

CMGZ 309 Digital Tension Controller

Plug & Play or utilize Ethernet connection

Easy to operate and provides flexible set-up

Configurable for brake and drive applications, for unwind and rewind stands

One controller can handle all functions

3 housing / mounting options

DIN Rail, Wall Mount (IP 65), and panel mount

All-in-One version CMGZ 309.W.B.AC.V

With built-in break amplifier 24 V or 90 V and supply unit



● CMGZ 309 Series

The CMGZ 309 tension controller responds to a broad range of missions. Its field of application is in production lines where moving web products are manufactured, processed or finished.

As a plug & play unit a minimum of tuning tasks are required. Functions can be configured very easily via a user-friendly control panel with a wind rose key pad and a two lines LCD. All internal parameters are also accessible through a web browser. The CMGZ 309 is a versatile and economic tension controller that solves even your most demanding control tasks.

● Functional Description

Design and functionality of the CMGZ 309 series is optimised for precise close loop tension control.

It offers selectable control of unwind brake or drive, intermediate drive, or rewinding drive.

Signal processing and controlling tasks are fully digitalised. This results in an excellent long term temperature stability and control performance. The CMGZ 309 operates on a 1 millisecond cycle time. Its fast reaction time, digital signal filtering, automatic offset calculation, built in taper tension option and automatic start-up ramping function along with a lot of other features creates a very powerful and user-friendly tension control system.

● Configuration “Unwind Brake”

Suitable for any electric or pneumatic brakes. As an option a diameter signal can be fed to the controller. The control parameters are continuously adapted to the changing diameter improving the control characteristics of the system considerably. The version CMGZ 309.W.B.AC.V is equipped with power supply and break amplifier.

● Configuration “Unwind Drive”

For torque or speed controlled drives. As an option for torque controlled drives in the “Unwind Drive” configuration also a diameter signal can be fed to the controller improving the control characteristics.

● Configuration “Rewind Drive”

For torque or speed controlled drives a taper function is available. For torque controlled drives a diameter signal can be fed to the controller improving the control characteristics. For this configuration a Taper-Functions is available.

● Configuration “Intermediate Drive”

For torque or speed controlled drives. As an option for speed controlled drives a line speed signal can be fed to the controller. The output values are calculated by the controller and overlaid onto the line speed.

