

Machinery Health™ Sensor

AMS EZ 1000 Sensor



Copyright

© 2024, Emerson. All rights reserved.

No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form by any means without the written permission of Emerson.

Disclaimer

This manual is provided for informational purposes. EMERSON MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Emerson shall not be liable for errors, omissions, or inconsistencies that may be contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. Information in this document is subject to change without notice and does not represent a commitment on the part of Emerson. The information in this manual is not all-inclusive and cannot cover all unique situations.

Patents

The product(s) described in this manual are covered under existing and pending patents.

Contents

Chapter 1	General.....	4
	1.1 Using this manual.....	4
	1.2 Symbols.....	4
	1.3 Liability and guarantee.....	4
	1.4 Incoming goods inspection.....	5
	1.5 Technical support.....	5
	1.6 Storage and transport.....	6
	1.7 Disposal of the device.....	6
	1.8 China RoHS Compliance.....	6
	1.9 CCC Certification – AMS EZ 1000.....	6
	1.10 Installation awareness.....	7
Chapter 2	Safety instructions.....	8
	2.1 Using the device.....	8
	2.2 Owner's responsibility.....	8
Chapter 3	Application and Design.....	9
	3.1 The sensors.....	9
	3.2 The measuring chain.....	10
Chapter 4	Installation and Mounting.....	11
	4.1 Choosing the measuring place.....	11
	4.2 Mount the sensor.....	12
	4.2.1 Requirements and hints for the sensor mounting.....	13
	4.3 Wiring hints.....	19
	4.4 Sensor with extension cable.....	20
Chapter 5	Technical data.....	22
	5.1 Measuring targets.....	22
	5.2 Measuring ranges and sensitivity.....	22
	5.3 Environmental conditions.....	23
Chapter 6	Drawings.....	25
Chapter 7	Order information.....	33
Chapter 8	Certificates.....	37
Appendix A	Special AMS EZ 1000 Sensors.....	43

1 General

1.1 Using this manual

This manual contains information concerning the proper and correct use of the device.

Read the installation guide completely prior to starting installation and operating the device. Comply with all safety instructions.

Include the installation guide when transferring the device to third parties.

Note

When requesting technical support, please indicate type and serial number from the type plate and the used converter type.

Table 1-1 shows a list of documents that are referred to in this installation guide.

Table 1-1: Referenced documents

MHM-97884	Operating manual AMS EZ 1000 Converter for Eddy Current Sensors
MHM-97879	Operating manual Machine Studio - General Functions
MHM-97873	Operating manual A6500-UM Universal Measurement Card
MHM-97442	Operating manual AMS 6300 SIS, Overspeed Protection System

1.2 Symbols

Note

This symbol marks passages that contain important information.

CAUTION

This symbol marks operations that can lead to malfunctions or faulty measurements, but will not damage the device.

DANGER

A danger indicates actions that can lead to property damage or personal injury.

1.3 Liability and guarantee

Emerson is not liable for damages that occur due to improper use. Proper use also includes the knowledge of, and compliance with, this document.

Customer changes to the device that have not been expressly approved by Emerson will result in the loss of guarantee.

Due to continuous research and further development, Emerson reserves the right to change technical specifications without notice.

1.4 Incoming goods inspection

Check the content of the shipment to ensure that it is complete; visibly inspect the goods to determine if the device has been damaged during transport. The following parts are included in the scope of delivery and must be contained in the shipment.

- Eddy current sensor EZ105x-xx-xx-xxx, EZ108x-xx-xx-xxx, EZ116x-xx-xx-xxx (with protection cap)
- Extension cable EZ190x-xxx (must be ordered separately)
- Mounting nuts (EZ105x-xx-xx-xxx, EZ108x-xx-xx-xxx, EZ116x-xx-xx-xxx)
- Two shrink sleeves (a black one and a blue one) to isolate the connection between sensor cable and extension cable
- Documentation CD with Installation Guide.

If the contents are incomplete, or if you observe any defects, file a complaint with the carrier immediately. Inform the responsible Emerson sales organization so your device can be replaced. In this case, attach a tag with customer name and the observed defect.

1.5 Technical support

You may need to ship this product for return, replacement, or repair to an Emerson Product Service Center. Before shipping this product, contact Emerson Product Support to obtain a Return Materials Authorization (RMA) number and receive additional instructions.

Product Support

Emerson provides a variety of ways to reach your Product Support team to get the answers you need when you need them:

Phone	Toll free 1 800 833 8314 (U.S. and Canada) +1 512 832 3774 (Latin America) +63 2 8702 1111 (Asia Pacific, Europe, and Middle East)
Email	Guardian.GSC@Emerson.com
Web	http://www.emerson.com/en-us/contact-us

To search for documentation, visit <http://www.emerson.com>.

To view toll free numbers for specific countries, visit <http://www.emerson.com/technicalsupport>.

Note

If the equipment has been exposed to a hazardous substance, a Material Safety Data Sheet (MSDS) must be included with the returned materials. An MSDS is required by law to be available to people exposed to specific hazardous substances.

1.6 Storage and transport

Store and transport the device only in its original packaging. Technical data specifies the environmental conditions for storage and transport.

Related information

[Technical data](#)

1.7 Disposal of the device

Provided that no repurchase or disposal agreement exists, recycle the following components at appropriate facilities:

- Recyclable metal
- Plastic elements

Sort the remaining components for disposal, based on their condition. National laws or provisions on waste disposal and protection of the environment apply.

Note

Environmental hazards! Electrical waste and electronic components are subject to treatment as special waste and may only be disposed by approved specialized companies.

1.8 China RoHS Compliance

Our products manufactured later than June 30, 2016, and those which are sold in the People's Republic of China are marked with one of the following two logos to indicate the Environmental Friendly Use Period in which it can be used safely under normal operating conditions.

Products that do not have the following marking were either manufactured before June 30, 2026, or are not electrical equipment products (EEP).



Circling arrow symbol with "e": The product contains no hazardous substances over the Maximum Concentration Value and it has an indefinite Environmental Friendly Use Period.



Circling arrow symbol with a number: This product contains certain hazardous substances over the Maximum Concentration Value and it can be used safely under normal operating conditions for the number of years indicated in the symbol. The names and contents of hazardous substances can be found in chapter "Certificates".

1.9 CCC Certification – AMS EZ 1000

With the announcement of the Chinese market regulation authority SAMR (State Administration for Market Regulation), a Compulsory Product Certification (CCC certification) is mandatory for many explosion protection products. This explosion proof

(“Ex”) product complies to the CCC obligation and is certified (certification number: 2023322315005261).



This China Compulsory Certificate mark (CCC), is a compulsory safety mark for many products imported, sold, or used in the Chinese market and indicates that the product is certified in accordance to GB/T 3836.1-2021, GB/T 3836.3-2021, and GB/T 3836.4-2021. If the product label is too small to contain the CCC certification mark it is sufficient to have the mark printed on the minimum package and in the attached document.

1.10 Installation awareness

Note

When planning a measurement, follow these guidelines:

- Consider environmental conditions which might have an influence on the measurement such as temperature, humidity, substances aggressive to the sensor, and pollution.
 - Always use a stiff and vibration-free sensor holder.
 - Define a suitable measuring range, not larger than necessary, in consultation with the operator of the plant.
 - Define the trip limit in consultation with the operator of the plant.
 - Take measurement deviations into account when defining trip limits.
 - Use a sensor that meets the requirements of the defined measuring range.
 - Ensure an EMC-compatible installation including the use of proper cables.
 - Ensure proper function of the measurement before activating the measurement in the production environment.
-

2 Safety instructions

To ensure safe operation, carefully follow all the instructions in this manual.

The correct and safe use of this device requires that operating and service personnel both understand and comply with general safety guidelines and observe the special safety comments listed in this manual. Where necessary, safety-sensitive points on the device are marked.

⚠ DANGER

Because the device is electrical equipment, only specially trained and authorized personnel may commission, service, and maintain this equipment.

2.1 Using the device

Install and use the device as specified in this manual.

If the device is used in a manner not specified by the manufacturer, the protection provided by the device may be impaired.

2.2 Owner's responsibility

If there is a reason to suspect that hazard-free operation, and thus, adequate machine protection is no longer possible, take the device out of operation and safeguard it from unintentional operation. This is the case:

- if the device shows visible damage.
- if the device no longer works.
- after any kind of overload that has exceeded the permissible limits (see technical data of the device for permissible limits).

⚠ DANGER

If device tests have to be completed during operation or if the device has to be replaced or decommissioned, it will impair the machine protection and may cause the machine to shut down. Make sure to deactivate machine protection before starting such work, and reactivate it after work has been completed.

