

FMS Tension Control / Measuring Amplifier

EMGZ491.EIP-Series Single-Channel Measuring Amplifier for EtherNet/IP

- **EtherNet/IP Device**
Simple integration into EtherNet/IP networks
- **Configuration via EtherNet/IP or web interface**
Easy configuration with parameter sets for demanding applications
- **Communication cycle time ≥ 1 ms**
Fast and precise – well suited for time-critical applications
- **Various installation options**
Narrow DIN rail version for cabinet or sealed IP 65 wall mount for harsh environment.
RJ45/M12 plugs and detachable terminal blocks for easy installation

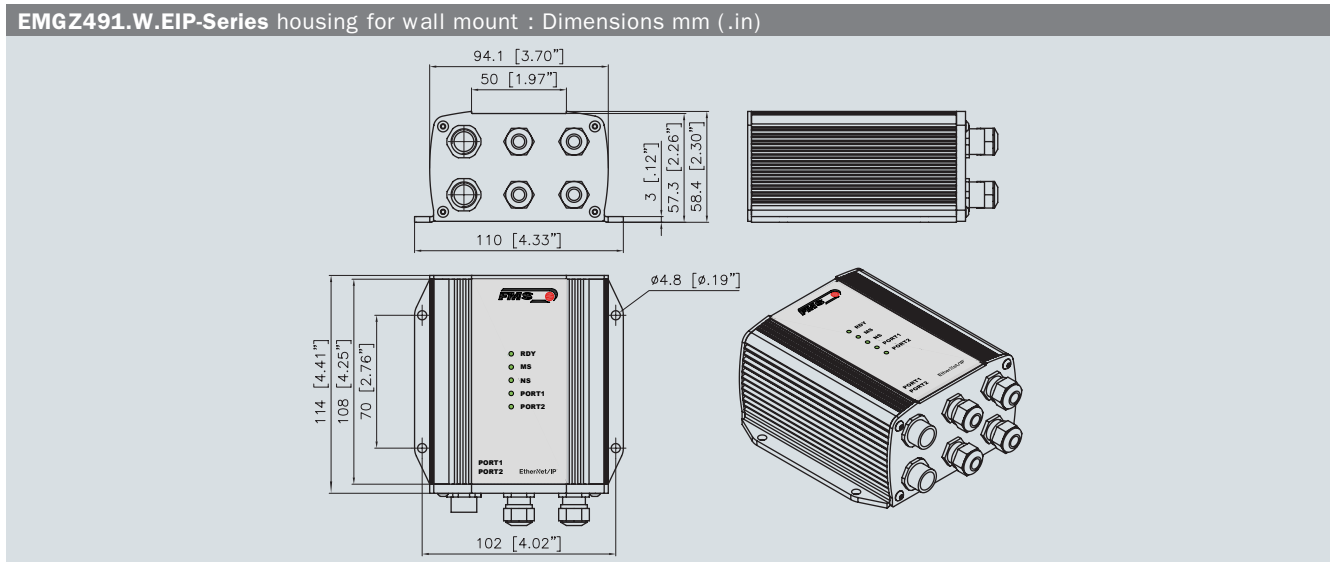
