



Model DKM-411

Power Analyzer with Internet communication



- Color TFT screen
- IP communications
- Harmonic analysis
- Scopemeter

The DKM-411 is a UL Listed, advanced precision metering device offering a 3.5" size, 320 x 240 pixel color TFT, together with unrivaled remote monitoring capabilities over internet in a compact and low cost package.

The unit itself is a web page and can be opened through any browser for remote monitoring. The central monitoring feature allows monitoring of thousands of meters from one central PC.

Features

- True RMS measurements, 0.2% accuracy
- 3.5" TFT LCD, 320x240 pixels
- Harmonic distortion display (63 harmonics)
- Oscilloscope, waveform display
- Phasor diagram display
- Internal battery backed-up real time clock
- Max demand display
- User configurable display screen
- 2 configurable relay outputs
- Energy pulse output capability
- 2 opto-isolated, configurable digital inputs
- Dual active-reactive power counters
- Both mains/generator energy metering
- Configurable user counters
- Voltage transformer ratio for MV applications
- Password protected front panel programming
- Reduced panel depth
- Sealed front panel (IP54)

Measurements

- Phase to phase voltages: L1L2-L2L3-L3L1-Lavg
- Phase to neutral voltages: V1-V2-V3-Vavg
- Phase currents: L1-L2-L3-LN-Lavg-Ltot
- Active power: P1-P2-P3-ΣP
- Reactive power: Q1-Q2-A3-ΣQ
- Apparent power: S1-S2-S3-ΣS
- Power factor: cos1-cos2-cos3-Σcos
- Active power counters: pC1-pC2
- Reactive power counters: Qc1-Qc2
- User Counters: USR1-USR2-USR3-USR4
- 2...63 Harmonics of any voltage or current
- Phase to neutral voltages vector angles
- Phase to phase voltages vector angles
- Phase or vector diagram



Communications

- Modbus RTU RS-485
- Modbus TCP/IP
- SNMP
- TCP/IP server
- TCP/IP client
- UDP
- SMTP
- Embedded web server
- Web monitoring
- Web programming
- GSM-SMS sending
- email sending
- Central Monitoring through IP
- Free configuration & monitoring software

Communication Ports

- Ethernet 10/100Mb
- RS-485 Isolated (Modbus RTU)
- RS-232 for external GPRS modem
- USB Host for data recording on flash memory
- USB Device for PC connection SUPPORTED

Supported Topologies

- 3 phases 4 wires, star
- 3 phases 3 wires, 3 CT's
- 3 phases 3 wires, 2 CT's (L1-L2)
- 3 phases 3 wires, 2 CT's (L1-L3)
- 3 phases 4 wires, delta
- 3 phases 3 wires, L1-L2
- 3 phases 3 wires, L1-L3
- 1 phase 2 wires

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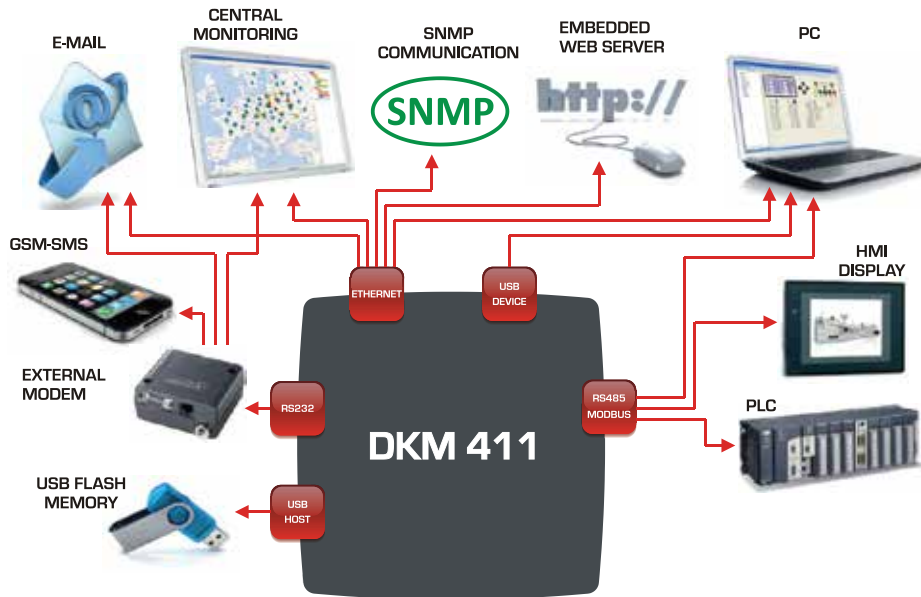
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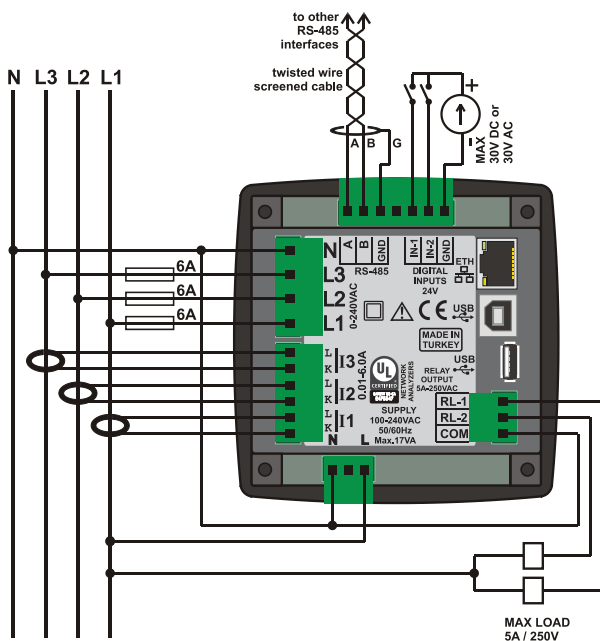
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Power Analyzer with Internet communication