Related information

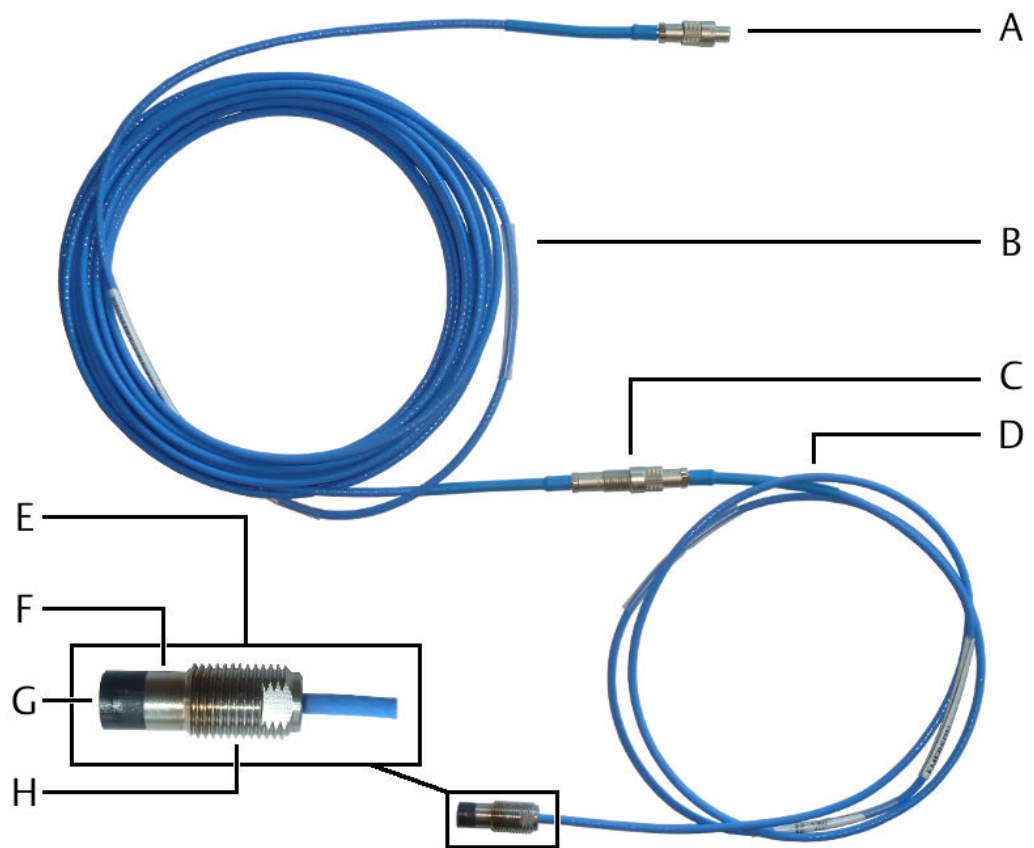
[Environmental conditions](#)

3 Application and Design

3.1 The sensors

The AMS EZ 1000 Sensors EZ105x-xx-xx-xxx, EZ108x-xx-xx-xxx, EZ116x-xx-xx-xxx are available in different variants. With or without the optional EZ190x-xxx extension cable. See [Order information](#) for details. [Figure 3-1](#) explains the parts of an AMS EZ 1000 Sensor.

Figure 3-1: Design of an AMS EZ 1000 Sensor



- A. Plug with cap nut of the extension cable
- B. EZ190x-xxx extension cable (optional)
- C. Connection (plug of the sensor cable with cap nut and socket of the extension cable)
- D. Sensor cable
- E. AMS EZ 1000 Sensor
- F. Unthreaded part of the sensor case
- G. Sensor tip
- H. Threaded part of the sensor case

Which sensor type is applicable for a measuring application depends on several requirements such as desired measuring range, available measuring track, and maximum environmental temperature. Each AMS EZ 1000 Sensor requires an AMS EZ 1000 Converter to complete the measuring chain. Use the EZ190x-xxx extension cable to adjust the sensor cable length to the installation requirements.

Note

Ensure that the overall cable length, sensor cable plus extension cable, does not exceed 10 meters.

3.2 The measuring chain

An AMS EZ 1000 Sensor, together with the AMS EZ 1000 Converter, form the eddy current measuring chain. Use this measuring chain for contactless distance, vibration, or speed measurements. Different types of sensors and the software-configurable AMS EZ 1000 Converter allow an optimal adaption to the requirements of the machine to be monitored.

Figure 3-2: Eddy current measuring chain



- A. AMS EZ 1000 Converter
 - B. EZ190x-xxx extension cable (optional)
 - C. AMS EZ 1000 Sensor
-

To achieve a high accuracy, the parts of the measuring chain, the sensor, the sensor cable (sensor cable plus optional extension cable), and the converter, are calibrated together. See the AMS EZ 1000 Converter operating manual for the calibration details.

The characteristics of the measuring chain also depend on the material of the measuring object (target), for example, the machine shaft material. The material mainly used for turbo machinery is 42CrMo4. During the calibration process, the measuring chain is adapted to the material.

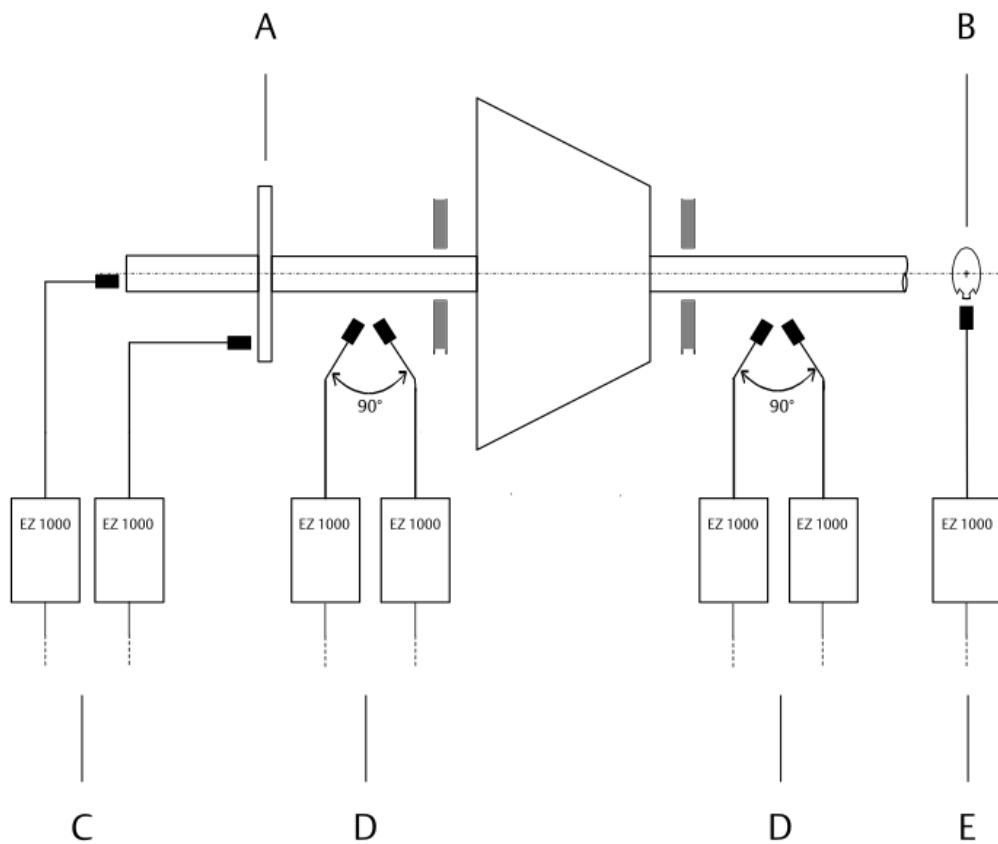
4 Installation and Mounting

4.1 Choosing the measuring place

Figure 4-1 is an example scheme for where to place the sensors on a turbine shaft to measure the axial displacement, shaft vibration, or speed. Consider the minimum shaft diameter for the sensor type, the minimum material width in front of the sensor tip, and the minimum gap (see [Requirements and hints for the sensor mounting](#)).

To measure shaft vibration, Emerson recommends using a sensor holder between bearing and turbine housing, as close as possible to the rotor.

Figure 4-1: Example scheme where to place the sensors



- A. Measuring collar
- B. Trigger wheel
- C. Measuring chain for measuring shaft displacement with AMS EZ 1000 Converter and AMS EZ 1000 Sensor.
- D. Measuring chain for measuring shaft vibration with AMS EZ 1000 Converter and AMS EZ 1000 Sensor, preferably EZ105x-xx-xx-xxx or EZ108x-xx-xx-xxx.
- E. Measuring chain for measuring speed/key with AMS EZ 1000 Converter and AMS EZ 1000 Sensor, preferably EZ105x-xx-xx-xxx or EZ108x-xx-xx-xxx. .

4.2 Mount the sensor

The following steps describe the mounting of the AMS EZ 1000 Sensors. See also the respective AMS EZ 1000 Converter manual as listed in [Table 1-1](#) for further details regarding sensor adjustment.

Prerequisites

Calibrated eddy current measuring chain.

Procedure

1. Screw in the sensor into the holder.

Ensure that the threads are clean and smooth-running.

Do not bend or twist the sensor cable. If the sensor cable has an adapter plug, open it.

To avoid touching the shaft during installation, the maximum distance between measuring target and sensor tip must be adjusted first. Screw in the sensor until the converter output voltage starts changing (approximately at -20V DC). Close the adapter plug for measuring the converter output voltage.

