

CMGZ 600 Series Digital Tension Controller

1 and 2 channel versions

Saves machine space and money

Unwinding, winding and intermediate drives

One controller can handle all functions

Compact modular design

Multiple functions in a small footprint

BUS interfacing capability

Remote connectability and integration simplicity

Special features built-in

Powerful and user-friendly in one package



● **CMGZ 600 Series**

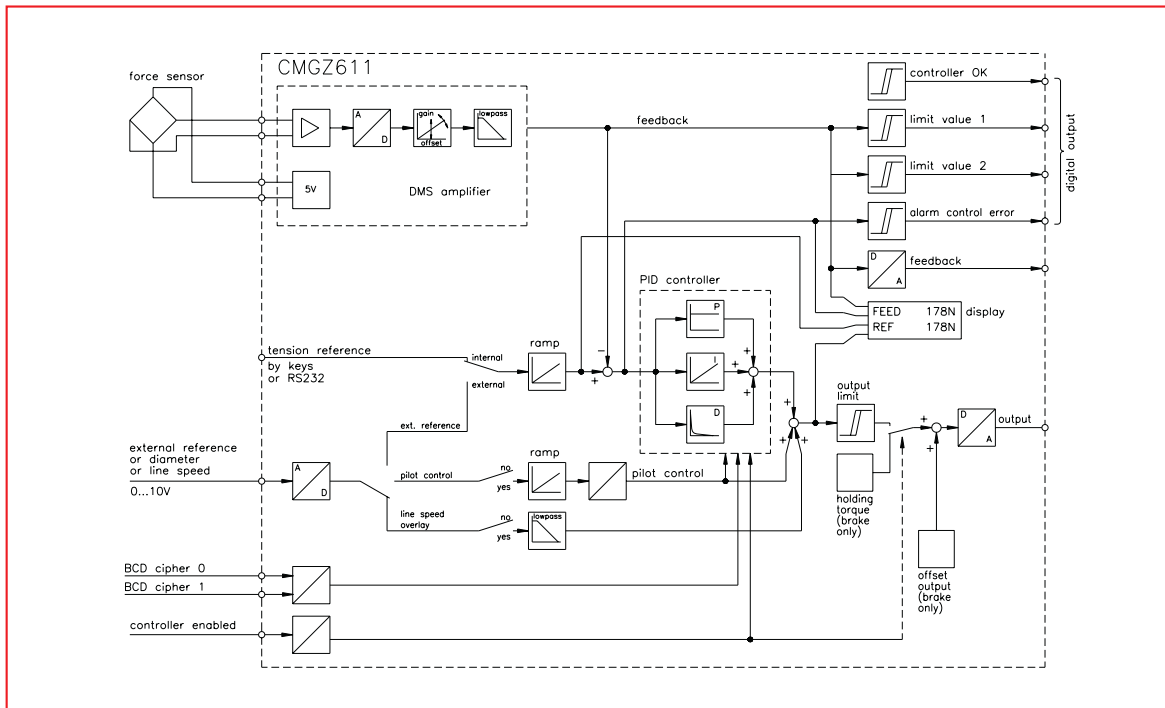
The CMGZ 600 Series controller integrates many functions into one compact housing. It offers selectable control of unwind brake or drive, intermediate drive, or winding drive. The CMGZ 600 Series controller is available in a 2 channel version offering 2 independent closed loops for tension control of 2 tension zones in any configuration.

● **Functional Description**

The CMGZ 600 Series Controller offers large dual line LCD display, plain text selectable in multiple languages, and only 4 programming keys makes this a very easy to set-up and operate control unit. Tension reference values and all parameters and functions can be set with keys or remotely via PC or BUS interface. Digital signal filtering, automatic offset calculation, built in taper tension option and automatic startup ramping function along with all other features creates a very powerful and user-friendly tension control system.

The CMGZ 600 Series Controller operates on a 2 millisecond cycle time for fast reaction performance and if utilized, the built-in line speed signal overlay capability improves the overall control dynamics even more. In addition, a built in pilot control program which adapts the control parameters dynamically based on the actual roll diameter, and both +/-10V and a 0/4-20mA outputs provides the flexibility that makes the FMS CMGZ 600 Series the leading Tension Controller in the industry.

