

MID approval

Under the Electricity Act 1989 all electricity meters used for billing purposes must be approved. The approval for these meters is obtained by conforming to the European Measuring Instruments Directive (MID) 2004/22/EC (replacing OFGEM approval). This directive covers a number of different Instruments that are used to measure products or services for reselling. Therefore not only does it apply to Electrical Meters but you may see MID approval on a range of items such as the charge meter in a taxi, beer and wine glasses (the volume measurement line) in a Public House or on the petrol pumps when you are filling up your vehicle.

Who should be using MID certified meters?

By Law, anyone who is taking a meter reading that is then used for billing purposes and for which they subsequently receive a payment from the user for the electricity consumed.

Some typical examples:

- A Retail shopping centre owner wants to measure the individual consumption of all the store owners in his shopping mall and send them separate invoices for the electricity that each has used to run their business.
- A Landlord who wants to measure the electricity used by tenants renting apartments in his building and then send them a bill for the electricity they have used.
- A caravan/mobile home Leisure Park wants to measure the consumption of its customers and charge them an exact amount for the electricity used at the end of their rental period.

All of these examples must have the electricity consumption reading taken from a certified MID approved meter. The MID certification validates that the meter is manufactured using quality components, assures the meter is accurate for electricity billing purposes and that it maintains this accuracy over time for consistent readings.

Standard Meters - Non MID approved

If a meter is being used purely for a "check meter reading" and not being used to resell or charge for electricity consumed, then a standard meter that is reasonably accurate may be used to measure energy used at that point in time. For example, a check meter reading is required to meet L2 Building Regulations and Chartered Institution of Building Services Engineers TM39 guide to Building Energy Metering. The reading taken is used as a 'check point' to help reduce energy consumption.

METERING - TECHNICAL DATA

Single Phase and Three Phase Measuring Devices

Direct Connected kW Meters - No external current transformers required.
Standard reading or MID calibrated options.
All meters have pulsed output for Building Management Systems. (BMS)



General Characteristics

Housing Width	2 modules DIN	4 modules DIN
Mounting	35mm DIN rail	35mm DIN rail
Depth	70mm	70mm
Reference standard	EN 50470-1-3 (B), EN 62053-23-31	EN 50470-1-3 (B), EN 62053-23-31

Operating Features

Connectivity	2	2-3-4
Storage of energy values and configuration	yes	yes
Display tariffs identifier	T1 and T2	T1 and T2

Supply

Rated control supply voltage Un	230 VAC	230 VAC
Operating range voltage	184 ... 276 V	184 ... 276 V
Rated frequency fn	50 Hz	50 Hz
Rated power dissipation (max.) Pv	≤8 (0.6) VA (W)	≤8 (0.6) VA (W)

Display (readouts)

Connection errors and phase out	-	PHASE Err
Display type LCD - Digits	7 (1 decimal) - 6mm x 3mm	8 (1 decimal) - 6mm x 3mm
Active energy: 1 display, 7-digit	000000.0 ... 999999.9 kWh	0000000.0 ... 999999.9 kWh
+ display import or export (arrow)	999999.9 ... 000000.0 kWh	999999.9 ... 000000.0 kWh
Reactive energy: 1 display, 7-digit	000000.0 ... 999999.9 kWh	0000000.0 ... 999999.9 kWh
+ display import or export (arrow)	999999.9 ... 000000.0 kWh	999999.9 ... 000000.0 kWh
Instantaneous active power: 1 display, 3-digit	000 ... 999 W, kW or MW	000 ... 999 W, kW or MW
Instantaneous reactive power: 1 display, 3-digit	000 ... 999 var, kvar or Mvar	000 ... 999 var, kvar or Mvar
Instantaneous tariff measurement	1 display, 1 digit. T1 or T2	1 display, 1 digit. T1 or T2
Display period refresh (seconds)	1	2

Measuring accuracy

Active energy and power	±1% (B)	±1% (B)
Reactive energy and power	±2 %	±2 %

Pulse output SO

Pulse output	yes	yes
Pulse quantity	1000 imp/kWh	500 imp/kWh
Pulse duration	30 ±2 ms	30 ±2 ms
Required voltage	5 ... 230 ±5% (5 ...300) VAC (DC)	5 ... 230 ±5% (5 ...300) VAC (DC)
Permissible current	90 mA	90 mA
Permissible current	1µA	1µA