2. Adjust the distance between measuring target and sensor tip according to the measuring task.

Use a voltmeter connected to the converter output to measure the output voltage. Open the adapter plug at every two turns of the sensor to untwist the cable.

Ensure that in the direction of the sensor tip, at least the always unthreaded part of the sensor case (length EZ105x-xx-xx-xxx: 5.0 mm, length EZ108x-xx-xx-xxx: 5.0 mm, length EZ116x-xx-xx-xxx: 6.0 mm) remains free.

3. Secure the sensor by fixing the nuts.

The maximum tightening torque for fixing the nuts is:

- EZ105x-xx-xx-xxx: 1 Nm
- EZ108x-xx-xx-xxx: 15 Nm
- EZ116x-xx-xx-xxx: 98 Nm

4.2.1 Requirements and hints for the sensor mounting

This section contains information and installation requirements for the sensor. The final adjustment of the sensor depends on the measuring task and requires a complete measuring chain. The AMS EZ 1000 Converter manual and the manuals for the evaluation electronics, such as the AMS 6500 ATG system, contain detailed information regarding the final adjustment.

General holder requirement

To mount the sensor, use a stiff and vibration-free holder with a mounting thread for the selected sensor.

General distance adjustment

For distance adjustment, the complete measuring chain consisting of sensor and converter is required as the distance will be generally adjusted by means of the converter output voltage.

Sensor fastening

- Use the enclosed nuts when installing sensors.
- Lock nuts to avoid loosening of the sensor. Loose parts can fall into the machine and cause damage. A medium-grade, removable, screw-securing adhesive (for example: Loctite® 242, blue) is recommended to secure the sensor.

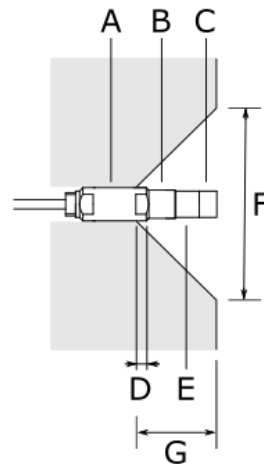
Measuring track on the measuring target

The measuring track on the measuring target must be free from irregularities as scratches, corrosion, stress concentrations, metallurgical segregation, and should have a high concentricity. These irregularities may cause changes in the converter output voltage which are not related to a real position or vibration signal. The signal caused by these irregularities is called runout. For the measuring track, Emerson recommends a surface finish of $0.41\ \mu\text{m}$ to $0.76\ \mu\text{m}$.

Free space

A free space around the sensor tip is required to avoid influences on the measurement by surrounding ferromagnetic material. At least, a $\pm 45^\circ$ free space with a minimum diameter of 24 mm is required for a mounting without any significant influence on the measurement. To keep the influences low a free thread space is required, which depends on sensor type and measuring range. See [Table 4-1](#).

Figure 4-2: Free space around sensor tip



- A. Threaded part of the sensor case
- B. Unthreaded part of the sensor case, length of this part depends on the selected sensor type
- C. Tip length:
 - EZ105x-xx-xx-xxx: 5.3 mm
 - EZ108x-xx-xx-xxx: 5.8 mm
 - EZ116x-xx-xx-xxx: approximately 16.0 mm
- D. Free thread space
- E. Always unthreaded part of the sensor case, length 5.0 mm
- F. 24.0 mm
- G. 7.0 mm

Table 4-1: Required free thread space and additional linearity errors

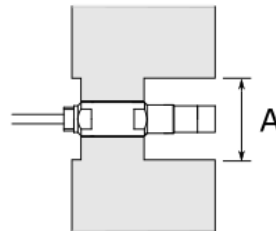
Sensor type	Measuring range factor ¹	Free thread space (Figure 4-2 ,D) ²	Additional linearity error
EZ105x-xx-xx-xxx	1.0	>0 mm	<0.5%
	1.5	>0 mm	<1.0%
	2.0	>1 mm	<1.0%
EZ108x-xx-xx-xxx	1.0	>0 mm	<2.0%
	1.0	>4 mm	<1.0%
	1.5	>7 mm	<2.0%
	2.0	>10 mm	<2.0%

1 Factor to extend the measuring range. Set this factor in the AMS EZ 1000 Converter configuration.

2 1 mm = 1 thread visible

If the sensor is surrounded by ferromagnetic material as shown in Figure 4-3, the diameters listed in Table 4-2 are required to avoid influences on the sensor signal.

Figure 4-3: Influence of material in 90° to the sensor



A. Diameter of the counter bore

Table 4-2: Diameter of the counter bore

Sensor type	Minimum diameter	Recommended diameter
EZ105x-xx-xx-xxx	15 mm	20 mm
EZ108x-xx-xx-xxx	20 mm	24 mm

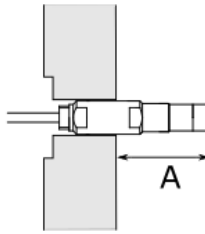
⚠ CAUTION

The measuring range at the upper end decreases and the linearity error increases when the free space specifications are not met.

Influence of the material behind the sensor

Ferromagnetic material behind the sensor as shown in Figure 4-4 also has an influence on the measuring accuracy. Table 4-3 lists different mounting positions including the additional error. There is no significant influence at lengths of more than 12 mm.

Figure 4-4: Influence of the material behind the sensor



A. Length of the sensor part outside of the material

Table 4-3: Influence of the material behind the sensor

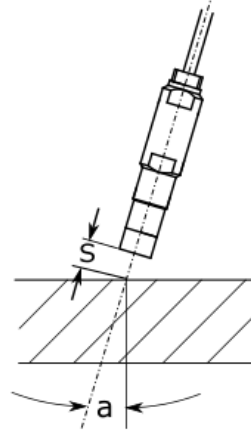
Sensor type	Length A Figure 4-4	Additional linearity error
EZ108x-xx-xx-xxx	12 mm ¹	---
	11 mm	-0.14%
	10 mm	-0.34%
	9 mm	-0.86%
	8 mm	-2.00%
EZ105x-xx-xx-xxx	12 mm ¹	---
	10.2 mm	0.15%
	8.4 mm	0.39%
	6.6 mm	0.55%
	5.7 mm	-0.59%
	4.8 mm	-5.97%
EZ116x-xx-xx-xxx	27 mm ¹	---

¹ Recommended mounting position

Maximum axial tilting angle

Ensure that the maximum axial tilting angle α is $< 4^\circ$. In this case, the additional DSL error is $< 0.2\%$. This requirement is valid for all AMS EZ 1000 Sensors.

Figure 4-5: Maximum axial tilting



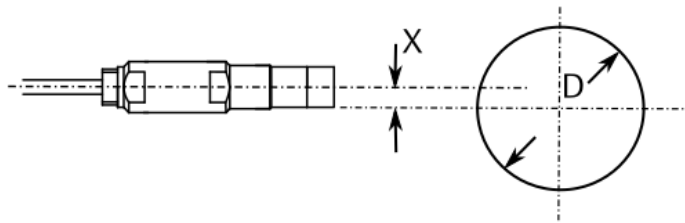
S: distance between measuring target and sensor tip

a: maximal axial tilting angle $< 4^\circ$

Maximum tangential offset

Ensure that the maximum tangential offset **X** is less than 10% of the diameter of the shaft **D**. In this case, the additional DSL error is $< 0.2\%$. This requirement is valid for all AMS EZ 1000 Sensors

Figure 4-6: Maximum tangential offset



X: maximal tangential offset

D: shaft diameter

$X < D * 10\%$

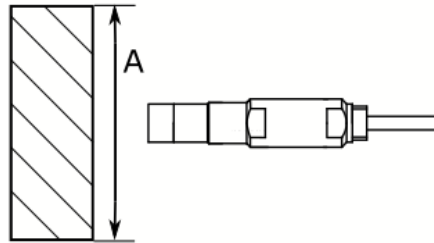
Minimum measuring area

Ensure that the minimum measuring area matches the values in [Table 4-4](#). [Figure 4-7](#) shows the definition of the minimum measuring area.

Table 4-4: Minimum measuring area

Sensor type		Target diameter	Additional linearity error
EZ105x-xx-xx-xxx	Recommended	>20 mm	<1%
	Minimum	10 mm	
EZ108x-xx-xx-xxx	Recommended	>20 mm	<1%
	Minimum	14 mm	
EZ116x-xx-xx-xxx	Minimum	≥80 mm	<1%

Figure 4-7: Minimum measuring area

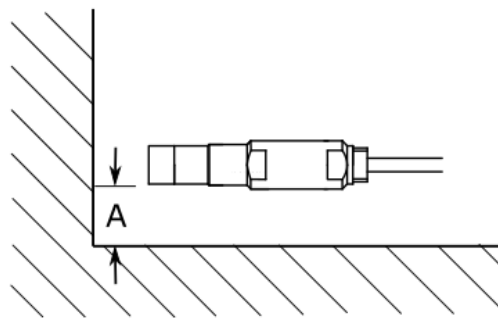


If using AMS EZ 1000 Sensors for speed measurement or key generation see referenced protection card manuals for trigger wheel specifications.

Minimum lateral distance

Ensure that there is a sufficient lateral distance to ferromagnetic material. The minimum lateral distance depends on the measuring range extension. See [Table 4-5](#).

