

UMD 710EVU - Measuring equipment for CAT IV environments

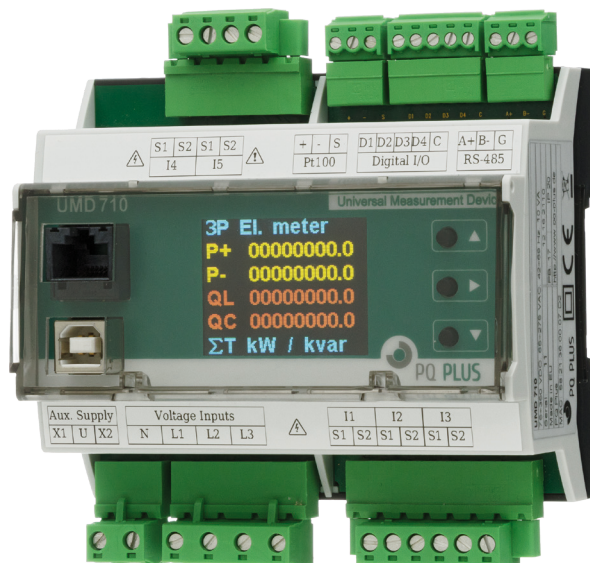
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UMD 710EVU

The UMD 710EVU is a compact, high-end network quality measurement device for CAT IV environments for installation on the DIN top hat rail. It measures 3-phase current and voltage with up to 3 tariffs in 4-quadrant operation in class 0.05 and thus the work in class 0.2s, as well as all usual network quantities, e.g. harmonics up to the 128th harmonic. The device maps network quality according to EN 50160, EN 61000-2-2, EN 61000-2-4, EN 61000-2-12 and measures in class A according to EN 61000-4-30.

It has a large 512 MB memory. The device can be accessed via the Ethernet interface and live measured values can be observed using the web browser via the corresponding web server. This enables internet protocols such as NTP to also be read in and PLC systems and building management systems to be connected easily. 4 digital inputs / outputs and a serial RS485 interface are integrated. The GO firmware module is used to activate oscilloscope functions for current and voltage, and to set trigger signals for limit value events. The PQ A firmware module can be used to record and evaluate the voltage quality continuously.



Application

The device is used in all CAT IV environments. A suitable CAT IV power unit is available in our accessories.

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	INPUTS Pt100	WEBSERVER	STANDARDS class 0.2S IEC 62053-22	STANDARDS IEC 61557-12	ETH	NTP	CAT IV
FLASH 512MB	RS485	MODBUS	CURRENT INPUT X/5A	STANDARDS class A IEC 61000-4-30	FIRMWARE GO	STANDARDS EN 50160	

Optional

FIRMWARE RCS
SUPRAHARMONICS 2 kHz 9 kHz

Supply voltage	Measurement voltage	Functions				Communication					Type	Item number
10 - 30 V DC	5 - 1470 V LL	Digital inputs/ outputs	Memory size in MB	Clock	Pt100 input	RS485	Ethernet	Gateway Modbus master	Class A	USB		
•	•	4	512	•	•	•	•	•	•	•	UMD 710EVU	12.32.4110

Technical specifications - UMD 710EVU

UMD 710EVU							
Inputs and outputs	Digital inputs/outputs	4 digital inputs/outputs					
	Relay inputs/outputs	None					
	Analogue inputs/outputs	None					
	Differential 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 allocation	512 MB flash freely partitionable into several archives					
	Measured value storage	Freely configurable measured values with different averaging intervals					
Electrical connection	Supply voltage						
		24 V variant: 12 - 27 V AC / 10 - 30 V DCc					
	Power input	7 VA / 3 W					
	Overvoltage category	CAT IV / 300 V					
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
		Harmonic oscillations:	Cl. 1	Power factor:	Cl. 0.5	cos phi:	Cl. 0.5
		Real energy:	Cl. 0.2	Reactive energy:	Cl. 2	Apparent energy	Cl. 0.5
Measuring inputs	Voltage	U L-N: 3 - 850 V AC					
		U L-L: 5 - 1470 V AC					
	Overload voltage	Permanent U L-N: 4200 V AC / peak overload for max. 1 sec. U L-N: 5600 V AC					
	Input impedance voltage	8.96 MOhm					
	Input load voltage	< 0.1 VA					
	Frequency	40 ... 70 Hz (DC-500 mode: 0 ... 500 Hz)					
	Transformers	4x 1 / 5 A					
	Overload current	Permanent: 15 A AC / peak overload for max. 1 sec: 70 A AC					
	Input impedance current	< 10 mOhm					
	Input load current	< 1 VA					
	Sampling rate	28.8 kHz					
	Harmonics per order	1st ... 128. for current and voltage; Optional: Supraharmonics from 2 kHz ... 9 kHz					
	Measurement procedure	IEC 61000-4-30 Cl. A					
Mechanical attributes	Operating temperature range	-25 - 60 °C at < 95 % relative humidity					
	Bearing temperature range	-30 - 80 °C at < 95 % relative humidity					
	Protection class 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 Module		PQ A: included		GO: included		RCS: optional	
		MM: optional		UDP: optional		IEC104: optional	
		SH: optional					

* depending on the variant

Typical connection variant - UMD 710EVU

