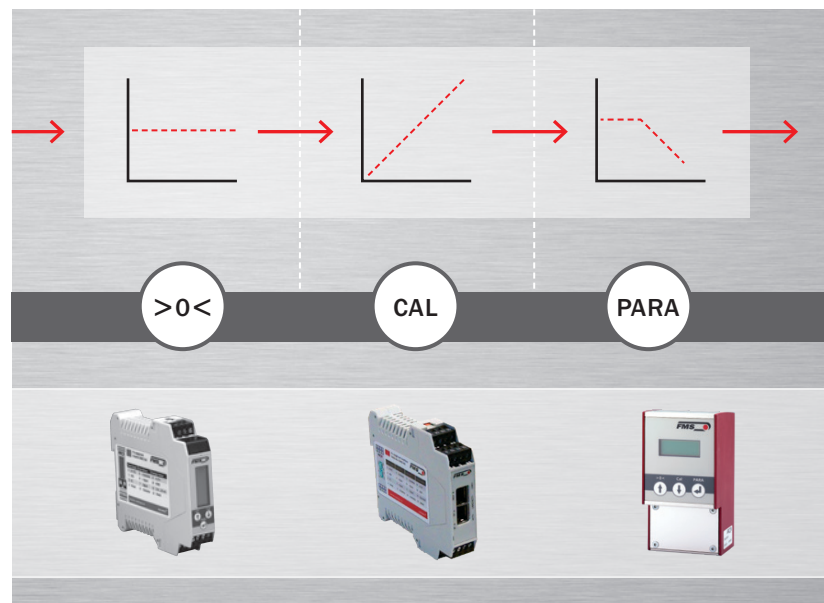


FMS Tension Control Measuring Amplifiers

- Full Range of Technologies:**
 Analog, digital and use with fieldbus networks
- Easy Operation and Configuration:**
 Optional via keypad, web browser, mobile device, or fieldbus protocol
- Versatile Installation Options:**
 Available in DIN rail, panel, and wall mount versions depending on requirements
- Full compatibility with all FMS force sensors:**
 Optimum performance with FMS force sensors and suitable in many cases for retrofit with other make force sensors



FMS Measuring Amplifiers

Dynamic application requirements, economic pressures and technological innovation have all influenced our developments to provide quality, cost effective solutions to industry. From the first analog amplifier (P/N EMGZ306 which is still in production) to the newest models with full network compatibility, we have delivered tens of thousands of amplifiers. Each project has its own challenges, and with our wide range of products we are typically able to provide a solution.

As a technological leader in the market, FMS strives to integrate the latest performance features into the products. The close cooperation we maintain with our customers drove the development of our first digital amplifier models, and later led to the wide range of network compatible products now available.

Functional description

Supplied with 24 VDC, the amplifiers generate a highly stable excitation voltage of 5 VDC to the force sensors. The mV signal from the sensor is amplified and processed using either analog or digital technology. The Offset >0< Function will compensate for roller weight, and the Calibration >CAL< Function will scale the amplifier to provide a signal that is proportional to an actual force value. The output signal from the device is then fed into a PLC or other process controller.

The wide range of amplifier products ensures that the required features (e.g. communication format, display type, mounting configuration, IP rating, etc.) will be available for your project. References for FMS tension measuring amplifiers can be found in the Converting, Pulp & Paper, Metals, Textiles and Wire & Cable industries.

OVERVIEW

FMS Tension Control | Measuring Amplifiers

Series	EMGZ 306	EMGZ 310	EMGZ 310.ComACT	EMGZ 309	EMGZ 321	EMGZ 491.PNET	EMGZ 492.PNET	EMGZ 491.EIP	EMGZ 492.EIP	EMGZ 491.ECAT	EMGZ 492.ECAT	EMGZ 474
Interface												
Versions for DIN rail mount												
Type	EMGZ 306	EMGZ 310	EMGZ 310.ComACT	EMGZ 309.R	EMGZ 321.R	EMGZ 491.R.PNET	EMGZ 492.R.PNET	EMGZ 491.R.EIP	EMGZ 492.R.EIP	EMGZ 491.R.ECAT	EMGZ 492.R.ECAT	EMGZ 474
IP protection rating	IP20	IP20	IP20	IP50	IP40	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Housing Wall mount												
Type	EMGZ 307			EMGZ 309.W	EMGZ 321.W							EMGZ 473.W
IP protection rating	IP67			IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP67
Housing Panel mount												
Type				EMGZ 309.S	EMGZ 321.S							
IP protection rating				IP50	IP50							
Input												
Number of channels	1	1	1	1	2	1	2	1	2	1	2	1
Maximum number of force sensors	2	2	2	2	4	2	4	2	4	2	4	2
Digital input	-	-	-	-	2	-	-	-	-	-	-	-
Output												
Voltage output (VDC)	-10 to +10	-10 to +10	0 to +10	0 to +10	2 x 0 to +10	0 to +10	0 to +10	0 to +10	0 to +10	0 to +10	0 to +10	-
Current output (mA)	0/4 to 20	0/4 to 20	0/4 to 20	0/4 to 20	0/4 to 20	-	-	-	-	-	-	-
Relay output	-	-	-	-	2	-	-	-	-	-	-	-
Operation and Display												
Digital display	-	yes	yes	yes	yes	-	-	-	-	-	-	-
Configuration on device	potentiometers	keypad	keypad	keypad	keypad	-	-	-	-	-	-	-
Configuration via web browser	-	-	-	yes	yes	yes	yes	yes	yes	-	-	-
Operation and Display via FMS ComACT™ App	-	-	yes	-	-	-	-	-	-	-	-	-
Performance												
Cycle time (ms)	analog	1	1	2	2	1	1	1	1	1	1	2

