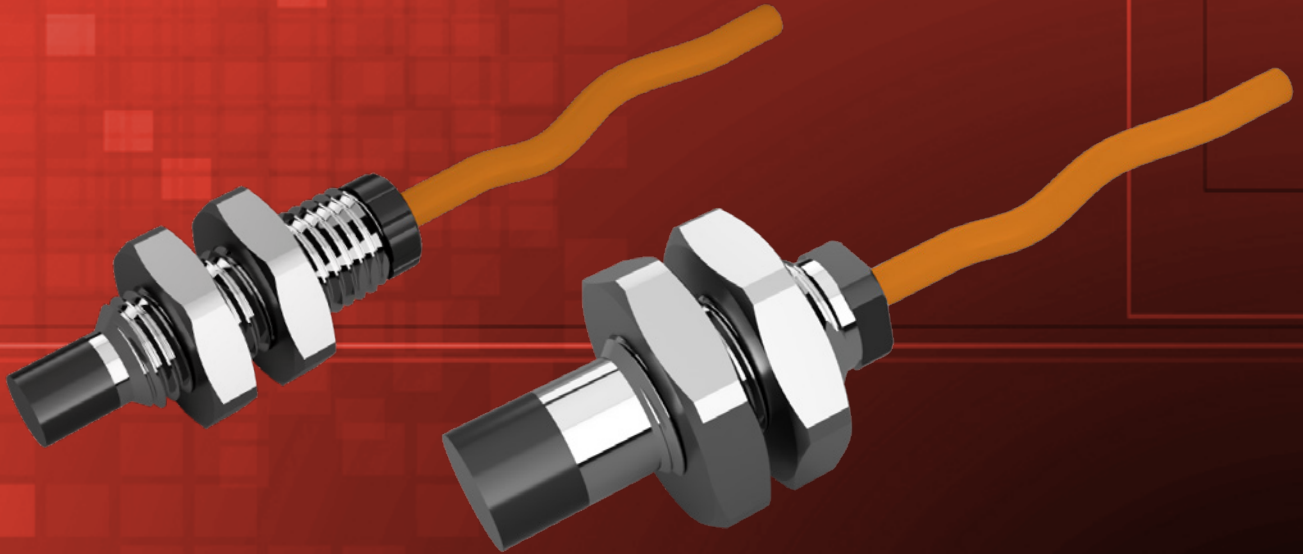


# EDDY CURRENT PROBE



## Content:

<b>Technical Data</b>	....2
<b>Technical Drawing</b>	....3
<b>EX Compliance</b>	....5
<b>Order Code</b>	....6

## Series EZ1000

### Key-Features:

- Contactless measurement on metal
- Measurement unaffected by oil, water or dust
- Measurement ranges up to 4 mm
- Linearity up to  $\pm 0.025$  mm
- Output: -2...-18 V
- Operating temperature -35...+180 °C
- Atex compliance
- Additional configuration via software (target material, frequency, calibration)

## TECHNICAL DATA - SENSORS

Sensor		EZ1050 / EZ1051	EZ1080 / EZ1081
Measurement range	[mm]	0.25...1.25	0.5...2.5
Extended measurement range factor 1.5 <sup>1)</sup>	[mm]	0.25...1.75	0.5...3.5
Extended measurement range factor 2 <sup>1)</sup>	[mm]	0.25...2.25	0.5...4.5
Linearity <sup>2)</sup>	[mm]	±0.025	
Sensitivity <sup>2)</sup>	[V/mm]	16 ±5 %	8 ±5 %
Protection class		IP67	
Operating temperature	[°C]	-35...+180	
Temperature coefficient	[%/K]	0.04	
Operating pressure max.	[bar]	10	
Vibration resistance		5 g at 60 Hz	
Connection <sup>4)</sup>		cable (FEP) with LEMO connector, 1 m or 5 m	
Housing		stainless steel	
Sensor head		PEEK	
Weight (including 1 m cable)	[g]	approx. 100	

### Target

Recommend target size	[mm]	>20 (min. 10)	>20 (min. 14)
Recommend shaft diameter	[mm]	>20 (min. 15)	>25 (min. 20)
Target material <sup>3)</sup>		ferromagnetic steel	

<sup>1)</sup> Adjustable via software. Please note that the initial air gap (0.25 mm / 0.5 mm) remains unchanged.

