

Electrical multimeters

- Measure and display up to 30 parameters of a three phase line with or without neutral. True RMS values.
- All values can be read without making program changes.
- Reduced size 96x96 mm. Flush mounting in panel.
- EMM6-485 and EMM6-485-A with ModBus communication, with and without analogic output.

- V** Voltage
- A** Current
- Cosφ** Power factor (PF)
- W** Active power (P)
- VAR** Reactive power (Q)
- VA** Apparent power (S)
- kWh** Active energy counter
- kVArh** Reactive energy counter
- Hz** Frequency
- °C** Temperature
- Max** Maximum values

- Calculates the current demand.
- 4 displays with red LED's of 3 digits with 7 segments for easy reading.
- 3 membrane push-buttons.
- Automatic scale of units.
- Suitable for all electrical switchboards used in the industrial field for instruments, motors, generators, etc.
- With active and reactive energy meter.
- 4 displays with red LED's of 3 digits with 7 segments for easy reading.
- 3 membrane push-buttons.
- Automatic scale of units.
- Suitable for all electrical switchboards used in the industrial field for instruments, motors, generators, etc.

EMM

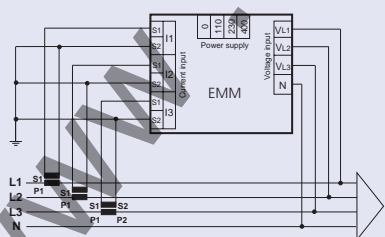


Models	EMM 4	EMM 6 / EMM 6-485 / EMM 6-485-A
Measured and displayed values	V A PF W VAR VA Hz °C Max	V A PF W VAR VA kWh kVArh Hz Max
Auxiliary supply	±10% 50/60 Hz	100-125 / 220-240 / 380-415 V
Code no.	41200	41205 / 41210 / 41215

Characteristics	EMM 4	EMM 6 / EMM 6-485 / EMM 6-485-A
Voltage input	4 wire input. For both 4 and 3 wire systems (in this case don't connect N)	
• Input impedance	1 MΩ	1 MΩ
• Continuous overload	+20%	+20%
Current input	From 0,02 to 5 A. Use always 3 CT../5. Multimeter self-consumption < 5VA	
• CT primary I_{N1} current	Range between 5 and 10.000 A. This value has to be programmed by the user in the multimeter	
• Continuous overload	+30%	+30%
Communication RS485 ModBus	No	EMM 6: No / EMM 6-485: Yes / EMM 6-485-A: Yes
Analogic output	No	EMM 6: No / EMM 6-485: No / EMM 6-485-A: Yes
Maximum terminal section	2,5 mm ²	2,5 mm ²
Front protection degree / weight	IP 52 / 0,5 kg	IP 52 / 0,5 kg
Storage / operation temperature; humidity	-25°C to 80°C / -10°C to 60°C; < 90%	-25°C to 80°C / -10°C to 60°C; < 90%
Standards	IEC EN 50081-2, IEC EN 50082-1, IEC EN 61010-1	IEC EN 50081-2, IEC EN 50082-1, IEC EN 61010-1

Wiring diagram

4 wires system.
In 3-phase applications (without or with neutral not distributed) don't connect the terminal N.



EMM 4	EMM 6-485 / EMM 6-485-A	Parameters	Measured parameters				Range	Accuracy % ±digits
•	•	V _{L-N} Voltage	V _{L1-N}	V _{L2-N}	V _{L3-N}	ΣV _{L-N}	20 - 290 Vrms	±0,5 ±1
•	•	V _{L-L} Voltage	V _{L1-2}	V _{L2-3}	V _{L3-1}	ΣV _{L-L}	20 - 500 Vrms	±0,5 ±1
•	•	A Current	I _{L1}	I _{L2}	I _{L3}	ΣI _L	0,02 - 9990 Arms	±0,5 ±1
•	•	PF Power factor cosφ	PF _{L1}	PF _{L2}	PF _{L3}	ΣPF _L	0,1 a 1 (+ind.,-cap.)	±1 ±1
•	•	W Active power	P _{L1}	P _{L2}	P _{L3}	ΣP _L	0,01 - 9990 kW	±1 ±1
•	•	VAR Reactive power	Q _{L1}	Q _{L2}	Q _{L3}	ΣQ _L	0,01 - 9990 kVA	±1 ±1
•	•	VA Apparent power	S _{L1}	S _{L2}	S _{L3}	ΣS _L	0,01 - 9990 kVA	±1 ±1
•	•	kWh Act. en. count	ΣkWh				0 - 10 ⁸ kWh	Clase 2
•	•	kVArh React. en. count	ΣkVArh				0 - 10 ⁸ kVArh	Clase 2
•	•	Hz Frequency	F _{L1}				40 - 500 Hz	±0,5 ±1
•	•	°C Temperature	T	Measured with internal sensor			0 - 60°C	±2°C
•	•	Max. (instantaneous)	ΣP _{L max}	Values every second				
•	•	Integrated active power	ΣP _{L max}	Average of max. values over last 15 minutes				
•	•	Max. (instantaneous)	I _{L1 max}	I _{L2 max}	I _{L3 max}		Values every second	
•	•	Integrated current	I _{L1 max}	I _{L2 max}	I _{L3 max}		Average of max. values over last 15 minutes	