

## **EMGZ473.W / EMGZ474 Series PROFIBUS® Tension Measuring Amplifier**

---

**Microprocessor controlled**  
**High performance & speed capability**

---

**All functions can be parametrized by  
PROFIBUS®**

---

**Easy set-up and programming**

---

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

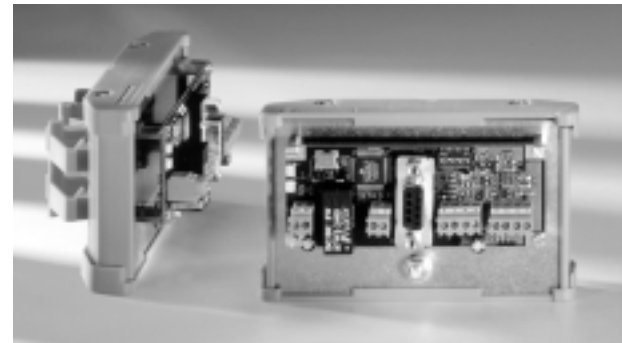
---

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

---



EMGZ473.W



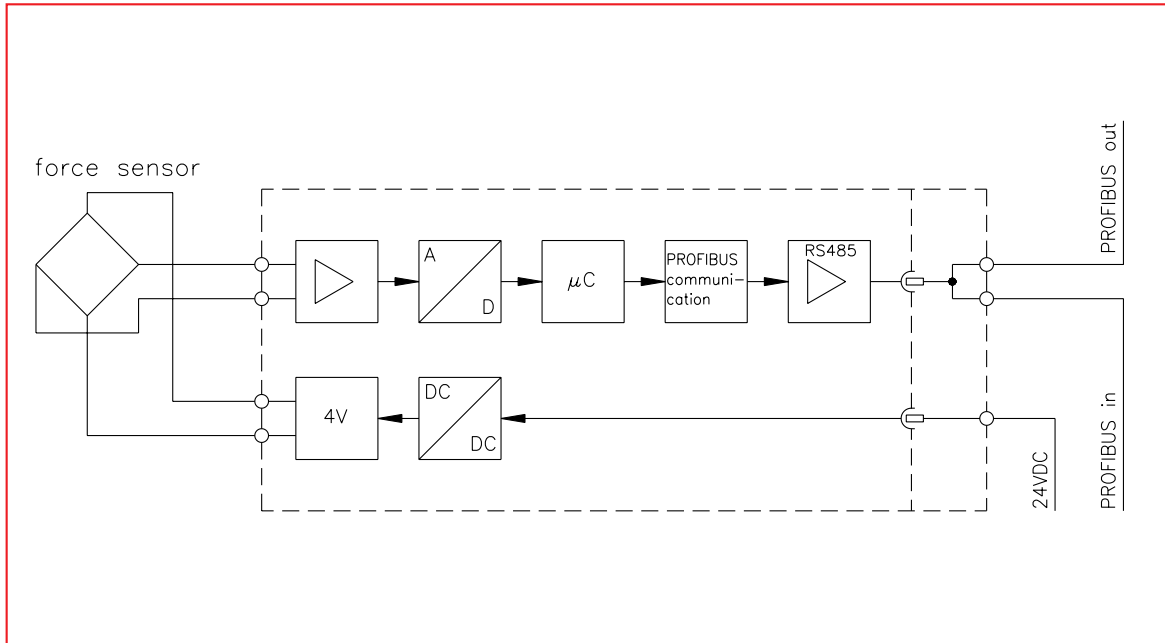
EMGZ474

● **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 to disconnect the measuring amplifier from PROFIBUS® without

cutting 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).