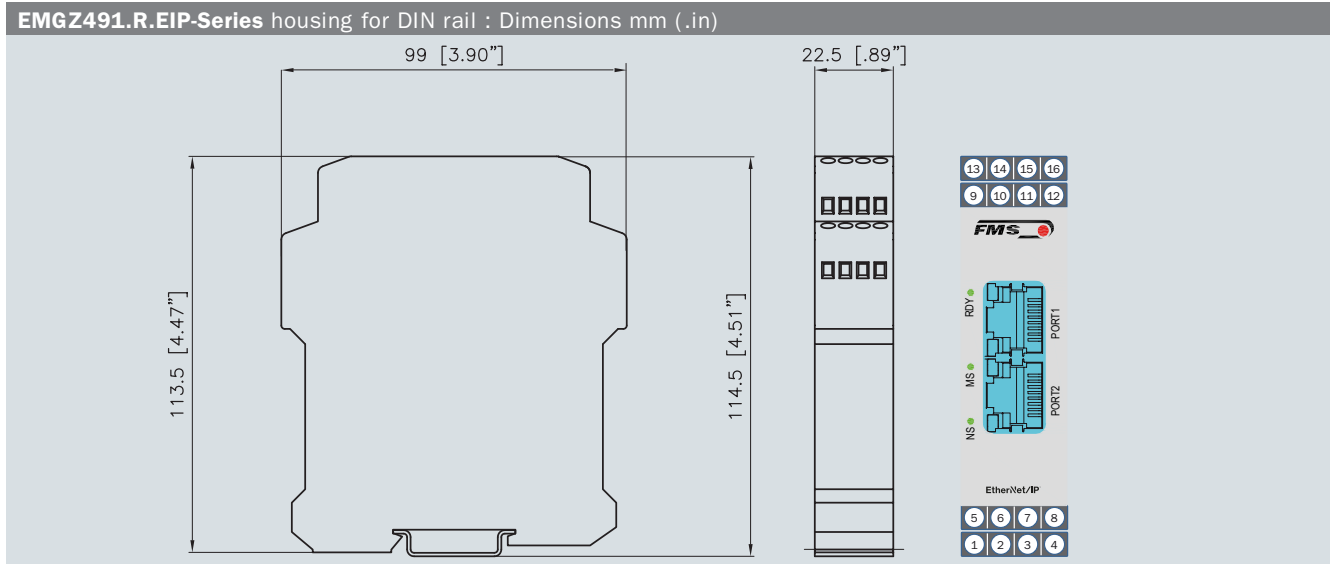
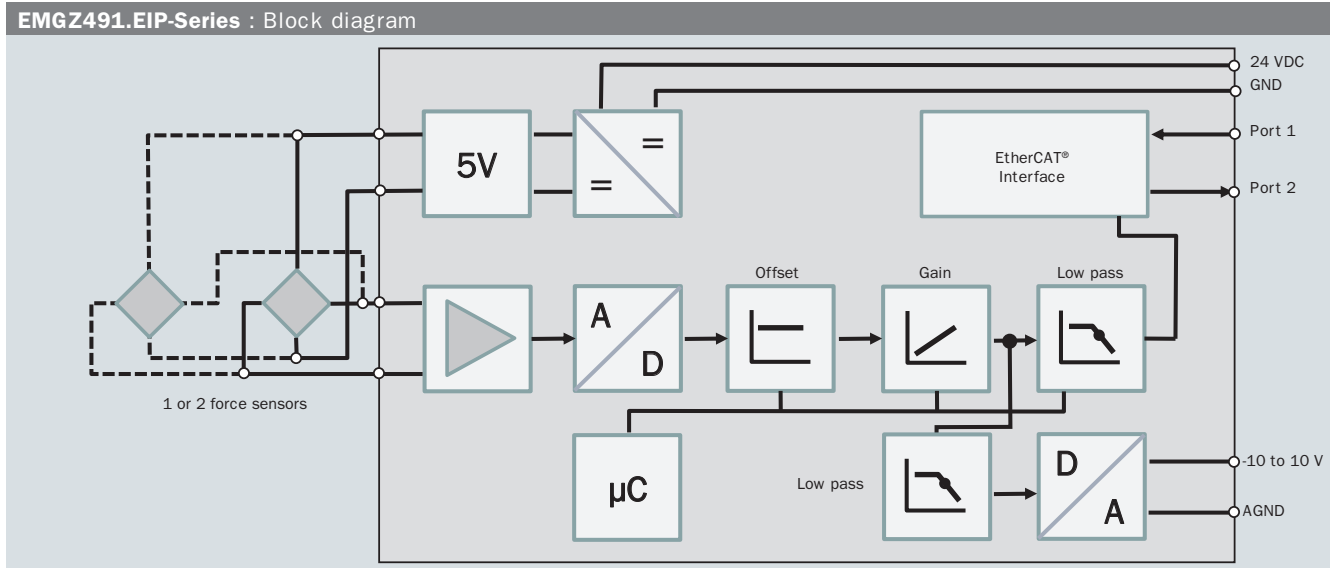


EMGZ491.EIP-Series

The EMGZ491.EIP amplifier has been designed for use in modern EtherNet networks where a typical application involves the measurement or control of web tension in coating, laminating, printing, extrusion, or other similar roll to roll processes. Making full use of the EtherNet/IP capabilities allows this amplifier to excel in high speed applications. An extensive range of parameters allows for quick and flexible configuration of the unit, and all functions are easily adjusted via web interface or EtherNet/IP with a scanner.

