

## EMGZ 321.EIP Left/Right Web Tension Measuring Amplifier with EtherNet/IP Interface

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**Separate force evaluation for left and right**  
Precise tension monitoring over the measuring roller

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**Integrated EtherNet/IP fieldbus**  
Straightforward integration in an Ethernet network with possibility of real time control over the field bus

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**Freely configurable digital inputs and outputs**  
Provides special monitoring functions and flexibility for application changes

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**3 housing/ mounting options**  
DIN Rail, Wall Mount (IP 65), and panel mount

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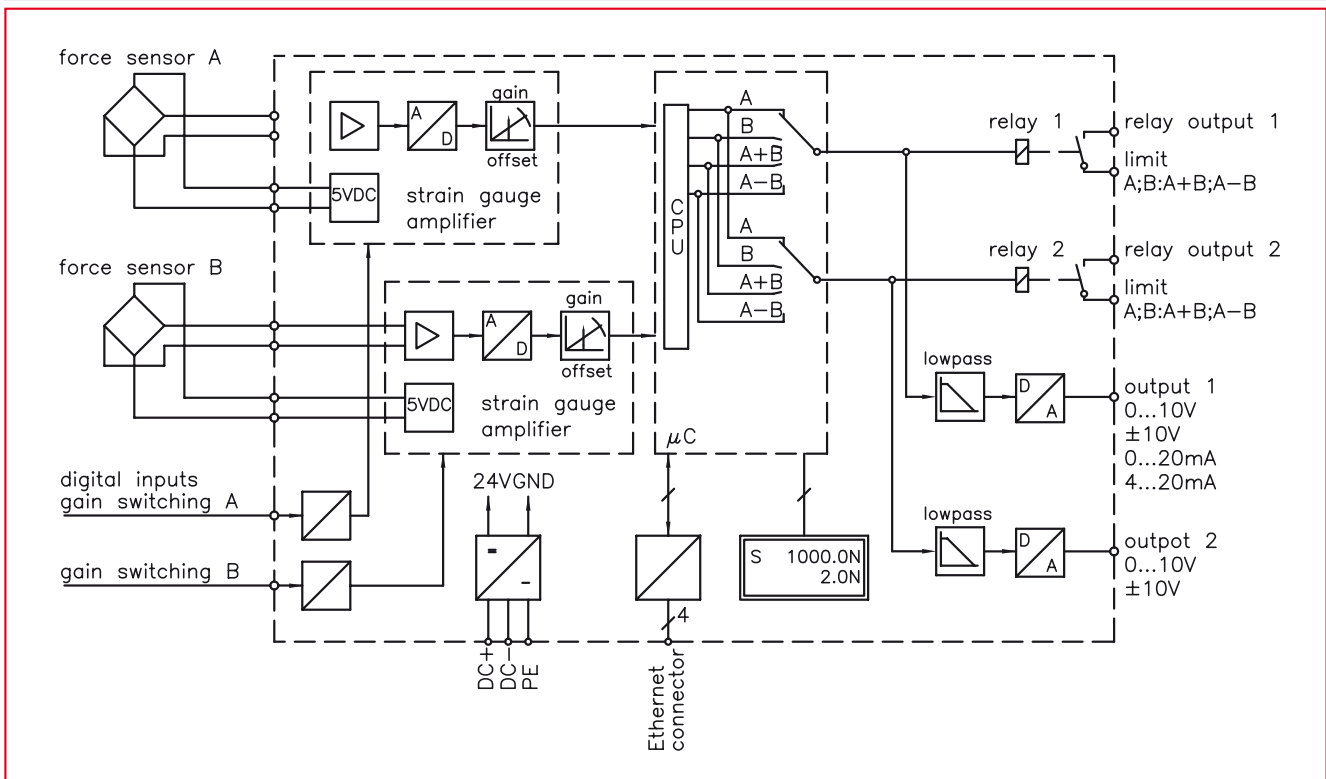
### ● EMGZ 321.EIP Series

EMGZ 321.EIP amplifiers are an innovative enhancement of the successful EMGZ 321 series. With a built-in EtherNet/IP field bus the electronics offers data transfer with cycle times down to 2 ms. The fast data rates enable real time tension control over the bus. The EMGZ 321.EIP, a left/right strain gauge amplifier, measures the material tension on both sides of the roller independently. Thus it is possible to monitor the load distribution over the measuring roller with great accuracy. The EMGZ 321 series can be used in connection with all FMS force sensors.

