



### Model Number

#### ECA10TL - PROFINET

Cable pull rotary encoder with PROFINET interface

### Features

- **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**

### Description

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

## 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

Transfer rate	100 MBit/s
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### Connection

Connector	Ethernet: 2 sockets M12 x 1, 4-pin, D-coded Supply: 1 plug M12 x 1, 4-pin, A-coded
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### 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

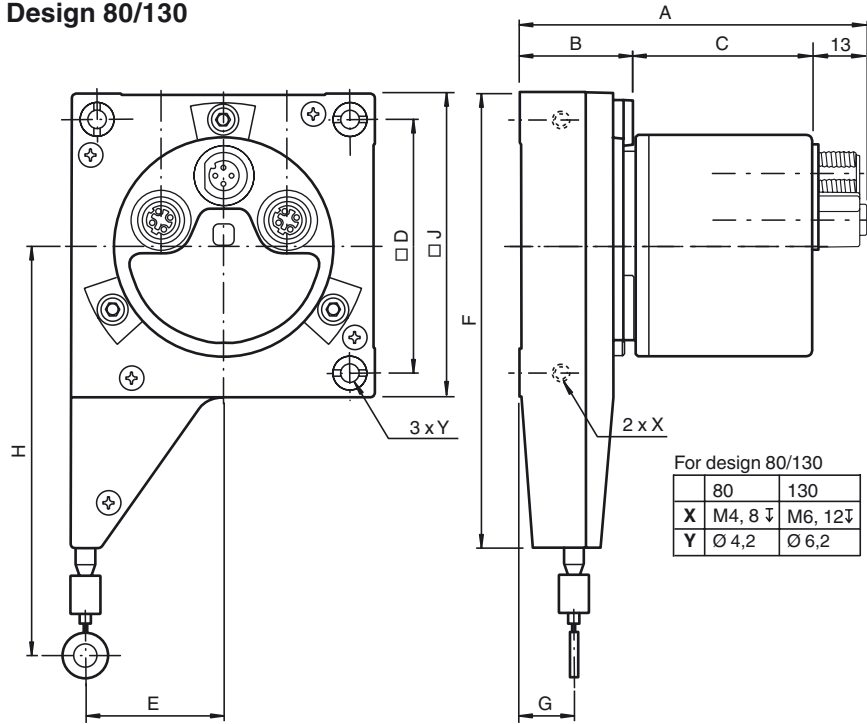
Ambient temperature	-30 ... 70 °C (-22 ... 158 °F)
Operating temperature	-30 ... 70 °C (-22 ... 158 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)
Relative humidity	98 % , no moisture condensation

### Mechanical specifications

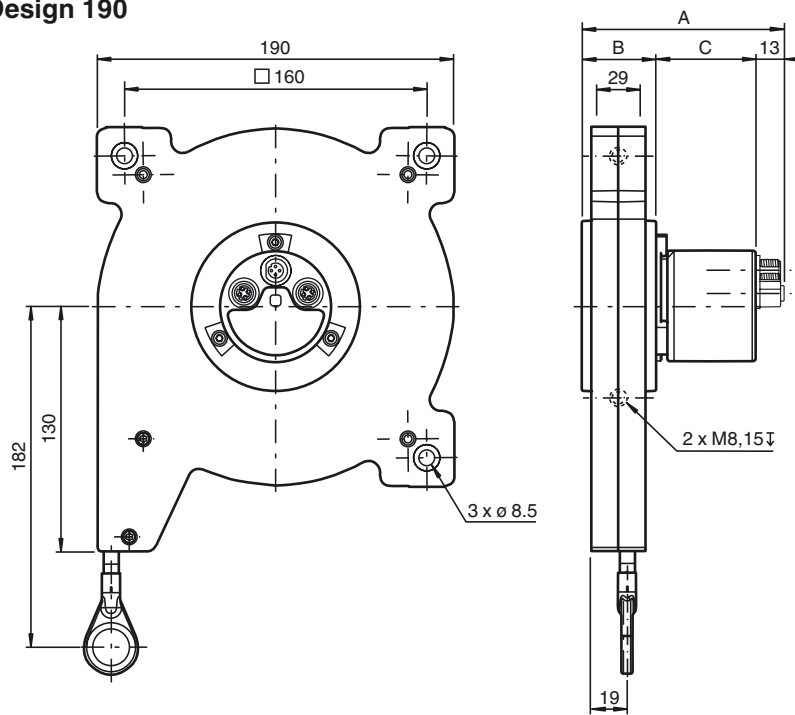
Rope diameter	0.55 mm
Material	
Housing	nickel-plated steel , painted
Cable pull	design 80/130 : Luranyl® or Lexan 920 design 190 : ABS-GF17
Flange	Aluminum
Rope	Stainless steel 1.4401/316
Life span	up to 10 <sup>6</sup> Cycles

