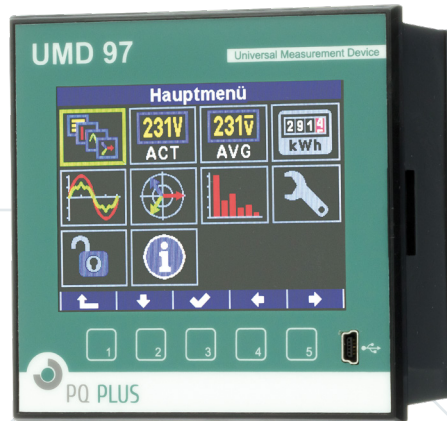


UMD 97 - Measuring technology for control panel installation

Download data sheet



Measurement inputs:
3x voltage, 3x current

Voltage measurement:
up to 1120 V

Current measurement: 1 / 5 A



Measurement category:
CAT III / 300 V

Scanning: 57.6 kHz

Sampling rate of
measured values: up to 40 ms



Harmonics:
up to the 128th harmonic

Evaluation in accordance with
EN 50160:
Class S

Oscillogram recording:
Free parametrisation of triggers
and recording duration



Accuracy of current and voltage
measurement:
Class 0.1

Accuracy of active power / real
energy: Class 0.2 / 0.2S

Accuracy of reactive power / real
energy: Class 0.5 / 0.5S



Communication interfaces:
Ethernet, RS485, front USB

Communication protocols:
e.g., Modbus, MQTT,
IEC 60870-5-104

Connection of slave
devices: Storage, mapping, and
display of slave data

Local network station

Building automation

Data centre

Hospital

EEG plants

Areas of use

Standard

INPUTS 3U, 3I	MEASUREMENT U, I, P, Q	PF, cos, THD	+/- Wh, varh	HARMONICS 128	OUTPUTS 2x PULSE
SAMPLING 57,6 kHz	FLASH 512MB	USB	STANDARDS IEC 61557-12	STANDARDS class 0.2S IEC 62053-22	INPUTS 1x DIGI
CURRENT INPUT X/5A	MODBUS Modbus				

Optional

WEBSERVER Globe icon	INPUTS/OUTPUTS 4x DIGI	FIRMWARE GO	ETH Network icon	RS485 RS485 icon
STANDARDS EN 50160	STANDARDS class S IEC 61000-4-30	SUPPLY 12V/24V/230V		OUTPUTS 2x RELAY
NTP Clock icon	FIRMWARE RCS	FIRMWARE MQTT	FIRMWARE IEC104	

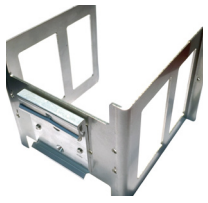


Technical specification - UMD 97

		UMD 97CBM	UMD 97EL	UMD 97E
In- and outputs	Digital in-/outputs	1 input and 2 outputs	1 input and 2 outputs	4 inputs / outputs
	Relay in-/outputs	none	none	none
	Analogue in-/outputs	none	none	none
	Residual current inputs	none	none	none
	Temperature inputs	none	none	none
Communication	Interfaces	RS485, front USB	Ethernet, front USB	RS485, Ethernet, front USB
	Communication protocols*	Modbus RTU, Modbus TCP/IP, SMTP, SNMP, DHCP, JSON		
Further functions	Alarms	Integrated logic: Limit values for exceeding/falling below freely defined values		
	Internal temperature measurement	-40 ... 80 °C		
Data logger	Storage capacity and distribution	512 MB Flash free partitioning into several archives possible		
	Measured value storage	Freely configurable measured values with different averaging intervals		
Electrical connection	Supply voltage	230 V version: 75 ... 275 V AC / 75 ... 350 V DC 24 V version: 20 ... 53 V AC / 20 ... 75 V DC		
	Power consumption	8 VA / 4 W		
	Overvoltage category	Category III		
Accuracy classes		Voltage: Cl. 0.1	Current: Cl. 0.1	Frequency: Cl. 0.02
		Active power: Cl. 0.2	Reactive power: Cl. 0.5	Apparent power: Cl. 0.2
		Harmonics: Cl. 2	Power factor: Cl. 0.5	cos phi: Cl. 0.5
		Real energy: Cl. 0.2S	Reactive energy: Cl. 0.5S	Apparent energy: Cl. 0.2
Measurement inputs	Voltage*	U L-N: 2 ... 650 V AC U L-L: 3.5 ... 1120 V AC		
	Overload voltage*	Permanent U L-N: 1200 V AC / peak overload for max. 1 sec. U L-N: 2000 V AC		
	Input impedance voltage*	6 MOhm		
	Input load voltage*	< 0.05 VA		
	Frequency	40 ... 70 Hz (DC-500 mode: 0 ... 500 Hz)		
	Current transformer*	3x 1 / 5 A		
	Overload current*	Permanent: 8 AAC / peak overload for max. 1 sec: 70 AAC		
	Input impedance current*	< 10 mOhm		
	Input load current*	< 0.5 VA		
	Sampling rate*	57.6 kHz		
	Harmonics per order	1 ... 128. for current and voltage		
	Measuring method	IEC 61000-4-30 Cl. S		
Mechanical properties	Operating temperature range	-20 ... 60 °C at < 95 % relative humidity		
	Temperature range bearing	-40 ... 80 °C at < 95 % relative humidity		
	Protection class front / rear	IP 40; optional IP 54 / IP 20		
	Dimensions WxHxD	96 x 96 x 80 mm		
	Weight	0.3 kg		
Internal real-time clock	Accuracy	+/- 2 s per day at 0 ... 40 °C		
	Possible synchronisation*	NTP/SNTP; external GPS receiver; external pulses; system frequency; PC time		
FW modules		PQ S: optional	GO: optional	RCS: optional
		MM: optional*	UDP: optional*	IEC104: optional*
		MQTT: optional*		