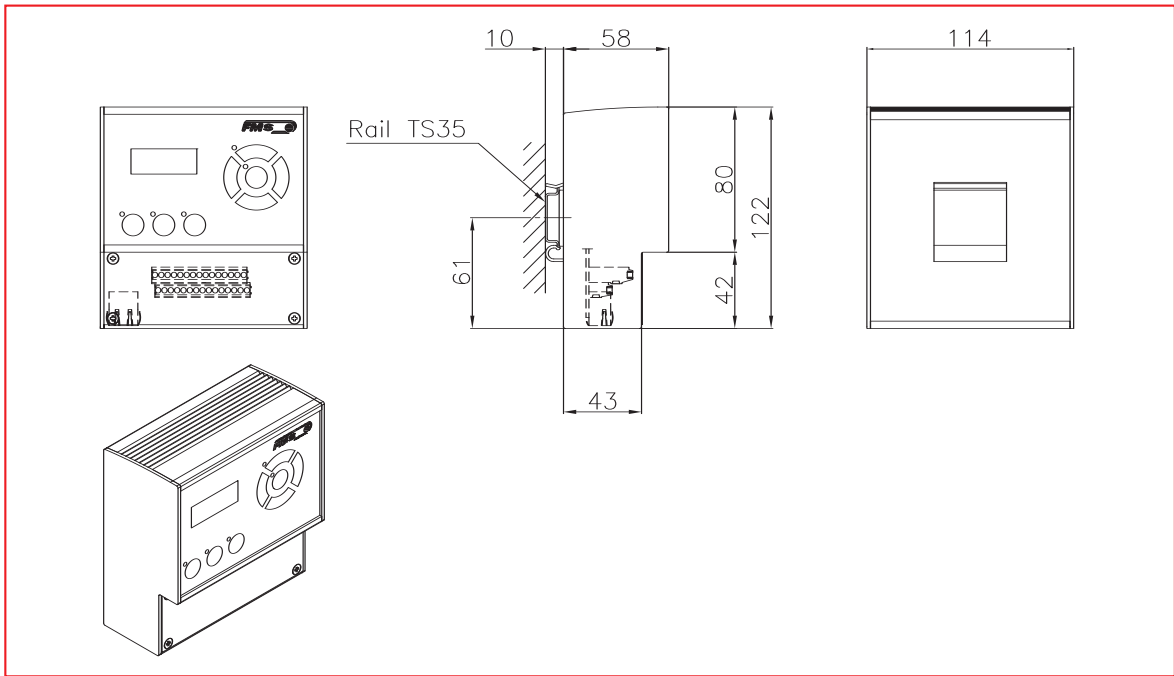
CMGZ 309 Series • Technical Data

Type	CMGZ 309.R	CMGZ 309.S	CMGZ 309.W	CMGZ 309.W.AC.V	CMGZ 309.W.B.AC.V
Number of channels	1 channel for 1 or 2 sensors with strain gauges @ 350 Ω				
Sensor supply	5.0 VDC, max. 60 mA; high stability				
Input signal range	0...9 mV (max. 12.5 mV)				
Resolution A/D-converter	± 8192 Digit (14 Bit)				
Measuring error	< 0.05 %				
Cycle time	1 ms				
Operation	3 buttons, 5 buttons wind rose, LCD-display 2 x 8 characters (size 8 mm)				
Interfaces	Ethernet via web browser (Ethernet explorer 7 or higher)				
Temperature range	-10...60 °C (14...140 °F)				
Power supply	24 VDC (18...36 VDC) / 10 W (max. 0.5 A) galvanically isolated supply			85...264 VAC 50 / 60 Hz; max. 80 W	85...264 VAC 50 / 60 Hz; max. 120 W
Options	-			Mains supply	Supports 90 VDC and 24 VDC brakes
Protection class	IP 40	-	IP 65	IP 65	IP 65
Weight	0.57 kg	0.40 kg	0.72 kg	0.95 kg	1.10 kg

CMGZ 309 Series • Input / Output Configuration

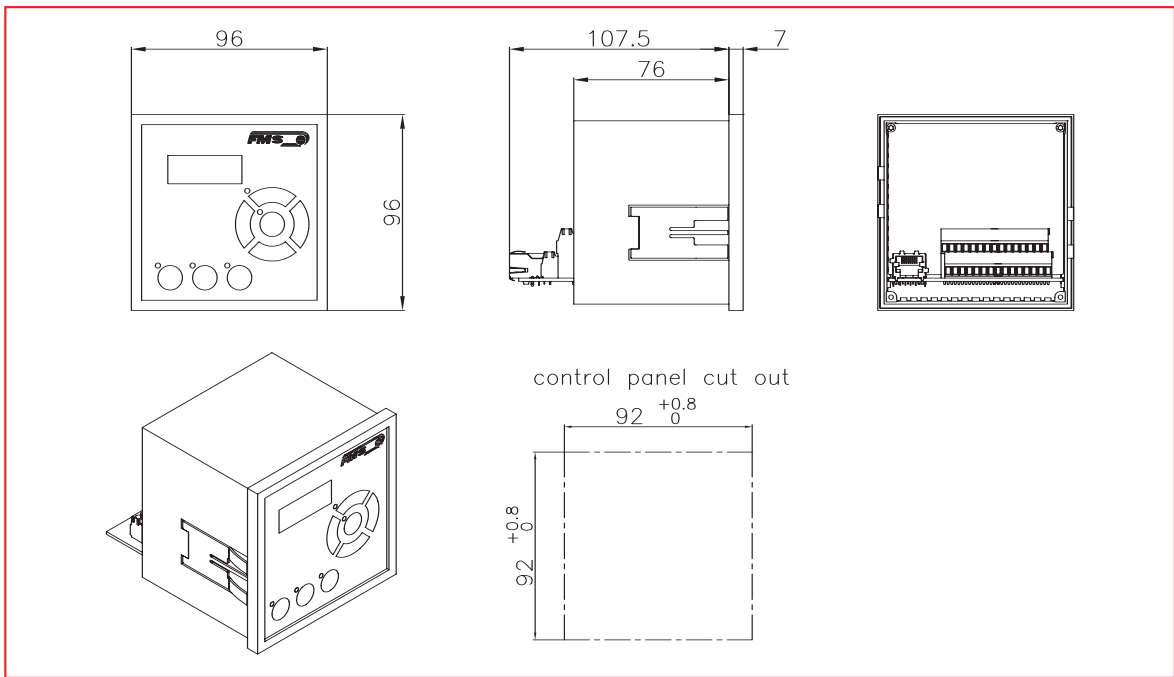
Analogue input 1	1 or 2 sensors with strain gauges @ 350 Ω (0...9 mV, max. 12.5 mV)
Analogue input 2	Reference potentiometer (0...10 VDC)
Analogue input 3	Diameter or line speed overlay (0...10 VDC)
Analogue output 1	Controller output signal (± 10 VDC, 0...10 VDC, 0/4...20 mA)
Analogue output 2	Feedback value output (0...10 VDC)
Digital Inputs	2 inputs @ 24 VDC, galvanically isolated
Relay outputs	2 outputs (DC: 220 V / 2 A / 60 W; AC: 250 V / 2 A / 62.5 VA)

