

UEC80-2X

80A single phase 2 wire energy meter

- Direct connection up to 80 A
- Fully bi-directional 4-quadrant measurements for all energies and powers
- Class B according to EN 50470-3 (MID)
- Tariff input
- 2 SO outputs for energy pulse emission
- LCD display with 7 main digits
- IR optical port for communication
- Available with MID certification



» General features

2 DIN modules energy meter for the energy measurement in industrial and civilian application, available with MID certification suitable for billing. Combined with different external modules, the meter can communicate with other systems. COM modules are available for the most common field protocols.

Besides the energy, the meter can measure the main electrical parameters and makes them available on the IR port. The LCD display shows the energies and the instantaneous powers.

The meter is built according to EN 50470-1 standard. The active energy is compliant to IEC/EN 62053-21 class 1, but for MID certified device it moreover fulfills class B requirements according to EN 50470-3. The accuracy of reactive energy is compliant to IEC/EN 62053-23 class 2.

Wide backlit LCD display with clear graphic symbols comprehensible at a glance. Metrological LED on front panel and sealable terminal covers. Available versions with different voltage working range for the connection on 2 wire network. The analysis of the MTBF values, the accurate selection of components and the reduction of the internal working temperatures together with strict production and control standards guarantee a product with an excellent quality and a long lasting reliability.

» Applications

- Totalization of the electric energy in the industry for each single line or machine.
- Measurement of energy generated by renewable sources such as solar, eolic, etc.
- Accounting and billing of consumptions in camp sites, malls, residential areas, naval ports, etc.
- Totalization of the electric consumption in hotels, congress centers, exhibition fairs.
- Accounting of the consumptions in buildings with executive office services.
- Internal allocation of the consumptions in timeshare civilian and industrial buildings.
- Realization of energy monitoring systems.
- Remote survey of the consumptions and compute of the costs.

» Benefits

- Up to 10 instantaneous measurements, complete set of energy counters with 2 tariffs total and partial counters. Moreover partial counters can be started, stopped or reset.
- Available MID according to Swiss market (MID S). Reactive energy is not shown on energy meter display.

» Related products

- Communication modules (RS485 Modbus, M-Bus, Lan gateway, KNX)

» Technical features

Power supply

- Power supplied from the voltage circuit
- Nominal measurement voltage $\pm 20\%$
- Max consumption: 7.5 VA - 0.5 W
- Nominal frequency: 50/60 Hz

Voltage & frequency

- Nominal values:
 - A) 230 V 50 Hz
 - D) 230 ... 240 V 50/60 Hz

Current

- Starting current I_{st} : 20 mA
- Minimum current I_{min} : 250 mA
- Transitional current I_{tr} : 500 mA
- Reference current I_{ref} (I_b): 5 A
- Maximum current I_{max} : 80 A

Accuracy

- Energia attiva classe 1 secondo IEC/EN 62053-21 (NO MID)
- Energia attiva classe B secondo EN 50470-3 (MID)
- Energia reattiva classe 2 secondo IEC/EN 62053-23

S0 outputs

- 2 passive optoisolated
- Maximum values: $250 V_{AC-DC}$ - 100 mA
- Meter constant: 500 imp/kWh
The measuring unit (imp/kWh, imp/kvarh, imp/kVAh) changes according to the assigned counter (kWh, kvarh, kVAh)
- Pulse length: 50 ± 2 ms ON time

Tariff input

- Active optoisolated
- Voltage range for tariff 2: 80 ... 276 V_{AC-DC}

Metrological LED

- Meter constant: 1000 imp/kWh

Environmental conditions

- Operating temperature: -25°C ... $+55^{\circ}\text{C}$
- Storage temperature: -25°C ... $+75^{\circ}\text{C}$
- Humidity: 80% max without condensation
- Protection degree: IP51 frontal part -IP20 terminals

» Technical drawing (mm)