GENERAL FEATURES VALID FOR ALL FMS MEASURING AMPLIFIERS:

Temperature range: 0 to 50 °C (32 to 122 °F)

Power supply: 24 VDC (18 to 36 VDC)

Excitation voltage to force sensors: 5 VDC, highly stable, except EMGZ 473/474 with 4 VDC

Status LED (where present): Power present

Other FMS Products | Tension Control

Force sensors



Tension controllers

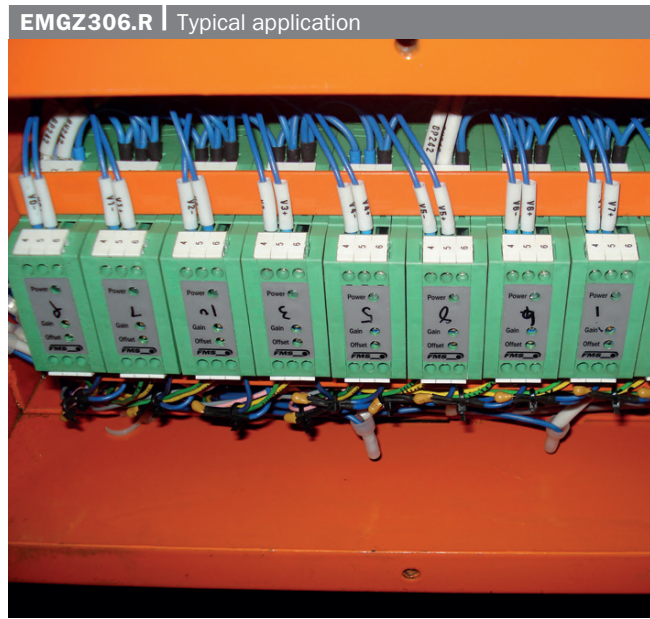
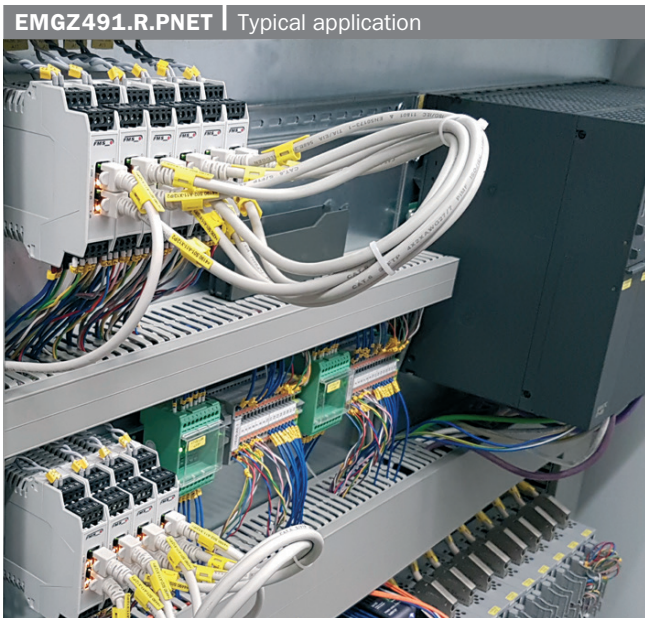


ATEX-Intrinsically safe barriers



OVERVIEW

FMS Tension Control | Measuring Amplifiers



FMS Force Measuring Systems AG | About us

Tension Control	Web Guiding	Telemetry Systems
		

Since 1993 FMS Force Measuring Systems AG has been a worldwide market leader in the fields of tension control and web guiding, and the only manufacturer that covers a complete range of measurement, control and telemetry technologies. Its customized solutions are applied in the converting, metals, paper, textile and the wire & cable industries.

With industry leading technology, high quality construction, and a wide array of products FMS serves customers worldwide to help them maximize their production performance.