



Cable pull rotary encoder ECA10TL - PROFINET

- Solid yet lightweight plastic construction
- Compact, slim design (the shaft of the mounted rotary encoder is used to provide the function of the drum bearing)
- Coupling-free adaptation
- Wide range of mounting options
- Rust and acid-resistant measuring cable
- Very high level of linearity and repeatability
- PROFINET interface
- Free of wear magnetic sampling

Cable pull rotary encoder with PROFINET interface

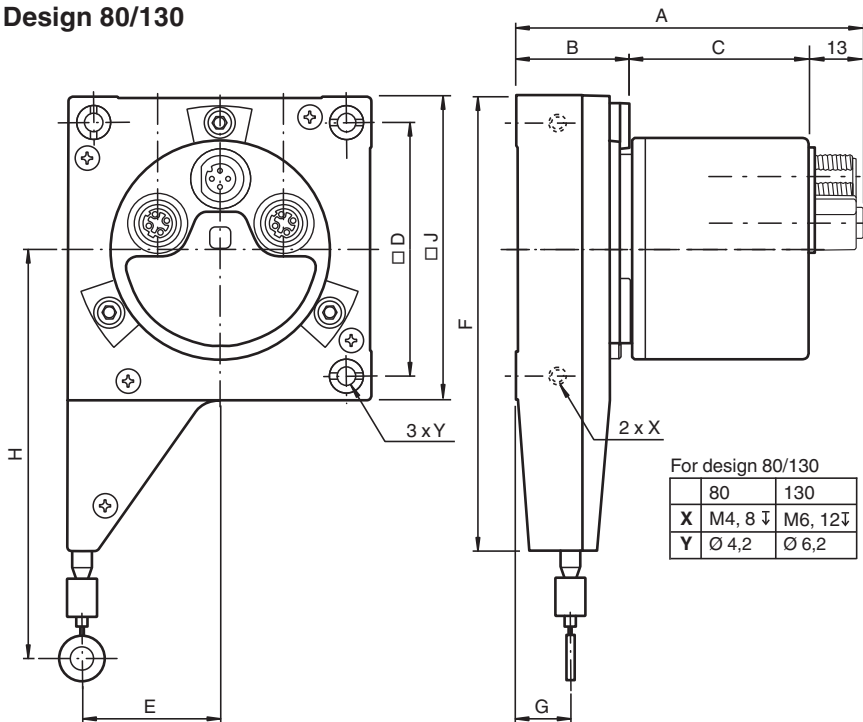


Function

Lighter and more solid cable pull rotary encoder with flat housing design.

