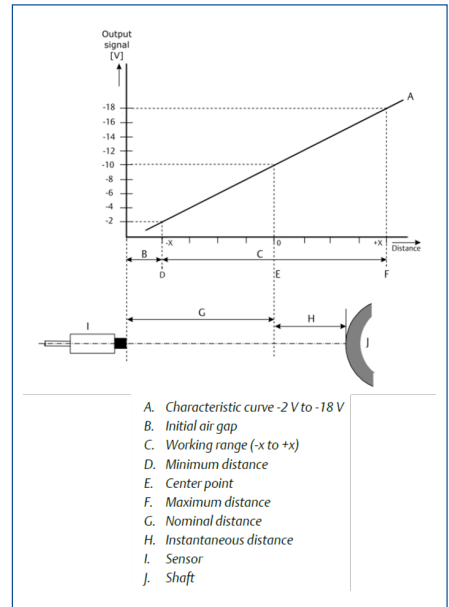
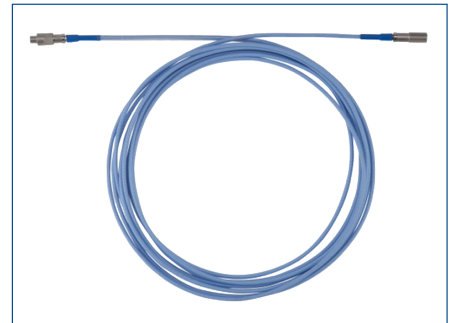
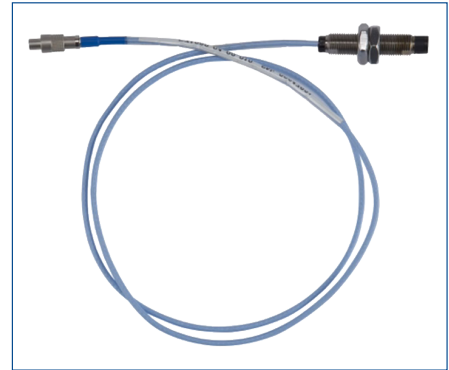


8mm Eddy Current Sensor

Non-contact sensor designed for critical turbomachinery applications such as steam, gas and hydro turbines, compressors, gearboxes, pumps and fans to measure radial and axial shaft dynamic displacement; position, eccentricity and speed/key.

Performance	
Linear Measurement Range	2 mm (80 mils)
Initial Air Gap	0.5 mm (20 mils)
Incremental Scale Factor (ISF)	API: 7.87 V/mm (199.9 mV/mil) ± 5% or ISO: 8 V/mm (203.2 mV/mil) ± 5% @ temperature range 0 to 45°C (+32 to +113°F)
Deviation from best fit straight line (DSL)	± 0.025 mm (± 1 mil) @ temperature range 0 to 45°C (+32 to +113°F)
Measuring Target	
Minimum Target Size	Minimum: 14mm (0.55") Recommended Minimum: 20mm (0.79"), additional failure <1%
Minimum Shaft Diameter	Minimum: 20mm (0.79") Recommended Minimum: 25mm (0.98")
Target Material (Ferromagnetic Steel)	42CrMo4 (AISI/SAE 4140) 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)



Environmental, General	
Protection Class	IP67, IEC 60529 IP68 (if DOC-TEST is assigned to delivered sensor)
Operating Temperature Range	Sensor incl. 1m Cable: -35 to +180°C (-31 to 356°F) Cable & Connector: -35 to +150°C (-31 to 302°F)
Differential Pressure & Sealing	10000 hpa (145 psi) @ up to 120°C (248°F) AMS EZ 1000 sensors are designed to seal differential pressure between sensor tip and case & oil leakage. Sensors are not pressure & leakage tested prior to shipment. Please order Test Certificate (DOC-TEST) separately, if you require a test of the pressure seal for your application.
Material	Sensor Tip (GF30 – glass- fiber reinforced PEEK Polyether Ether Ketone) Case (Stainless Steel) Cable (FEP <i>Fluorinated Ethylene Propylene</i>), Connector (Brass, nickel-plated)
Weight (Sensor with 1m Cable)	Approx. 100 grams (3.53 oz)