Figure 4-8: Minimum lateral distance



A. Lateral distance between sensor sleeve and ferromagnetic material

Table 4-5: Minimum lateral distance

Sensor type	Extended range factor ¹	Minimum distance	Additional linearity error
EZ108x-xx-xx-xxx	1.0	>5 mm	<1%

Table 4-5: Minimum lateral distance (continued)

Sensor type	Extended range factor ¹	Minimum distance	Additional linearity error
	1.5	>7 mm	<1%
	2.0	>10 mm	<1%
EZ105x-xx-xx-xxx	1.0	>5 mm	<1%
	1.5	>5 mm	<5%
	2.0	>5 mm	<5%

¹ See Operating manual AMS EZ 1000 Converter (MHM-97884).

4.3 Wiring hints

This section contains general information and wiring hints regarding the sensor cable installation. As always, proper cable installation depends on observations and judgments based on the situation on-site. Observe the following points for a reliable cable installation:

- Do not bend or twist the sensor cables. Cables and connectors must be movable when the sensor is screwed into the holder.
- Install the cable strain-free and spin-free such that it is protected against mechanical damages.
- Do not shorten the sensor cable or the extension cable. Roll up the excess cable (rolling diameter ≥ 100 mm).
- Ensure that no parts of the cable, including the adapter plug, touch any rotating parts of the machine.
- Note that machines can expand or shrink due to temperature influences. Always install the sensor cable with a cable length reserve to compensate the thermal behavior of the machine.
- Only install cables with a minimum bending radius of 25 mm. For sensor cables with metal protection tubes, the minimum bending radius is 35 mm.
- Avoid oil stream areas for sensor cableways. Be sure that no oil stream or other agitations will permanently move the cable.
- Avoid sensor cableways where the cable is permanently submerged in oil.
- Affix the sensor cable at recurring short distances.
- Do not squeeze the cable, for example, between metal plates for fixing. Squeezing the cable will damage the outer isolation, which could allow oil into the cable or causes short-circuits.
- Lead the sensor cable through the bearing pedestal wall (machine case), below the horizontal joint of the machine and above the residual oil level in the bearing pedestal. Do not lead the sensor cable through the upper or removable pedestal cover. This could cause problems during machine maintenance, and represents a safety concern.

- Always keep a distance between adjacent sensor cables to avoid mutual influence. Do not bundle sensor cables over a long distance.
- Place junction boxes on a higher level than the sensor to stop oil from entering the cable protection tubes. You can also use swan-necks for the same purpose.

4.4 Sensor with extension cable

Observe the following hints if using an EZ190x-xxx extension cable to extend the sensor cable.

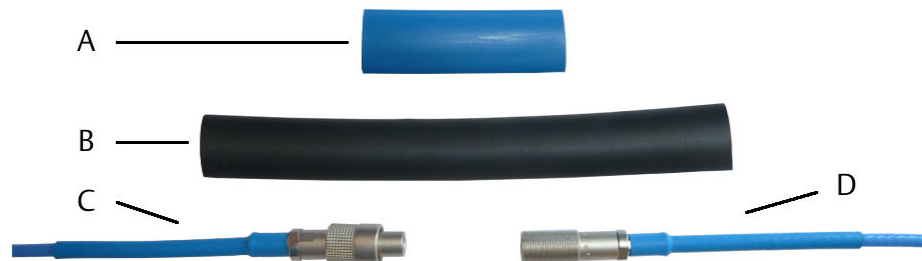
Connection

- To connect, screw the plug of the sensor cable finger tight into the corresponding plug socket of the extension cable.
- To unlock, unscrew the plug.

Connector isolation

Cover the connection (plug and socket) with the shrink sleeve included into the delivery. The shrinking temperature of the shrink sleeve with an approximately length of 100 mm is approximately 200°C. Applying a shrink sleeve to the connector isolates and protects the connection and is always required – even when using metal protection tubes.

Figure 4-9: Overview shrink sleeve



- A. Blue shrink sleeve – only necessary for installations at hazardous locations.
- B. Black shrink sleeve
- C. Plug of the sensor cable
- D. Socket of the extension cable

Apply shrink sleeve to a connector

1. At the open connection, push the black shrink sleeve over one connector so that the sleeve completely covers the sensor cable.
2. Close the connection.

Figure 4-10: Closed connection



3. Move the shrink sleeve over the closed connection. Plug and socket should be completely covered by the shrink sleeve. The black shrink sleeve should evenly overlap plug and socket.

Figure 4-11: Shrink sleeve in position



4. Use a hot air gun to evenly shrink the sleeve. The required shrinking temperature is approximately 200°C.
5. Ensure that the shrunken sleeve touches sensor cable, plug, and socket. It is important that the shrink sleeve cannot slip from the connection.

Note

If installing the sensor at hazardous locations, additionally shrink the blue shrink sleeve (contained in the delivery) over the first black one.

5 Technical data

Only specifications with tolerances are guaranteed. Data without tolerance or without error limits are informative data and not guaranteed. Technology is under constant development, and specifications are subject to change without notice.

All specifications are valid for a measuring chain consisting of a sensor EZ105x-xx-xx-xxx, EZ108x-xx-xx-xxx, EZ116x-xx-xx-xxx and an AMS EZ 1000 Converter calibrated to the sensor.

5.1 Measuring targets

		EZ105x-...	EZ108x-...	EZ116x-...
Measuring target		shafts and plain surfaces		
Shaft diameter	Minimum	15 mm	20 mm	--- mm
	Recommended	>20 mm	>25 mm	---
Speed of shaft circumference		0 to 2500 m/s		
Object material		electrical conducting materials		
Reference material		1.7224 (42CrMo4; AISI/SAE 4140)		
Target material		P235S C35 (AISI/SAE 1035) 34CrMo4 (AISI/SAE 4337, 4340) 26NiCrMoV14 ST 37, S235JR X35CrMo17 CK1500590 ASTM A276 Type 410 30CrNiMo8 18CrNiMo7-6 Other (On Request)		

5.2 Measuring ranges and sensitivity

The data in this chapter is valid for standard measuring ranges (extended range factor: 1.0).

Sensor	EZ105x-...	EZ108x-...	EZ116x-...
Nominal measuring range, static measurements	±0.5 mm	±1.0 mm	±2.0 mm
Nominal measuring range, dynamic, peak - peak (recommended)	≤625 μm	≤1250 μm 2000 μm ¹	≤2500 μm

Sensor	EZ105x-...	EZ108x-...	EZ116x-...
Sensitivity for 42CrMo4	16 V/mm (ISO) 15.74 V/mm (API)	8 V/mm (ISO) 7.87 V/mm (API)	4 V/mm (ISO) 3.935 V/mm (API)
Value for nominal distance at the center point of converter output signal	0.75 mm	1.5 mm	2.7 mm
Initial air gap	0.25 mm	0.5 mm	0.7 mm

¹ Standard measuring chain according to API 670 consisting of EZ108x-xx-xx-010, EZ190x-040, and AMS EZ 1000 Converter with standard target material 42CrMo4.

5.3 Environmental conditions

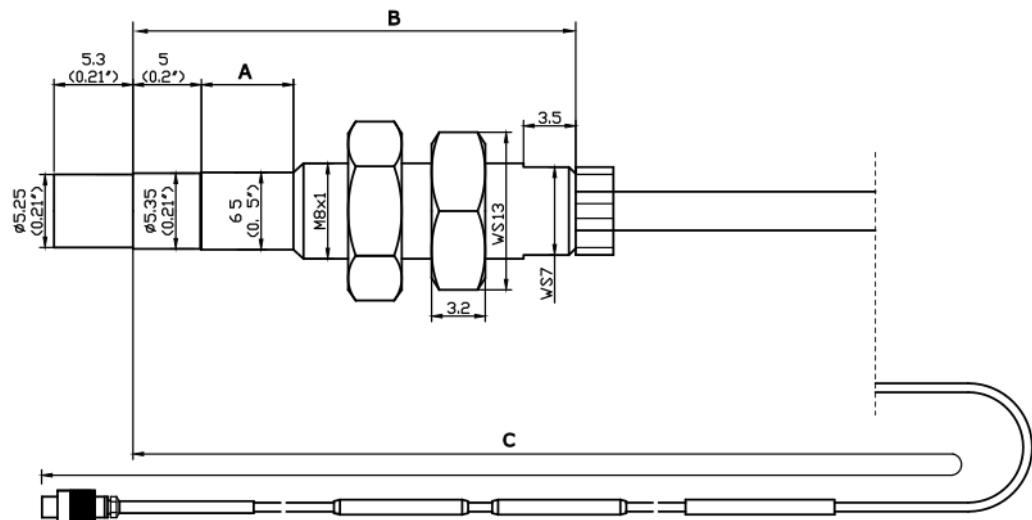
	EZ105x and EZ108x	EZ116x
Reference temperature	+23°C	
Temperature nominal operating range	-35°C to +180°C (sensor inclusive 1 m cable)	-35°C to +150°C (sensor inclusive 1 m cable)
Temperature nominal range for cable and connector	-35°C to +150°C	
Temperature limits for storage and transport	-40°C to +70°C	
Temperature error (according to API 670, only sensor)	4 % per 100 K	
Humidity	5 to 95%, non condensing Additional linearity error of ±0.2% for EZ105x-xx-xx-xxx and EZ108x-xx-xx-xxx with 5 meter sensor cable and standard measuring range at 10 to 100 % relative humidity (rh), condensing.	
Resistance to chemicals (at room temperature)	Sensor and cable are resistant to: water, steam, natural gas, helium, bearing oils, gasoline, benzol, nitric acid, tetra carbon chloride, tetra chloride ethylene.	
Pressure resistance to sensor tip	Typical 10000 hPa	
Pressure and differential pressure resistance at cable outlet	Pressure test certificate on request	
maximal Vibration	5g at 60 Hz	
Dimensions	See Drawings	
	Diameter connector cap nut (sensor cable and extension cable): 8.3 mm	
Material	Sensor tip: GF30 (glass-fiber reinforced PEEK Polyether Ether Ketone)	Sensor tip: Epoxy resin
	Case: Stainless Steel	
	Cable: FEP Fluorinated Ethylene Propylene	
	Connector: Brass, nickel-plated	