Dimensions

Design 80/130



Release date: 2022-12-12 Date of issue: 2022-12-12 Filename: t178005_eng.pdf

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

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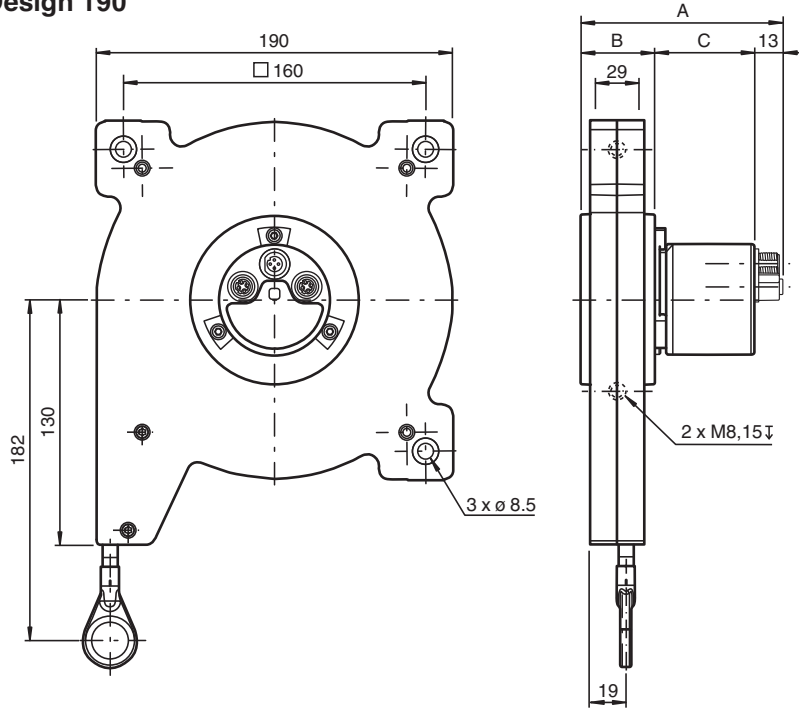
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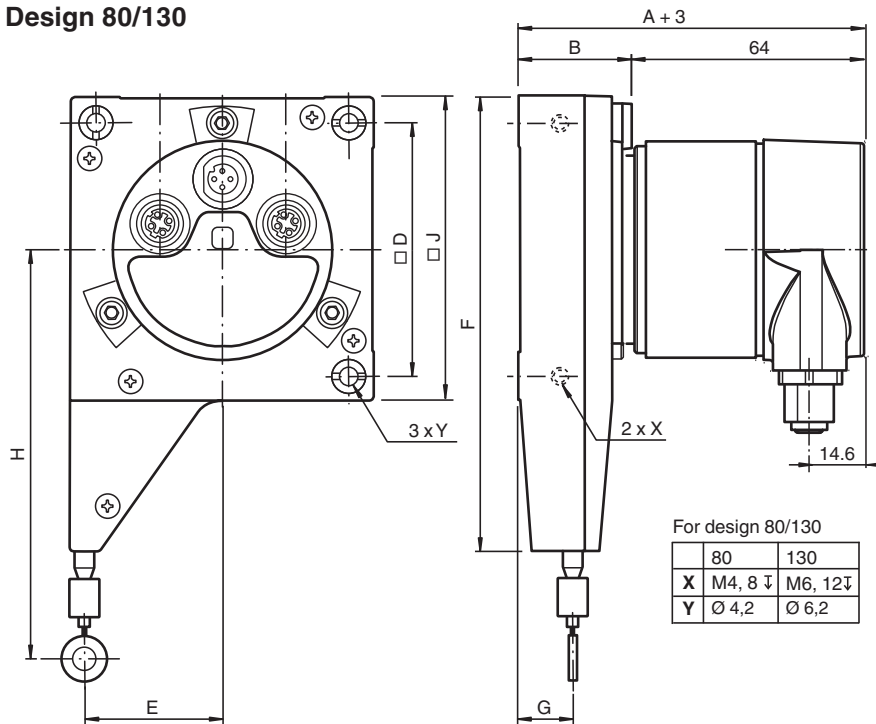
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Dimensions