Compliance and Certifications

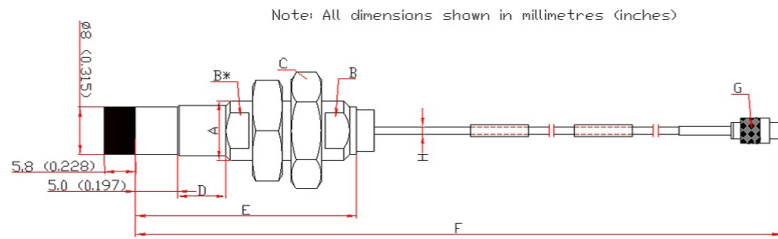
CE	2014/30/EU (EN 61326-1) 2014/34/EU 2014/65/EU (EN IEC 63000)
ATEX	EN IEC 60079-0:2018 EN IEC 60079-7:2015 + A1:2018 EN IEC 60079-11:2012
IEC-Ex KTL Korea	IEC 60079-0:2017 IEC 60079-7:2017 IEC 60079-11:2011
CSA	CAN/CSA-C22.2 NO. 0-10 CAN/CSA-C22.2 NO. 61010-1-12 CAN/CSA-C22.2 NO. 60079-0:19 CAN/CSA-C22.2 NO. 60079-11:14 CAN/CSA-C22.2 NO. 60079-7:16 UPD1:2015; UPD2:2016; AMD1:2018 UL 61010-1 UL 60079-0:19 UL 60079-11:13 UL 60079-7:2017
CCC	GB 3836.1-2010 GB 3836.4-2010 GB 3836.8-2014
CCOE PESO India	IEC 60079-0:2011 IEC 60079-11:2011 IEC 60079-15:2010
CML Japan	JNIOH-TR-46-1:2020 JNIOH-TR-46-6:2015 JNIOH-TR-46-8:2015
Marine	DNV GL rules for classification – Ships and offshore units
Safety (SIL): SC 2 (SIL 2 Capable)	IEC 61508:2010

Hazardous Area Approvals

Intrinsic Safety (ia)	
ATEX	Area classification depends on converter, see converter documentation for details. Sensor temperature classification: T6: $-35^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$ T4: $-35^{\circ}\text{C} \leq T_a \leq 130^{\circ}\text{C}$ T2: $-35^{\circ}\text{C} \leq T_a \leq 200^{\circ}\text{C}$
IEC-Ex	
CSA	
CCC-Ex	
CCOE PESO India	
KTL Korea	
CML Japan	
Increased Safety (ec)	
ATEX	Area classification depends on converter, see converter documentation for details. Sensor temperature classification: T6: $-35^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$ T4: $-35^{\circ}\text{C} \leq T_a \leq 130^{\circ}\text{C}$ T2: $-35^{\circ}\text{C} \leq T_a \leq 200^{\circ}\text{C}$
IEC-Ex	
CSA	
CCC-Ex	
CCOE PESO India	
KTL Korea	
CML Japan	

