

Measuring Amplifier for Currents or Voltages

EM2

Characteristics:

- Input frequency 6Hz to 1 kHz
- True effective value measurement
- Direct connection without extern transformer
- Measurement also of not sinusoidal signals
- Current measurement 10A/230VAC
- Voltage measurement 440VAC
- Norm signal output
- Galvanic 3-way isolation
- Adjustable (optional accessible)
- Universal power unit (20...253VAC/DC)
- Mountable on 35mm cap rail TS35
- Clear terminal labeling
- Narrow design
- Shape 22,5mm
- Universal power supply
- High reliability, 5 years warranty



Image similar

Description:

The devices of the series EM2 measuring amplifiers are developed for capturing alternating current or – voltage as true effective value signals and to convert them into standard signals of 0...10V or 0, 4...20mA. In the variant as current measuring amplifier alternating currents up to 10A can be connected directly. The version as a voltage measuring amplifier makes a connection up to 440VAC possible. The devices of the series EM2 have a true 3-way galvanic insulation between input/output and auxiliary supply.

Application:

Monitoring of alternating voltage.

Monitoring of alternating current without additional transformer.

Order -No:

Input:	EM2-	Output:	-
0...1A	1	0...10V	1
0...5A	5	0...20mA	2
0...10A	10	4...20mA	3
0...10V	010		
0...40V	040		
0...140V	115		
0...260V	230		
0...440V	440		

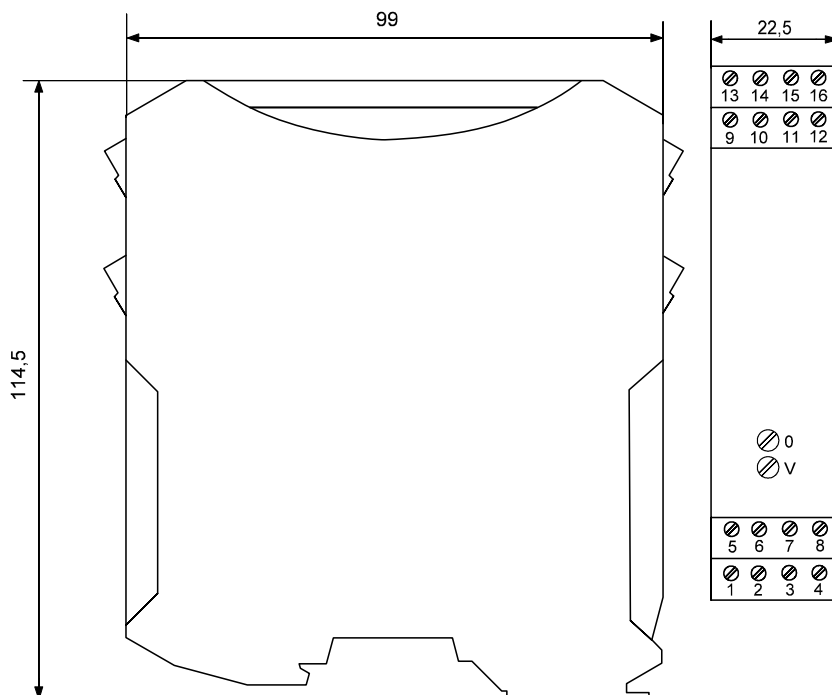
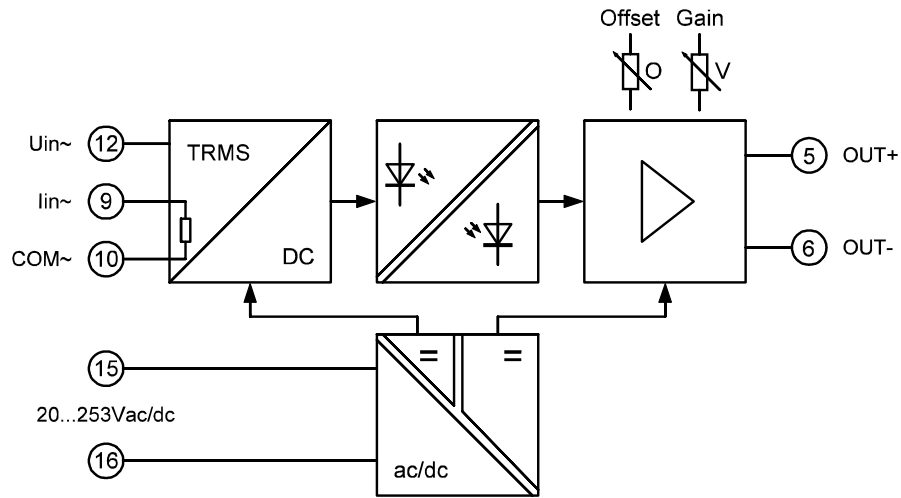
Order example:

Current measuring amplifier EM2:
 Input = 1A / Output = 0...20mA

Voltage measuring amplifier EM2:
 Input = 440V / Output = 0...10V

Order-No: EM2-1-2

Order-No: EM2-440-1



Technical data

Auxiliary power:

Supply voltage : 20...253VAC/DC
Power consumption : 2VA

Inputs:

Voltage input	:	0...10Vac	Rin = 150K Ω	Overload max. 100V
		0...40Vac	Rin = 150K Ω	Overload max. 100V
		0...140Vac	Rin = 880K Ω	Overload max. 300V
		0...260Vac	Rin = 1560K Ω	Overload max. 500V
		0...440Vac	Rin = 1560K Ω	Overload max. 500V
Current input	:	1Aac	Rin = 100m Ω	Overload max. 3A
		5Aac	Rin = 10m Ω	Overload max. 10A
		10Aac	Rin = 5m Ω	Overload max. 20A
Frequency	:	6Hz...1 kHz		
Flicker measurement	:	max. 20 kHz		

Outputs:

Voltage output	:	0...10VDC / max. 20mA		
Current output	:	0(4)...20mA / load resistor max. 500 Ω		
Accuracy	:	Crest factor	< 2, 5: 1%	
			> 2, 5: 5%	
Offset setting	:	Optional, \pm 2, 5%, after removal of the front cover		
Gain adjustment	:	Optional, 0, 6...1, 5, after removal of the front cover		
Settling time	:	600ms at 6Hz		
Ripple & Noise	:	< 20 mV		

General data:

Operating temperature	:	0...50°C
Storage temperature	:	-25...+85°C, condensation before putting into operation is not allowed
Test voltage	:	2,5kVAC / 50Hz / 60 sec. between Input / output and auxiliary power
MTBF	:	186 years Mean Time Between Failures – according to EN 61709 (SN 29500). Requirements: Stationary operation in clean rooms, average ambient temperature 40 ° C, no forced ventilation, continuous operation
CE conformity	:	EN 61326-1, EN 61000-4-2/3*/4/5/6*, EN 61000-6-4 * during measurements small deviations are possible

Body:

Dimension	:	22,5mm adjoin body, 22,5x114,5x104,5mm (with terminals)
Material	:	PA / V0
Protection category	:	IP20
Fixing	:	M3-screw-type terminal 0, 14 - 2,5mm ² , flexible or inflexible
Fixing	:	Snap-on mounting for norm rail TS35
Weight	:	125g

Note on safety:



Disconnect the power supply before attempting to open the unit.

During the operation of this module it is possible that parts of the module, even there is extra-low voltage, (for example shunt measurement) are under dangerous voltage! Therefore a non-observance of this caution may cause damage of property or physical injury.

Only trained qualified personnel should install or operate the unit. Before installation the qualified personnel should read the documentation and should familiarize themselves with the unit.

If there is visible damage to the body of the unit it should be immediately replaced and not put into operation.



Please ensure that there is a sufficient prevention against electrostatic discharge during installation of the unit.

Installation Information:

Pay attention and make sure the unit is far away from mounted sources that may disturb the device such as magnetic coils, transformers, frequency converters etc.

Wiring advice:

Use only shielded cables. The shield is to be connected extensively to ground. Do not mix power- and signal-wires/cables in the same cable tray.

Limited warranty:

The LEG Industrie-Elektronik GmbH warranted that the product does not have any material or processing defects in a period of 5 years after date of delivery.

It is up to the choice of LEG to repair or to exchange an inoperative unit.

Subsequent damages or any claim for indemnification above the functionality of the unit are excluded.

This limited warranty is only valid if ...

1. the product was installed and put into operation according to the LEG operation documentation;
2. the technical configuration of the power supply was abided;
3. the product was not used for unintended purposes;
4. there were no unauthorized modifications or manipulations, misuse or repairs without previous agreement from LEG .

Our Terms of Trade are based on the "General Conditions for the supply of products and services of the Electrical and Electronics Industry" including the "Complementary Clause: Extended Reservation of Property" of the ZVEI e.V. (German Association of Electrical Manufacturers).

Miscellaneous:

We expressly reserve the right, without previous notice, to correct errors contained in any data of this information brochure, and to make alterations to the program and technical modifications.