

THE NEW DKM-411 MK3



- COLOUR TFT SCREEN
- IP COMMUNICATIONS
- FLEXIBLE WITH PLUG-IN MODULES
- HARMONIC ANALYSIS
- SCOPEMETER

The DKM-411 MK3 is an advanced precision metering device offering a 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 server 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
- 4 quadrant energy counters
- Configurable user counters
- Voltage transformer ratio for MV applications
- Password protected front panel programming
- Universal AC supply input (85-305VAC)
- Reduced panel depth
- Sealed front panel (IP54)

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

PLUG-IN MODULES

- GSM Modem (2G-4G)
- Wi-Fi (802.11 b/g/n)
- RS-485 (2400-57600baud)

COMMUNICATION PORTS

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

COMMUNICATIONS

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

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- Σ P
- Reactive power: Q1-Q2-Q3- Σ Q
- Apparent power: S1-S2-S3- Σ S
- Power factor: cos1-cos2-cos3- Σ cos
- Active and reactive counters: Pimp1-Pexp1-Qcap1-Qind1, Pimp2-Pexp2-Qcap2-Qind2
- 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



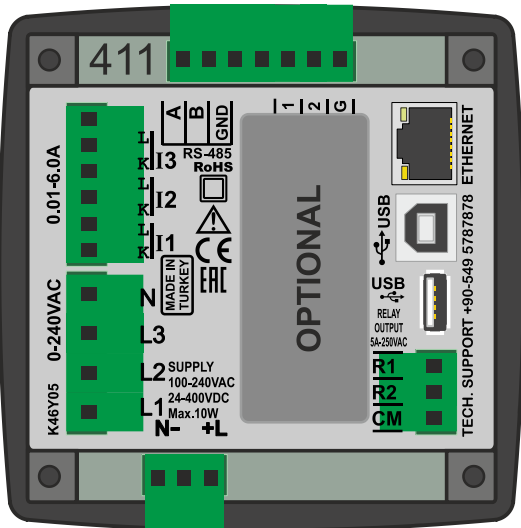
RoHS

EAC

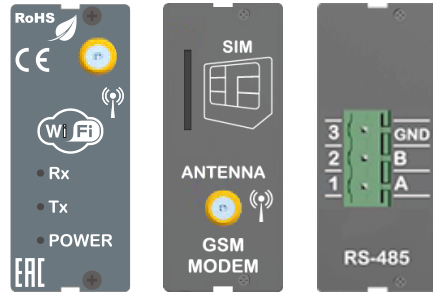
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DATAKOM