Design 190



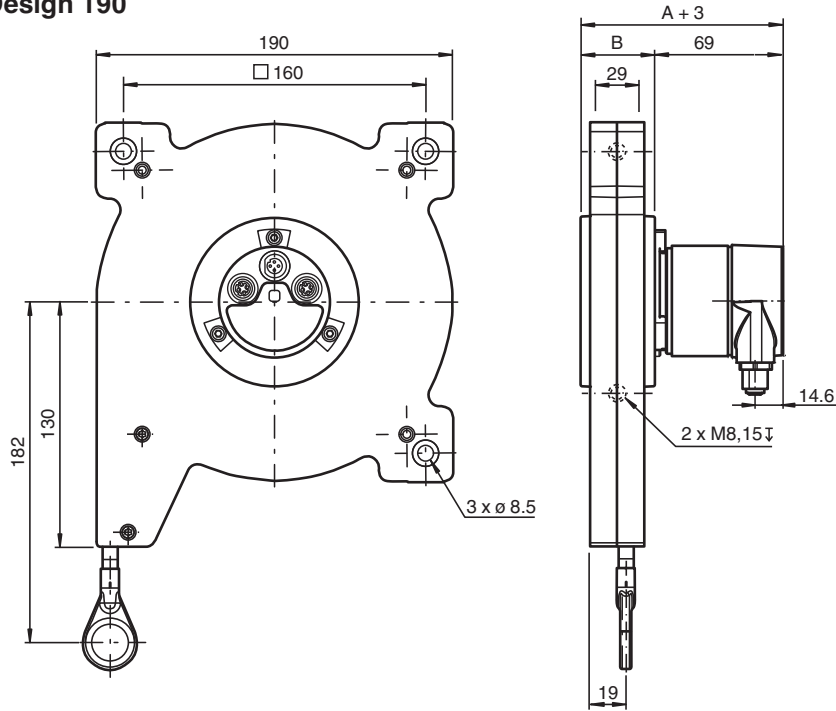
Design 80/130



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Dimensions

Design 190



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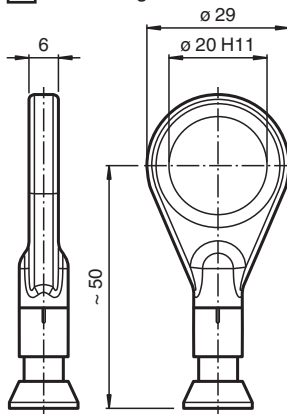
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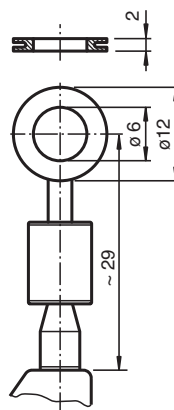
Dimensions

Cable mounts

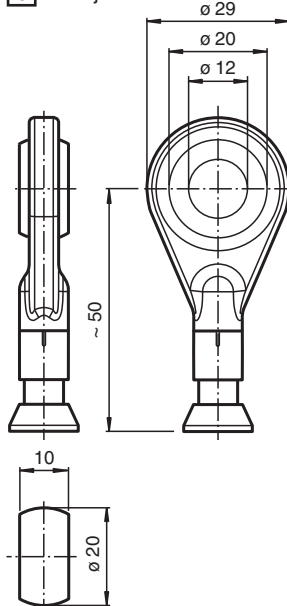
A Brass ring PE



B Ring



C Ball joint



Technical Data

General specifications

Detection type	magnetic sampling	
Device type	Target line with PROFINET interface	
Measuring range	3000 ... 10000 mm	
Construction type	80 mm, 130 mm, 190 mm	
Resolution	Cable pull: 80 mm design: 0,028 mm 130 mm design: 0,047 mm 190 mm design: 0,068 mm Encoder: 25 Bit (13 Bit/revolution)	

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
Power consumption	P_0	approx. 4 W
Output code	binary code	
Code course (counting direction)	adjustable	

Interface

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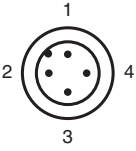
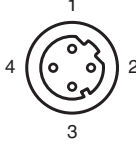
 **PEPPERL+FUCHS**

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	acc. DIN EN 60529
Connection side	connector models: IP65 Cable pull: IP50
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)
Operating 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
Material	
Housing	nickel-plated steel , painted
Cable pull	design 80/130 : Luranyl® or Lexan 920 design 190 : ABS-GF17
Flange	Aluminum
Rope	Stainless steel 1.4401/316
Life span	up to 10 ⁶ Cycles

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 -

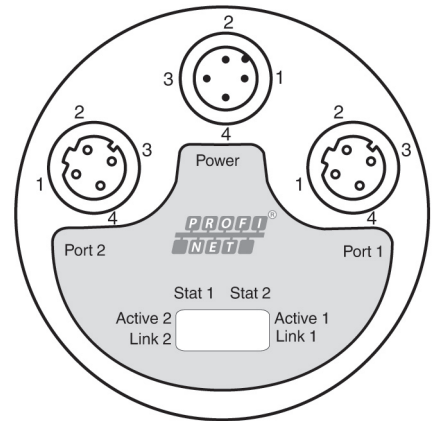
	
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Indication

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

Dimensions

Variable Data and Dimensions

Technical data	Design 80	Design 130	Design 190
Measuring length (in m)	03	05	10
Drum size (incl. cable) (in mm)	230	385	555

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Retraction speed (in m/s)	6	3	4
Spring retraction force (in N)	5-6.3	4.5-7	9-12
Weight (in kg)	0.55	1.1	2.2
Rotary encoder Ø (in mm)	58		
Dimensions (in mm)			
A	91	93	106
B	30	32	40
C	48	48	53
D	67	110	-
E	36	61	-
F	120	186	-
G	14,5	17	-
H	106	150	-
J	80	130	

Type Code

Model Number



- Electrical connection**
- BP** 2 Sockets/ 1 x M12 plug, axial
- AZ** 2 Sockets/ 1 x M12 plug, radial
- Electrical interface**
- B17** PROFINET
- Cable mounts**
- A** Ring PE carrier (with 10 m only)
- B** Eyelet
- C** Ball joint (with 10 m only)
- Length of measuring cable**
- 03** 3 m
- 05** 5 m
- 10** 10 m

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