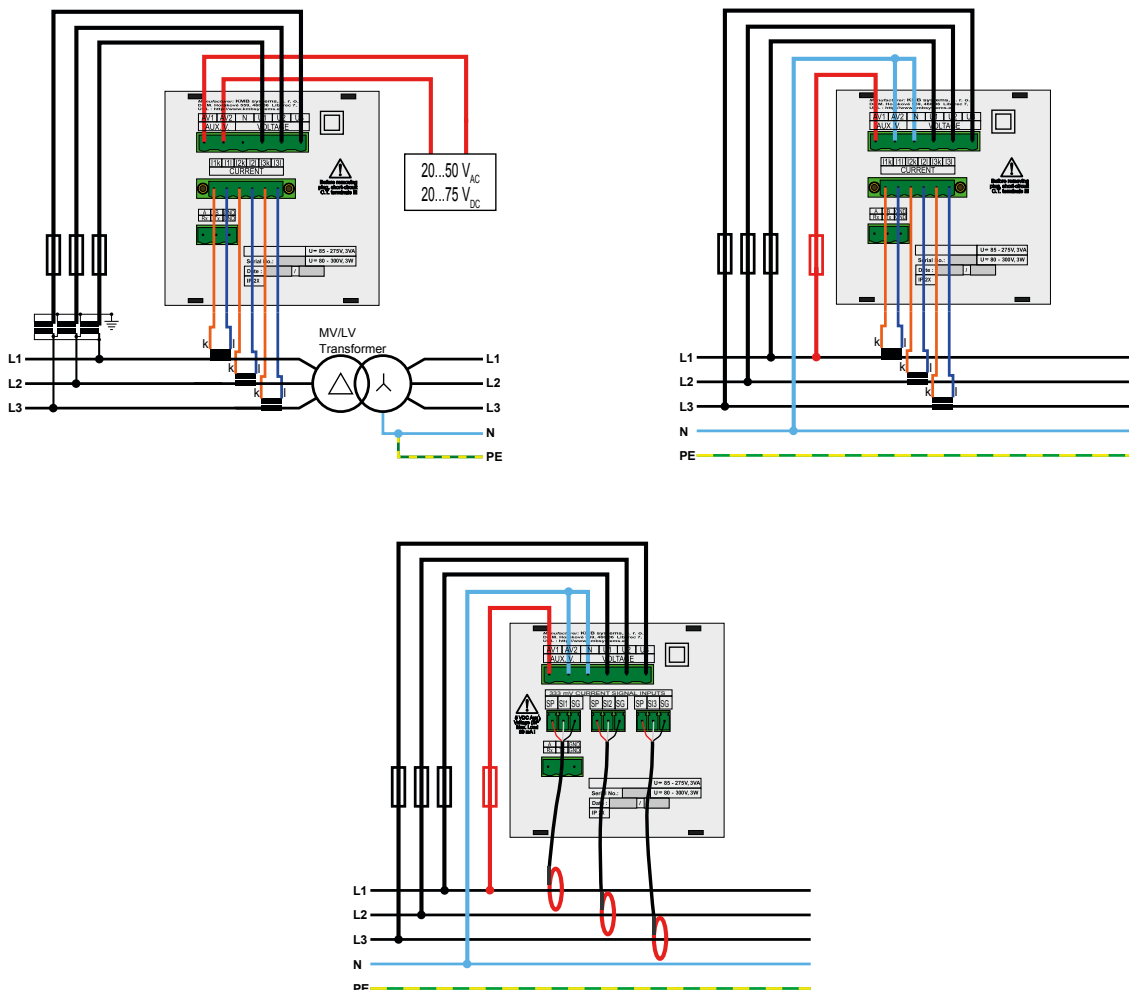
* depending on version

Supply voltage		Meas- urement voltage	Functions				Communication				Type	Item number
75 - 275 V AC 75 - 350 V DC	20 - 53 V AC 20 - 75 V DC		3.5 - 1120 V LL	Digital inputs	Digital outputs	Memory size in MB	Clock	RS485	Ethernet	Gateway Modbus master		
•	-	•	1	2	512	•	•	-	-	•	UMD 97CBM*	11.06.1105
-	•	•	1	2	512	•	•	-	-	•	UMD 97CBM	11.06.3105
•	-	•	1	2	512	•	-	•	-	•	UMD 97EL*	11.06.1107
-	•	•	1	2	512	•	-	•	-	•	UMD 97EL	11.06.3107
•	-	•	4		512	•	•	•	•	•	UMD 97E*	11.06.1110
-	•	•	4		512	•	•	•	•	•	UMD 97E	11.06.3110

* Preferred types

Accessories		Item number
	Top-hat rail adapter AH9697 (Depth with UMD: 110 mm)	81.00.9697
	USB-C connection cable 3.0 m	18.21.2021
	Safety hood IP65	37.00.9600

Typical connection version - UMD 97



Dimension drawings - UMD 97

