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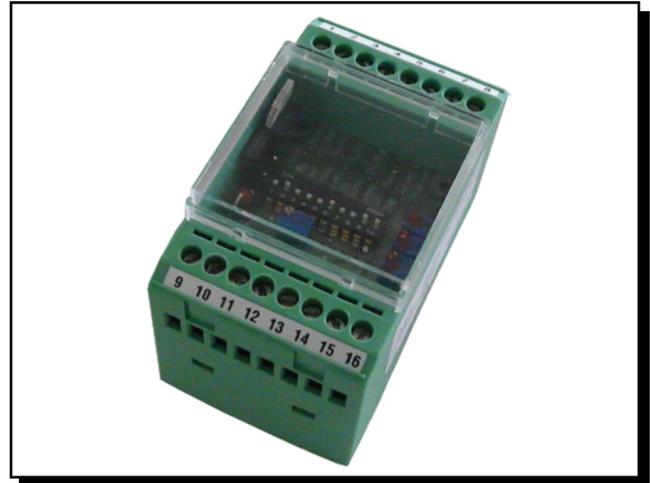
# LMU 209

## Load Monitoring Unit

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### FEATURES

- Signal-conditioning of strain gauge sensors
- Very large zero-adjusting range
- Universal input ranges from 0.5 mV/V to 4 mV/V
- Two calibrated outputs: voltage and current
- Selectable bridge supply voltage
- Polycarbonate housing for mounting on DIN-rails, aluminum housing available as an option



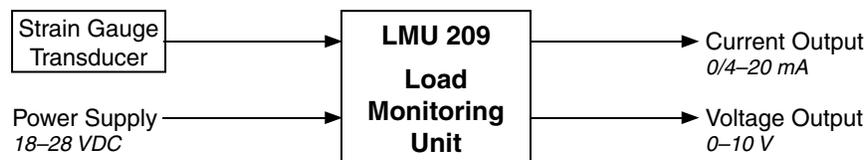
### DESCRIPTION

The LMU 209 is a versatile strain gauge amplifier, designed for signal conditioning and interfacing low level signals to programmable logic controllers (PLCs) or any control unit with analog inputs. The LMU 209 features both voltage and current-type outputs with life zero. Due to its integrated DIP-switches, the amplifier can be easily configured to the desired input nulling ranges.

This modularized amplifier is ready for snap-on mounting to DIN-rails. All wires are connected to screw terminals.

### SYSTEM CONFIGURATION

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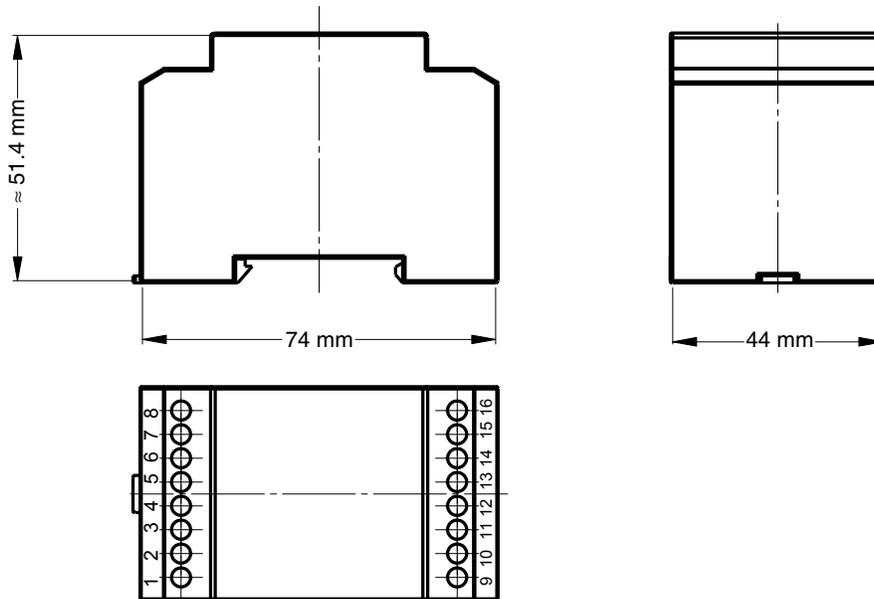


The LMU 209 is used with Magtrol Load Measuring Pins which measure load and force and provide overload protection. Magtrol also offers a wide range of Load-Force-Weight Transducers in various executions and accuracy classes and our Digital Process Monitors/Signal Conditioners measure and display load, force and weight from signals generated by strain gauge transducers.

**TECHNICAL CHARACTERISTICS**

INPUT CHARACTERISTICS	
<b>Power Supply</b>	
Supply	18...28 VDC / 70 mA
Ripple Voltage	max. 1 Vpp / 50 Hz
<b>Bridge Signal</b>	
Sensitivity Ranges	0.5 mV/V to 1.5 mV/V 1.5 mV/V to 4.0 mV/V
Sensitivity (default)	1 mV/V
Input-resistance Sensor	5 V: 120 Ω to 10 kΩ 10 V: 330 Ω to 10 kΩ
Bridge Supply Voltage	5 VDC or 10 VDC (selectable)
OUTPUT CHARACTERISTICS	
Voltage Output	0–10 V @ $R_{load}$ 3 kΩ
Current Output	0/4–20 mA @ $R_{load}$ 0 to 800 Ω
Calibration Signal	1 mV/V, ± 0.8%

TRANSFER CHARACTERISTICS	
Adjustment Sensitivity	Adjustment using 10-turn potentiometer
Zero Coarse Adjustment Range	±75%, in 5 ranges with switches
Zero Fine Adjustment	Adjustment using 10-turn potentiometer
Zero Adjustment Range	±10 mV
Zero Drift vs. Temperature	< 0.01% / °C
Linearity Error	< 0.05 %
Noise	max. 20 mVpp (0...5kHz)
Frequency Response	0 kHz to 5 kHz (-3 dB)
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	-20 °C to +60 °C
Protection Class	IP 52: Polycarbonate housing IP 65: Aluminum housing
EMC	According to EN 61000-4
MECHANICAL CHARACTERISTICS	
Housing Material	PC-F, UL94 V-0 polycarbonate Aluminum (option)

**DIMENSIONS**


Due to the continual development of our products, we reserve the right to modify specifications without forewarning.


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