

Absolute encoders - SSI

Cone shaft

Optical singleturn encoders

EFL580 - SSI



EFL580 with cone shaft

Features

- Encoder singleturn / SSI
- Optical sensing method
- Resolution: singleturn 13 bit
- Additional incremental signals 2048 sine periods
- Cone shaft
- Operating temperature max. +105 °C

Optional

- Alternative connection technology

Technical data - electrical ratings

Voltage supply	5 VDC ±10 %
Reverse polarity protection	Yes
Consumption w/o load	≤50 mA
Initializing time typ.	20 ms after power on
Interfaces	SSI, SinCos
Function	Singleturn
Steps per turn	8192 / 13 bit
Incremental output	2048 sinewaves A, B, sine 1 Vpp
Sensing method	Optical
Code	Gray
Code sequence	CW/CCW coded by connection
Inputs	SSI clock Zero setting input
Output stages	SSI data: linedriver RS485
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Approval	UL approval / E63076

Technical data - mechanical design

Size (flange)	ø58 mm
Shaft type	9.25 mm cone shaft (1:10)
Protection DIN EN 60529	IP 64
Operating speed	≤6000 rpm (electric)
Rotor moment of inertia	20 gcm ²
Materials	Housing: aluminium Flange: aluminium
Operating temperature	-25...+105 °C
Relative humidity	95 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 30 g, 16-2000 Hz DIN EN 60068-2-27 Shock 200 g, 3 ms
Weight approx.	620 g (5 m cable)
Connection	Cable 5 m with D-SUB, 15-pin

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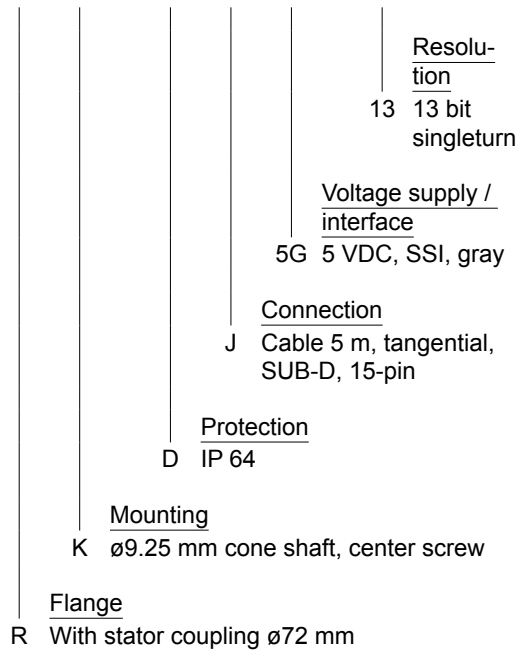
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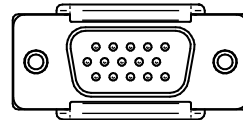
Part number

EFL580.C **R** **K** . **D** **J** **5G** . **13** **009**

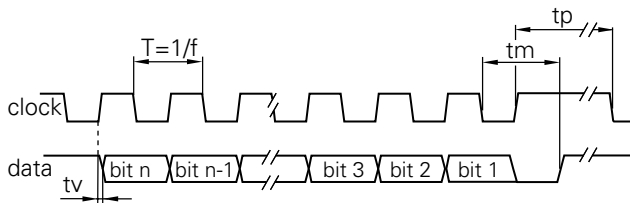


Terminal assignment

Connector	Assignment
Pin 1	A
Pin 2	A inv.
Pin 3	B
Pin 4	B inv.
Pin 5	Data+
Pin 6	Data-
Pin 7	–
Pin 8	Zero
Pin 9	–
Pin 10	–
Pin 11	Clock+
Pin 12	Clock-
Pin 13	UB
Pin 14	GND
Pin 15	–



Data transfer



Clock frequency f	62.5...1500 kHz
Duty cycle of T	40...60 %
Delay time tv	150 ns
Monoflop time tm	26 µs + T/2
Clock interval tp	30 µs

Trigger level

SSI	Circuit
SSI-Clock	RS422 Terminating resistor 220 Ω
SSI-Data	RS422

Control input	Input circuit
Input level High	>0.7 UB
Input level Low	<0.3 UB
Input resistance	10 kΩ

Outputs	Sine / Cosine
Output level	1 Vpp ±10 %
Load	<10 mA

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Dimensions

