RGB ELEKTRONIKA
Centrum automatyki przemysłowej

DATASHEET

FMS

EMGZ 421

OTHER SYMBOLS:

EMGZ421, EMGZ 421

RGB ELEKTRONIKA AGACIAK CIACIEK SPÓŁKA JAWNA

Jana Długosza 2-6 Street
51-162 Wrocław
Poland

biuro@rgbelektronika.pl
+48 71 325 15 05

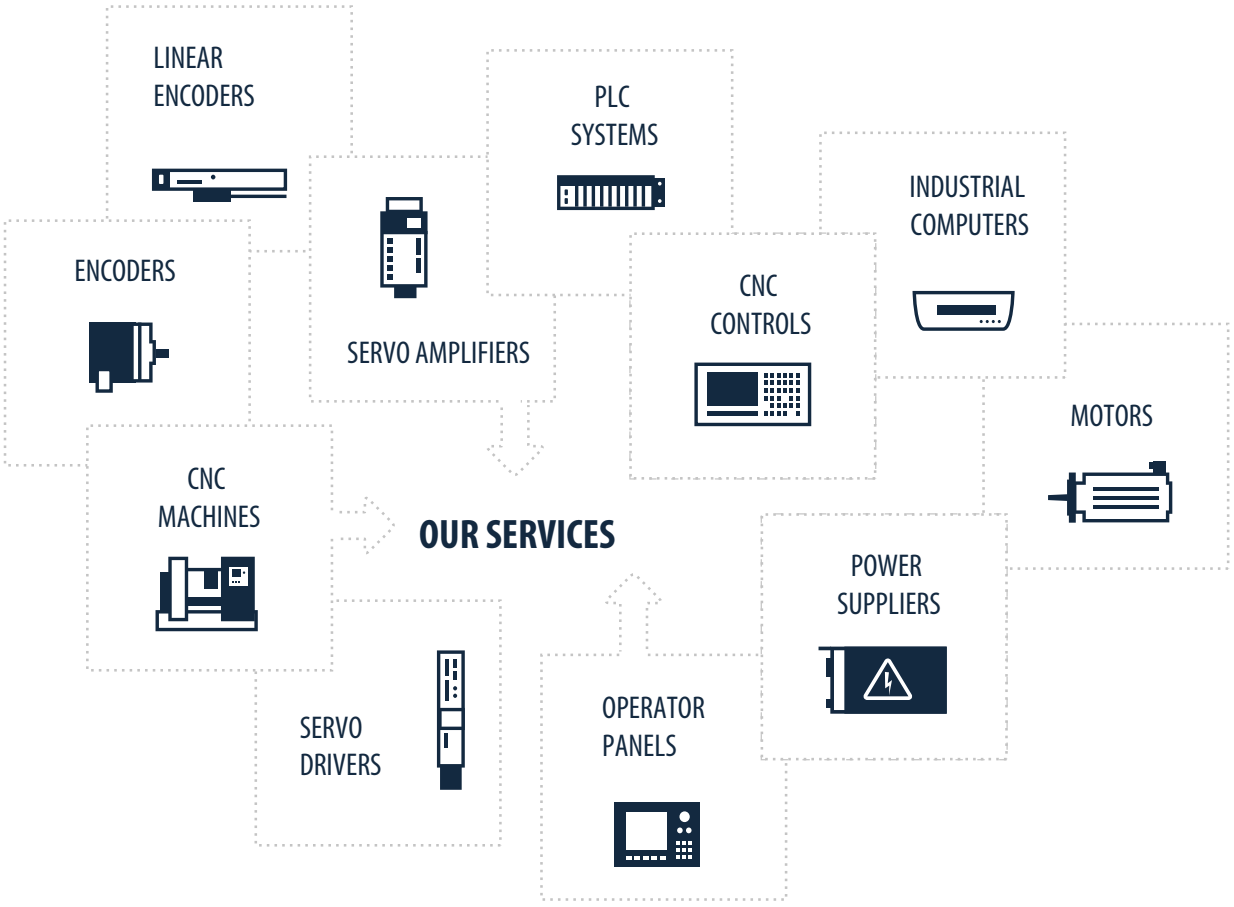
www.rgbelektronika.pl

www.rgbautomatyka.pl

YOUR PARTNER IN MAINTENANCE

Repair **this product** with RGB ELEKTRONIKA

ORDER A DIAGNOSIS »



At our premises in Wrocław, we have a fully equipped servicing facility. Here we perform all the repair works and test each later sold unit. Our trained employees, equipped with a wide variety of tools and having several testing stands at their disposal, are a guarantee of the highest quality service.

