

Features

- Optical miniature encoder system
- Singleturn, incremental
- 3 channels: 2 pulse tracks, 1 reference puls
- Unique code wheel with high-precision optics
- Flexprint connection
- Requiring very little installation space
- Low power consumption
- Easy assembly
- Low sensitivity to installation tolerances

Electrical Specifications (after calibration)

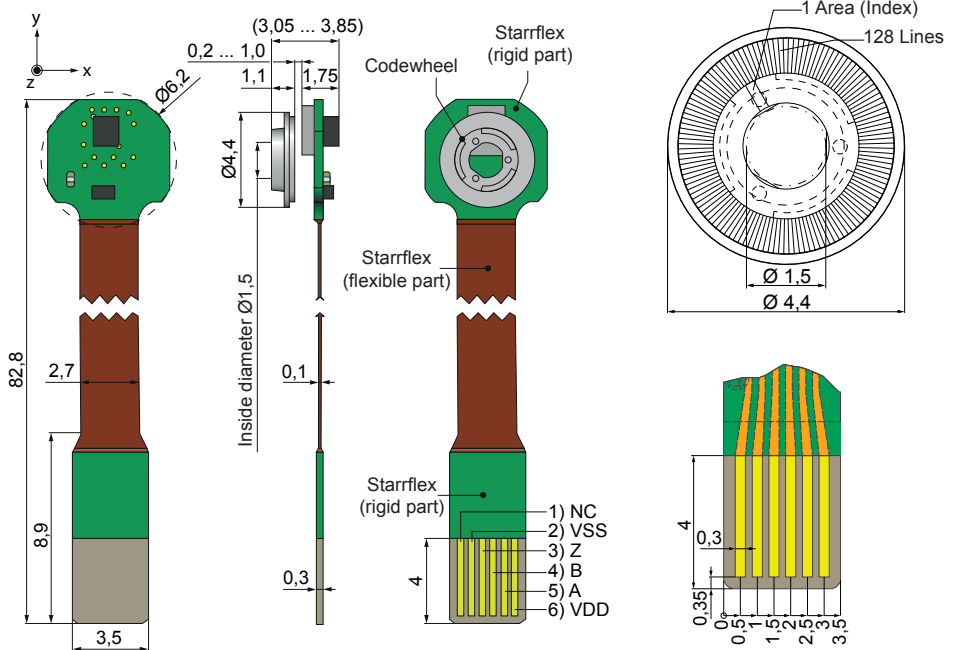
Supply voltage (DC)	3 V...6 V
Supply current*	2 mA...6 mA
Output short circuit current (max.)	30 mA
Output drive current (at 4,5 V)	typ. 5 mA
Rotational speed**	50000 min ⁻¹
Pulse frequency (max.)	1000 kHz
Signal rise time (max.)	300 ns
Signal fall time (max.)	300 ns
(R _i = 1 kΩ, C _i = 47 pF)	
Pulse count per revolution per channel A, B	128
Pulse count per revolution channel Z	1
Interface	CMOS/TTL
Duty cycle for A and B	50 % ±5 %
Phase shift between A to B***	typ. 90 °e ±30 °e

*valid for typical distance of 0,3 mm between code wheel / sensor

**higher rotational speed on request

***see table for tolerances

Dimensions and Pin Configuration



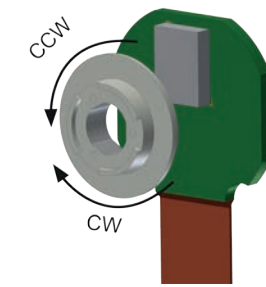
All dimensions in mm
Detailed dimensions on request

Recommended connector:
0,5 mm ZIF / LIF (thickness 0,3 mm)

Mechanical Specifications Code Wheel

Diameter sensor head	6,2mm
Outer diameter code wheel	4,4 mm
Inside diameter code wheel	1,5 mm
Thickness code wheel	1,1 mm
Line count on code wheel	128
Position tolerances	see table for tolerances

Toleranzen



CW Clockwise
CCW Counter-clockwise

Distance code wheel / sensor in mm	Permissible position tolerance code wheel / sensor in mm		Max. phase shift A / B in °e
	X-Orientation	Y-Orientation	
0,20 - 0,40	±0,10	±0,05	90 ± 5
0,20 - 0,40	±0,15	±0,10	90 ± 10
0,20 - 0,40	±0,20	±0,15	90 ± 25
0,41 - 0,70	±0,15	±0,05	90 ± 5
0,41 - 0,70	±0,15	±0,10	90 ± 10
0,71 - 1,00	±0,15	±0,05	90 ± 5

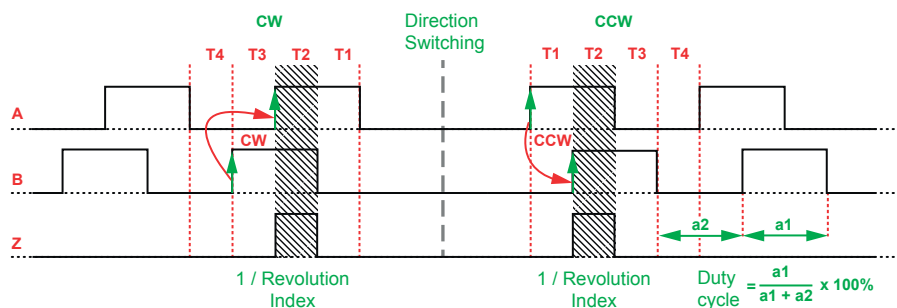
Environmental Specifications

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

Tests and Regulations

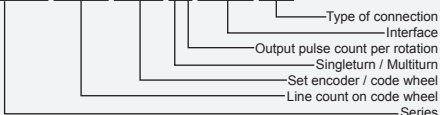
Burst (EN-61000-4-4)	±1 kV
ESD (EN-61000-4-2)	±4 kV / ±8 kV
Shock stability (EN 60068-2-27)	half sine wave, 30g, 6 ms
Vibration resistance (EN 60068-2-6)	5 Hz - 120 Hz Amp. 1 mm, 9 min
Isolation values	on request

Signal Diagram



Product Key

E OI R007 C0128 DSET SA CMOS FC1



Options

In preparation

Accessories

Calibration device (EFI-Board)