CMGZ 600 Series • Block diagram



CMGZ 611/612

Tension Controller for one or two channels (1 or 2 independent closed loops).
 A correction input for diameter signal, line speed or reference value is provided for each channel.

CMGZ 630

Tension Controller for single channel. With correction input for diameter signal or line speed.
 Second input for reference value potentiometer.

CMGZ 622/642

Tension Controller for one or two channels featuring double range force sensor.
 Provides a correction input for diameter signal, line speed or reference value potentiometer.

• Configuration „Unwind Brake“

For any electric or pneumatic brakes.
 A diameter signal can be fed to the controller, then the control parameters are continuously adapted to the changing diameter.

• Configuration „Unwind Drive“

For torque or speed controlled drives.
 A diameter signal can be fed to the controller, then the control parameters are continuously adapted to the changing diameter.

• Configuration „Winding Drive“

For torque or speed controlled drives.
 A diameter signal can be fed to the controller, then the control parameters are continuously adapted to the changing diameter.

• Configuration „Intermediate Drive“

A line speed signal can be fed to the controller, then the output value calculated by the controller is overlaid onto the line speed.

CMGZ 600 Series • General Technical Data

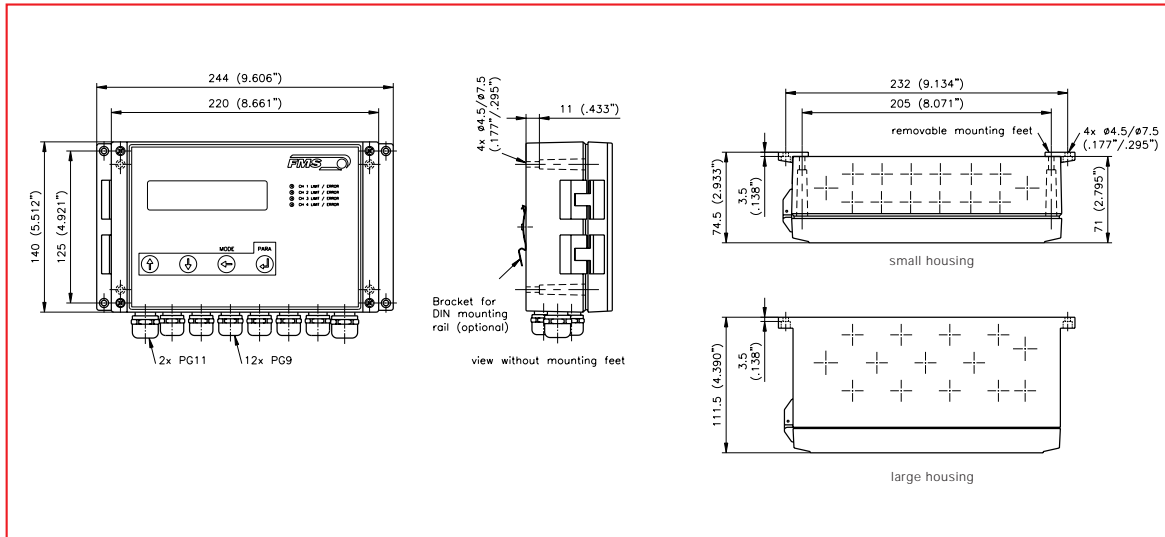
	CMGZ 611	CMGZ 612	CMGZ 630	CMGZ 622	CMGZ 642
Channels	1	2	1	1	2
Housing dimensions	small	large	small	small	large
Special functions	–		2 correction inputs	Double range force sensors	
Force sensors	1...2x 350 Ω per channel			2x 2x 350 Ω per channel	
Sensor supply voltage	5 VDC ¹⁾ (default) or 10 VDC ¹⁾				
Input signal range	Force sensors: 0...9 mV (max. 12.5 mV) or 0...18 mV (max. 25 mV) ²⁾ , Correction signal: 0...10 V				
Resolution A/D converter	±8192 Digit (14 Bit)				
Measuring error	< 0.05 %				
Output signal range	Output value: ±10 V and 0/4...20 mA, Feedback: 0...10 V and 0/4...20 mA				
Cycle time	2ms				
Operation	4 keys, 4 LED's, LCD display 2 x 16 characters (8mm height)				
Interfaces	RS 232, Profibus [®] DP (EN 50170) ³⁾ , CANopen ³⁾ , DeviceNet™ ³⁾				
Power supply	24 VDC (18...36 VDC) / 10W (max. 1 A), 110 VAC ^{3) 4)} , 230 VAC ^{3) 4)} , galvanically isolated				
Brake amplifier	24 V / max. 2 A ^{3) 4)}				
Temperature range	32...113°F [0...45°C]				
Protection class	IP54				
Weight	3.3 lbs [1.5 kg]				

