APTER POWER

INDUSTRIAL AUTOMATION PRODUCT

EZ1081-03-00-010 + EZ1901-090

Eddy Current System

Emerson EZ1081-03-00-010 + EZ1901-090 combines an armored M10x1 EZ1081 sensor with a 1 m integral cable and an armored EZ1901 extension cable for a documented 10 m system length. The configured sensor provides a 2 mm eddy-current measuring range for compatible EZ1000 conversion electronics.

IDENTITY	VERIFIED VALUE
Manufacturer	Emerson
Complete model	EZ1081-03-00-010 + EZ1901-090
Product role	Eddy Current System
System family	AMS EZ1000 8 mm System
Country of origin	USA

DOCUMENT SCOPE

Exact identity, manufacturer-supported technical data, installation checks, applications, precautions and controlled verification records.

APTER POWER SALES TEAM

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Technical Specifications

PARAMETER	VERIFIED VALUE
Complete configuration	EZ1081-03-00-010 + EZ1901-090
Sensor thread	M10x1
Sensor case length	30 mm
Integral cable	1 m, armored
Extension cable	9 m, armored
Total system length	10 m
Measuring range	2 mm
Initial air gap	0.5 mm
Scale factor	7.87 V/mm ±5% API or 8 V/mm ±5% ISO at 0–45 °C
Protection	IP67; IP68 with DOC-TEST

Model-Specific Engineering Note

ENGINEERING BOUNDARY

Keep the complete 10 m calibrated cable chain together and record the 30 mm case-length code before replacement. Verify the 0.5 mm initial air gap, target geometry and converter configuration before dynamic acceptance.

Pre-Installation Checks

NO.	REQUIRED CHECK
1	Verify the entire EZ1081-03-00-010 + EZ1901-090 configuration, not only the probe body.
2	Place the monitored machine and channel in the approved maintenance state.
3	Keep the 1 m sensor cable and 9 m extension as the documented 10 m chain.
4	Protect the probe tip, armored cable and connectors from impact or contamination.
5	Confirm the minimum target and shaft geometry from the official data sheet.

System Role and Architecture

Emerson EZ1081-03-00-010 + EZ1901-090 combines an armored M10x1 EZ1081 sensor with a 1 m integral cable and an armored EZ1901 extension cable for a documented 10 m system length. The configured sensor provides a 2 mm eddy-current measuring range for compatible EZ1000 conversion electronics.

FUNCTION 1

Forms a calibrated 10 m sensor cable chain

FUNCTION 2

Uses an armored M10x1 EZ1081 probe

FUNCTION 3

Provides a 2 mm measurement range

FUNCTION 4

Supports API or ISO scale-factor configuration

Common Applications

APPLICATION	ENGINEERING CONTEXT
Shaft relative vibration	Measures non-contact shaft motion with a compatible converter.
Radial position monitoring	Tracks static position inside the documented linear range.
Key or speed reference	Detects a suitable metallic target when the converter is configured accordingly.
Exact cable-chain replacement	Restores the documented 1 m sensor plus 9 m extension arrangement.

CONTROLLED ACCEPTANCE DUTY

Confirm identity, physical interface, companion hardware, configured values and functional response against the installed-system record before release.

Engineering Precautions

NO.	PRECAUTION
1	Verify the entire EZ1081-03-00-010 + EZ1901-090 configuration, not only the probe body.
2	Place the monitored machine and channel in the approved maintenance state.
3	Keep the 1 m sensor cable and 9 m extension as the documented 10 m chain.
4	Protect the probe tip, armored cable and connectors from impact or contamination.
5	Confirm the minimum target and shaft geometry from the official data sheet.
6	Set the initial air gap near 0.5 mm while preserving mechanical clearance.
7	Confirm the converter is set for the selected API or ISO scale factor.
8	Prove gap voltage, polarity, linear response and alarm action before release.

Model-Specific FAQ - Part 1

QUESTION	ANSWER
What total cable length does Emerson EZ1081-03-00-010 + EZ1901-090 create?	The 1 m EZ1081 cable plus the 9 m EZ1901 extension gives the documented 10 m system length.
Which thread is used by Emerson EZ1081-03-00-010 + EZ1901-090?	The EZ1081 sensor code in this configuration uses an M10x1 mounting thread.
What case length is encoded in Emerson EZ1081-03-00-010 + EZ1901-090?	The sensor order code specifies a 30 mm case length.
What measuring range applies to Emerson EZ1081-03-00-010 + EZ1901-090?	The 8 mm EZ1000 sensor system has a 2 mm measuring range.

Model-Specific FAQ - Part 2

QUESTION	ANSWER
Where should the initial gap be set for Emerson EZ1081-03-00-010 + EZ1901-090?	The data sheet states a 0.5 mm initial air gap.
Which scale factors are available for Emerson EZ1081-03-00-010 + EZ1901-090?	The official values are 7.87 V/mm ±5% for API scaling or 8 V/mm ±5% for ISO scaling at 0–45 °C.
Can the extension cable in Emerson EZ1081-03-00-010 + EZ1901-090 be omitted or exchanged casually?	No. The calibrated chain depends on the documented 10 m total length, so any extension change requires confirmation of the complete order and converter setup.
What is the final functional check for Emerson EZ1081-03-00-010 + EZ1901-090?	Verify connector integrity, converter selection, static gap, polarity, linear movement response and the configured alarm path with the full cable chain installed.

Related Products on Apter Power

MODEL	APTER POWER PAGE
Bently Nevada 21500-00-32-05-02	View Bently Nevada 21500-00-32-05-02
Bently Nevada 21501-00-16-05-02	View Bently Nevada 21501-00-16-05-02
Bently Nevada 21504-00-08-10-02	View Bently Nevada 21504-00-08-10-02
Bently Nevada 21504-00-20-10-02	View Bently Nevada 21504-00-20-10-02
Bently Nevada 21504-00-24-10-02	View Bently Nevada 21504-00-24-10-02
Bently Nevada 21504-00-48-10-02	View Bently Nevada 21504-00-48-10-02
Bently Nevada 21504-000-012-05-02	View Bently Nevada 21504-000-012-05-02
Bently Nevada 21504-0000-012-05-02	View Bently Nevada 21504-0000-012-05-02

MANUFACTURER SOURCE RECORD

AMS EZ1000 8 mm Sensor Data Sheet
Emerson data sheet, December 2024; EZ1081 and EZ1901 ordering tables

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