DKM-411

POWER ANALYSER

-COLOUR TFT SCREEN
-IP COMMUNICATIONS
-HARMONIC ANALYSIS
-SCOPEMETER

The DKM-411 is an advanced precision metering device offering an 3.5" size, 320x240 pixel color TFT, together with unrivalled 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: U12-U23-U31-Uavg
Phase to neutral voltages: V1-V2-V3-Vavg
Phase currents: I1-I2-I3-In-Iavg-Itot
Active power: P1-P2-P3-∑P
Reactive power: Q1-Q2-Q3-∑Q
Apparent power: S1-S2-S3-∑S
Power factor: cos1-cos2-cos3-∑cos
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
Phasor 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-SMSsending
e-mailsending
Central Monitoring through IP
Free configuration & monitoring software

COMMUNICATION PORTS

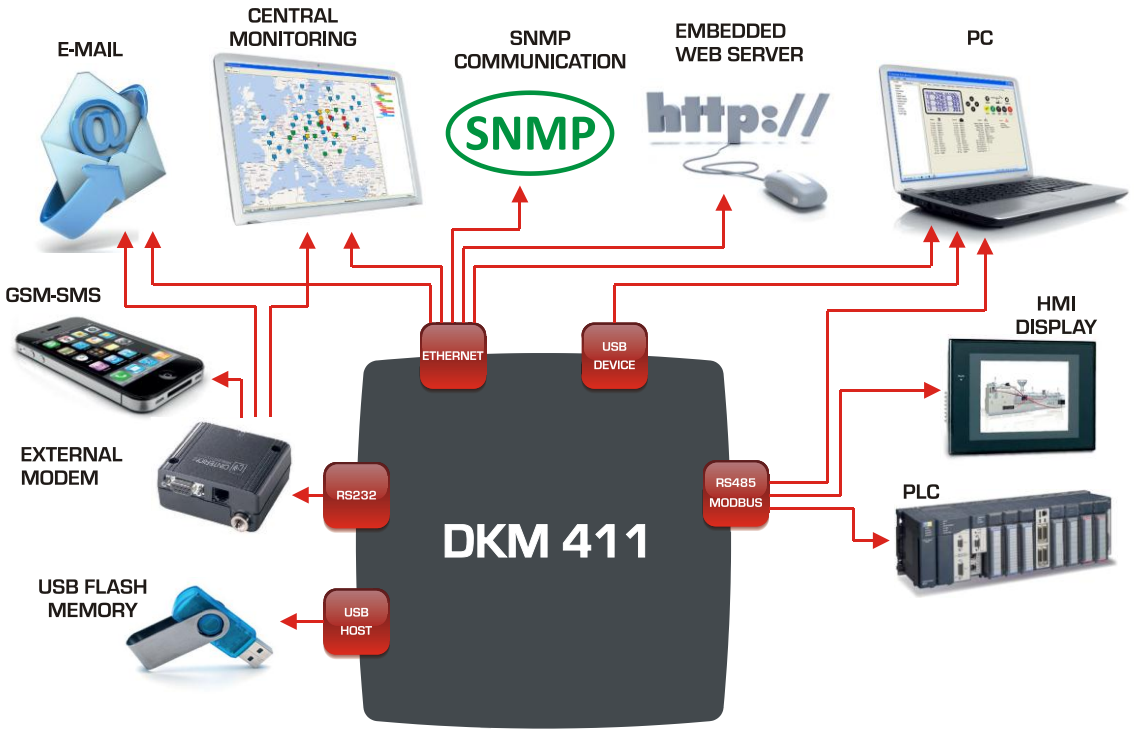
Ethernet 10/100Mb
RS-485 isolated (Modbus RTU)
RS-232 for external GPRS modem
USB Host for data recording on flash memory
USB Device for PC connection

