



### Model Number

ENA58IL-S10C4E-1416B17-RH5

### Features

- Solid shaft
- 30 Bit multiturn
- Free of wear magnetic sampling
- High resolution and accuracy
- Mechanical compatibility with all major encoders with fieldbus interface

### Description

The ENA58IL series are high precision encoders with internal magnetic sampling.

## Technical Data

### General specifications

Detection type	magnetic sampling
Device type	Absolute encoders
Linearity error	$\leq \pm 0.1^\circ$

### Functional safety related parameters

MTTF <sub>d</sub>	130 a at 40 °C
Mission Time (T <sub>M</sub> )	12 a
L <sub>10</sub>	55 E+8 revolutions at 40/110 N axial/radial shaft load
Diagnostic Coverage (DC)	0 %

### Electrical specifications

Operating voltage U <sub>B</sub>	10 ... 30 V DC
Power consumption P <sub>0</sub>	approx. 3 W
Time delay before availability t <sub>v</sub>	< 250 ms
Output code	binary code
Code course (counting direction)	programmable, cw ascending (clockwise rotation, code course ascending) cw descending (clockwise rotation, code course descending)

### Interface

Interface type	PROFINET IO
Resolution	
Single turn	up to 16 Bit
Multiturn	up to 14 Bit
Overall resolution	up to 30 Bit
Transfer rate	100 MBit/s
Cycle time	$\geq 1$ ms

### Connection

Terminal compartment	Connection cover with radial cable outlet, with 2 threads M20 for cable glands
----------------------	--

### Standard conformity

Degree of protection	DIN EN 60529, IP66, IP67
Climatic testing	DIN EN 60068-2-3, no moisture condensation
Emitted interference	EN 61000-6-4:2007
Noise immunity	EN 61000-6-2:2005
Shock resistance	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 1000 Hz

### Ambient conditions

Operating temperature	-40 ... 70 °C (-40 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	98 % , no moisture condensation

### Mechanical specifications

Material	
Housing	stainless steel V4A
Flange	stainless steel V4A
Shaft	stainless steel V4A
Mass	approx. 1000 g
Rotational speed	max. 3000 min <sup>-1</sup>
Moment of inertia	50 gcm <sup>2</sup>
Starting torque	< 5 Ncm
Shaft load	
Axial	40 N
Radial	110 N



**Electrical Connection**

Terminal	PWR	Port 2	Port 1
Tx +		Tx +: Transmission Data +	Tx +: Transmission Data +
Rx +		Rx +: Receive Data +	Rx +: Receive Data +
Tx -		Tx -: Transmission Data -	Tx -: Transmission Data -
Rx -		Rx -: Receive Data -	Rx -: Receive Data -
PWR+	Supply voltage+U <sub>B</sub>		
PWR-	0 V		

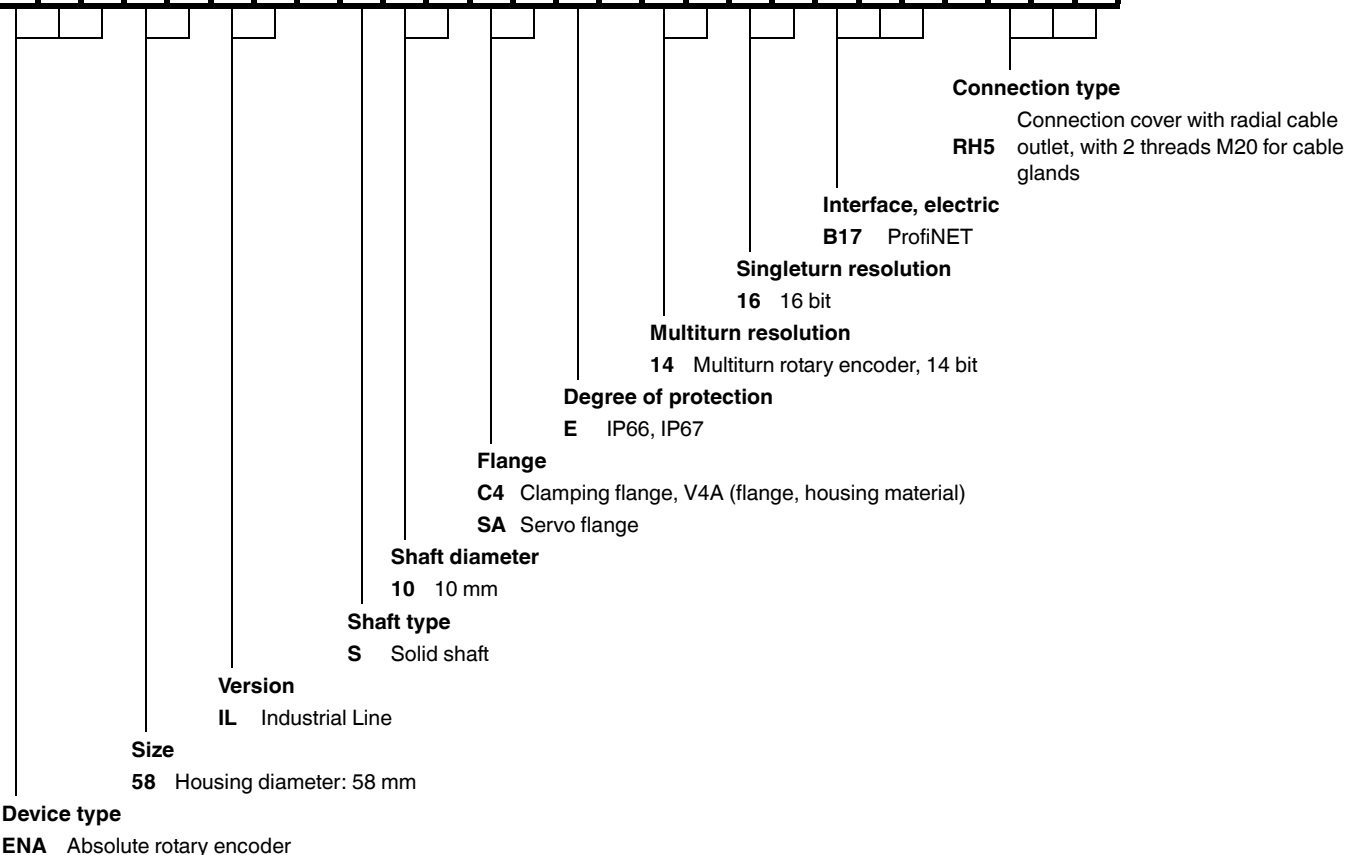
Port 2		Port 1		PWR	
Tx+	Tx-	Tx+	Tx-	-	+
Rx+	Rx-	Rx+	Rx-	-	+

-	+
PWR	

**Model number**

**E N A 5 8 I L - S 1 0 C 4 E - 1 4 1 6 B 1 7 - R H 5**



Release date: 2019-04-30 14:47 Date of issue: 2019-04-30 310873\_eng.xml