» Measurements

| | SYMBOL | MEASURE UNIT, VALUE or STATUS | DISPLAY | COM PORT |
|---------------------------------------------------------------------------------------------|----------|----------------------------------|---------|-------------|
| INSTANTANEOUS VALUES | | | | |
| Voltage | V | V | | ● |
| Current | I | A | | ■ |
| Power factor | PF | | | ● |
| Apparent power | S | kVA | ■ | ■ |
| Active power | P | kW | ■ | ■ |
| Reactive power | Q | kvar | ■ | ■ |
| Frequency | f | Hz | | ● |
| Power direction | → ← | | ● | ● |
| RECORDED DATA | | | | |
| Total active energy | | kWh | ■ | ■ |
| Total inductive and capacitive reactive energy | | kvarh | ■ ❖ | ■ ❖ |
| Total inductive and capacitive apparent energy | | kVAh | ■ | ■ |
| T1/T2 tariff energy counters | | kWh, kvarh, kVAh | ■ ❖ | ■ |
| Resettable partial energy counters | | kWh, kvarh, kVAh | ■ ❖ | ■ |
| Energy balance | | kWh, kvarh, kVAh | ■ ❖ | ■ |
| OTHER INFORMATION | | | | |
| Present tariff | T | 1/2 | | ● |
| Undervoltage/overvoltage | VOL, VUL | ON/OFF | | ● |
| Undercurrent/overcurrent | IOL, IUL | ON/OFF | | ● |
| Underfrequency/overfrequency | fOL, fUL | ON/OFF | | ● |
| Partial counters | PAR | START/STOP | ● | ● |
| S0 output status | J1 J2 | Active/Not active | ● | |
| LEGEND: ● = Available ■ = Bidirectional value ❖ = varh not available for MID S meter | | | | |

| ORDER CODE | VOLTAGE AND FREQUENCY INPUT | COMMUNICATION PORT | OPTIONS | | | | USER MANUAL LANGUAGES | | | |
|-----------------|-----------------------------|--------------------|--------------|----|-----|------|-----------------------|-------|-------|-------|
| | | | Self-powered | IR | MID | MIDS | NONE | RESET | IT/EN | DE/EN |
| UEC80-2A | | | | | | | | | | |
| 1108.0001.0001 | 230V 50Hz | ● | ● | | | | | ● | | |
| 1108.0002.0001 | 230V 50Hz | ● | | ● | | | | ● | | |
| 1108.0003.0001 | 230V 50Hz | ● | | | ● | | | ● | | |
| 1108.0004.0001 | 230V 50Hz | ● | | | | ● | | ● | | |
| 1108.0005.0001 | 230V 50Hz | ● | ● | | | | | | ● | |
| 1108.0006.0001 | 230V 50Hz | ● | | ● | | | | | ● | |
| 1108.0007.0001 | 230V 50Hz | ● | | | ● | | | | ● | |
| 1108.0008.0001 | 230V 50Hz | ● | | | | ● | | | ● | |
| 1108.0009.0001 | 230V 50Hz | ● | ● | | | | | | | ● |
| 1108.0010.0001 | 230V 50Hz | ● | | ● | | | | | | ● |
| 1108.0011.0001 | 230V 50Hz | ● | | | ● | | | | | ● |
| 1108.0012.0001 | 230V 50Hz | ● | | | | ● | | | | ● |
| UEC80-2D | | | | | | | | | | |
| 1108.0013.0001 | 230V...240V 50/60Hz | ● | ● | | | | | ● | | |
| 1108.0014.0001 | 230V...240V 50/60Hz | ● | | ● | | | | ● | | |
| 1108.0015.0001 | 230V...240V 50/60Hz | ● | | | ● | | | ● | | |
| 1108.0016.0001 | 230V...240V 50/60Hz | ● | | | | ● | | ● | | |
| 1108.0017.0001 | 230V...240V 50/60Hz | ● | ● | | | | | | ● | |
| 1108.0018.0001 | 230V...240V 50/60Hz | ● | | ● | | | | | ● | |
| 1108.0019.0001 | 230V...240V 50/60Hz | ● | | | ● | | | | ● | |
| 1108.0020.0001 | 230V...240V 50/60Hz | ● | | | | ● | | | ● | |
| 1108.0021.0001 | 230V...240V 50/60Hz | ● | ● | | | | | | | ● |
| 1108.0022.0001 | 230V...240V 50/60Hz | ● | | ● | | | | | | ● |
| 1108.0023.0001 | 230V...240V 50/60Hz | ● | | | ● | | | | | ● |
| 1108.0024.0001 | 230V...240V 50/60Hz | ● | | | | ● | | | | ● |

LEGEND

- IR:** IR port. This port allows to combine the meter with the communication module (not included).
- MID:** MID certified meter, with reset function only on partial counters.
- MID S:** MID certified meter, with reset function only on partial counters, without reactive energy counters on display (only SWITZERLAND .
- NONE:** Meter without MID certification, with reset function only on partial counters.
- RESET:** Meter without MID certification, with RESET function on ALL counters.

NOTE: Subject to change without notice



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