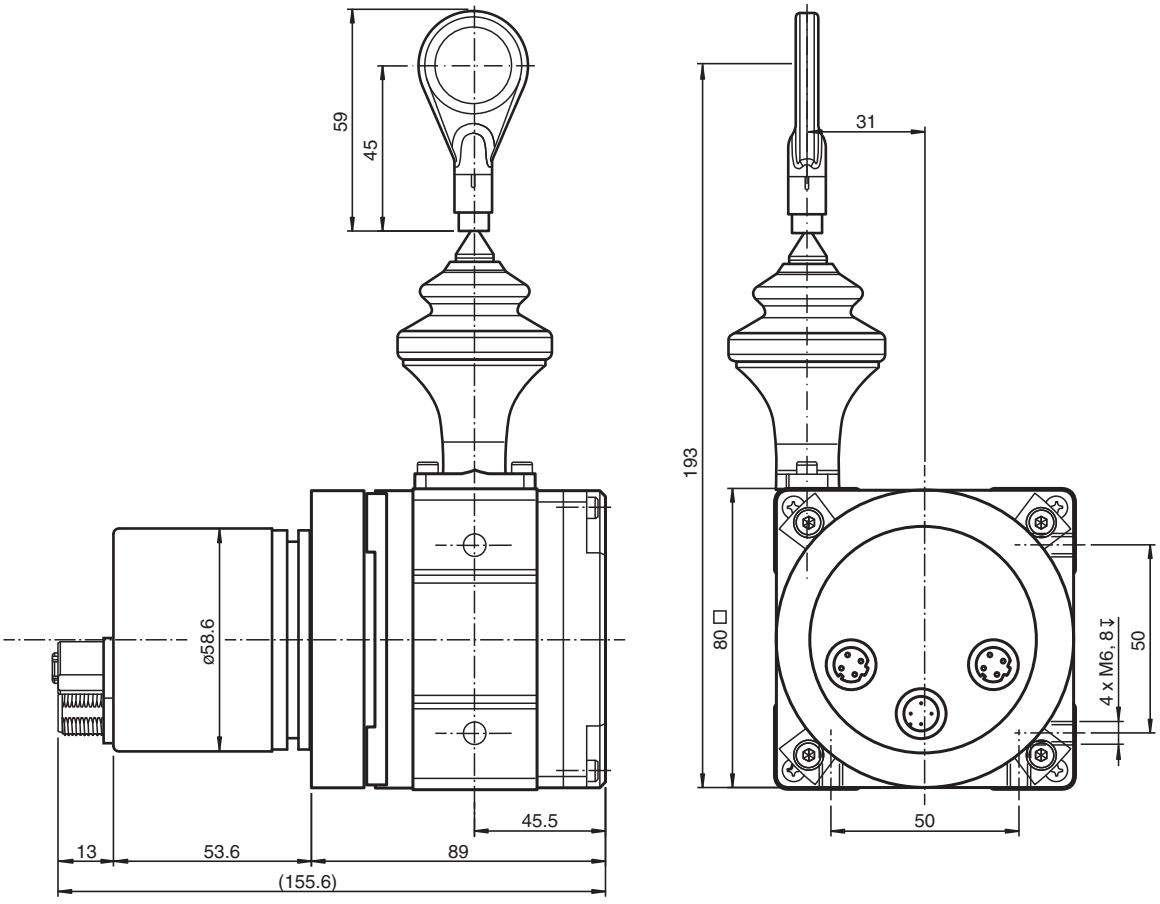
Cable pull rotary encoder
ECA21IL-02A1A-B17BP:NN

- Robust aluminum drum housing
- Bellows with steel tip
- Rust and acid-resistant measuring cable
- Resolution: 13 singleturn, 12 bit multiturn

Cable pull rotary encoder with PROFINET IO interface

Dimensions



Technical Data

General specifications	
Detection type	magnetic sampling
Device type	Cable pull rotary encoder with PROFINET IO interface
Measuring range	2000 mm
Construction type	80 mm
Resolution	Cable pull: Design 80 mm: 0.024 mm Encoder: 25 Bit (13 Bit/revolution)

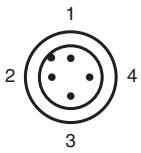
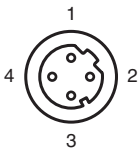
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Technical Data

Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
No-load supply current	I_0	≥ 350 mA
Power consumption	P_0	approx. 4 W
Time delay before availability	t_v	< 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		13 Bit
Multiturn		12 Bit
Overall resolution		25 Bit
Transfer rate		max. 100 MBit/s
Cycle time		≥ 1 ms
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		acc. DIN EN 60529
Connection side		Encoder: IP65 Cable pull: IP64
Climatic testing		DIN EN 60068-2-3, no moisture condensation
Emitted interference		EN 61000-6-4:2007
Noise immunity		EN 61000-6-2:2005
Ambient conditions		
Ambient temperature		-30 ... 70 °C (-22 ... 158 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)
Relative humidity		98 % , no moisture condensation
Mechanical specifications		
Rope diameter		0.55 mm
Drum perimeter		230 mm
Retraction speed		4 m/s
Spring retraction force		8 ... 14 N
Material		
Housing		aluminum, coated
Cable pull		anodized aluminum
Flange		anodized aluminum
Rope		Stainless steel 1.4401/316
Mass		1400 g
Life span		up to 10^6 Cycles

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Connection

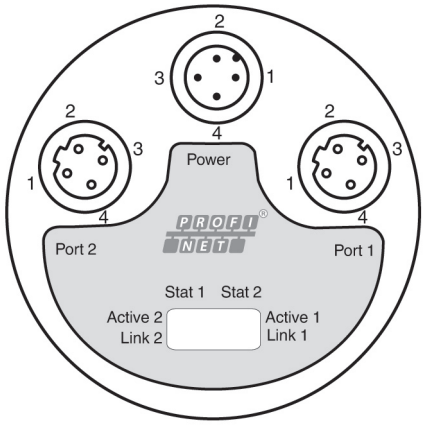
Pin	Male connector M12 x 1, 4-pin, A-coded	Female connector M12 x 1, 4-pin, D-coded
1	Supply voltage +U_B	Tx +
2	-	Rx +
3	0 V	Tx -
4	-	Rx -
		

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

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