UEC1P5-4X

6A three phase 4 wire energy meter

- For 1 or 5A CT
- Programmable CT ratio
- Fully bi-directional 4-quadrant measurements for all energies and powers
- For 4 wire networks
- Class B according to EN 50470-3 (MID)
- Tariff input
- 2 S0 outputs for energy pulse emission
- LCD display with 8 main digits
- IR optical port for communication with external modules
- Available with MID certification

» General features

4 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 backlighted 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 4 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 30 instantaneous measurements, complete set of energy counters with 2 tariffs total and partial counters. Moreover partial counters can be started, stopped or reset.
- Suitable for CT with 1 or 5A secondary. CT ratio is programmable (1 ... 10000).
- Phase sequence and diagnostic function for error signalling in case of wrong polarity connection.
- 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 ±20%
- Max consumption (for each phase): 7.5 VA - 0.5 W
- CT burden (for each phase): 0.04 VA
- Nominal frequency: 50/60 Hz

Voltage & frequency
- Nominal values:
  A) 3x230/400 V 50 Hz
  D) 3x230/400 ... 3x240/415 V 50/60 Hz

Current
- Starting current I_{st}: 2 mA
- Minimum current I_{min}: 10 mA
- Transitional current I_{tr}: 50 mA
- Reference current I_{ref} (I_n): 1 A
- Maximum current I_{max}: 6 A

Accuracy
- Active energy class 1 according to IEC/EN 62053-21 (NO MID)
- Active energy class B according to EN 50470-3 (MID)
- Reactive energy class 2 according to IEC/EN 62053-23

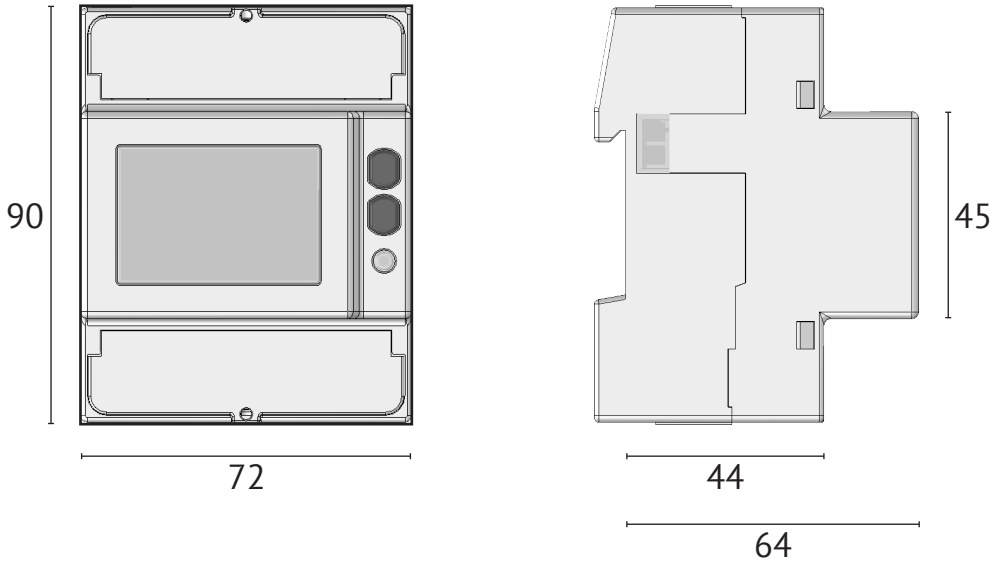
S0 outputs
- 2 passive optoisolated
- Maximum values: 250 V_{AC-DC} - 100 mA
- Meter constant according to the set CT ratio:
  1000 imp/kWh with CT ratio in range 1...4
  200 imp/kWh with CT ratio in range 5...24
  40 imp/kWh with CT ratio in range 25...124
  8 imp/kWh with CT ratio in range 125...624
  1 imp/kWh with CT ratio in range 625...3124
  0.1 imp/kWh with CT ratio in range 3125...10000
  The measuring unit (imp/kWh, imp/kvarh, imp/kVAh) changes according to the assigned counter (kWh, kvarh, kVAh)
- Pulse length: 50 ±2 ms

