



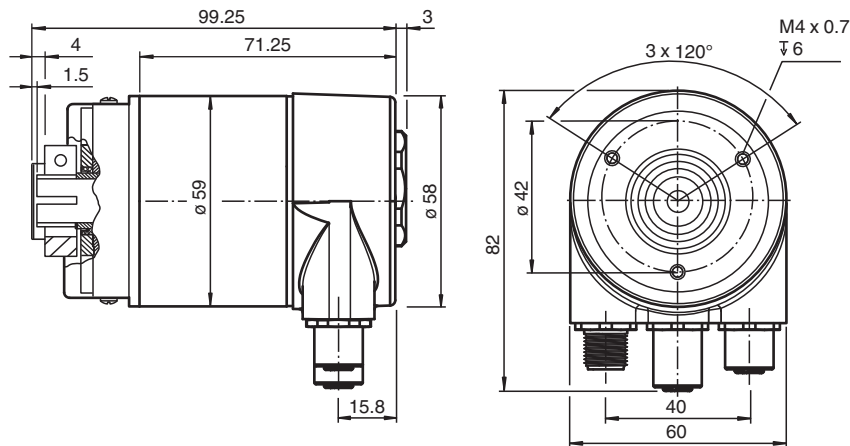
Multitrans absolute encoder

ESM58N-F1AIZR0BY-1213:01

- Industrial standard housing Ø58 mm
- EtherNet/IP
- 25-bit multitrans
- 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

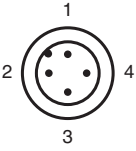
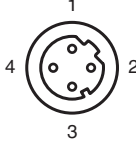
General specifications		
Detection type		photoelectric sampling
Device type		Multitrans absolute encoder
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Power consumption	P_0	max. 4 W
Linearity		± 0.5 LSB (12 Bit)
Output code		binary code
Code course (counting direction)		programmable, cw ascending (clockwise rotation, code course ascending) cw descending (clockwise rotation, code course descending)
Interface		
Interface type		EtherNet/IP
Resolution		
Single turn		13 Bit
Multitrans		12 Bit
Overall resolution		25 Bit
Physical		Ethernet

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

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	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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