SUPPORTED TOPOLOGIES

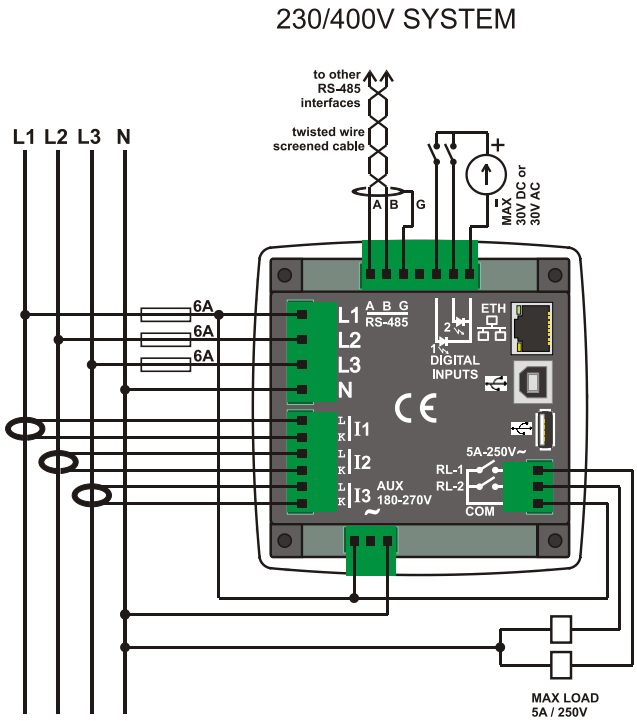
3 phases 4 wires, star
3 phases 3 wires, 3 CTs
3 phases 3 wires, 2 CTs (L1-L2)
3 phases 3 wires, 2 CTs (L1-L3)
3 phases 4 wires, delta
2 phases 3 wires, L1-L2
2 phases 3 wires, L1-L3
1 phase 2 wires

DATAKOM

COMMUNICATION DIAGRAM



CONNECTION DIAGRAM



TECHNICAL SPECIFICATIONS

Power Supply Input:
220V input: 180 to 270V AC
110V input: 90 to 140V AC
50 - 60Hz nominal (± 10%)
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 - 100 Hz

Accuracy:
Voltage: 0.2%+1digit
Current: 0.2%+1 digit
Frequency: 0.1%+1 digit
Power(kW,kVAr): 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

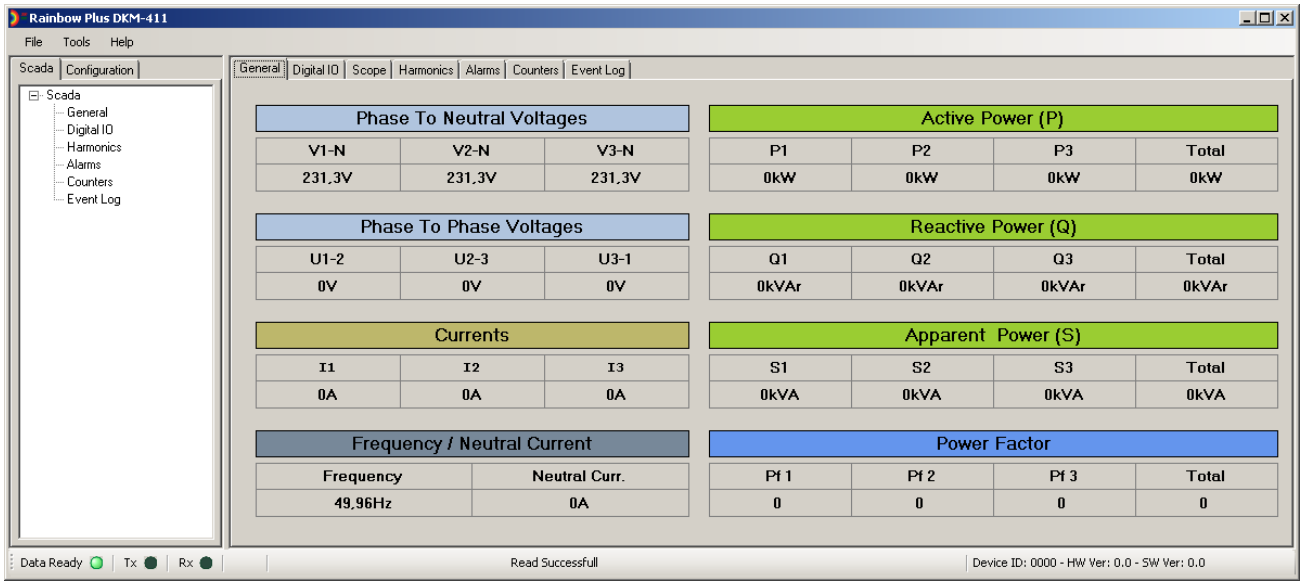
Voltage burden: < 0.1VA per phase
Current burden: < 1VA per phase
Relay Outputs: 5A @ 250V AC
Digital Inputs:
Active level: 5 to 30V-DC or AC
Min pulse: 250ms.
Isolation: 1000V AC, 1 minute