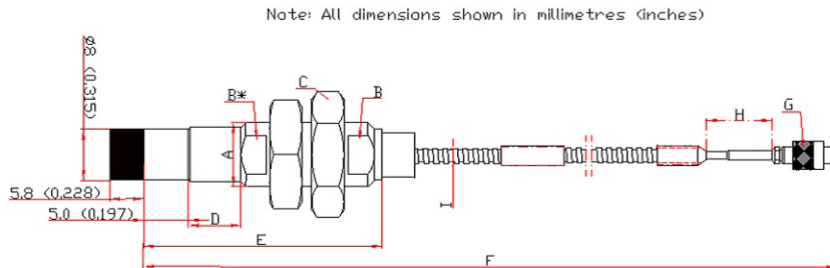
Dimensions

EZ1080-xx-xx-xxx & EZ1082-xx-xx-xxx



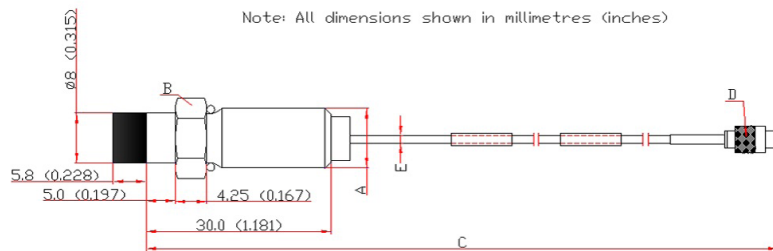
- A. Case thread, M10x1 or 3/8-24UNF
- B. Wrench flats, SW 8 mm for M10 threads, SW 5/16 in for 3/8-24UNF threads
- B*. Wrench flat not available with 20 mm (0.8 in) and unthreaded length case
- C. SW 17 mm for M10 threads, SW 9/16 in for 3/8-24UNF threads
- D. Unthreaded length
- E. Case Length
- F. Cable Length (Tolerances 0...+10%)
- G. Lemo connector (male), 8.3 mm (0.328 in) diameter
- H. Standard cable diameter 2.8 mm (0.110 in), minimum bending radius 25 mm (0.984 in)

EZ1081-xx-xx-xxx & EZ1083-xx-xx-xxx



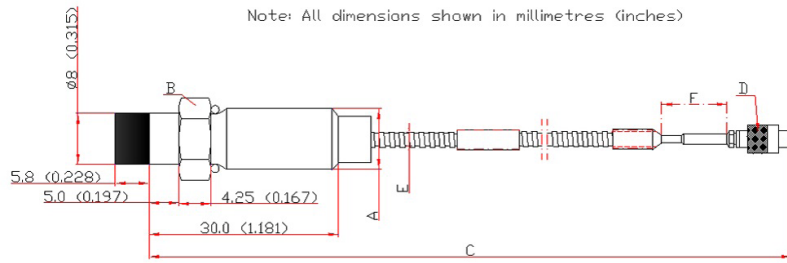
- A. Case thread, M10x1 or 3/8-24UNF
- B. Wrench flats, SW 8 mm for M10 threads, SW 5/16 in for 3/8-24UNF threads
- B*. Wrench flat not available with 20 mm (0.8 in) and unthreaded length case
- C. SW 17 mm for M10 threads, SW 9/16 in for 3/8-24UNF threads
- D. Unthreaded length
- E. Case Length
- F. Cable Length (Tolerances 0...+10%)
- G. Lemo connector (male), 8.3 mm (0.328 in) diameter
- H. Length without armor < 30 mm at 1m, < 300 mm at 5m and 10m cable length
- I. Armored cable diameter 6 mm (0.236 in), minimum bending radius 35 mm (1.378 in)

EZ1080-RM-00-xxx & EZ1082-RM-00-xxx



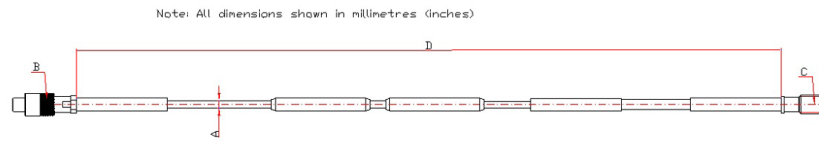
- A. Case thread, M10x1 or 3/8-24UNF
- B. SW 11 mm for M10 threads, SW 7/16 in for 3/8-24UNF threads
- C. Cable Length (Tolerances 0...+10%)
- D. Lemo connector (male), 8.3 mm (0.328 in) diameter
- E. Standard cable diameter 2.8 mm (0.110 in), minimum bending radius 25 mm (0.984 in)