PLUG-IN MODULES

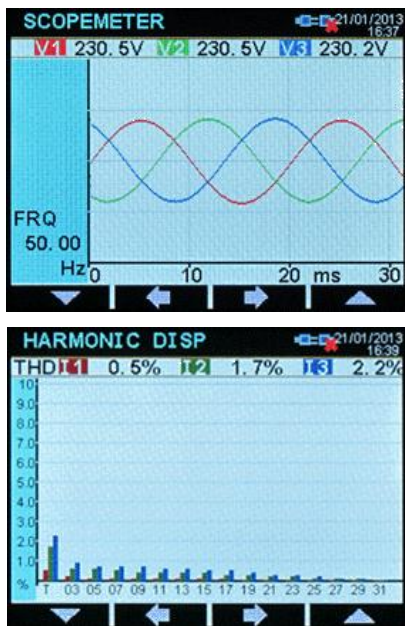


Backpanel view

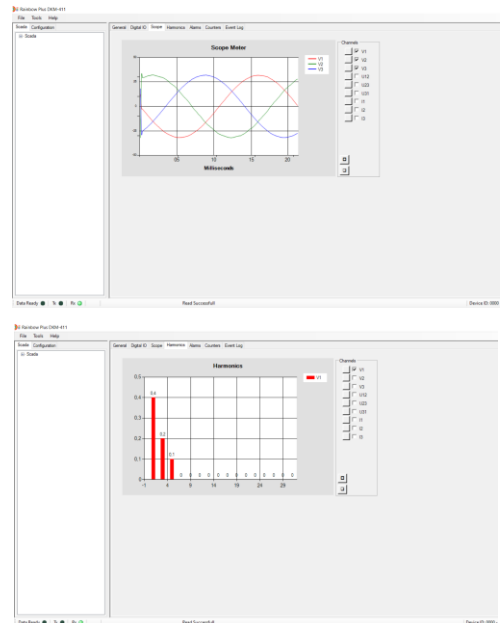


Plug-in modules

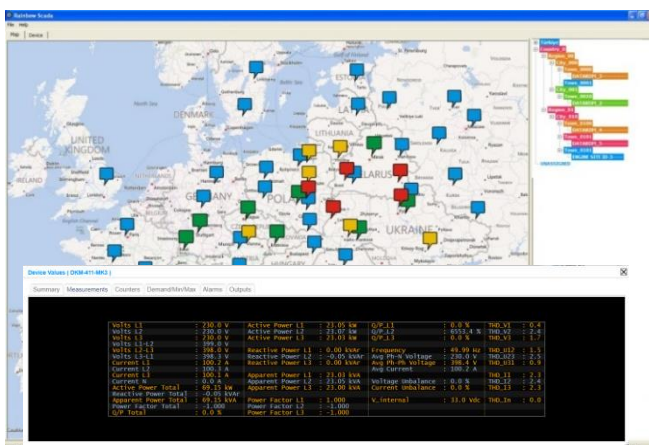
SCOPEMETER & HARMONICS



RAINBOW PLUS PROGRAM



RAINBOW SCADA CENTRAL MONITORING

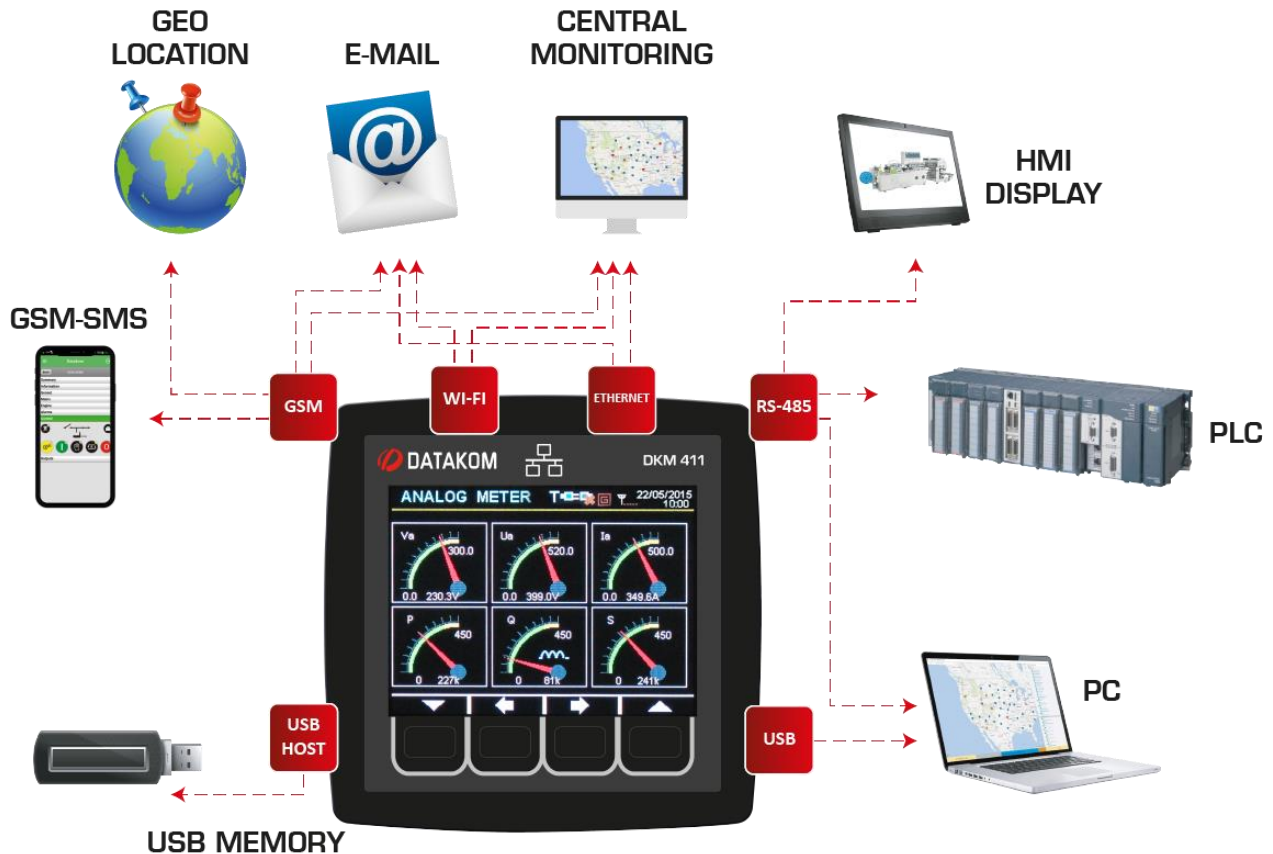


Display on Map, online monitoring



Smartphone Support

COMMUNICATIONS



TECHNICAL SPECIFICATIONS

Power Supply Input: 85-305VAC, 45-500Hz

Power Consumption: < 10 W

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%+1digit

Current: 0.2%+1 digit

Frequency: 0.1%+1 digit

Power(kW,kVAr): 0.4%+2digit

Power factor: 0.2%+1 digit

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

CONFORMITY

EU Directives:

-2014/35/EC (low voltage)

-2014/30/EC (electro-magnetic compatibility)

Norms of reference:

EN 61010 (safety)

EN 61326 (electro-magnetic compatibility)

TYPICAL CONNECTIONS