	EZ105x and EZ108x	EZ116x
Metal protection tube (EZ1051-xx-xx-xxx, EZ1053-xx-xx-xxx, EZ1081-xx-xx-xxx, EZ1083-xx-xx-xxx, EZ1161-xx-xx-xxx, and EZ1163-xx-xx-xxx)	Stainless steel	
Weight (sensor with 1 m cable, no metal protection tube)	Approximately 100 g	Approximately 200 g

6 Drawings

EZ105x-xx-xx-xxx

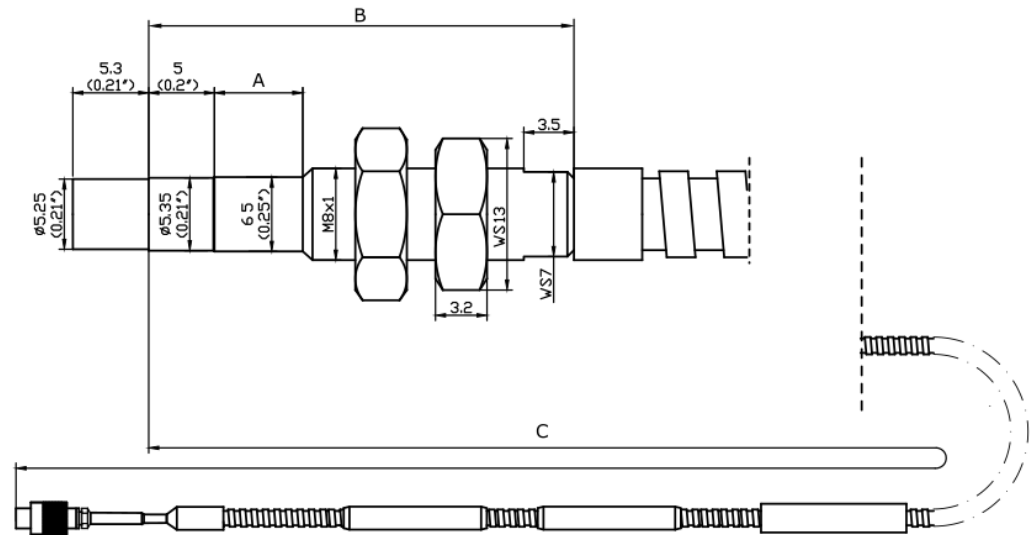
Figure 6-1: EZ1050-xx-xx-xxx



- A. Unthreaded length (see [Order information](#) for available lengths)
- B. Case length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

The dimensions without parentheses are in mm and the dimensions in parentheses are in inch.

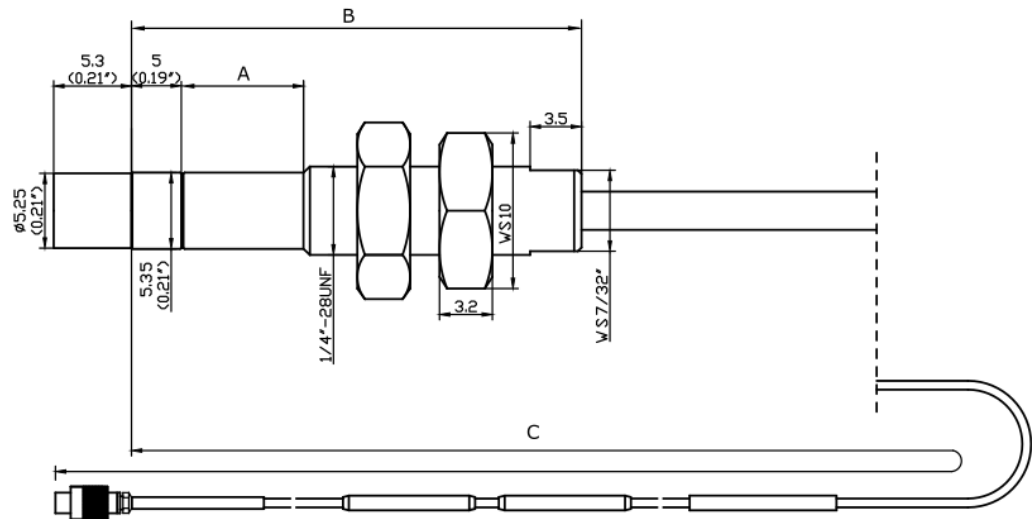
Figure 6-2: EZ1051-xx-xx-xxx



- A. Unthreaded length (see [Order information](#) for available lengths)
- B. Case length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

The dimensions without parentheses are in mm and the dimensions in parentheses are in inch.

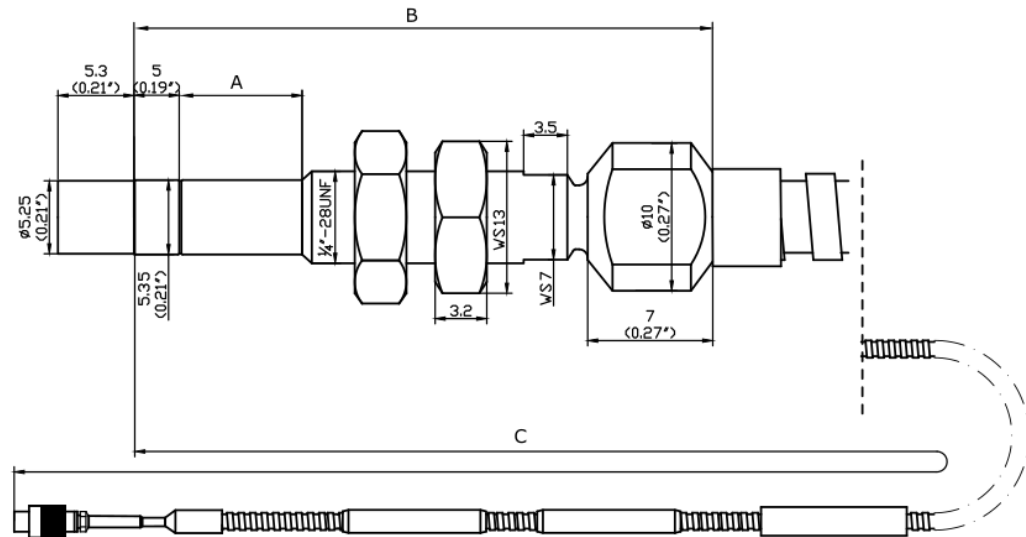
Figure 6-3: EZ1052-xx-xx-xxx



- A. Unthreaded length (see [Order information](#) for available lengths)
- B. Case length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

The dimensions without parentheses are in mm and the dimensions in parentheses are in inch.

Figure 6-4: EZ1053-xx-xx-xxx

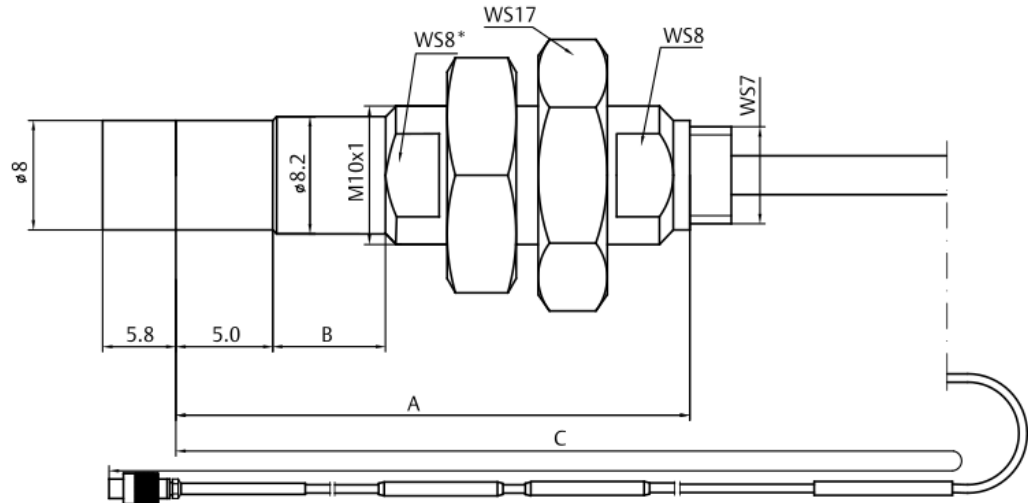


- A. Unthreaded length (see [Order information](#) for available lengths)
- B. Case length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

The dimensions without parentheses are in mm and the dimensions in parentheses are in inch.