EZ1081-RM-00-xxx & EZ1083-RM-00-xxx



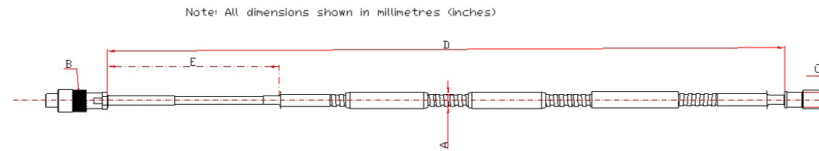
- A. Case thread, M10x1 or 3/8-24UNF
- B. SW 11 mm for M10 threads, SW 7/16 in for 3/8-24UNF threads
- C. Cable Length (Tolerances 0...+10%)
- D. Lemo connector (male), 8.3 mm (0.328 in) diameter
- E. Armored cable diameter 6 mm (0.236 in), minimum bending radius 35 mm (1.378 in)
- F. Length without armor < 30 mm at 1m, < 300 mm at 5m and 10m cable length

EZ1900-xxx



- A. Standard cable diameter 2.8 mm (0.110 in), minimum bending radius 25 mm (0.984 in)
- B. Lemo connector (male), 8.3 mm (0.328 in) diameter
- C. Lemo connector (female), 7.0 mm (0.276 in) diameter
- D. Cable Length (Tolerances 0...+10%)

EZ1901-xxx



- A. Armored cable diameter 6 mm (0.236 in), minimum bending radius 35 mm (1.378 in)
- B. Lemo connector (male), 8.3 mm (0.328 in) diameter
- C. Lemo connector (female), 7.0 mm (0.276 in) diameter
- D. Cable Length (Tolerances 0...+10%)
- E. Length without armor < 300 mm

Ordering Information Sensor

Case Threads	Armored Cable	Model No.
M10x1	No	EZ1080
	Yes	EZ1081
3/8"-24 UNF	No	EZ1082
	Yes	EZ1083

Model No.	Case Length XX	Unthreaded Length XX	Cable Length XXX
EZ1080	02 20mm (Minimum)	00 0mm, No UTL	005 0.5m
EZ1081	I 25 250mm (Maximum) Order in increments of 10mm RM Reverse Mount Note: 20mm Case is only available with EZ1080	05 50mm (Minimum) I 20 200mm (Maximum) Note: Remaining threaded Length must be either 50mm or 100mm	010 1.0m 015 1.5m 020 2.0m 050 5.0m 100 10.0m 150 15.0m 300 30.0m Note: 15.0m and 30.0m on request (non-standard).
EZ1082	08 0.8in	00 0.0in, No UTL	Note: Usage of EZ190x Extension Cable possible with 0.5m, 1.0m, 1.5m & 2.0m option only. Note: While using sensors in combination with extension cable, overall system length must be 4.0m, 5.0m, 6.0m, 7.0m, 8.0m, 9.0m, 10.0m, 15.0m or 30.0m.
EZ1083	10 1.0in (Minimum) I 95 9.5in (Maximum) Order in increments of 0.5in RM Reverse Mount Note: 0.8in Case is only available with EZ1082	20 2.0in (Minimum) I 75 7.5in (Maximum) Note: Remaining threaded Length must be either 2.0in or 4.0in	

Example:

EZ1080-02-00-050

ECS 8mm, M10X1, NO ARMOR, 20MM SLEEVE, 0MM UNTHREADED, 5M CABLE

Special Versions

Part Number	Description
EZ1xxx-xx-xx-xxx-001	Sensor option with special short armor.
EZ1xxx-xx-xx-xxx-002	Sensor option with FEP covered stainless steel armor.
EZ1xxx-xx-xx-xxx-003	Sensor option with special sealing.
EZ1xxx-xx-xx-xxx-004	Sensor option with special big Lemo connector.

Special Versions

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

Example:

EZ1900-040

ECS EXTENSION CABLE, NO ARMOR, 4M CABLE

Product Accessories

Model Number	Product Description
MPT 064	Metal Protection Tube
EZ 1600	ECS Probe Holder

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