CMGZ 309.R Rail Mount Housing • Dimensions in mm



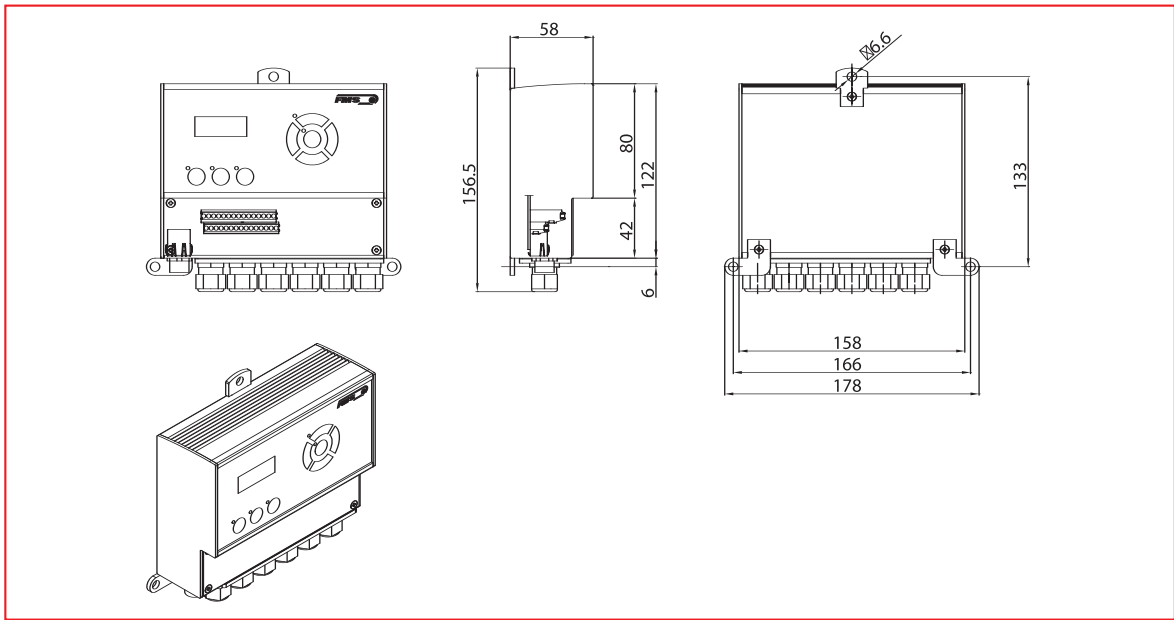
Wiring is realised via cable terminals.

CMGZ 309.S Panel Mount Housing • Dimensions in mm



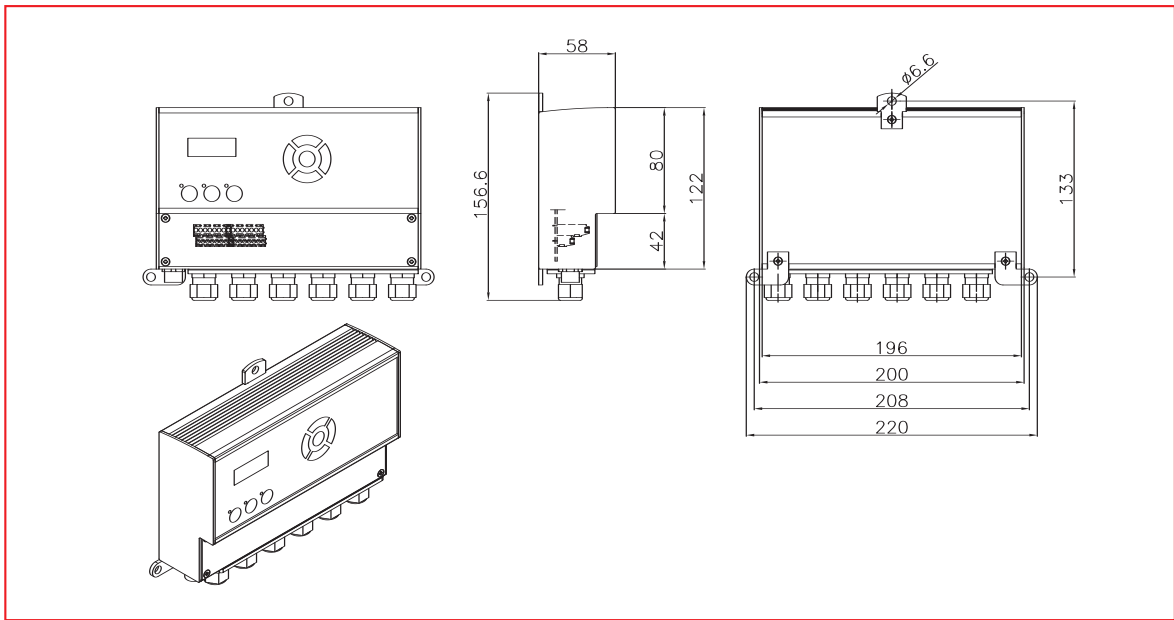
Wiring is realised via cable terminals.

CMGZ 309.W and CMGZ 309.W.ACV Wall Mount Housing • Dimensions in mm



With PG-Gland cable connector. Protection class IP 65.

CMGZ 309.W.B.ACV Wall Mount Housing with Power Supply and Brake Amplifier • Dimensions in mm



With PG-Gland cable connector. Protection class IP 65.

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