

Tension Measuring Amplifiers for Web Tension

All FMS tension measuring amplifiers are fully compatible with all FMS force sensors and tension controllers. They are specially adapted to measurements of dynamic processes.



EMGZ309-EIP Measuring Amplifier with EtherNet/IP Bus

EMGZ309.EIP amplifiers are an innovative enhancement of the successful 309 series. They are available with a built-in field bus based on EtherNet/IP technology (CIPTM Common Industrial Protocol IEC61158). The popular EtherNet/IP bus offers data transfer with cycle times of ≥ 2 ms. The fast data rates enable real time tension control over the fieldbus.

Features	Advantages
Integrated EtherNet/IP field bus	Straightforward integration in EtherNet network and possibility of real time control over the fieldbus
Plug&play or parameterization via the EtherNet/IP field bus	Fast setup or full utilization of extended parameter set



EMGZ309 Digital Tension Measuring Amplifier

Digital plug & play amplifier with Ethernet capability. Parameter set-up is carried out either via the 3 keys or through a web browser.

Features	Advantages
Digital, microprocessor controlled	Top performance at highest speed
3 programming keys and 2-line LCD	Easy to set up and operate
3 housing versions	Available as wall, rail and panel mount
Galvanic isolated	Protected against electrical noise
Additional features	Auto-Calibration and -Tare Weight Ethernet capability Digital Filtering



EMGZ321 Left/right Tension Measuring Amplifier

The EMGZ321, 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.

Features	Advantages
Separate force evaluation for left and right	Precise tension monitoring over the measuring roller
Plug & play or utilize Ethernet connection	Easy to operate and provides flexible set-up
Freely configurable digital inputs and outputs	Provides special monitoring functions and flexibility for application changes.
3 housing / mounting options	DIN Rail, Wall Mount (IP65), and panel mount



EMGZ321.EIP Left/Right Tension Measuring Amplifier with EtherNet/IP-Bus

EMGZ321.EIP amplifiers are an innovative enhancement of the successful EMGZ321 series. With a built-in EtherNet/IP field bus the electronics offers data transfer with cycle times down to 2ms. The fast data rates enable real time tension control over Ethernet. This two channel 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.

→ [Data sheet \(PDF\)](#)

Features	Advantages
Separate force evaluation for left and right	Precise tension monitoring over the measuring roller
Integrated EtherNet/IP Fieldbus	Straightforward integration in Ethernet network and possibility of real time control over the field bus
Freely configurable digital inputs and outputs	Provides special monitoring functions and flexibility for application changes
3 housing / mounting options	DIN Rail, Wall Mount (IP65), and panel mount



EMGZ306A Compact Tension Measuring Amplifier

The EMGZ306A series is a single channel analogue tension measuring amplifier.

Features	Advantages
No programming required	Easy to setup
Standardised analogue outputs	Multiconnectable with PLC, display etc.
Galvanically isolated	Protected against electrical noise
DIN rail mount	Easy to mount in cabinet
Gain and offset setting by 20-turn trimmers	Precise adjustment guaranteed



EMGZ307 Extra Robust Tension Measuring Amplifier

The EMGZ 307 series is a single channel analogue tension measuring amplifier in a robust, sealed aluminium housing.

Features	Advantages
IP67 aluminium housing	Can be used in harsh environments
No programming required	Easy to setup
Standardised analogue outputs	Multiconnectable with PLC, display etc.
Galvanically isolated	Protected against electrical noise



EMGZ470.D/472.D PROFIBUS® Tension Measuring Amplifier

The EMGZ470/472 is a double channel, digital tension measuring amplifier with integrated PROFIBUS® interface and suitable for 1 or 2 double range force sensors LMGZ.D

Features	Advantages
Microprocessor controlled	High performance and speed
Functions parameterized via PROFIBUS®	Easy set-up and programming
IP67 aluminium housing	Can be used in harsh environments
Galvanically isolated	Protected against electrical noise



EMGZ470/472A.W PROFIBUS® Tension Measuring Amplifier

The EMGZ470/472 is a single channel, digital tension measuring amplifier with integrated PROFIBUS® interface.

Features	Advantages
Microprocessor controlled	High performance and speed
Functions parameterized via PROFIBUS®	Easy set-up and programming
IP67 aluminium housing	Can be used in harsh environments
Galvanically isolated	Protected against electrical noise



EMGZ474 PROFIBUS® Tension Measuring Amplifiers

Tension measuring amplifier with PROFIBUS® interface made for DIN rail assembly.

Features	Advantages
Microprocessor controlled	High performance & speed capability
All functions can be parameterized by PROFIBUS®	Easy setup and programming
Compact design, DIN rail	Saves cabinet space and money
Galvanically isolated	Protected against electrical noise
Low space requirements	Easy mounting



EMGZ473.W Tension Measuring Amplifiers

Tension measuring amplifier with PROFIBUS® interface in a robust aluminium housing.

Features	Advantages
Microprocessor controlled	High performance & speed capability
All functions can be parameterized by PROFIBUS®	Easy setup and programming
Compact design, IP 67	Saves cabinet space and money
Galvanically isolated	Protected against electrical noise
Low space requirements	Easy mounting



- Data sheet (PDF)
- CAD drawings

EMGZ480 Force Measuring Amplifier with CAN-BUS® Interface

In the tension measuring amplifiers of the EMGZ480 series parameter setting and data transmission are performed via an integrated CAN-Bus interface using the Open CAN CiA-DS 301® protocol. The amplifiers come in rugged, resilient aluminium housings. They were designed for dependable operation in rotating stranding machines for the most demanding environments.

Features	Advantages
Microprocessor controlled	Top performance at high machine speed
Data transfer und parameter setting via CAN-BUS ®	Easy set-up and programming
Compact design, protection class IP67	Low space requirements, easy mounting
Galvanically isolated	Protected against electrical noise



EMGZ600 Series Digital Tension Measuring Amplifier

Microprocessor controlled tension measuring amplifier for up to 4 channels with user programming keys, LCD display, robust housing and several special functions built-in.

Features	Advantages
Digital microprocessor controlled	High performance & speed capability
Up to 4 independent channels	Saves machine space and money
4 key programming	Easy to setup and operate
BUS interfacing capability	Remote connectability and integration simplicity
Special features built-in	Powerful and user-friendly in one package