

# UEC80-2D

## 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)

## » 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 range & frequency

- 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<sub>AC-DC</sub> - 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  $\pm 2$ ms ON time

### Tariff input

- Active optoisolated
- Voltage range for tariff 2: 80 ... 276 V<sub>AC-DC</sub>

### Metrological LED

- Meter constant: 1000 imp/kWh

### Environmental conditions

- Operating temperature: -25°C ... +55°C
- Storage temperature: -25°C ... +75°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
<b>INSTANTANEOUS VALUES</b>				
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	→ ←		●	●
<b>RECORDED DATA</b>				
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	■ ❖	■
<b>OTHER INFORMATION</b>				
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	●	
<b>LEGEND:</b> ● = Available ■ = Bidirectional value ❖ = varh not available for MID S meter				

ORDER CODE	VOLTAGE AND FREQUENCY INPUT	INPUTS/OUTPUTS		COMMUNICATION PORT	OPTIONS			
		TARIFF input	SO outputs		IR	MID	MIDS	NOMID
<b>UEC80-2D</b>								
1108.0013.0001	230V...240V 50/60Hz	1	2	●	●			
1108.0014.0001	230V...240V 50/60Hz	1	2	●		●		
1108.0015.0001	230V...240V 50/60Hz	1	2	●			●	
1108.0016.0001	230V...240V 50/60Hz	1	2	●				●

ORDER CODE	MODEL	POWER SUPPLY	COMMUNICATION PORT			USER MANUAL LANGUAGES		
			RS485 MODBUS	M-BUS	ETHERNET	IT/EN	DE/EN	FR/EN
<b>COMMUNICATION MODULES</b>								
1112.0001.0001	RS485 MODBUS	230VAC ±20%	●			●		
1112.0005.0001	RS485 MODBUS	230VAC ±20%	●				●	
1112.0009.0001	RS485 MODBUS	230VAC ±20%	●					●
1112.0002.0001	M-BUS	Through bus connection		●		●		
1112.0006.0001	M-BUS	Through bus connection		●			●	
1112.0010.0001	M-BUS	Through bus connection		●				●
1112.0003.0001	LAN GATEWAY	230VAC ±20%			●	●		
1112.0007.0001	LAN GATEWAY	230VAC ±20%			●		●	
1112.0011.0001	LAN GATEWAY	230VAC ±20%			●			●

**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 .
  - NO MID:** Meter without MID certification, with reset function only on partial counters.
  - RESET:** Meter without MID certification, with RESET function on ALL counters.
- Softwares for meter remote management (MODBUS Master, M-BUS Master) downloadable for free at [www.algodue.com](http://www.algodue.com)

NOTE: Subject to change without notice



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