

UMD 710MVU - Measuring technology for connecting voltage sensors

Download data sheet



Measurement inputs:
3x voltage, 3x current,
1x Pt100

Voltage measurement:
3.25 V / $\sqrt{3}$
(voltage sensors)

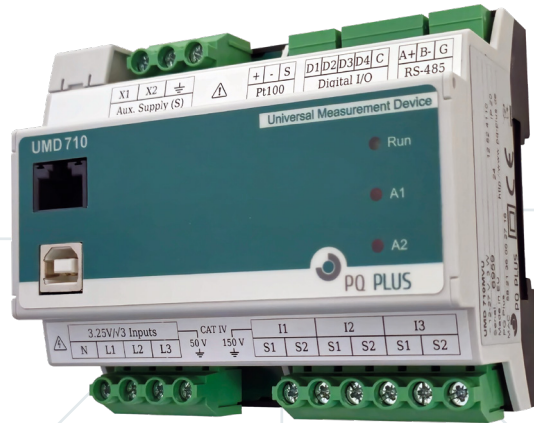
Current measurement: 1 / 5 A



Measurement category:
CAT IV / 300 V

Scanning: 28.8 kHz

Sampling rate of
measured values: up to 200 ms



Evaluation in accordance with
EN 50160:
Class A

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 1 / 0.5S



Communication interfaces:
Ethernet, RS485, front USB

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

Connection of slave
devices: Storage and mapping
of slave data

Areas of use

Substation

Local network station

Transfer station

Medium voltage

CAT IV environments

Standard

INPUTS 3U, 3I	MEASUREMENT U, I, P, Q	PF, cos, THD	+/- Wh, varh	HARMONICS 128	SAMPLING 28,8 kHz	SUPPLY 24V	USB
INPUTS/OUTPUTS 4xDIGI	VOLTAGE INPUT 3,25/ $\sqrt{3}$	WEBSERVER	STANDARDS class 0.2S IEC 62053-22	STANDARDS IEC 61557-12	ETH	NTP	INPUTS Pt100
FLASH 512MB	RS485	MODBUS	CURRENT INPUT X/5A	STANDARDS class A IEC 61000-4-30	FIRMWARE GO	STANDARDS EN 50160	CAT IV

Optional

FIRMWARE RCS	SUPRAHARMONICS 2 kHz...9 kHz
FIRMWARE IEC104	FIRMWARE MQTT

Technical specification - UMD 710MVU

UMD 710MVU						
In- and outputs	Digital in-/outputs	4 inputs / outputs				
	Relay in-/outputs	none				
	Analogue in-/outputs	none				
	Residual current inputs	none				
	Temperature inputs	1 Pt100 input -50 ... 170 °C				
Communication	Interfaces	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 ... 85 °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	24 V version: 10 ... 30 V DC				
	Power consumption	7 VA / 3 W				
	Overvoltage category	Category IV				
Accuracy classes	Voltage:	Cl. 0.1	Current:	Cl. 0.1	Frequency:	Cl. 0.02
	Active power:	Cl. 0.2	Reactive power:	Cl. 1	Apparent power:	Cl. 0.2
	Harmonics:	Cl. 1	Power factor:	Cl. 0.5	cos phi:	Cl. 0.5
	Real energy:	Cl. 0.2S	Reactive energy:	Cl. 0.5S	Apparent energy:	Cl. 0.5
Measurement inputs	Voltage	U L-N: 0.02 ... 11.5 V AC U L-L: 0.04 ... 20 V AC				
	Overload voltage	Permanent U L-N: 18 V AC / peak overload for max. 1 sec. U L-N: 30 V AC				
	Input impedance voltage	200 kOhm				
	Input load voltage	< 0.1 VA				
	Frequency	40 ... 70 Hz (DC-500 mode: 0 ... 500 Hz)				
	Current transformers	3x 1 / 5 A				
	Current overload	Permanent: 15 AAC / peak overload for max. 1 sec: 70 AAC				
	Input impedance current	< 10 mOhm				
	Input load current	< 1 VA				
	Sampling rate	28.8 kHz				
	Harmonics per order					
	Measuring method	IEC 61000-4-30 Class A				
Mechanical properties	Operating temperature range	-20 ... 60 °C at < 95 % relative humidity				
	Temperature range bearing	-30 ... 80 °C at < 95 % relative humidity				
	Protection type front / total	IP 40 / IP 20				
	Dimensions WxHxD	108 x 90 x 61 mm				
	Weight	0.3 kg				
Internal real-time clock	Accuracy	+/- 0.2 s per day at 0 ... 40 °C				
	Possible synchronisation	NTP/SNTP; external GPS receiver; external pulses; system frequency; PC time				
FW modules		PQ A: included	GO: included	RCS: optional		
		MM: optional	UDP: optional	IEC104: optional		
		SH: optional				

Supply voltage	Measuring voltage	Functions				Communication					Type	Item number
10 - 30 V DC	0.03 - 11.5 V	Digital in- / outputs	Memory size in MB	Clock	Pt100 input	RS485	Ethernet	Gateway Modbus master	Class A	USB		
•	•	4	512	•	•	•	•	•	•	•	UMD 710MVU	12.52.4110

Dimension drawings