### ● Functional Description

The mV signals generated by the force sensors are amplified and conditioned in the EMGZ 321.EIP electronics. The individual sensor values A or B as well as the sum A+B and difference (A-B) are shown on the display in [N], [lbs] or another chosen unit. The whole signal processing is microprocessor based. Data is transferred via the EtherNet/IP bus to a central machine control or PLC where data processing and application dependent calculations are carried out. The EtherNet/IP interface provides an efficient integration and configuration of the tension amplifiers in an existent Ethernet network.

**EMGZ 321.EIP • Block Diagram**



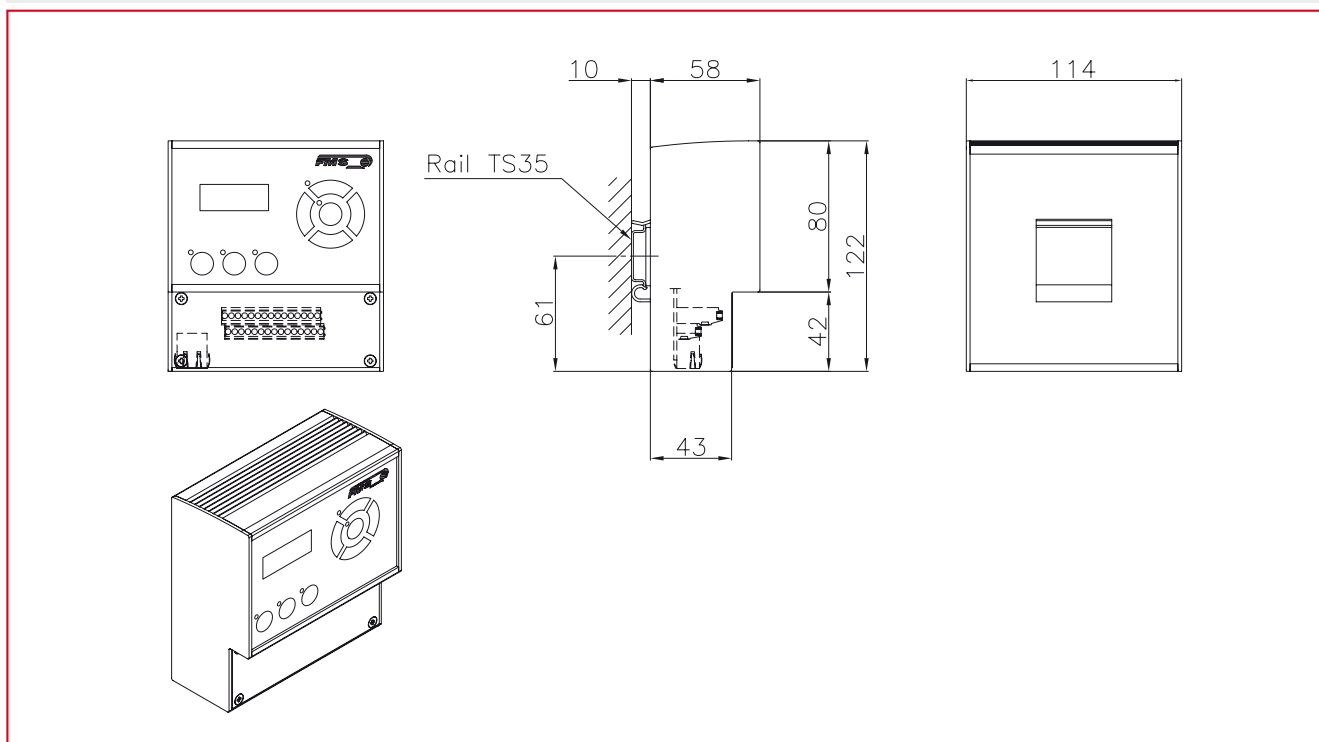
**EMGZ 321.EIP Series • Technical Data**