Communication Diagram



Connection Diagram



Specifications

Power Supply Input:	100-240V AC nominal($\pm 20\%$), 50 - 60Hz nominal DC supply versions available.
Power Consumption:	< 5 VA
Measurement Input Range:	
Voltage:	5 - 300 V AC (L-N) 10 - 520 V AC (L-L)
Current:	0.1 - 5.5 A AC
Frequency:	30 - 500 Hz
Accuracy:	
Voltage:	0.2%+1 digit
Current:	0.2%+1 digit
Frequency:	0.1%+1 digit
Power(kW,kVA):	0.4%+2digit
Power factor:	0.2%+1digit
Measurement range:	
CT range:	5/5A to 10'000/5A
VT range:	0.1/1 to 200.0/1
kW range:	0.1 kW to 6.5MW
Voltage burden:	< 0.1VA per phase
Current burden:	< 1VA per phase
Relay Outputs:	5A @ 250V AC
Digital Inputs:	
Active level:	5 to 30V-DC or AC
Min pulse:	250ms.
Isolation:	1000V AC, 1 minute
Operating Temperature:	-20°C to +50°C (-4 to +176 °F).
Maximum humidity:	95% non-condensing.
Degree of Protection:	IP 65 (Front), IP 30 (Back)
Enclosure:	Non-flammable, ROHS compliant
Installation:	Flush mounting with rear brackets
Dimensions:	102x102x53mm (WxHxD)
Panel Cutout:	92x92mm
Weight:	350 gr

UL-CSA Certification:

UL 61010-1, 3rd Edition, 2012-05,
CAN/CSA-C22.2 (File: E475547, Vol. D1)

EU Directives

2006/95/EC (LVD)
2004/108/EC (EMC)

Norms of reference: EN 61010 (safety) EN 61326 (EMC)