¹⁾ 6 wire circuit also possible ²⁾ depending on force sensor excitation ³⁾ optional ⁴⁾ large housing required

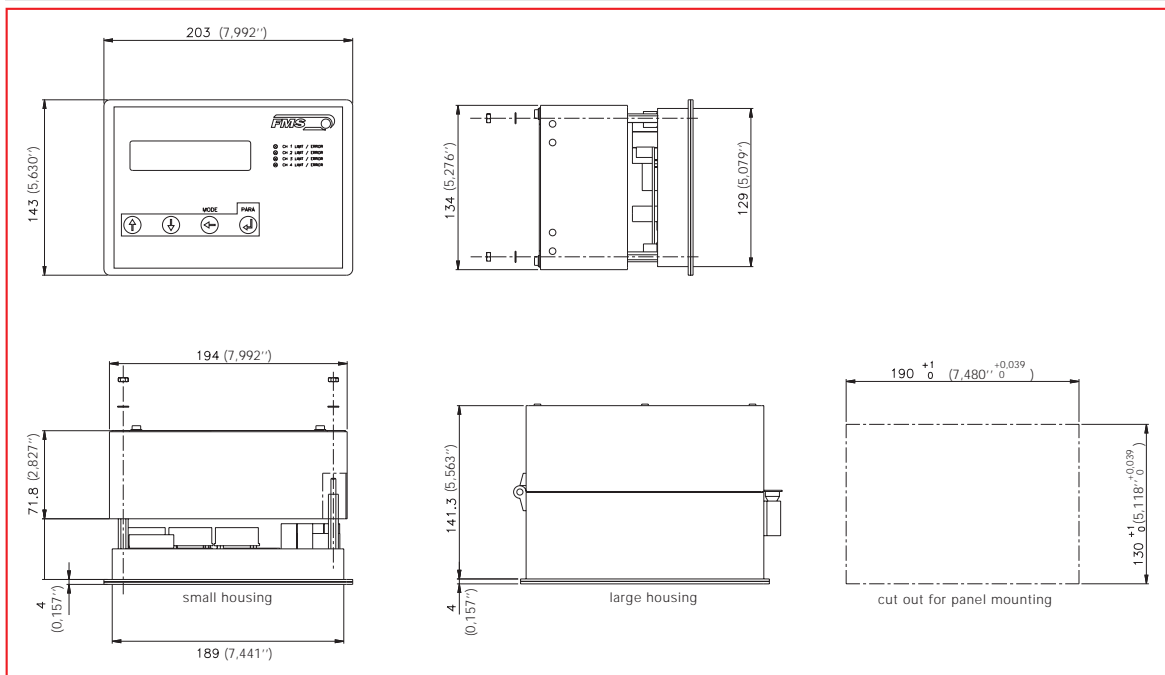
CMGZ 600 Series • Technical Data analog input/output

	CMGZ 611	CMGZ 612	CMGZ 630	CMGZ 622	CMGZ 642
Analog input 1	Roller 1	Roller 1	Roller 1	Roller 1/Range 1	Roller 1/Range 1
Analog input 2	Correction input 1	Correction input 1	Correction input 1	Roller 1/Range 2	Roller 1/Range 2
Analog input 3	–	Roller 2	Reference value 1	Correction input 1	Roller 2/Range 1
Analog input 4	–	Correction input 2	–	–	Roller 2/Range 2
Analog output 1	Output value 1	Output value 1	Output value 1	Output value 1	Output value 1
Analog output 2	Feedback 1	Feedback 1	Feedback 1	Feedback 1	Feedback 1
Analog output 3	–	Output value 2	–	–	Output value 2
Analog output 4	–	Feedback 2	–	–	Feedback 2

CMGZ 600 Series • Dimensions in mm [inch] wall mounting version



CMGZ 600 Series • Dimensions in mm [inch] panel mounting version



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