

EMGZ473.W / EMGZ474 Series PROFIBUS® Tension Measuring Amplifier

Microprocessor controlled
High performance and speed

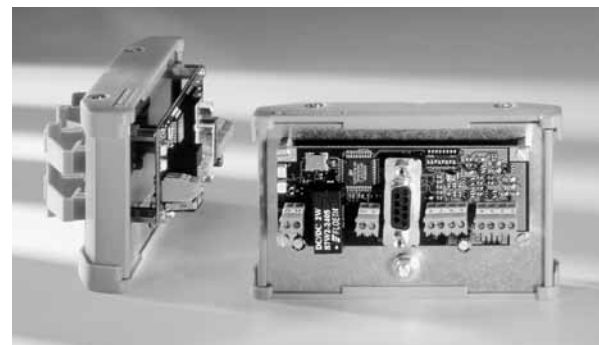
Functions parameterized via PROFIBUS®
Easy set-up and programming

Compact design, IP 67 / DIN Rail
Low space requirements, easy mounting

Galvanically isolated
Protected against electrical noise



EMGZ 473.W



EMGZ 474

● EMGZ 473.W / EMGZ 474 Series

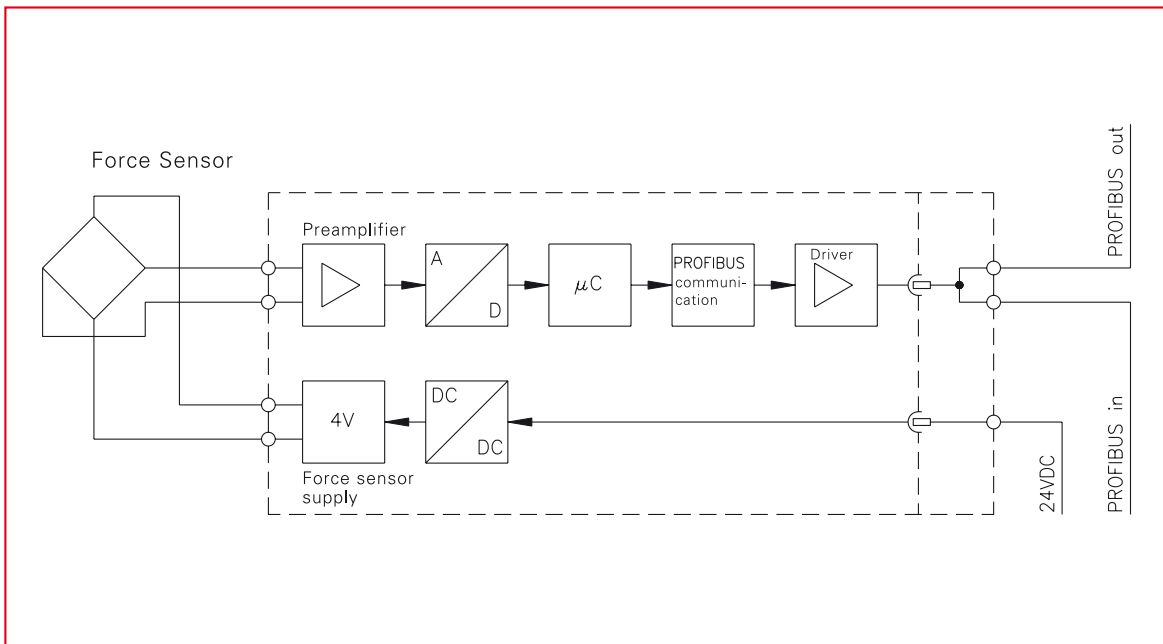
The digital tension measuring amplifiers EMGZ 473.W / EMGZ 474 are suitable for tension measurement with all FMS force sensors.

The complete operation is done by the integrated PROFIBUS® connection.

The cover of the EMGZ 473.W housing has an electrical design identical to the PROFIBUS® standard plug on the EMGZ 474. This allows disconnection of the measuring amplifier from PROFIBUS® without disrupting the bus line.

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 PROFIBUS® interface provides flexible signal processing by the control unit. For maximum flexibility, two different PROFIBUS® operating modes are possible: „Feedback with status“ (4 data byte) and „Full Control“ (6 data byte).

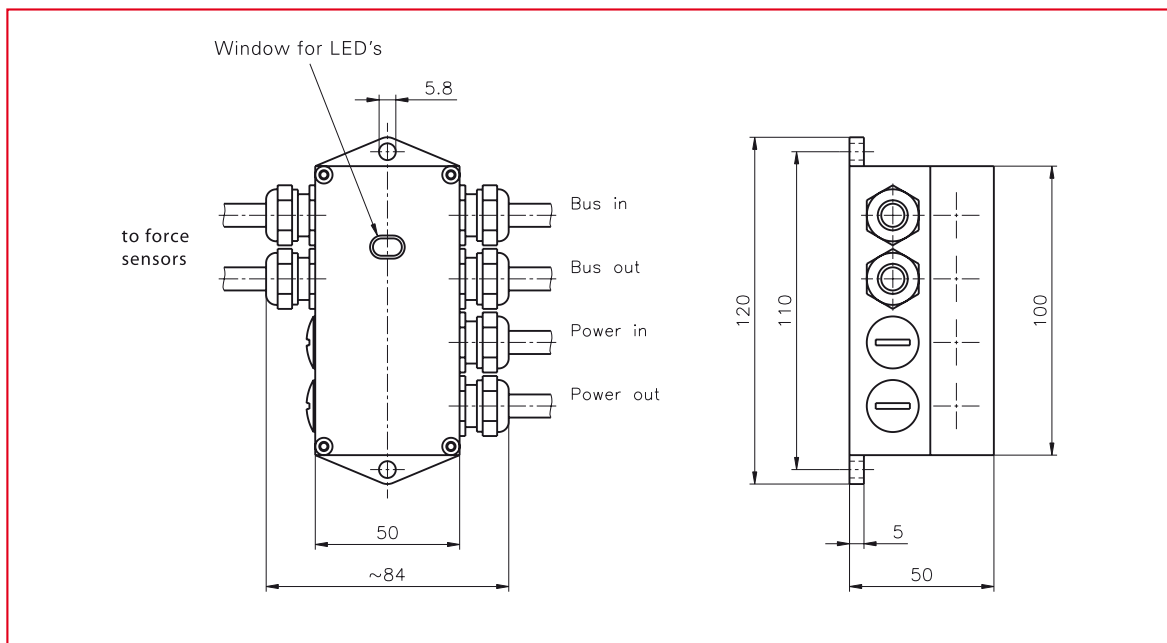
EMGZ 473.W / EMGZ 474 Series • Block diagram