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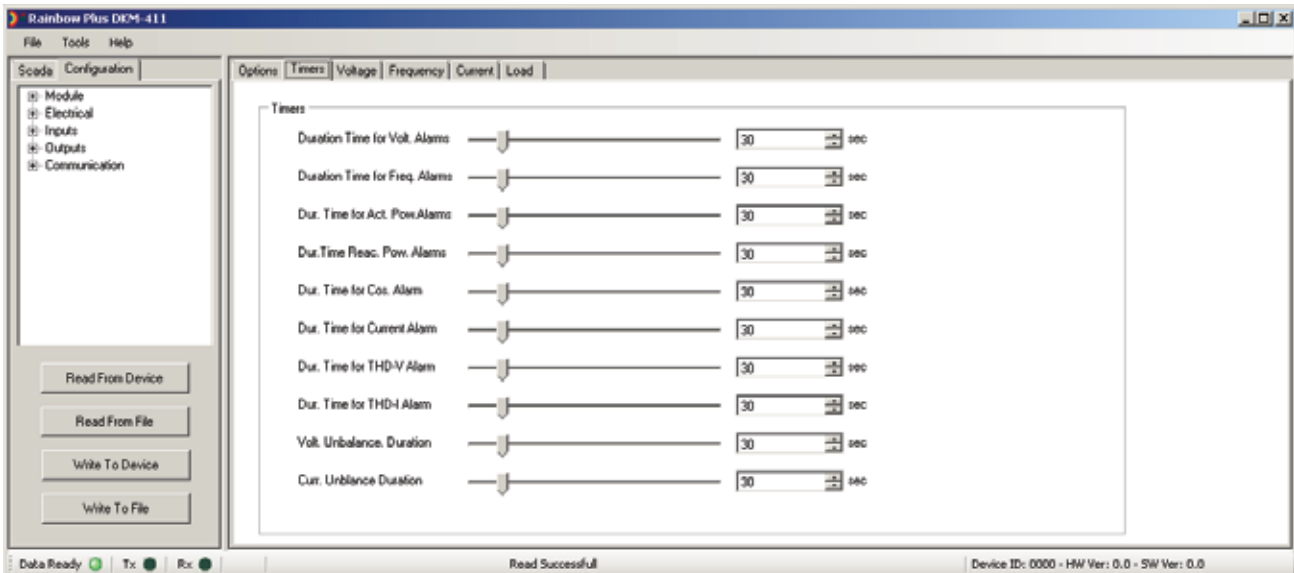
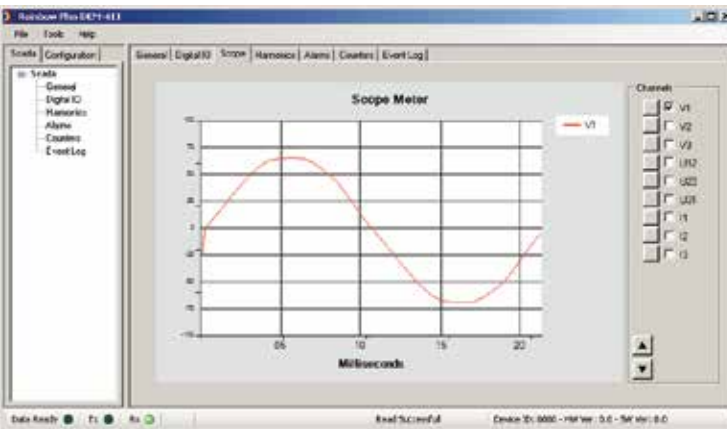
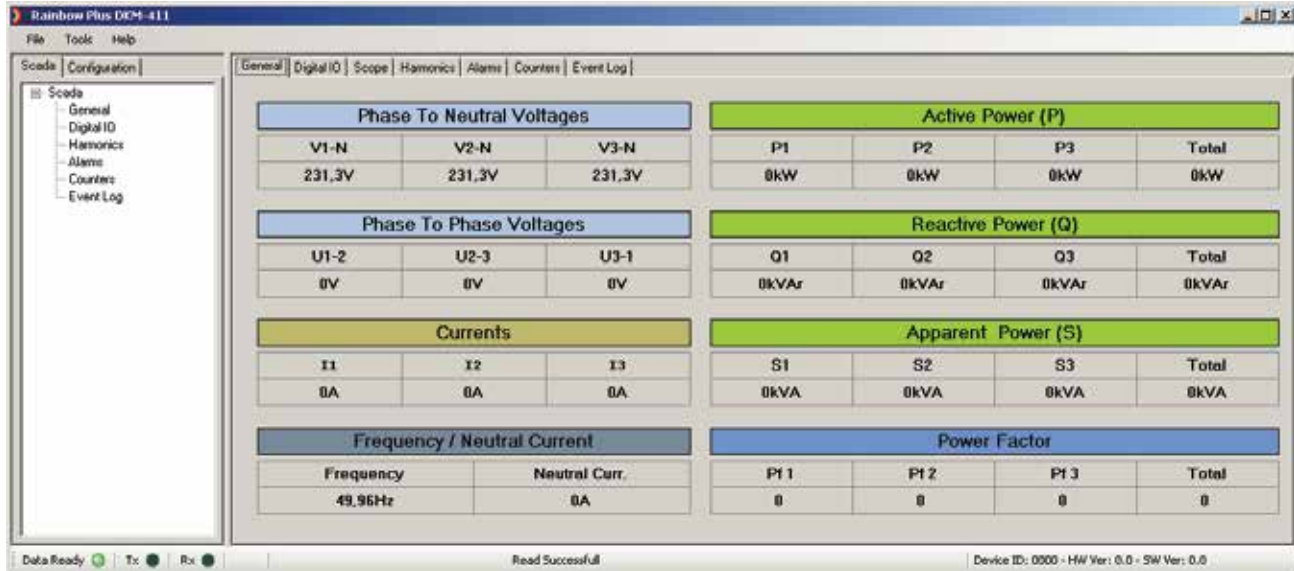
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Random Program