<sup>2)</sup> At temperature range 0...+45 °C

<sup>3)</sup> The amplifier EZ1000 can be adjusted to the following steel types (further on request):

42CrMo4 (AISI/SAE 4140) / P235S / C35 (AISI/SAE 1035) / 34CrMo4 (AISI/SAE 4337, 4340) / 26NiCrMoV14 / ST 37, S235JR / X35CrMo17

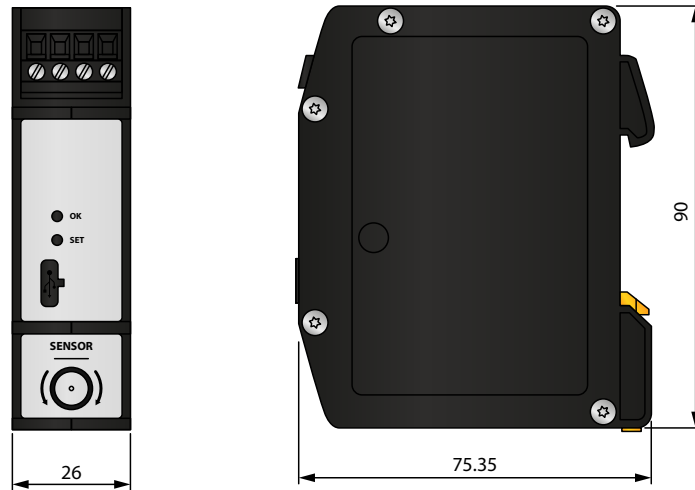
<sup>4)</sup> Please note that sensors with cable length 1 m require an extension cable with a length of at least 2 m.

## TECHNICAL DATA - AMPLIFIER

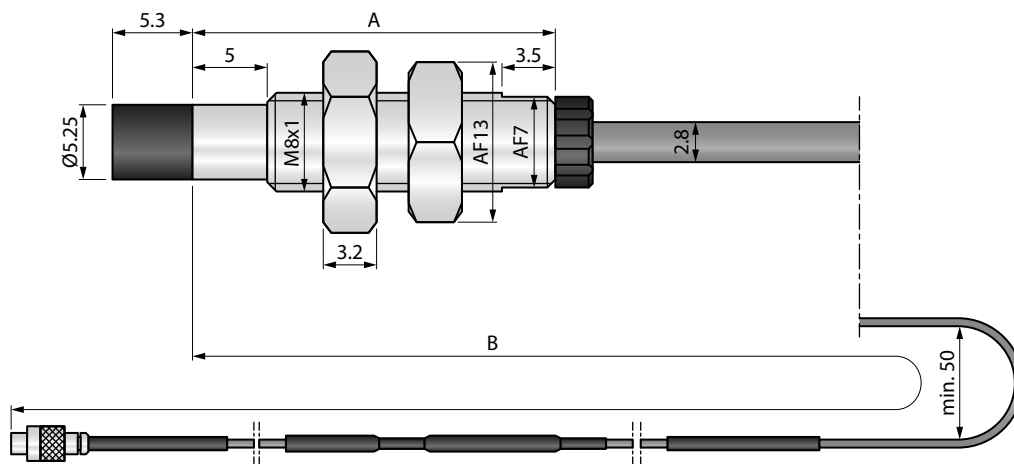
Amplifier		EZ1000
Output		-1.1...-21.6 V (at supply -24 V: -2...-18 V)
Frequency	[kHz]	0...20 (-3 dB)
Rise time	[ms]	<15
Supply	[VDC]	-20...-32 (typical: -24)
Current consumption max.	[mA]	12
Load resistance	[kΩ]	100
Over voltage protection		yes, (max. 60 VDC)
Short circuit protection		yes
Reverse polarity protection		yes
Protection class		IP20
Operating temperature	[°C]	-35...+85
Humidity		5...95 % relative, non-condensing
Shock and vibration resistance		5 g at 60 Hz at 25 °C
EMC		according to EN 61326-1
Connection		Sensor: Lemo connector Supply/Output: screw type 1.5 mm <sup>2</sup> Configuration: Micro-USB
Housing		Polycarbonate
Weight	[g]	approx. 100
Mounting		DIN rail