<b>Number of Channels</b>	2 Channels for 2 sensors
<b>Sensor Supply</b>	5 VDC; max. 60 mA; high stability
<b>Input signal range</b>	0...9 mV (max. 12.5 mV)
<b>Resolution A/D converter</b>	± 8192 Digit (14 Bit)
<b>Measuring error</b>	< 0.05% FS
<b>Operation</b>	3 buttons, 5 buttons wind rose, LCD-display 2x8 characters (size 5 mm)
<b>Interface for Parameter Setting</b>	Ethernet via web browser (Ethernet explorer 7 or higher)
<b>Interface</b>	EtherNet/IP (CIP Common Industrial Protocol, Standard IEC 61158)
<b>Options</b>	EMGZ 321.EIP.W.AC.V for main supply
<b>Power supply</b>	24 VDC (18...36 VDC) / 10 W (max. 0.5 A) For EMGZ 321.EIP.W.AC.V: 85...264 VAC, 50/60 Hz; max. 120 W
<b>Temperature range</b>	0...50 °C (32...122 °F)
<b>Protection class</b>	EMGZ 321.EIP.R and EMGZ 321.EIP.S: IP40 EMG Z321.EIP.W and EMG Z321.EIP.W.AC.V: IP65
<b>Weight</b>	EMGZ 321.EIP.R: 0.57 kg; EMGZ 321.EIP.S: 0.40 kg EMGZ 321.EIP.W: 0.72 kg; 321.EIP.W.AC.V: 1.10 kg

**EMGZ 321.EIP Series • Input / Output Configuration**

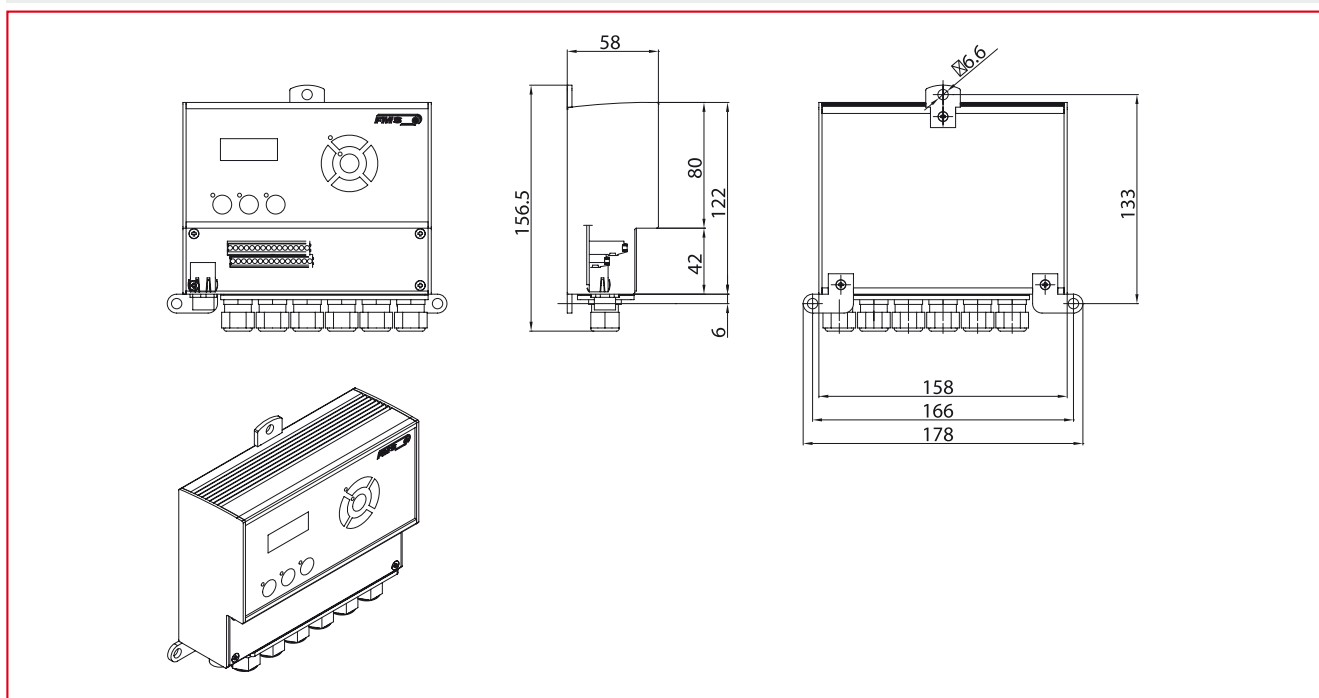
<b>Analogue input 1</b>	1 sensor with strain gauges @ 350 Ω; with input signal range: 0...9 mV, max. 12.5 mV
<b>Analogue input 2</b>	1 sensor with strain gauges @ 350 Ω; with input signal range: 0...9 mV, max. 12.5 mV
<b>Analogue output 1</b>	0...10 VDC; ±10 VDC, min. 1.2 k Ω or 0/4...20 mA, max. 500 Ω
<b>Analogue output 2</b>	0...10 VDC; ±10 VDC, min. 1.2 k Ω
<b>Digital Inputs</b>	2 inputs @ 24 VDC galvanically isolated
<b>Relay outputs</b>	2 outputs (DC: 240 V/0.5 A/12 W; AC: 240 V/0.5 A/12 VA)