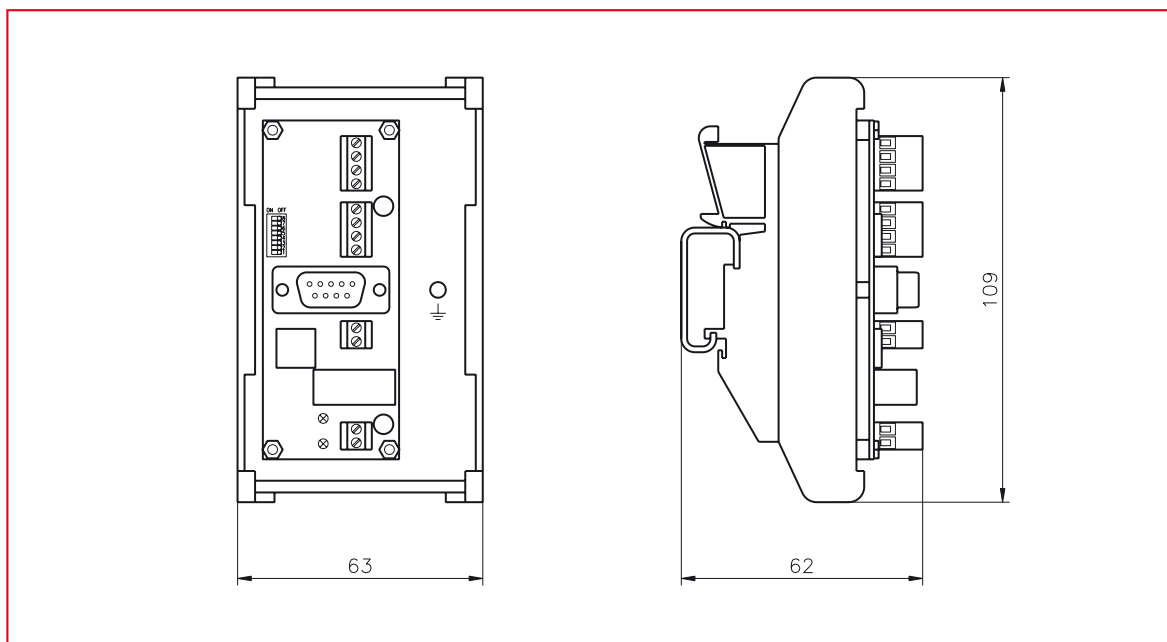
EMGZ 473.W / EMGZ 474 Series • Technical data

| | |
|-------------------------------------|--|
| Force sensors | 1...2 x 350 Ω |
| Sensor supply voltage | 4 VDC |
| Input signal | 0...7.2 mV (max. 9.92 mV) |
| Resolution A / D converter | ± 2048 Digit (12 Bit) |
| Measuring error | < 0.05 % |
| Measuring rate | 2 ms |
| Operation | Entirely by PROFIBUS® |
| Feedback value | 10.000 at nominal load of force sensor (7.2 mV) |
| PROFIBUS® protocol | PROFIBUS® DP slave (EN 50 170) |
| PROFIBUS® data transfer rate | Up to 12 Mbaud |
| PROFIBUS® address | 0...125 (by DIP switch) |
| PROFIBUS® operating modes | Full control, Feedback with status |
| Connection | EMGZ 473.W: 4 cables ø 8...10 mm through PG glands EMGZ 474: PROFIBUS® plug D-Sub-9 |
| Termination | EMGZ 473.W: by 2 jumpers EMGZ 474: in side PROFIBUS® plug |
| Required cables | PROFIBUS® cable type A, STP 2 x 0.342 |
| Power supply | 24 VDC (18...36 VDC) / 0.1 A, galvanically isolated |
| Temperature range | - 10...60 °C |
| Protection class | EMGZ 473.W: IP 67 EMGZ 474: IP 00 |
| Weight | EMGZ 473.W: 0.3 kg EMGZ 474: 0.2 kg |

EMGZ 473.W Series • Dimensions in mm



EMGZ 474 Series • Dimensions in mm



FMS' Product Portfolio and System Solutions



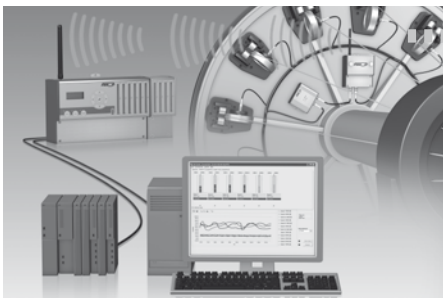
The product line **Force Sensors** provides products, solutions and related services that increase industrial productivity, energy efficiency and high quality output. Its force sensors, tension measuring rollers and pillow block based designs are of premium quality and ultra durable.



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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