Central Monitoring



Çihaz Değerleri | ENERJİ ANA DOKU

Özet | Ölçümler | Servisler | Tarih/Alın/Alan | Alarmlar

V1 = 227,9 V	P1 = -0,07 kW	TRC_V1 = 7,4	Erkarsız = 1,48, 99 Hz
V2 = 227,9 V	P2 = 0,46 kW	TRC_V2 = 2,0	V ₁ nominal = 1,38, 0 Vda
V3 = 227,9 V	P3 = 0,16 kW	TRC_V3 = 1,9	V ₂ nominal = 1,22, 0 V
V4 = 227,9 V	P4 = 0,16 kW	TRC_V4 = 1,9	V ₃ nominal = 296,3 V
V5 = 227,9 V	P5 = -0,90 kW	TRC_V5 = 1,0	L ₁ nominal = 1,4, 3 s
V6 = 227,9 V	P6 = -1,12 kW	TRC_V6 = 2,4	V ₄ nominal = 3, 0, 7 s
V7 = 227,9 V	P7 = 0,77 kW	TRC_V7 = 19,0	I ₁ nominal = 4, 6 s
I1 = 0,9 A	I2 = 0,90 kVA	TRC_I1 = 27,0	
I3 = 12,9 A	I4 = 1,22 kVA	TRC_I2 = 35,2	
I5 = 12,9 A	I6 = 0,78 kVA	TRC_I3 = 68,2	
I7 = 12,9 A	I8 = 2,90 kVA	TRC_I4 = -0,022	
I9 = 12,9 A	I10 = 0,000	TRC_I5 = 0,000	
I11 = 12,9 A	I12 = 0,200	TRC_I6 = 0,200	
I13 = 12,9 A	I14 = 0,000	TRC_I7 = 0,000	
I15 = 12,9 A	I16 = 0,000	TRC_I8 = 0,000	
I17 = 12,9 A	I18 = 0,000	TRC_I9 = 0,000	

Embedded Web Server

WEB Scada

ÖZEL	ÖLÇÜMLER	SERVISLER	ALARMLAR
11.001	227,2 V	0,0 A	0,000
11.002	227,2 V	0,0 A	0,000
11.003	227,2 V	0,0 A	0,000
11.004	227,2 V	0,0 A	0,000
11.005	227,2 V	0,0 A	0,000
11.006	227,2 V	0,0 A	0,000
11.007	227,2 V	0,0 A	0,000
11.008	227,2 V	0,0 A	0,000
11.009	227,2 V	0,0 A	0,000
11.010	227,2 V	0,0 A	0,000
11.011	227,2 V	0,0 A	0,000
11.012	227,2 V	0,0 A	0,000
11.013	227,2 V	0,0 A	0,000
11.014	227,2 V	0,0 A	0,000
11.015	227,2 V	0,0 A	0,000
11.016	227,2 V	0,0 A	0,000
11.017	227,2 V	0,0 A	0,000
11.018	227,2 V	0,0 A	0,000
11.019	227,2 V	0,0 A	0,000
11.020	227,2 V	0,0 A	0,000

Web Monitoring

WEB Scada

ÖZEL	ÖLÇÜMLER	SERVISLER	ALARMLAR
11.001	227,2 V	0,0 A	0,000
11.002	227,2 V	0,0 A	0,000
11.003	227,2 V	0,0 A	0,000
11.004	227,2 V	0,0 A	0,000
11.005	227,2 V	0,0 A	0,000
11.006	227,2 V	0,0 A	0,000
11.007	227,2 V	0,0 A	0,000
11.008	227,2 V	0,0 A	0,000
11.009	227,2 V	0,0 A	0,000
11.010	227,2 V	0,0 A	0,000
11.011	227,2 V	0,0 A	0,000
11.012	227,2 V	0,0 A	0,000
11.013	227,2 V	0,0 A	0,000
11.014	227,2 V	0,0 A	0,000
11.015	227,2 V	0,0 A	0,000
11.016	227,2 V	0,0 A	0,000
11.017	227,2 V	0,0 A	0,000
11.018	227,2 V	0,0 A	0,000
11.019	227,2 V	0,0 A	0,000
11.020	227,2 V	0,0 A	0,000

Web Monitoring

WEB Scada

Tarih	Saat	Durum	Yorum
11.001	11:00:00	Normal	11.001
11.002	11:00:00	Normal	11.002
11.003	11:00:00	Normal	11.003
11.004	11:00:00	Normal	11.004
11.005	11:00:00	Normal	11.005
11.006	11:00:00	Normal	11.006
11.007	11:00:00	Normal	11.007
11.008	11:00:00	Normal	11.008
11.009	11:00:00	Normal	11.009
11.010	11:00:00	Normal	11.010
11.011	11:00:00	Normal	11.011
11.012	11:00:00	Normal	11.012
11.013	11:00:00	Normal	11.013
11.014	11:00:00	Normal	11.014
11.015	11:00:00	Normal	11.015
11.016	11:00:00	Normal	11.016
11.017	11:00:00	Normal	11.017
11.018	11:00:00	Normal	11.018
11.019	11:00:00	Normal	11.019
11.020	11:00:00	Normal	11.020

Event Log Display