**EMGZ 321.EIP.R Rail Mount Housing • Dimensions in mm**



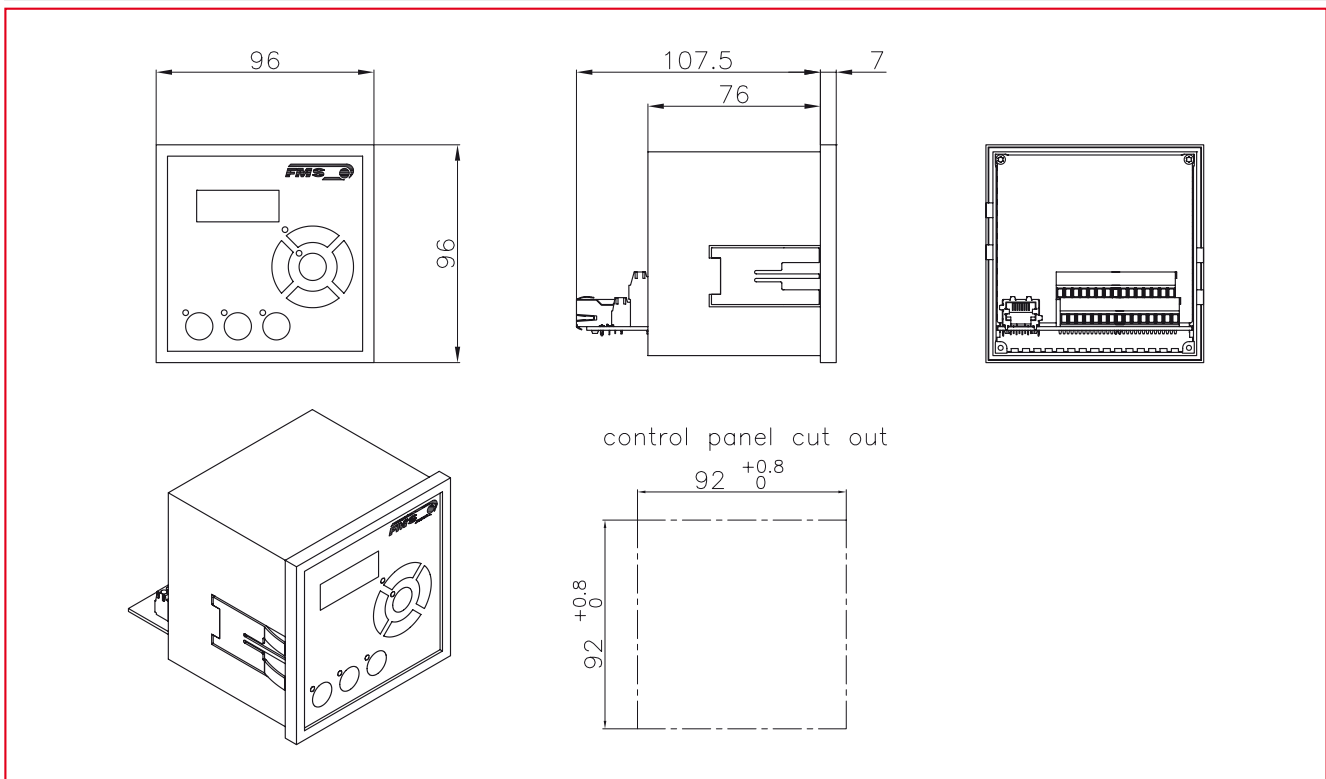
Wiring is realised via cable terminals.

**EMGZ 321.EIP.W Wall Mount Housing • Dimensions in mm**



With PG-Gland cable connector. Protection class IP65. Ethernet connector M12 4-pole D-coded.

**EMGZ 321.EIP.S Panel Mount Housing • Dimensions in mm**



Wiring is realised via cable terminals.

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