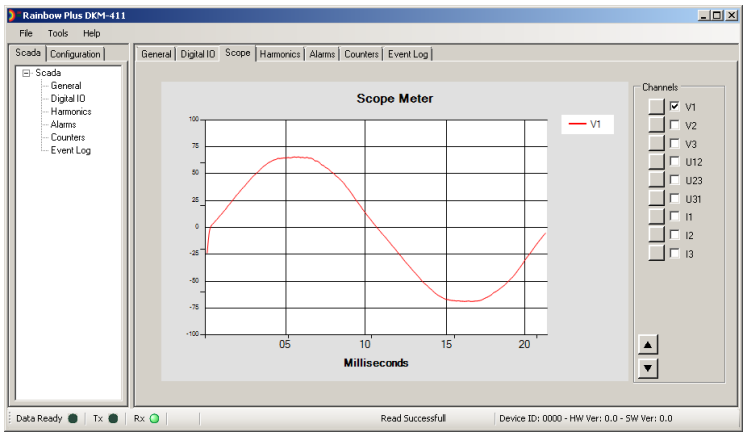
Operating Temperature:
-20°C to +50°C (-4 to +176 °F).

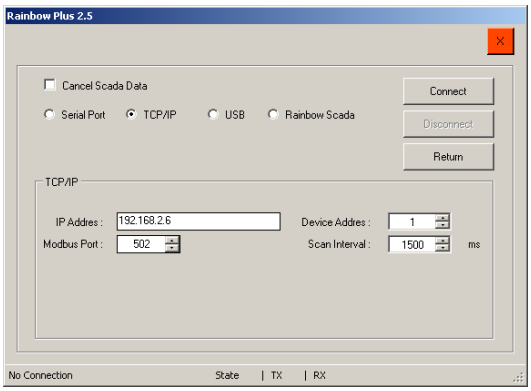
Maximum humidity: 95% non-condensing.
Degree of Protection: IP 65 (Front), IP 30 (Back)
Enclosure: Non-flammable, ROHS compliant
Installation: Flush mounting with rear brackets
Dimensions: 102x102x53mm (WxHxD)
Panel Cutout: 92x92mm
Weight: 480 gr

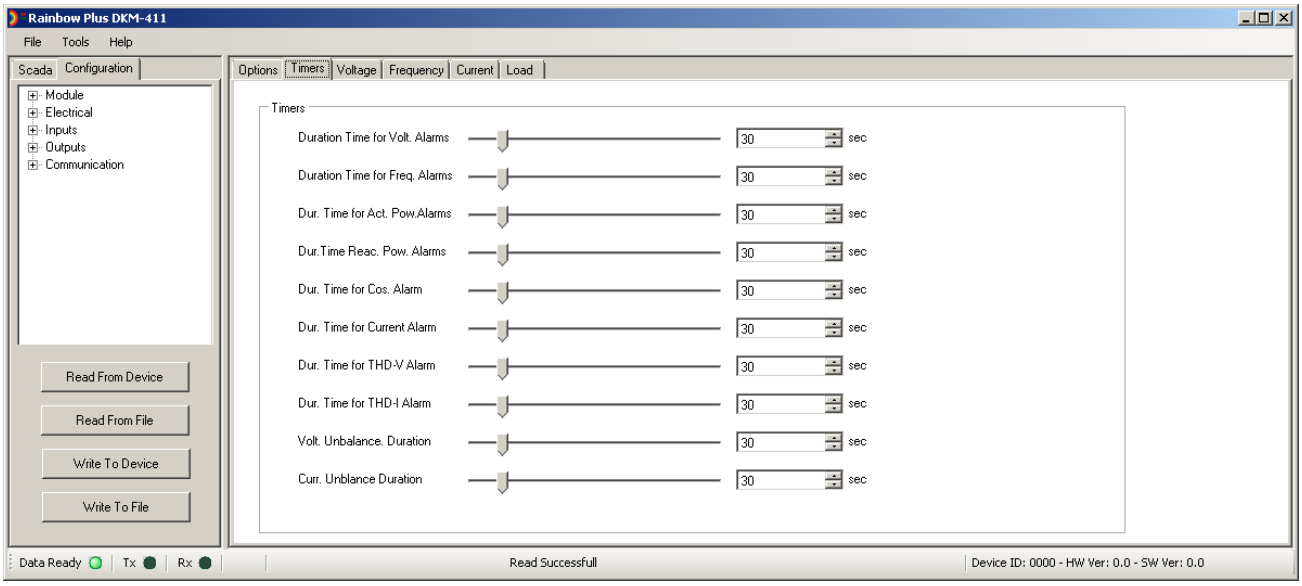
EU Directives:	**Norms of reference:**
2006/95/EC (LVD)	EN 61010 (safety)
2004/108/EC (EMC)	EN 61326 (EMC)