Buy **this product** at RGB AUTOMATYKA

BUY »

EMGZ 400/500 Series Digital Tension Measuring Amplifiers

Digital microprocessor controlled
High performance & speed capability

Single and double channel versions
Saves cabinet space and money

4 key programming dual line display
Easy to set-up and operate

Galvanically isolated
Protected against electrical noise

Limit switches
Alarm control possibility

EMGZ 400 / 500 Series

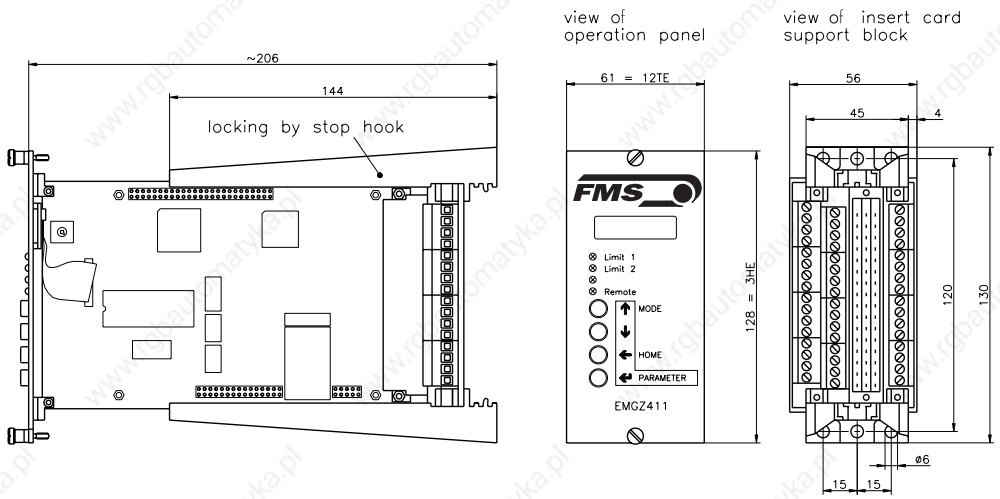
The EMGZ 400/500 Series microprocessor controlled Tension Measuring Amplifier is available in single or double channel versions and suitable for tension measurement with almost any kind of strain gauge based force sensors.

Functional Description

The EMGZ 400/500 Series digital Tension Measuring Amplifier offers dual line LCD display, plain text in different languages. Only 4 programming keys make this a very easy to set-up and operate electronic unit. All parameters and functions can be set with keys or remotely via PC interface. Digital signal filtering, automatic offset calculation, built in gain switching facility along with all other features creates a very powerful and user-friendly tension measuring system.

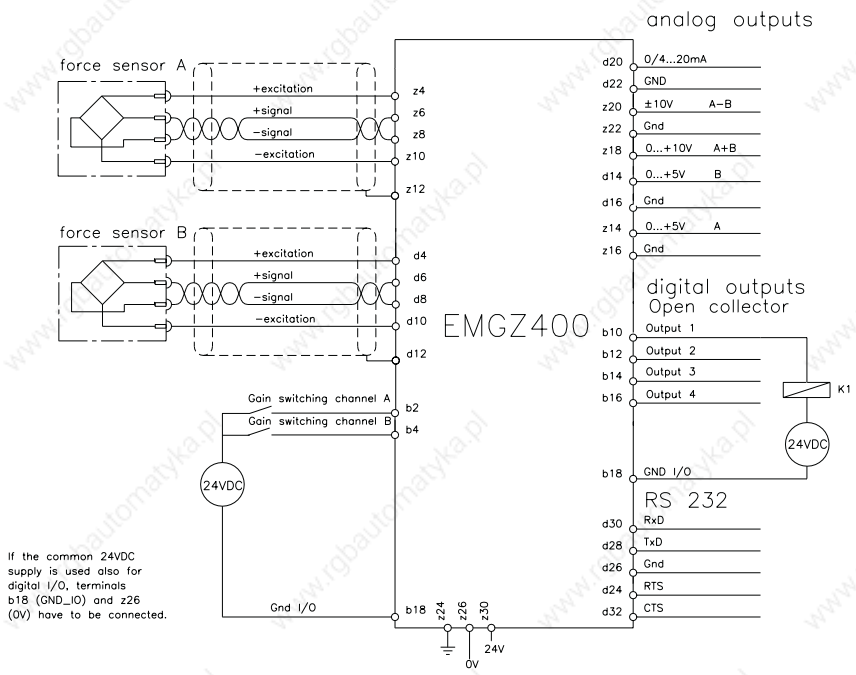
The EMGZ 400/500 Series digital Tension Measuring Amplifier is based on a European standard size PC board. Design and function are optimised for tension measuring applications. The mV signal of the sensors is pre-amplified with a fixed gain and then fed directly to the A/D converter. Signal conditioning is done digitally. The 13 bit (± 4096 digits) resolution results in high accuracy across a wide force range

