Emerson Service Manual

EZ1080-16-11-010

1. Description

EZ1080-16-11-010

3. Product Information

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EZ1080-16-11-010

ECS 8mm, M10X1, NO ARMOR, 160MM SLEEVE, 110MM UNTHREADED, 1M CABLE

Emerson 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 (DOCTEST) 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 Fluorinated Ethylene

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Propylene), 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 JNIOSH-TR-46-1:2020
JNIOSH-TR-46-6:2015
JNIOSH-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
IEC-Ex
CSA
CCC-Ex
CCOE PESO India
KTL Korea
CML Japan
Area classification depends
on converter, see converter
documentation for details.
Sensor temperature classification:
T6: -35°C ≤ Ta ≤ 55°C
T4: -35°C ≤ Ta ≤ 130°C
T2: -35°C ≤ Ta ≤ 200°C
Increased Safety (ec)
ATEX
IEC-Ex
CSA
CCC-Ex
CCOE PESO India

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KTL Korea

CML Japan

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Ordering Information Sensor

Model No: EZ1080

Case Threads:M10x1

Armored Cable:No

EZ1080: 8mm Eddy Current Sensor

Case Length:-16- 160MM

Note: 20mm Case is only available with EZ1080

Unthreaded Length: 11 - 110mm

Cable Length: 010 - 1.0m

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