EZ108x-xx-xx-xxx

Figure 6-5: EZ1080-xx-xx-xxx



* WS8 spanner flat not available with 20 mm (0.8 in) and unthreaded length case

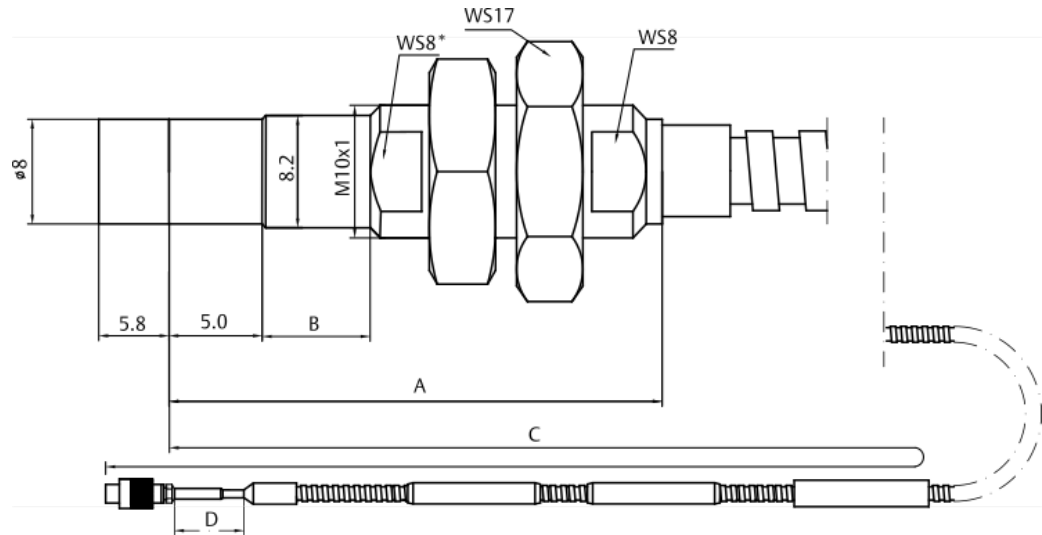
A. Case length (see [Order information](#) for available lengths)

B. Unthreaded length (see [Order information](#) for available lengths)

C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

All dimension in mm.

Figure 6-6: EZ1081-xx-xx-xxx



* WS8 spanner flat not available with 20 mm (0.8 in) and unthreaded length case

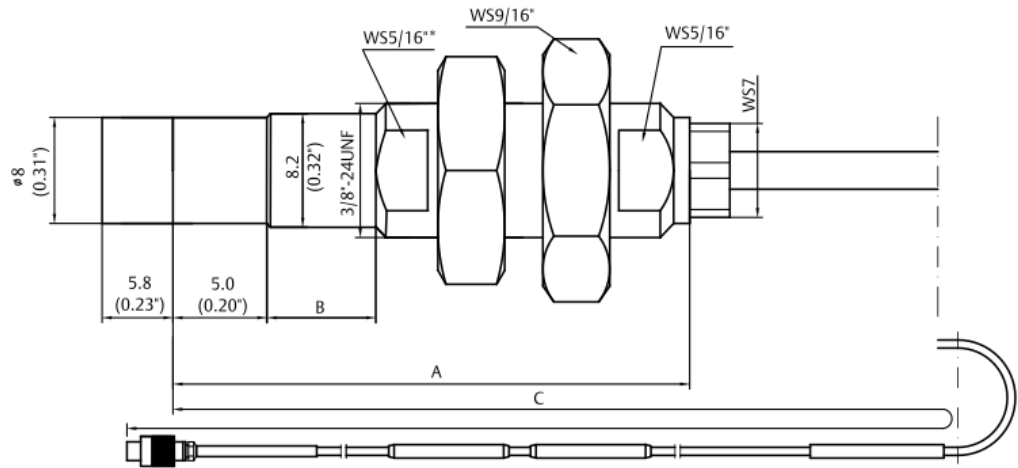
- A. Case length (see [Order information](#) for available lengths)
- B. Unthreaded length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

D.

Cable length	D
1 m	<30 mm
5 m	>300 mm
10 m	>300 mm

All dimension in mm.

Figure 6-7: EZ1082-xx-xx-xxx

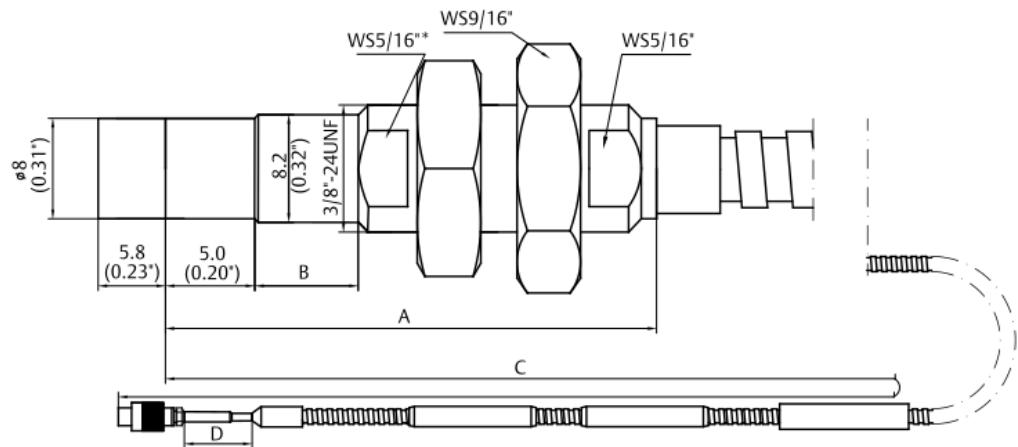


* WS5/16" spanner flat not available with 20 mm (0.8 in) and unthreaded length case

- A. Case length (see [Order information](#) for available lengths)
- B. Unthreaded length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

The dimensions without parentheses are in mm and the dimensions in parentheses are in inch.

Figure 6-8: EZ1083-xx-xx-xxx



* WS5/16" spanner flat not available with 20 mm (0.8 in) and unthreaded length case

- A. Case length (see [Order information](#) for available lengths)
- B. Unthreaded length (see [Order information](#) for available lengths)
- C. Overall cable length (see [Order information](#) for available lengths, tolerance 0 ... +10%)

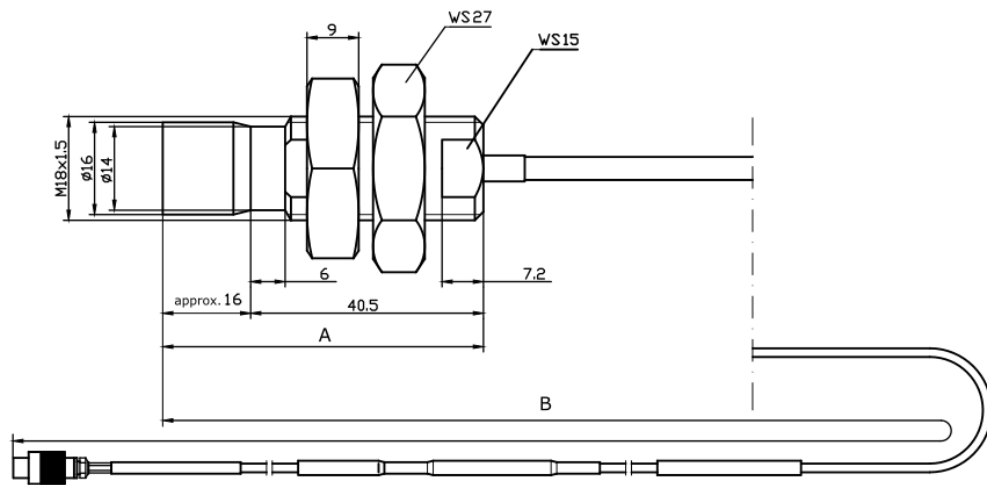
D. Cable length	D
1 m	<30 mm

<i>Cable length</i>	<i>D</i>
5 m	>300 mm
10 m	>300 mm

The dimensions without parentheses are in mm and the dimensions in parentheses are in inch.

EZ116x-xx-xx-xxx

Figure 6-9: EZ116x-xx-xx-xxx



- A. Case length (see [Order information](#) for available length)
- B. Overall cable length (see [Order information](#) for available length, tolerance 0...+10%)

All dimension in mm.

7 Order information

The EZ105x-xx-xx-xxx, EZ108x-xx-xx-xxx, and EZ116x-xx-xx-xxx sensors can be ordered in different variations according to [Table 7-1](#) and [Table 7-2](#), [Table 7-3](#) and [Table 7-4](#). Use the EZ190x-xxx extension cable to adjust the cable length to your needs (see [Table 7-5](#)).

