

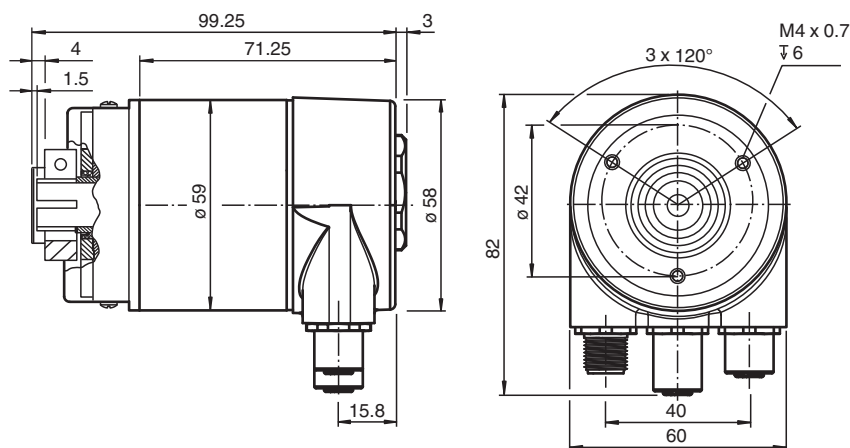


Multiturn absolute encoder ESM58N-F1AIZR0BY-1213:01

- Industrial standard housing Ø58 mm
- EtherNet/IP
- 25-bit multiturn
- Recessed hollow shaft
- Compatible with Rockwell/ Allen Bradley/ Schneider control
- Mechanical compatibility with all major encoders with fieldbus interface
- Rotary axis functionality
- Status LEDs



Dimensions



Technical Data

General specifications

Detection type	photoelectric sampling
Device type	Multiturn absolute encoder

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
Power consumption	P_0	max. 4 W
Linearity		± 0.5 LSB (12 Bit)
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	EtherNet/IP
Resolution	
Single turn	13 Bit
Multiturn	12 Bit
Overall resolution	25 Bit
Physical	Ethernet

Release date: 2022-12-08 Date of issue: 2022-12-12 Filename: 70124434_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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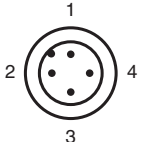
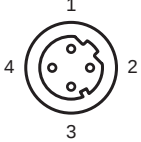
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 **PEPPERL+FUCHS**

Technical Data

Transfer rate		100 MBit/s
Connection		
Connector		Ethernet: 2 sockets M12 x 1, 4-pin, D-coded Supply: 1 plug M12 x 1, 4-pin, A-coded
Standard conformity		
Degree of protection		DIN EN 60529, shaft side: IP64 housing side: 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 ... 2000 Hz
Approvals and certificates		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
Ambient conditions		
Operating temperature		-40 ... 60 °C (-40 ... 140 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Material		housing: powder coated aluminum flange: aluminum shaft: stainless steel
Mass		approx. 370 g
Rotational speed		max. 12000 min ⁻¹
Moment of inertia		30 gcm ²
Starting torque		≤ 3 Ncm (version without shaft seal)
Shaft load		
Angle offset		± 0.9 °
Axial offset		static: ± 0.3 mm, dynamic: ± 0.1 mm
Radial offset		static: ± 0.5 mm, dynamic: ± 0.2 mm

Connection

Pin	Male connector M12 x 1, 4-pin, A-coded	Female connector M12 x 1, 4-pin, D-coded
1	Supply voltage +U _B	Tx +
2	-	Rx +
3	0 V	Tx -
4	-	Rx -
		

Indication

Diagnostic LEDs

LED	Color	Description for LED = ON
Active1	Yellow	Incoming and outgoing data traffic for port 1
Link1*	Green	Connection to other Ethernet devices on port 1
Active2	Yellow	Incoming and outgoing data traffic for port 2
Link2*	Green	Connection to other Ethernet devices on port 2
Stat1	Green	Status 1, details see table below
Stat2	Red	Status 2, details see table below

* flashes with 2 Hz if engineering identification call is activated and link connection is available

Stat1 (green)	Stat2 (red) bus failure	Meaning	Cause
off	off	No power	
on	on	No connection to another device Criteria: no data exchange	- bus disconnected - Master not available / switched off
on	flashes ¹⁾	Parameterization fault, no data exchange Criteria: data exchange correct. However, the slave did not switch to the data exchange mode.	- Slave not configured yet or wrong configuration - Wrong station address assigned (but not outside the permitted range) - Actual configuration of the slave differs from the nominal configuration
on	off	Data exchange. Slave and operation ok.	

1) flashing frequency 0.5 Hz for at least 3 seconds