# TECHNICAL DRAWING

## Amplifier EZ1000

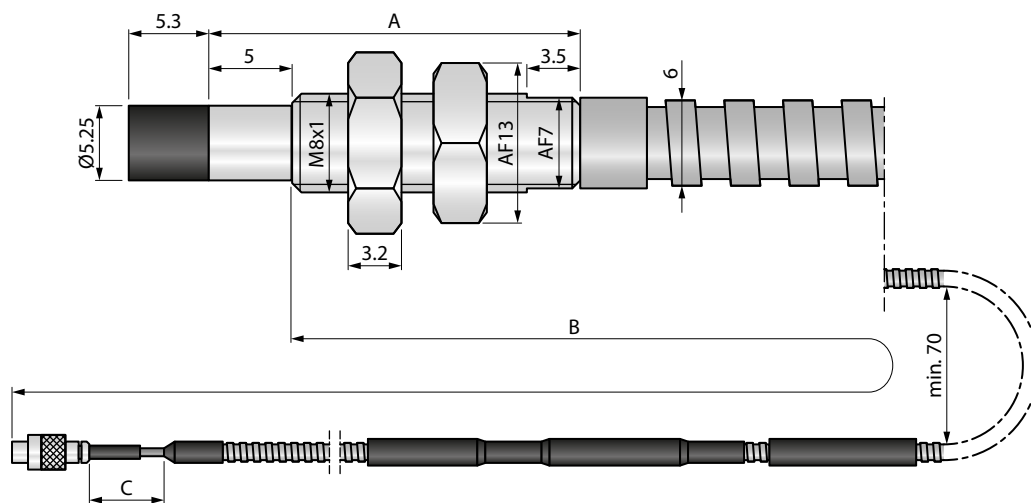


## Sensor EZ1050: measurement range 0.25...1.25 mm, standard cable



<b>A</b>	<b>Housing length</b>	20 mm / 100 mm
<b>B</b>	<b>Cable length +0...10 %</b>	1 m / 5 m

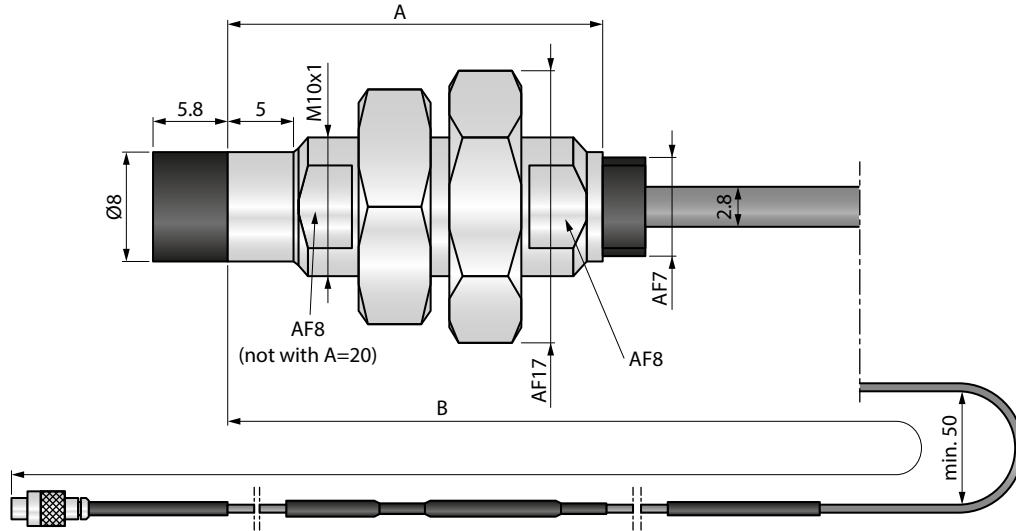
## Sensor EZ1051: measurement range 0.25...1.25 mm, armored cable