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

Metrological LED
- Meter constant: 10000 imp/kWh
- Pulse length: 10 ±2 ms

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
INSTANTANEOUS VALUES				
Phase voltage	V_{L1-N} - V_{L2-N} - V_{L3-N}	V		●
Line voltage	V_{L1-L2} - V_{L2-L3} - V_{L3-L1}	V		●
System voltage	V∑	V		●
Phase current	I_1 - I_2 - I_3	A		■
Neutral current	I_N	A		■
System current	I∑	A		■
Phase power factor	PF_{L1} - PF_{L2} - PF_{L3}	-		●
System power factor	PF∑	-		●
Phase apparent power	S_{L1} - S_{L2} - S_{L3}	VA	■	■
System apparent power	S∑	VA	■	■
Phase active power	P_{L1} - P_{L2} - P_{L3}	W	■	■
System active power	P∑	W	■	■
Phase reactive power	Q_{L1} - Q_{L2} - Q_{L3}	var	■	■
System reactive power	Q∑	var	■	■
Frequency	f	Hz		●
Phase sequence	CW/CCW	-	●	●
Power direction	→ ←	-	●	●
RECORDED DATA				
Phase active energy	L1 - L2 - L3	Wh	■	■
System active energy	∑	Wh	■	■
Phase inductive and capacitive reactive energy	L1 - L2 - L3	varh	■❖	■
System inductive and capacitive reactive energy	∑	varh	■❖	■
Phase inductive and capacitive apparent energy	L1 - L2 - L3	VAh	■	■
System inductive and capacitive apparent energy	∑	VAh	■	■
Tariff 1/2 phase active energy	L1 - L2 - L3	Wh	■	■
Tariff 1/2 system active energy	∑	Wh	■	■
Tariff 1/2 phase inductive and capacitive reactive energy	L1 - L2 - L3	varh	■❖	■
Tariff 1/2 system inductive and capacitive reactive energy	∑	varh	■❖	■
Tariff 1/2 phase inductive and capacitive apparent energy	L1 - L2 - L3	VAh	■	■
Tariff 1/2 system inductive and capacitive apparent energy	∑	VAh	■	■
Resettable partial energy counters	∑	Wh, varh, VAh	■❖	■
Energy balance	∑	Wh, varh, VAh	■❖	■
OTHER INFORMATION				
Present tariff	T	1/2		●
Secondary values	SEC	ON/OFF	●	●
CT ratio	CT	Set value	●	●
Undervoltage/overvoltage	VOL, VUL	ON/OFF		●
Undercurrent/overcurrent	IOL, IUL	ON/OFF		●
Frequency out of range	fOUT	ON/OFF		●
Partial counters	PAR	START/STOP	●	●
S0 output status	⌋1⌊ ⌋2⌊	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
UEC1P5-4A								
1103.0001.0001	3x230/400V 50Hz	●	●				●	
1103.0002.0001	3x230/400V 50Hz	●		●			●	
1103.0003.0001	3x230/400V 50Hz	●			●		●	
1103.0004.0001	3x230/400V 50Hz	●				●	●	
1103.0005.0001	3x230/400V 50Hz	●	●					●
1103.0006.0001	3x230/400V 50Hz	●		●				●
1103.0007.0001	3x230/400V 50Hz	●			●			●
1103.0008.0001	3x230/400V 50Hz	●				●		●
UEC1P5-4D								
1103.0013.0001	3x230/400V...3x240/415V 50/60Hz	●	●				●	
1103.0014.0001	3x230/400V...3x240/415V 50/60Hz	●		●			●	
1103.0015.0001	3x230/400V...3x240/415V 50/60Hz	●			●		●	
1103.0016.0001	3x230/400V...3x240/415V 50/60Hz	●				●	●	
1103.0017.0001	3x230/400V...3x240/415V 50/60Hz	●	●					●
1103.0018.0001	3x230/400V...3x240/415V 50/60Hz	●		●				●
1103.0019.0001	3x230/400V...3x240/415V 50/60Hz	●			●			●
1103.0020.0001	3x230/400V...3x240/415V 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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