RAINBOW PROGRAM

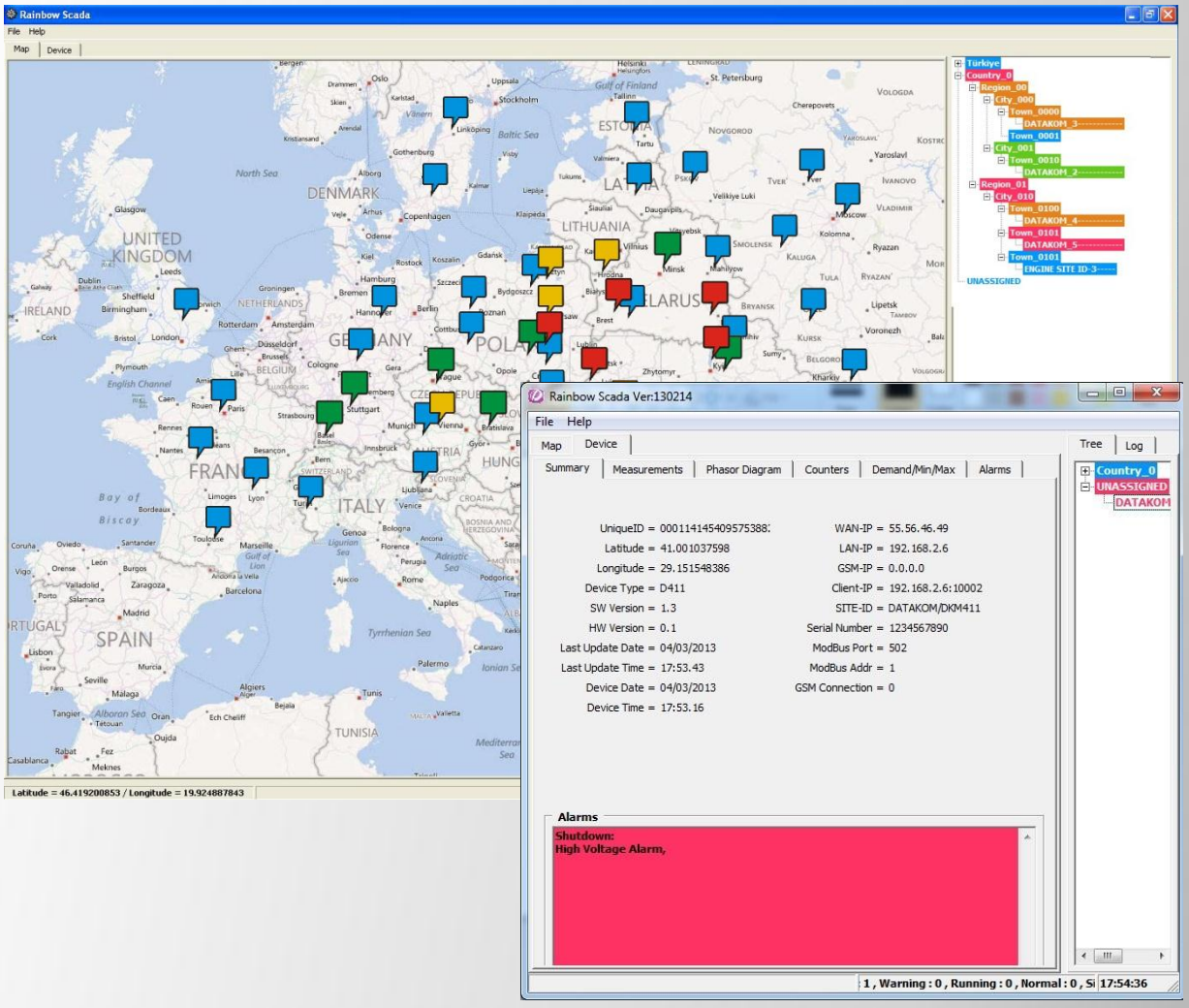








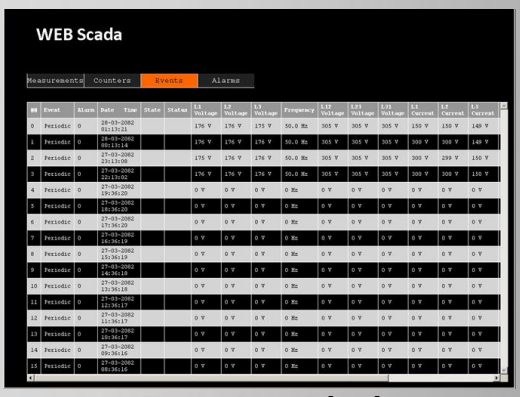
CENTRAL MONITORING



EMBEDDED WEB SERVER

Web Monitoring

Web Monitoring



Event Log Display

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