Note

Ensure that the overall cable length, sensor cable plus extension cable, does not exceed 10 meters.

Table 7-1: Ordering information – Sensor

Tip diameter	Case thread	Armored cable	Model No.
5 mm	M8x1	No	EZ1050
		Yes	EZ1051
8 mm	M10x1	No	EZ1080
		Yes	EZ1081
16 mm	M18x1.5	No	EZ1160
		Yes	EZ1161
5 mm	1/4"-28 UNF	No	EZ1052
		Yes	EZ1053
8 mm	3/8"-24 UNF	No	EZ1082
		Yes	EZ1083
16 mm	3/4-16UNF	No	EZ1162
		Yes	EZ1163

Table 7-2: Ordering matrix – EZ105x

Model No.	-	Case length XX	-	Unthreaded length XX	-	Cable length XXX ^{1,2}
EZ1050	-	02 ³ 20 mm (Minimum) to 10 100 mm (Maximum) Order in increments of 10 mm.	-	00 0 mm (no unthreaded length) 05 50 mm ⁴	-	005 0.5 m 010 1.0 m 015 1.5 m 020 2.0 m 030 3.0 m 050 5.0 m 100 10.0 m 150 ⁵ 15.0 m
EZ1051						

Table 7-2: Ordering matrix – EZ105x (continued)

Model No.	-	Case length XX	-	Unthreaded length XX	-	Cable length XXX ^{1,2}
EZ1052	-	08 ⁶	-	00	-	
EZ1053	-	0.8 in 10 1.0 in (Minimum) to 40 4.0 in (Maximum) Order in increments of 0.5 in.	-	0 in (no unthreaded length) 20 2.0 in ⁷	-	

- 1 The usage of EZ190x-xxx Extension Cable is possible with options 0.5 m, 1.0 m, 1.5 m, and 2.0 m.
- 2 When using sensors in combination with extension cables, the overall system length must be 4.0 m, 5.0 m, 6.0 m, 7.0 m, 8.0 m, 9.0 m, or 10.0 m.
- 3 The 20 mm case is only available with EZ1050.
- 4 The remaining threaded length must be either 50 mm or 100 mm.
- 5 On request (non-standard)
- 6 The 0.8 in case is only available with EZ1052.
- 7 The remaining threaded length must be either 2.0 in or 4.0 in.

Example:

EZ1050-04-00-050

EZ 5 mm, M8x1, No armor, 40 mm sleeve, 0 mm unthreaded, 5 m cable

Table 7-3: Ordering matrix – EZ108x

Model No.	-	Case length XX	-	Unthreaded length XX	-	Cable length XXX ^{1,2}
EZ1080	-	02 ³	-	00	-	005 0.5 m
EZ1081	-	20 mm (Minimum) to 25 250 mm (Maximum) Order in increments of 10 mm. RM Reverse Mount	-	0 mm (no unthreaded length) 05 50 mm (Minimum) to 20 200 mm (Maximum ⁴)	-	010 1.0 m 015 1.5 m 020 2.0 m 030 3.0 m 050 5.0 m 100 10.0 m 150 ⁵ 15.0 m 300 ⁵ 30.0 m

Table 7-3: Ordering matrix – EZ108x (continued)

Model No.	-	Case length XX	-	Unthreaded length XX	-	Cable length XXX ^{1,2}
EZ1082	-	08 ⁶ 0.8 in	-	00 0 in (no unthreaded length)	-	
EZ1083	-	10 1.0 in (Minimum) to 95 9.5 in (Maximum) Order in increments of 0.5 in. RM Reverse Mount	-	20 2.0 in (Minimum) to 75 7.5 in (Maximum ⁷)	-	

- 1 The usage of EZ190x-xxx Extension Cable is possible with options 0.5 m, 1.0 m, 1.5 m, and 2.0 m.
- 2 When using sensors in combination with extension cables, the overall system length must be 4.0 m, 5.0 m, 6.0 m, 7.0 m, 8.0 m, 9.0 m, or 10.0 m.
- 3 The 20 mm case is only available with EZ1080.
- 4 The remaining threaded length must be either 50 mm or 100 mm.
- 5 On request (non-standard)
- 6 The 0.8 in case is only available with EZ1082.
- 7 The remaining threaded length must be either 2.0 in or 4.0 in.

Example:

EZ1080-02-00-050

EZ 8 mm, M10x1, No armor, 20 mm sleeve, 0 mm unthreaded, 5 m cable

Table 7-4: Ordering matrix – EZ116x

Model No.	-	Case length XX	-	Unthreaded length XX	-	Cable length XXX ^{1,2}
EZ1160	-	04 40 mm (Minimum)	-	00 0 mm (no unthreaded length) ⁴	-	010 1.0 m
EZ1161	-	to 29 290 mm (Maximum) Order in increments of 10 mm. ³	-	05 50 mm (Minimum) to 24 240 mm (Maximum ⁵)	-	050 5.0 m 100 10.0 m
EZ1162	-	15 1.5 in (Minimum) to 95 9.5 in (Maximum) Order in increments of 0.5 in. ⁶	-	00 0 in (no unthreaded length) ⁴ 20 2.0 in (Minimum) to 75 7.5 in (Maximum ⁷)	-	

Table 7-4: Ordering matrix – EZ116x (continued)

Model No.	-	Case length XX	-	Unthreaded length XX	-	Cable length XXX ^{1,2}
EZ1163						

- 1 The usage of EZ190x-xxx Extension Cable is possible with option 1.0 m.
- 2 When using sensors in combination with extension cables, the overall system length must be 4.0 m, 5.0 m, 6.0 m, 7.0 m, 8.0 m, 9.0 m, or 10.0 m.
- 3 Standard: **04** to **10**, **15**, **20**, **25**, and **29**; all other case lengths on request
- 4 Standard, all other unthreaded lengths on request
- 5 The remaining threaded length must be either 50 mm or 100 mm.
- 6 Standard: **15** to **40**, **60**, **80**, and **95**; all other case lengths on request
- 7 The remaining threaded length must be either 2.0 in or 4.0 in.

Example:

EZ1160-05-00-050

EZ 16 mm, M18x1.5, No armor, 50 mm sleeve, 0 mm unthreaded, 5 m cable

Table 7-5: Ordering matrix – Extension cable

Sensor cable	Armored cable X	-	Cable length XXX
EZ190	0 No		020 2.0 m
EZ190	1 Yes		025 2.5 m
			030 3.0 m
			035 3.5 m
			040 4.0 m
			045 4.5 m
			050 5.0 m
			055 5.5 m
			060 6.0 m
		-	065 6.5 m
			070 7.0 m
			075 7.5 m
			080 8.0 m
			085 8.5 m
			090 9.0 m
			095 9.5 m
			140 14.0 m ¹
			290 29.0 m ¹

- 1 On request (non-standard), 30.0 m not available with EZ 105x sensors.

Example:

EZ1900-040

EZ190 extension cable, no armor, 4 m cable

8 Certificates



EU-Declaration of Conformity (Translation)

We: epro GmbH, Jöbkesweg 3, 48599 Gronau
declare under our sole responsibility that following product(s):

Product designation:	EZ 1000
Product description:	Eddy current measurement system consisting of signal converter type EZ 1000 (SIS) with sensors types EZ 105x, EZ 108x, EZ 116x, EZ 132x, PR 6422, PR 6423, PR 6424, PR 6425 and PR 6426
Part numbers	EZ1000, EZ1000-SIS EZ105x-xx-xx-xxx EZ108x-xx-xx-xxx EZ116x-xx-xx-xxx EZ132x-xx-xx-xxx PR642x/xxx-xxx

are in conformity with the terms of the directives mentioned below including any amendment valid at the date of declaration:

2014/30/EU	Electromagnetic compatibility
2014/34/EU	Equipment and protective system intended for use in potentially explosive atmospheres
2011/65/EU	The restriction of the use of certain hazardous substances in electrical and electronic equipment

Following harmonized standards have been applied:

2014/30/EU	EN 61326-1	Electrical equipment for measurement, control and laboratory use. EMC requirements Part 1. General requirements
2014/34/EU	EN 60079-0	Explosive atmospheres - Part 0: Equipment - General requirements
	EN 60079-7	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
	EN 60079-11	Explosive atmospheres - Part 11: Equipment protection by type of protection "I"
2011/65/EU	EN IEC 63000	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

For the type examination according to EN 60079-0, EN 60079-7 and EN 60079-11 the following notified body has been involved;

DEKRA EXAM GmbH
Type examination certificate BVS 18 ATEX E 011 X

Authorized person for technical documentation:

Bruno Hecker, Jöbkesweg 3, 48599 Gronau

Gronau, 22 February 2023
Place, Date

Managing Director
Quality



UKCA-Declaration of Conformity

We, the manufacturer: epro GmbH, Jöbkesweg 3, 48599 Gronau, Germany
declare under our sole responsibility that following product(s):