EMGZ 400/500 Series ● Dimensions in mm



Note: The insert card support block EMGZ555959 must be ordered separately.

EMGZ 400/500 Series ● Wiring diagram



EMGZ 411

Single channel.

EMGZ 421

For one measuring roller.
Separate processing of left and right force sensor.
Output signals are A, B, A+B, A–B.

EMGZ 521

Double channel.
For two independent channels.

EMGZ 522

Double channel. For one set of
Double range force sensors.

EMGZ 400 / 500 Series ● General Technical Data

	EMGZ 411	EMGZ 421	EMGZ 521	EMGZ 522
Channels	1	1	2	1
Additional functions	–	left / right separately	–	Double range force sensors
Force sensors	1...2x 350 Ω	2x 350 Ω	1...2x 350 Ω per channel	2 x 2 x 350 Ω
Sensor supply voltage	4 VDC			
Input signal range	0...7.7 mV (max. 9.92 mV) (0...10 V for correction input)			
Resolution A/D converter	13 Bit (± 4096 Digit)			
Measuring error	< 0.05 %			
Cycle time	4 ms			
Operation	4 keys, 4 LED's, LCD display 2 x 16 characters (3 mm height)			
Interfaces	RS 232			
Power supply	24 VDC (18...36 VDC) 0.15 A, galvanically isolated			
Connector	DIN 41612 type F b+d+z			
Temperature range	0...50 °C			

EMGZ 400 / 500 Series ● Technical Data Input / Output

	EMGZ 411	EMGZ 421	EMGZ 521	EMGZ 522
Analogue output 1 ±10V / 0...10V / 0/4...20mA (12 Bit)	Feedback 1	Feedback A–B	Feedback 1	Feedback range 1
Analogue output 2 0...10V (12 Bit)	Feedback 1	Feedback A+B	Feedback 2	Feedback range 2
Analogue output 3 0...5V (8 Bit)	–	Feedback A (left)	Feedback 1	Feedback range 1
Analogue output 4 0...5V (8 Bit)	–	Feedback B (right)	Feedback 2	Feedback range 2
Digital inputs [1]	Switch gain 1	Switch gain left	Switch gain 1	Switch gain range 1
	Switch gain 2	Switch gain right	Switch gain 2	Switch gain range 2
	Find offset	Find offset left	Find offset 1	Find offset range 1
		Find offset right	Find offset 2	Find offset range 2
Digital outputs [2]	Min. limit	Min. limit A+B	Min. limit 1	Min. limit range 1
	Max. limit	Max. limit A+B	Max. limit 1	Max. limit range 1
	Error	|A–B| > limit	Min. limit 2	Min. limit range 1
		Error	Max. limit 2 [3]	Max. limit range 2 [3]
			Error [3]	Error [3]

[1] *24VDC galvanically isolated* [2] *24VDC Open Collector* [3] *alternatively*

The Point is Technology

World Headquarters:
FMS Force Measuring Systems AG
Aspstrasse 6
8154 Oberglatt (Switzerland)
Tel. ++41 1 852 80 80
Fax ++41 1 850 60 06
info@fms-technology.com

FMS USA, Inc.
925 East Rand Road · Suite 207
Arlington Heights, IL 60004
Phone 847 392 7872
Fax 847 392 7873
fmsusa@fms-technology.com

FMS UK
Highfield, Atch Lench Road
Church Lench
Evesham WR 11 4UG
Phone ++44 1386 871023
Fax ++44 1386 871021
fmsuk@fms-technology.com

www.fms-technology.com

All data have been prepared and checked carefully. However, we cannot assume liability for any errors or incompletness. Subject to modifications serving progress.

11.02.03.005.e