

## CMGZ 480 Digital Tension Controller with CAN-BUS® Interface

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**PID Controller with 2 ms cycle time**  
**High performance and fast reaction time**

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**Functions parameterized via CAN-BUS®**  
**Easy set-up and programming**

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**Compact design, IP 67 Protection**  
**Low space requirements, easy mounting**

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**Galvanically isolated**  
**Protected against electrical noise**

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### ● CMGZ 480 Series

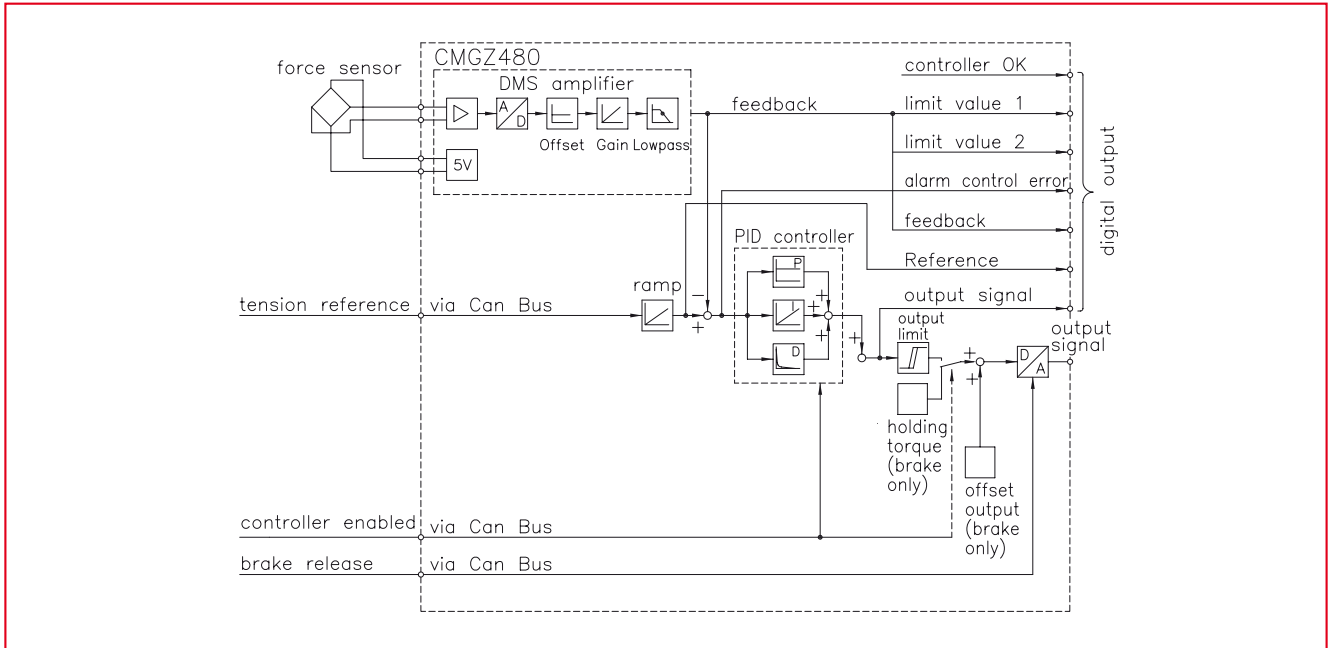
The digital tension controllers CMGZ 480 can be used with all FMS force sensors. Thanks to its specific features the controller is ideally suited for fast application e.g. in stranding machines.

CMGZ 480 controllers come in rugged, resilient aluminium housings. They were designed for dependable operation in the most demanding environments. The sealed housing is rated for a protection class of IP 67.

### ● Functional Description

Design and functionality of the CMGZ 480 is optimised for tension control. The tension force values are fed to the controller via a fast A/D converter. Signal processing and controlling tasks are performed digitally. This results in excellent long term temperature stability and control performance. The CMGZ 480 operates on a 2 millisecond cycle time for fast reaction and high performance. Parameter setting as well as data transmission is performed via an integrated CAN-BUS® interface using the Open CAN CiA-DS 301 protocol.