Functional Description

The analog force sensor feedback signals are input directly to a high resolution A/D-converter. Functions such as signal filtering, automatic offset compensation, and gain calculation are all digitized on the EMGZ491.EIP series amplifier. The EtherNet/IP interface provides enhanced connectivity in your production line. Additional processing of the feedback signal can then be carried out in a PLC under real time conditions.



EMGZ491.EIP-Series : Technical Data

Number of channels	1 channel for 2 sensors
Power supply for force sensor	5 VDC, max. 80 mA, highly stable
Sensor feedback signal	± 9 mV (max. 11.25 mV); with option .V05 ± 2.5 mV (max. ± 3.125 mV)
Resolution A/D converter	± 32768 Digit (16 Bit)
Resolution D/A converter	0 to 4096 (12 Bit)
Measuring error	< 0.05 % FS
Connector for Interface	EMGZ 491.R: 2 x RJ-45 EMGZ 491.W: 2 x M 12 4-Pol, D-coded
Configuration	via EtherNet/IP or web interface
Protection class	IP 20 (.R Version), IP 65 (.W Version)
Power supply	24 VDC (18 to 36 VDC) / 5 W
Temperature range	-10 to +50 °C (14 to 122 °F)
Weight	370 g / 0.82 lbs (.R Version), 470 g / 1.04 lbs (.W Version)

EMGZ491.EIP-Series : EtherNet/IP Features

Cycle time	≥ 1 ms
IO Connection Types (implicit)	Exclusive Owner, Listen Only, Input only
Number of Message Connections	Explicit message connections (10), Implicit message connections (5)
IO Connection Trigger Types	Cyclic
Baud Rate	10 or 100 Mbit/s
Cyclic Process Data	Actual value in Digits (ADC), Actual value in Newton, Actual value in Pound, actual value in config. unit, Status
Acyclic Services	Get_Attribute_Single, Set_Attribute_Single, according to CIP specification Volume 1 and Volume 2, ...
Ring Topology	DLR (Device Level Ring)
Predefined Standard Objects	Identity Object, Message Router Object, Assembly Object, Connection Manager, DLR Object, QoS Object, TCP/IP Interface Object, Ethernet Link Object
Features	DLR (Device Level Ring), beacon based ring node, ACD (Address Conflict Detection), DHCP, BOOTP, Integrated Switch
Web interface	Configuration, measuring data queries via http (alternative configuration via EtherNet/IP)
Certification	according CT16

EMGZ491.EIP-Series : Order Code

EMGZ491	.V05	.W	.EIP	
				EtherNET/IP
				.W Version for wall mount, .R Version for DIN rail
				.V05 sensor feedback signal ± 2.5 mV (max. ± 3.125 mV)
				Series

EMGZ491.EIP-Series : Options

.R	Version for DIN rail mount, IP 20
.W	Version for wall mount, IP 65
.V05	Sensor feedback signal ± 2.5 mV (max. ± 3.125 mV) for force sensors with a sensitivity of 0.5 mV/V

EMGZ491.EIP-Series : Scope of supply

- Measuring Amplifier ● Installation and operation manual

EMGZ491.EIP-Series : Accessories

- Patch cable with RJ45 connectors ● M12 connectors D-coded

EMGZ491.EIP-Series : Typical Application



Other products : Tension Control

Force Sensors	Tension Controllers	ATEX
		

About us

FMS Force Measuring Systems AG is the market leader in the field of web tension measurement, control and specialist for web guiding solutions. For the wire industry we are the only manufacturer offering a complete range of technologies for force measurement, data processing and radio transmission of signals.

Our in house developed products are used in the manufacturing industry, converting, metals, paper, textiles, as well as in cable and wire rope production. Utilising the latest technology, high quality components and a firm understanding of customer applications, FMS supports customers worldwide in the effort to maximize the productivity of their machines. Since 1993, our highly qualified employees have been creating high-end solutions for machine builders and plant operators. As an owner-managed company, we pride ourselves on being personal and approachable with the ability to make decisive moves fast.

World Headquarters: FMS Force Measuring Systems AG

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