<b>A</b>	<b>Housing length</b>	100 mm
<b>B</b>	<b>Cable length +0...10 %</b>	1 m      5 m
<b>C</b>	<b>Length without armor</b>	30 mm      300 mm

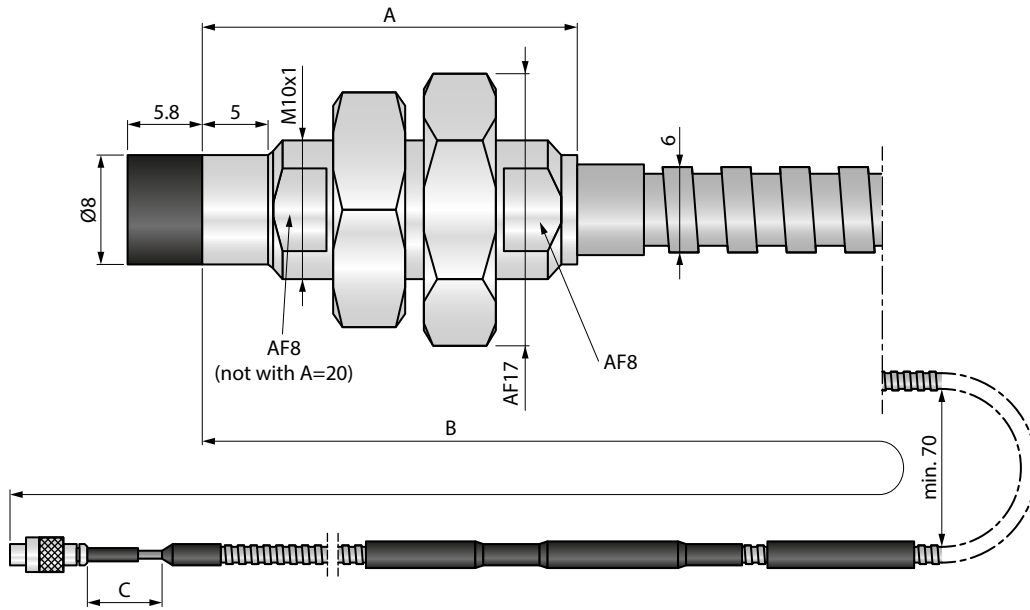
# TECHNICAL DRAWING

## EZ1080: measurement range 0.5...2.5 mm, standard cable



<b>A</b>	<b>Housing length</b>	20 mm / 100 mm / 250 mm
<b>B</b>	<b>Cable length +0...10 %</b>	1 m / 5 m

## EZ1081: measurement range 0.5...2.5 mm, armored cable



<b>A</b>	<b>Housing length</b>	100 mm / 250 mm
<b>B</b>	<b>Cable length +0...10 %</b>	1 m      5 m
<b>C</b>	<b>Length without armor</b>	30 mm      300 mm

## COMPLIANCE AND CERTIFICATIONS

CE	ATEX	IEC-Ex	CSA
2014/30/EU 2014/34/EU 2014/65/EU	EN 60079-0:2018 EN 60079-11:2012 EN 60079-15:2010	IEC 60079-0:2017 IEC 60079-11:2011 IEC 60079-15:2010	CAN/CSA-C22.2 NO. 0-10 CAN/CSA-C22.2 NO. 61010-1-12 CAN/CSA-C22.2 NO. 60079-0:15 CAN/CSA-C22.2 NO. 60079-11:14 CAN/CSA-C22.2 NO. 60079-15:16 UL 61010-1:12 UL 60079-0:13 UL 60079-11:13 UL 60079-15:13