Dimensions

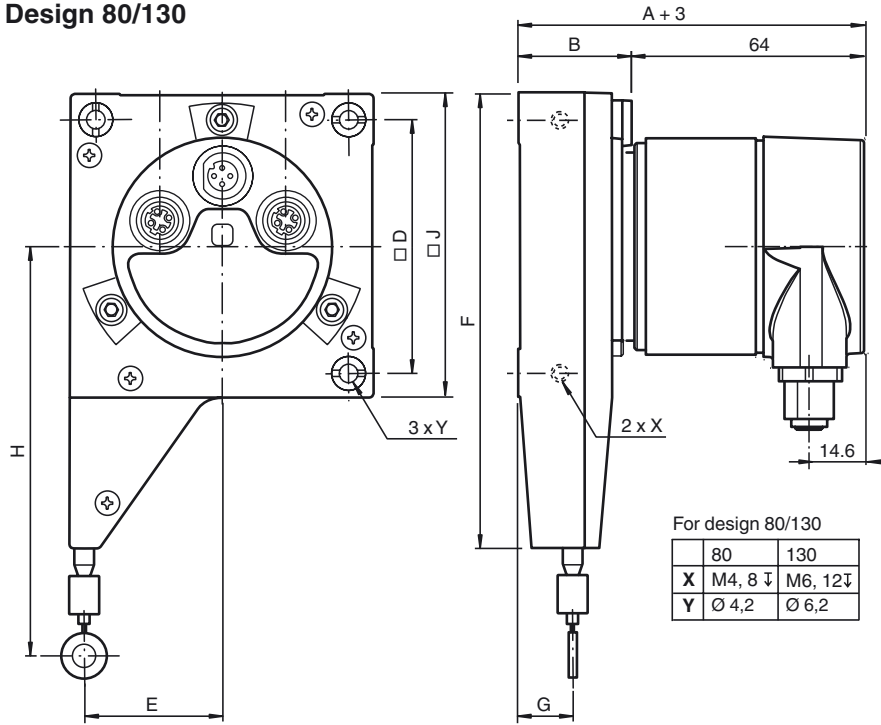
Design 80/130



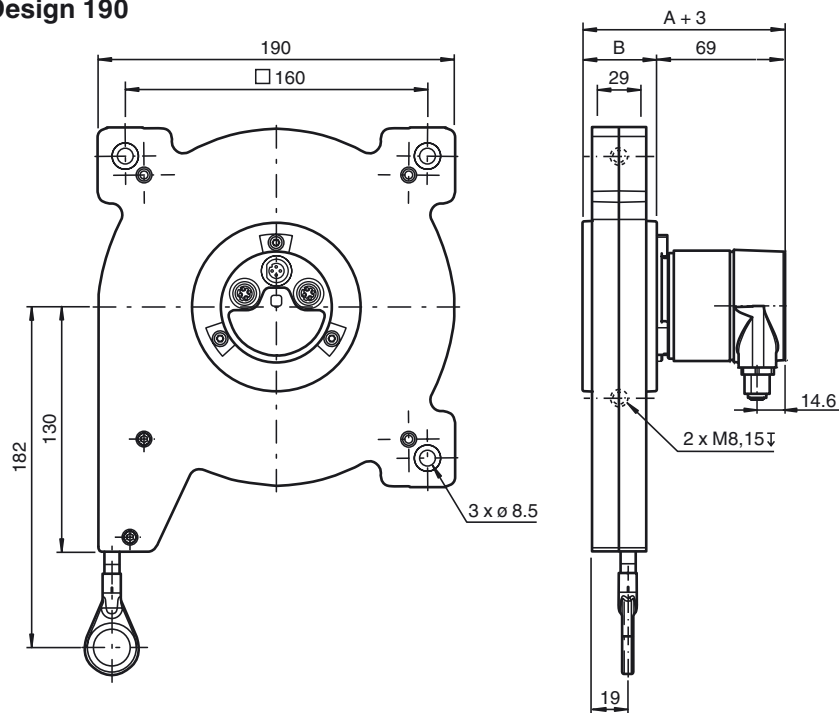
Design 190



**Design 80/130**



**Design 190**



Release date: 2019-07-10 14:03 Date of issue: 2019-07-10 1178005\_eng.xml

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

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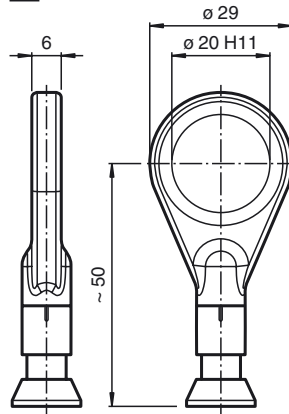
USA: +1 330 486 0001  
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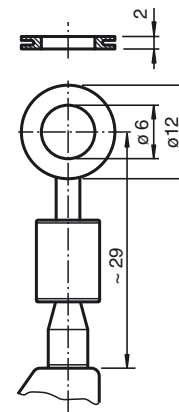
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**Cable mounts**

