



EM 20 Meter

The EM 20 range of meters is a class 1 multi-function, panel mounting meter to measure electrical parameters



It is ideal for applications like:

- Energy Monitoring, 20-20-20 target
- Costing and Billing
- Power Factor Analysis
- Supply Capacity
- Building performance: Hospitals, Schools, Offices,...

European law 20-20-20 to be implemented by AD 2020

Our society is feeling the pressure of environmental issues and the problems they bring in terms of energy. In 2006, the European Union imposed the following measures on the European member states to be met by 2020:

- 20% CO₂ reduction
- 20% of energy demand to be delivered by renewable energy sources
- 20% energy efficiency increase

General characteristics

- Standard multifunction meter: P, Q, V, I, cos phi, kWh,...
- 3 phase 3 or 4 wire system
- Different types of communication protocols (Modbus, Modbus TCP)
- Up to the 40th harmonic in the power analyzer types
- DIN 96 x 96 panel mounting

Type	Description
EM 20	Energy meter
EM 20 M	Energy meter with Modbus RTU
EM 20 MH	Power Analyzer with Modbus RTU
EM 20 IPH	Power Analyzer with IP

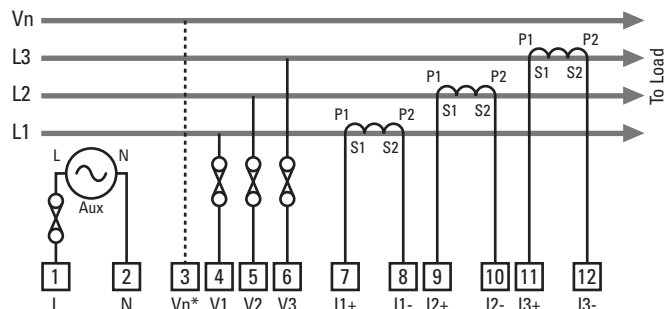


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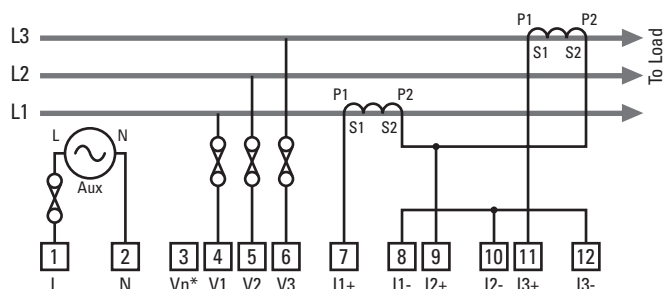
Specification Sheet

Energy	kWh class 1 EN62053-21 & BS8431, kVA _{rh} class 2 EN62053-23 & BS8431, kVAh class 2				
Voltage	230 V _{ac} phase-neutral, 400 V _{ac} phase-phase. Burden ≤ 0.1 VA per phase. Overload x 4 for 1 hour. Measurement 50 - 120 %, 0.3 % accuracy.				
Current	3 x 5 A input, fully isolated to 2.5 kV per phase, Burden ≤ 0.1 VA per phase. Overload x 40 for 0.5 second. 10 mA to 6 A range, 1 % accuracy.				
Frequency	45 to 65 Hz upto 30 th harmonic @ 50 Hz				
Meter Supply	230 V _{ac} 15 % 45 - 65 Hz Loading 2 VA				
Display	Custom supertwist liquid crystal display (LCD); 8 digits energy, 4 digits other				
General	250 g, Mablex UL V94-V-O material, IP54 -10 to 65 °C operating, < 75 % RH non-condensing				
Communication	Type	EM 20	EM 20 M	EM 20 MH	EM 20 IPH
	Communication	Pulse output	Modbus RTU	Modbus RTU	IP
Pulse Output	Normally Open volt-free pulse of kWh + kVAh or kVA _{rh} . 100 V _{ac/dc} , 100 mA _{ac/dc} max, 2.5 kV isolated. ON period 0.1 to 20 seconds.				
Modbus RTU	4800 - 19200 baud, high-speed RS485. 110 V measurement. 208 V measurement.				
IP	Network interface:	RJ45 Connector, 10BaseT, Cat5 Cabling			
	IP Protocols :	FTP, TFTP & SNMP, Modbus® TCP, Fixed IP address (User configured)			
	Web server:	HTTP, HTML Format, SVG for dynamic graphics, 8 split Direct Display Pages (Additional user-configured pages can be added 'Excel Web Query' Page, Network Configuration Page, Meter & FTP Data Transmission Configuration Page)			
	Time:	A software real time clock is integrated, synchronized to local or global time server using the SNTP protocol			
	Digital Inputs & Outputs:	2 digital inputs for external pulsing devices or status 2 digital for Alarm or local control			

3 Phase 3 or 4 Wire (optional)



3 Phase 3 Wire



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