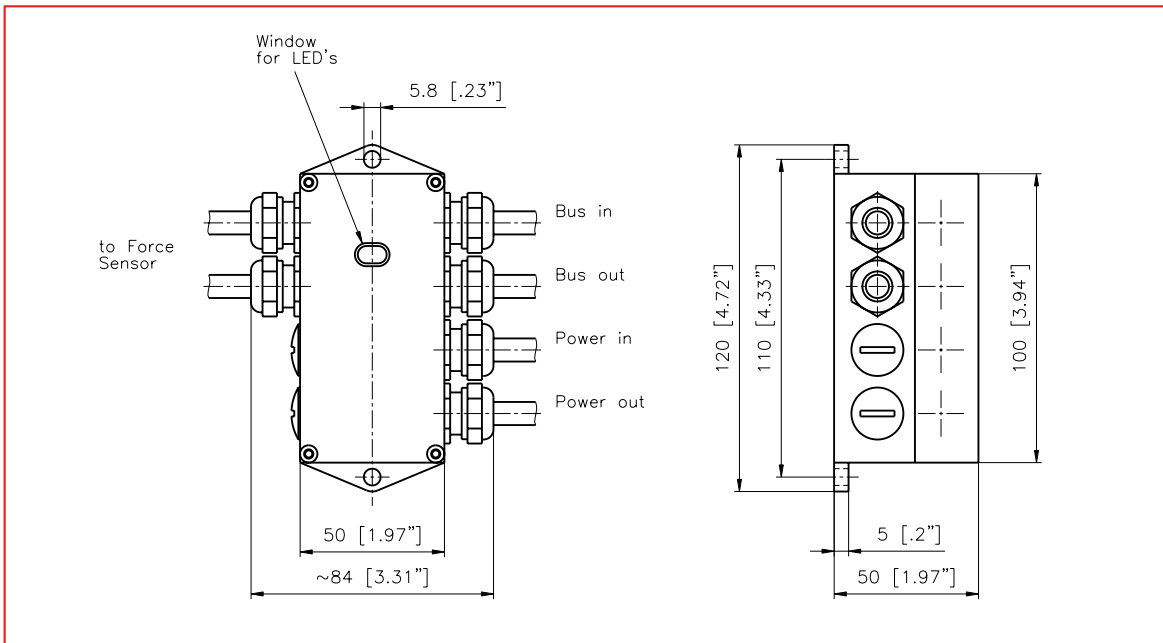
**EMGZ 473.W / EMGZ 474 Series • Block diagram**



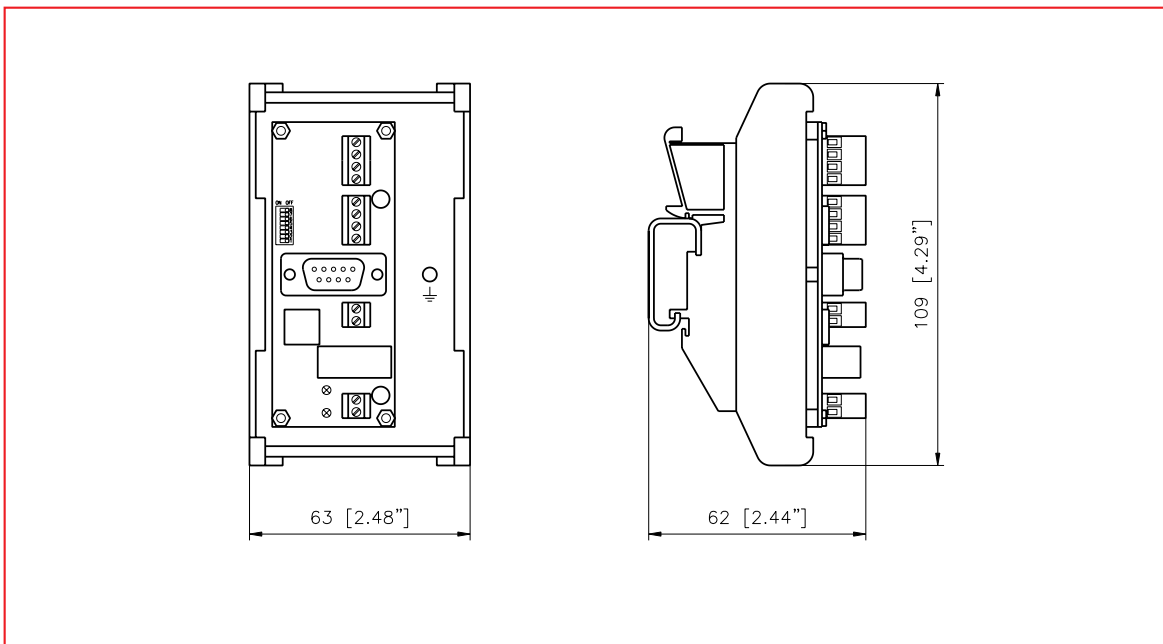
**EMGZ 473.W / EMGZ 474 Series • Technical Data**

	EMGZ 473.W	EMGZ 474
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	4 cables ø 8...10 mm through PG glands	PROFIBUS® plug D-Sub-9
Termination	by 2 jumpers	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	- 14...+140 °F [- 10...+60 °C]	
Protection class	IP 67	IP 00
Weight	0.66 lbs [0.3 kg]	0.44 lbs [0.2 kg]

**EMGZ 473.W Series • Dimensions in mm [inch]**



**EMGZ 474 Series • Dimensions in mm [inch]**



● **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**