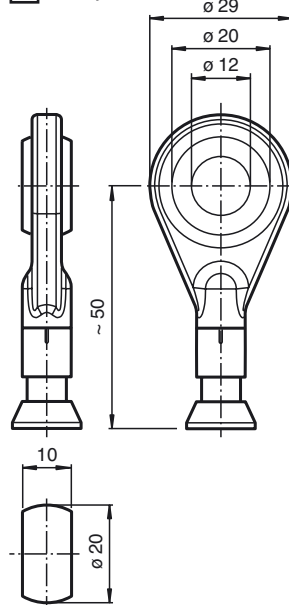
**A** Brass ring PE



**B** Ring



**C** Ball joint



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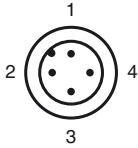
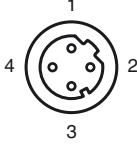
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**Electrical connection**

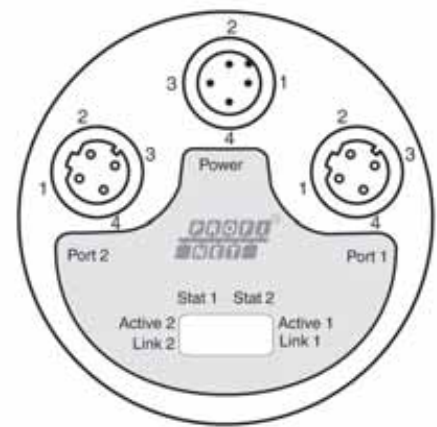
Pin	Male connector M12 x 1, 4-pin, A-coded	Female connector M12 x 1, 4-pin, D-coded
1	Supply voltage +U <sub>B</sub>	Tx +
2	-	Rx +
3	0 V	Tx -
4	-	Rx -
		

**Indicators**

**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"> <li>bus disconnected</li> <li>Master not available / switched off</li> </ul>
on	flashes <sup>1)</sup>	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"> <li>Slave not configured yet or wrong configuration</li> <li>Wrong station address assigned (but not outside the permitted range)</li> <li>Actual configuration of the slave differs from the nominal configuration</li> </ul>
on	off	Data exchange. Slave and operation ok.	

1) flashing frequency 0.5 Hz for at least 3 seconds

**Variable Data and Dimensions**

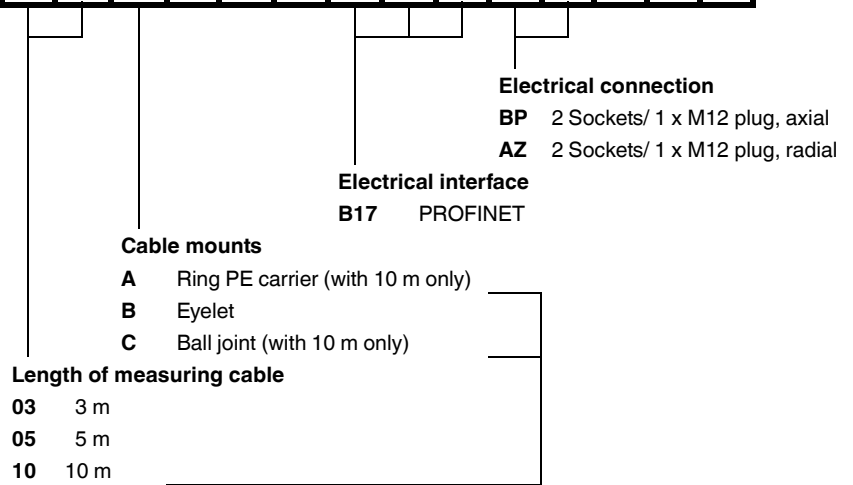
Technical data	Design 80	Design 130	Design 190
Measuring length (in m)	03	05	10
Drum size (incl. cable) (in mm)	230	385	555
Retraction speed (in m/s)	6	3	4
Spring retraction force (in N)	5–6.3	4.5–7	9–12
Weight (in kg)	0.55	1.1	2.2
Rotary encoder Ø (in mm)	58		
<b>Dimensions (in mm)</b>			

Release date: 2019-07-10 14:03 Date of issue: 2019-07-10 1178005\_eng.xml

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	-

**Model Number**

**E C A 1 0 T L - [ ] [ ] [ ] N P - B 1 7 [ ] [ ] [ ] : N N**



Release date: 2019-07-10 14:03 Date of issue: 2019-07-10 t178005\_eng.xml

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