Product designation:	EZ 1000
Product description:	Eddy current measurement system consisting of signal converter type EZ 1000 (SIS) with sensors types EZ 105x, EZ 108x, EZ 116x, EZ 132x, PR 6422, PR 6423, PR 6424, PR 6425 and PR 6426
Part numbers	EZ1000, EZ1000-SIS EZ105x-xx-xx-xxx EZ108x-xx-xx-xxx EZ116x-xx-xx-xxx EZ132x-xx-xx-xxx PR642x/xxx-xxx

are in conformity with the terms of the directives mentioned below including any amendment valid at the date of declaration:

S.I. 2016 No. 1091	Electromagnetic Compatibility Regulations 2016
S.I. 2016 No. 1107	Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016
S.I. 2016 No. 3032	The restriction of the use of certain hazardous substances in electrical and electronic equipment

Following standards have been applied:

S.I. 2016 No. 1091	EN 61326-1	Electrical equipment for measurement, control and laboratory use. EMC requirements. Part 1. General requirements
S.I. 2016 No. 1107	EN 60079-0	Explosive atmospheres -Part 0: Equipment- General requirements
	EN 60079-7	Explosive atmospheres- Part 7: Equipment protection by increased safety "e"
	EN 60079-11	Explosive atmospheres- Part 11: Intrinsic Safety „i“
S.I. 2016 No. 3032	EN IEC 63000	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

For the type examination according to EN 60079-0, EN 60079-7 and EN 60079-11 the following notified body has been involved:

DEKRA Testing and Certification GmbH
Type examination certificate BVS 18 ATEX E 001 X

Authorized person for technical documentation:

Bruno Hecker, Jöbkesweg 3, 48599 Gronau, Germany

Authorized Representative:

Emerson Process Management Limited,
company No 00671801
Meridian East,
Leicester
LE19 1UX, United Kingdom
Regulatory Compliance Department
email: ukproductcompliance@emerson.com
Phone: +44 11 6282 23 64

M. Fränzer
Managing Director

B. Hecker
Quality

Place, Date: Gronau, 22 February 2023



Emerson Process Management
1100 W. Louis Henna Blvd.
Round Rock, TX 78681

Statement Regarding the China RoHS Compliance of Emerson Product - EZ105x-xx-xx-xxx

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements

表 1：有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr (VI))	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
电缆 CABLE ASSY	X	0	0	0	0	0	
<p>○ 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下 ○ Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.</p> <p>X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 X Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.</p> <p>环保期限 (EFUP) 的产品及其部件是每个列出的符号。除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. Use Period is valid only when the product is operated under the conditions defined in the product manual.</p>							

James McFerrin
Environmental Compliance Manager PSG
T 512 832 3271 E james.mcferrin@emerson.com



Emerson Process Management
1100 W. Louis Henna Blvd.
Round Rock, TX 78681

Statement Regarding the China RoHS Compliance of Emerson Product - EZ108x-xx-xx-xxx

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements

表1：有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr (VI))	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
传感器 SENSOR	X	0	0	0	0	0	25
0 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下 0: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。 X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.							
环保期限 (EFUP) 的产品及其部件是每个列出的符号，除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. Use Period is valid only when the product is operated under the conditions defined in the product manual.							

James McFerrin
Environmental Compliance Manager PSG
T 512 832 3271 E james.mcferrin@emerson.com



Emerson Process Management
1100 W. Louis Henna Blvd.
Round Rock, TX 78681

Statement Regarding the China RoHS Compliance of Emerson Product - EZ190x-xxx

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements

表 1：有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr (VI))	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
电缆 CABLE ASSY	X	0	0	0	0	0	Ⓢ
○ 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下 ○ Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.							
X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 X Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.							
环保期限 (EFUP) 的产品及其部件是每个列出的符号，除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. Use Period is valid only when the product is operated under the conditions defined in the product manual.							

James McFerrin
Environmental Compliance Manager PSG
T 512 832 3271 E james.mcferrin@emerson.com



Emerson Process Management
1100 W. Louis Henna Blvd.
Round Rock, TX 78681

Statement Regarding the China RoHS Compliance of Emerson Product - EZ1900-003-ADAP-x

Please refer to Table 1 for the names and contents of the toxic or hazardous substances or elements contained in Emerson products.

Table 1: Names and Contents of Toxic or Hazardous Substances or Elements

表 1：有毒有害物质或元素的名称及含量

部件名称 Part Name	有毒有害物质或元素 Toxic or hazardous Substances and Elements						
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Hexavalent Chromium (Cr (VI))	多溴联苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)	
连接器 ADAPTER	X	0	0	0	0	0	
<p>○ 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下 ○ Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.</p> <p>X 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。 X Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.</p> <p>环保期限 (EFUP) 的产品及其部件是每个列出的符号。除非另有标明。使用期限只适用于产品在产品手册中规定的条件下工作 The Environmentally Friendly Period (EFUP) for the product and its parts are per the symbol listed, unless otherwise marked. Use Period is valid only when the product is operated under the conditions defined in the product manual.</p>							

James McFerrin
Environmental Compliance Manager PSG
T 512 832 3271 E james.mcferrin@emerson.com

A Special AMS EZ 1000 Sensors

The following AMS EZ 1000 Sensors are variants of the standard AMS EZ 1000 Sensors listed in [Order information](#). The special properties of the variants are described in this chapter. For general information such as installation and further technical data of these sensors see the other chapters of this manual.

EZ108x-xx-xx-xxx-001

EZ108x Sensor with short cable armor. In this variant the metal protection tube does not extend to the connector, but ends approximately 0.5 m in front of it.

EZ108x-xx-xx-xxx-002

EZ108x Sensor with PTFE cable armor. In this variant the metal protection tube is additionally covered by a PTFE plastic hose.

EZ108x-xx-xx-xxx-003

EZ108x Sensor with an O-ring seal to be resistant to H₂S gas. Because of the special sealing, the technical data in [Table A-1](#) apply, otherwise the technical data in [Technical data](#) apply.

Table A-1: Technical data

O-ring material	EPDM resistant to H ₂ S gas
Temperature nominal operating range	-35°C to +150°C (sensor including 1 m cable)

EZ108x-xx-xx-xxx-004

EZ108x Sensor with a bigger intermediate connector.

- To connect, push the plug into the socket. The plug locks with an audible click.
- To unlock the intermediate connector, pull the plug out of the socket.

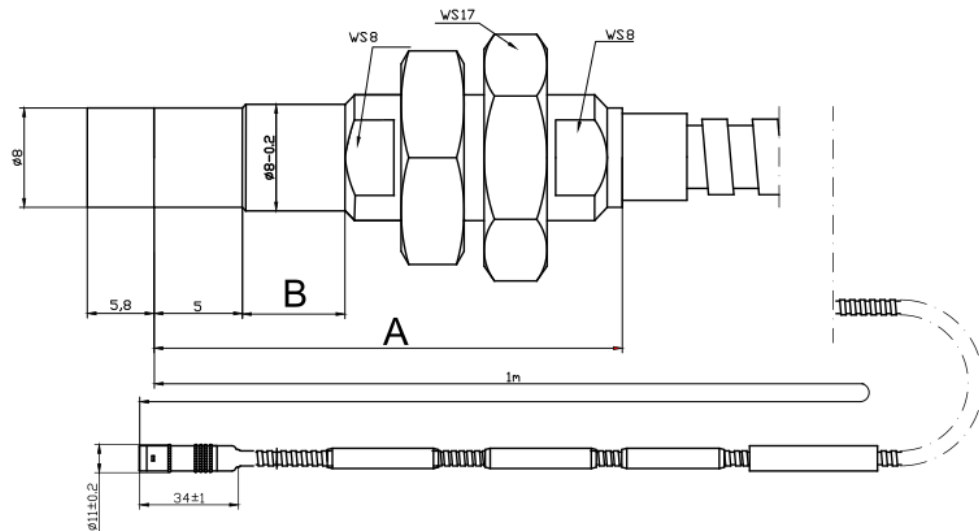
Note

The intermediate connector is a pluggable connector. Do not turn plug or socket for opening.

Figure A-1: Big intermediate connector – closed and open



Figure A-2: Dimensions – EZ108x-xx-xx-xxx-004 with big connector



- A. Case length (see [Order information](#) for available lengths)
- B. Unthreaded length (see [Order information](#) for available lengths)

Note

When installing the EZ108x-xx-xx-xxx-004 at hazardous locations, shrink a blue shrink sleeve over the intermediate connector. A blue shrink sleeve with a length of approximately 100 mm, a diameter of 13 to 15 mm (not shrunk), and a shrink ratio of 1:4 is required. The shrink sleeve is not contained in the delivery.

Emerson
12001 Technology Drive
Eden Prairie, MN 55344 USA
T 1(952)828-3000
www.Emerson.com

Emerson
835 Innovation Drive
Knoxville, TN 37932 USA
T +1 865-675-2400
F +1 865-218-1401
www.Emerson.com

Emerson
Jöbkesweg 3
48599 Gronau
Germany
T +49 2562 709 0
F +49 2562 709 401
www.Emerson.com/ams

©2024, Emerson. All rights reserved.

The contents of this publication are presented for informational purposes only, and while diligent efforts were made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

The Emerson logo is a trademark and service mark of Emerson Electric Co. The AMS logo is a mark of one of the Emerson family of companies. All other marks are the property of their respective owners.