**CMGZ 480 • Block Diagram**



**CMGZ 480 • Technical Data**

<b>Channels</b>	1
<b>Force sensors</b>	2 x 350 Ω
<b>Sensor supply voltage</b>	5,00 VDC
<b>Input signal</b>	0...9 mV (max. 12.5 mV)
<b>Resolution A/D converter</b>	± 8192 Digit (14 Bit)
<b>Measuring error</b>	< 0.05 % FS
<b>Measuring rate</b>	2 ms
<b>Operation</b>	By CAN CiA-DS 301® protocol
<b>Analogue output</b>	0...10 V (Default) / ± 10 V
<b>Power supply</b>	24 VDC (18...36 VDC)
<b>Temperature range</b>	- 10...60 °C
<b>Protection class</b>	IP 67
<b>Weight</b>	ca. 300 g

**Option:**

**M16** = Version with Amphenol 5-pole connector for rotating applications

**Order code (Example):**

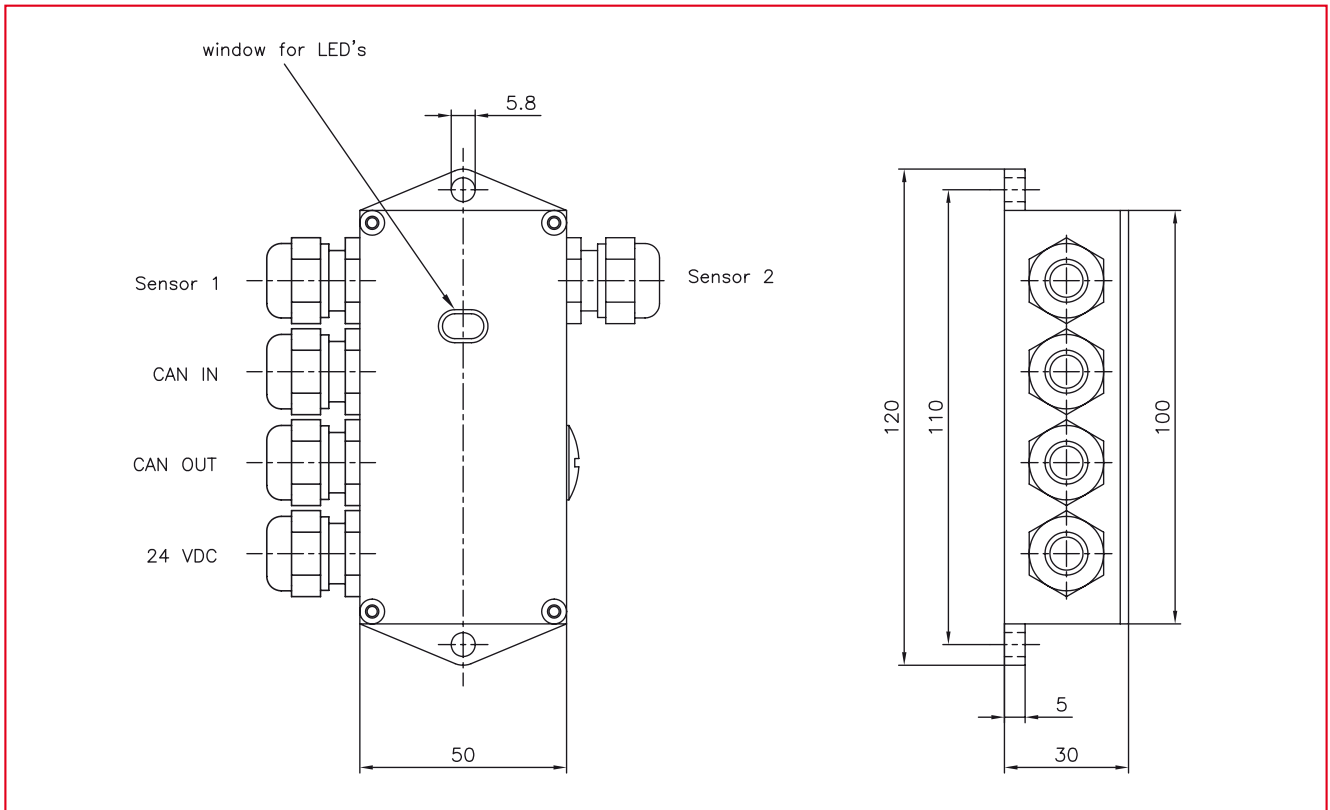
**CMGZ480.M16**

Controller series ● ┌──────────┐  
 Connector option ● └──────────┘

**Scope of delivery:**

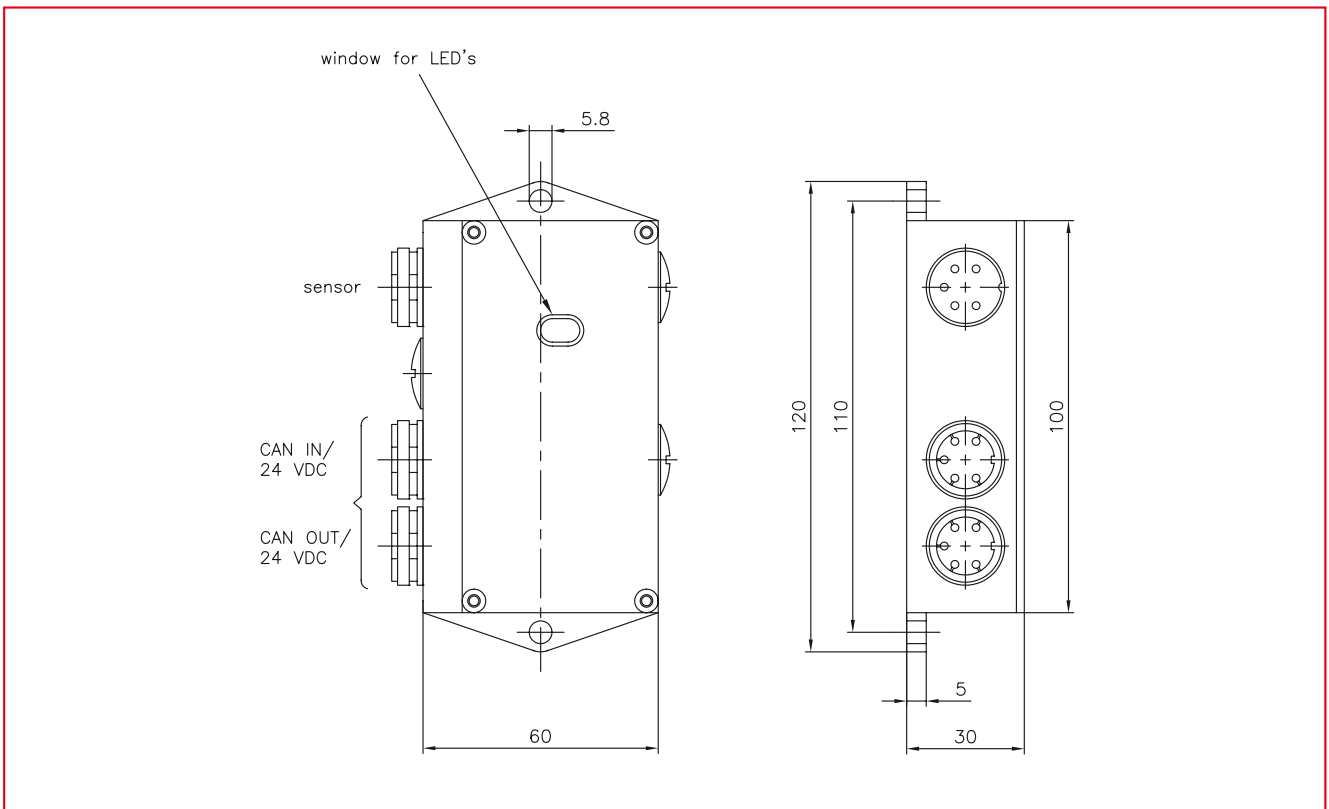
Tension Controller, operation manual

**CMGZ 480 • Dimensions in mm**



PG-Gland cable connector.

**CMGZ 480.M16 • Dimensions in mm**



M 16 connector option. This version is specially suited for rotating applications e.g. stranding machines.

**FMS' Product Portfolio and System Solutions**



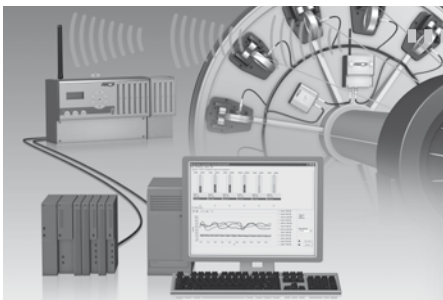
**The product line Force Sensors** provides products, solutions and related services that increase industrial productivity, energy efficiency and high quality output. Its force sensors, tension measuring rollers and pillow block based designs are of premium quality and ultra durable.



**The product line Electronics** facilitates tension monitoring, close loop tension control and web guiding systems. Key technologies include high-performance tension amplifiers and PID-controllers, as well as products to accurately and consistently control material position in continuously manufactured products.



**The main focus of the FMS Web Guiding business** is to provide customers with products and solutions for web detection and web positioning. Its steering frames, drives, controllers and material sensors provide an excellent coverage of the most important applications. The industries served include converting, printing, label processing and packaging.



**RTM** (Radio Transmitted Tension Monitoring) delivers system solutions across the cable production value chain. These innovative systems utilise force measuring rollers to capture the tension of individual wires or strands, and then securely transmit this data from the rotating to the static part of the machine. The systems are designed with fully compatible components. Production rates and product quality on rotating strand-handling machinery are significantly improved.



**Special Application Fields** facilitates solutions in **vacuum** applications or in potentially explosive atmospheres. A sophisticated range of interface options including systems such as **PROFINET, Ethernet/IP, Profibus** and **CAN-bus** provide quick and efficient integration of FMS products into the existing communication and control infrastructure of your company.

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