Nm (1,42 Ozin) |
| Bearing stage material | aluminum |
| Shaft material | stainless steel |
| Housing material | aluminum |
| Bearings | n.2 ball bearings |
| Bearings life | 10 ⁹ revolutions |
| Operating temperature^{4,5} | -10° ... +85°C (+14° ... +185°F) |
| Storage temperature⁵ | -25° ... +85°C (-13° ... +185°F) |
| Weight | 150 g (5,29 oz) |

¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ this product is not a safety component, for further details refer to TECHNICAL BASICS section

⁴ measured on the transducer flange

⁵ condensation not allowed

CONNECTIONS

| Function | Cable |
|----------|----------------|
| +V DC | red |
| 0 V | black |
| A+ | green |
| B+ | yellow |
| Z+ | blue |
| A- | brown |
| B- | orange or pink |
| Z- | white |
| U+ | grey |
| V+ | violet |
| W+ | grey-pink |
| U- | red-blue |
| V- | white-green |
| W- | brown-green |
| ⏏ | shield |