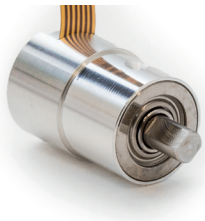
E OI R007 Series

E OI R007 C0128 CSV0 SA CMOS FC1



Features

- Highly precise optical miniature rotary encoder
- Singleturn, incremental
- 3 channels: 2 pulse tracks, 1 index pulse
- Low power consumption
- Easy assembly
- Aluminum housing
- Stainless steel shaft
- Two precision miniature ball bearings
- Simple mounting with grub screw

Electrical data

Supply voltage (DC)	3,5 V...6 V
Supply current	2 mA...6 mA
Output drive current (at 4,5 V)	typ. 5 mA
Speed (mechanically permissible maximum speed)	85 000 rpm
Pulse count/revolution (signal edges)	128 (512)
Channel Z (index)	1
Duty cycle for A and B	50 % ±5 %
Phase shift between A to B (Φ)	typ. 90 °e ±25 °e
Pulse width index (Z)	90 °e ±10 °e
Signal rise time	100 ns
Signal fall time (R=1 kΩ, C=0,47 pF)	100 ns
Interface	CMOS/TTL

Mechanical data

Weight	1,2 g
Radial Load	max. 3 N
Axial Load	max. 1 N

A general indication of the service life cannot be given due to the many influencing factors of the ambient conditions (operating mode, speed, vibrations, operating temperature, shaft loads, type of mounting etc.).

Environmental Specifications

Operational temperature	-20 °C to 85 °C
Storage temperature	-20 °C to 85 °C
Relative humidity (without condensation)	85 %
IP protection	IP 50

Tests, Regulations

Burst (IEC 61000-4-4)	±1 kV
ESD (IEC 61000-4-2)	±4 kV / ±8 kV
Shock stability (IEC 60068-2-27)	half sine wave, 3 x 50g, 11 ms
Vibration resistance (IEC 60068-2-6)	5 Hz - 120 Hz Amp. 1 mm, 9 min 1 mm, 9 min

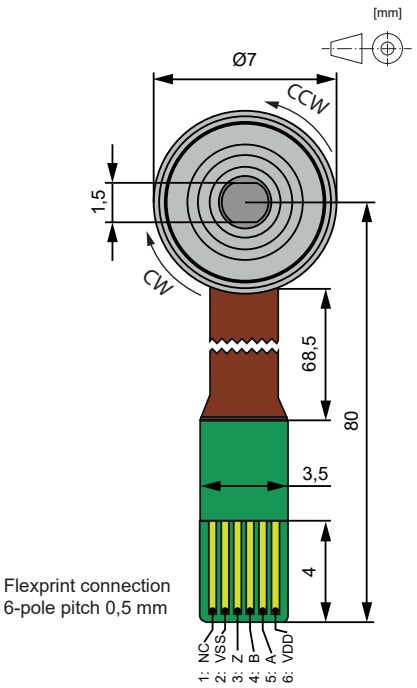
Connection and Installation

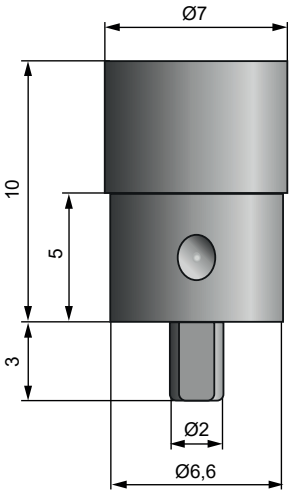
Flex print connector	type ZIF/LIF 6-pole pitch 0,5
Fastening with grub screw M3 x 5 mm	
Torque secured with bolt adhesive	max. 0,3 Nm

Options

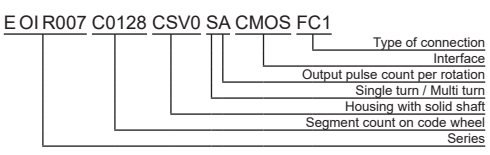
Adaptation to customer-specific features possible.

Dimensions

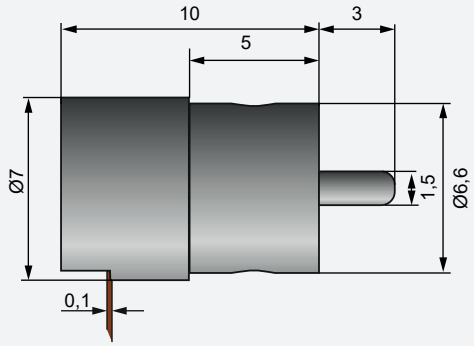




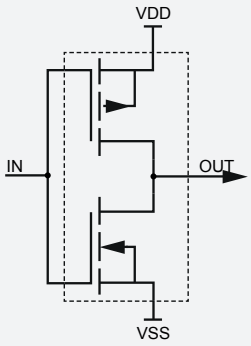
Product Key



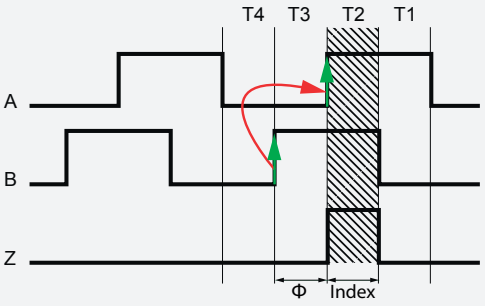
Dimensions



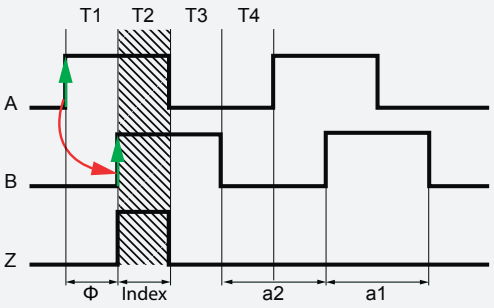
Output Diagram (per Channel A, B and Z)



Signal Diagram CW



Signal Diagram CCW



Duty Cycle = $\frac{a1}{a1 + a2}$ x 100%

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