## HAZARDOUS AREA APPROVALS

Intrinsic Safety (ia)	ATEX	IEC-Ex	CSA
<b>EZ1000</b>	II 1G Ex ia IIC T6,T4,T2 Ga T6: -35 °C ≤ Ta ≤ 50 °C T4: -35 °C ≤ Ta ≤ 80 °C T2: -35 °C ≤ Ta ≤ 80 °C	Ex ia IIC T6,T4,T2 Ga T6: -35 °C ≤ Ta ≤ 50 °C T4: -35 °C ≤ Ta ≤ 80 °C T2: -35 °C ≤ Ta ≤ 80 °C	Ex/AEx ia IIC T6, T4, T2 Ga Class I, Div 1 Group A,B,C,D T6, Ta, T2 T6: -35 °C ≤ Ta ≤ 50 °C T4: -35 °C ≤ Ta ≤ 80 °C T2: -35 °C ≤ Ta ≤ 80 °C
<b>EZ1050, EZ1051, EZ1081, EZ1080 <sup>1)</sup></b>		T6: -35 °C ≤ Ta ≤ 55 °C T4: -35 °C ≤ Ta ≤ 130 °C T2: -35 °C ≤ Ta ≤ 200 °C	
Non-sparking (na)	ATEX	IEC-Ex	CSA
<b>EZ1000</b>	II 3G Ex nA [ic] IIC T6,T4,T2 Gc T6: -35 °C ≤ Ta ≤ 50 °C T4: -35 °C ≤ Ta ≤ 80 °C T2: -35 °C ≤ Ta ≤ 80 °C	Ex nA [ic] IIC T6,T4,T2 Gc T6: -35 °C ≤ Ta ≤ 50 °C T4: -35 °C ≤ Ta ≤ 80 °C T2: -35 °C ≤ Ta ≤ 80 °C	Ex/AEx nA [ic] IIC T6, T4, T2 Gc Class I, Div 2 Group A,B,C,D T6, Ta, T2 T6: -35 °C ≤ Ta ≤ 50 °C T4: -35 °C ≤ Ta ≤ 80 °C T2: -35 °C ≤ Ta ≤ 80 °C
<b>EZ1050, EZ1051, EZ1081, EZ1080 <sup>1)</sup></b>		T6: -35 °C ≤ Ta ≤ 55 °C T4: -35 °C ≤ Ta ≤ 130 °C T2: -35 °C ≤ Ta ≤ 200 °C	

<sup>1)</sup> Area classification depends on converter, see converter documentation for details. Temperature classification depends on the sensor.

**ORDER CODE**

EZ10   -  - 00 -

<b>Thread type and range MR</b>	
M8 thread, range 0,25...1.25 mm	5
M10 thread, range 0.5...2.5 mm	8

<b>Cable type</b>	
Standard cable	0
Armored cable	1

		<b>Cable length</b>
010		1 m <sup>1)</sup>
050		5 m

		<b>Housing length</b>
02		20 mm <sup>2)</sup>
10		100 mm
25		250 mm <sup>3)</sup>

<sup>1)</sup> Please note that for sensors with cable length 1 m an extension cable of min. 2 m length is required!

<sup>2)</sup> Only in combination with standard cable

<sup>3)</sup> Only in combination with M10 thread

**AMPLIFIER AND CABLES**

<b>Amplifier</b>	
EZ1000	Amplifier

<b>Extension cable, standard cable, temperature range -35...+150 °C</b>	
EZ1900-020	standard cable, 2 m
EZ1900-050	standard cable, 5 m

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<b>Extension cable, armored cable, temperature range -35...+150 °C</b>	
EZ1901-020	armored cable, 2 m
EZ1901-050	armored cable, 5 m

Subject to change without prior notice.

**WayCon Positionsmesstechnik GmbH**  
 email: info@waycon.de  
 internet: www.waycon.biz



Positionsmesstechnik

**Head Office**  
 Mehlarstr. 4  
 82024 Taufkirchen  
 Tel. +49 (0)89 67 97 13-0  
 Fax +49 (0)89 67 97 13-250

**Office Köln**  
 Auf der Pehle 1  
 50321 Brühl  
 Tel. +49 (0)2232 56 79 44  
 Fax +49 (0)2232 56 79 45