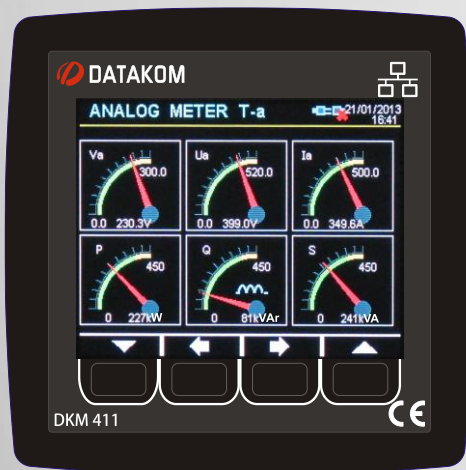


THE NEW DKM-411-DC MK3



- **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 DC supply input (19-150VDC)
 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-ΣP
 Reactive power: Q1-Q2-Q3-ΣQ
 Apparent power: S1-S2-S3-ΣS
 Power factor: cos1-cos2-cos3-Σcos
 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



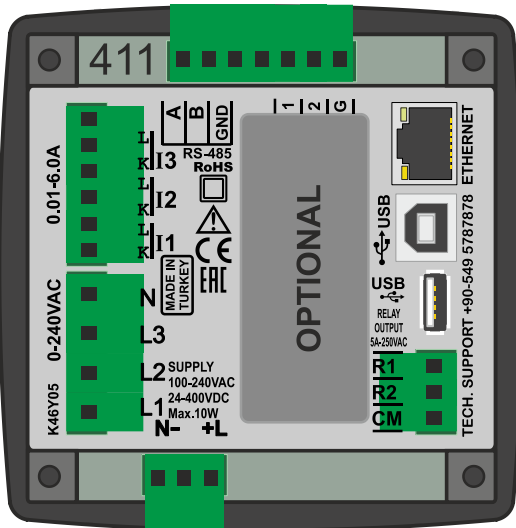
RoHS

EAC

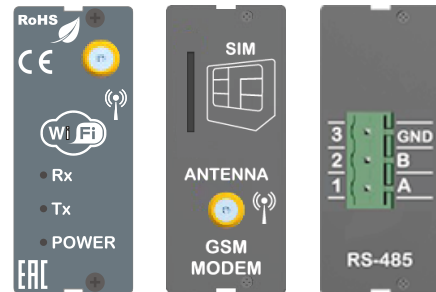
CE

DATAKOM

PLUG-IN MODULES

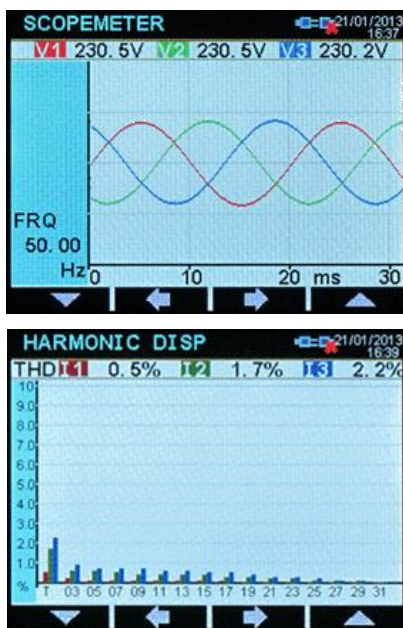


Backpanel view

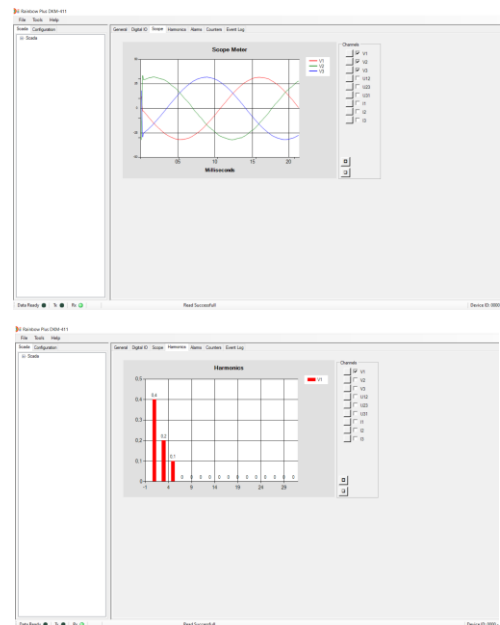


Plug-in modules

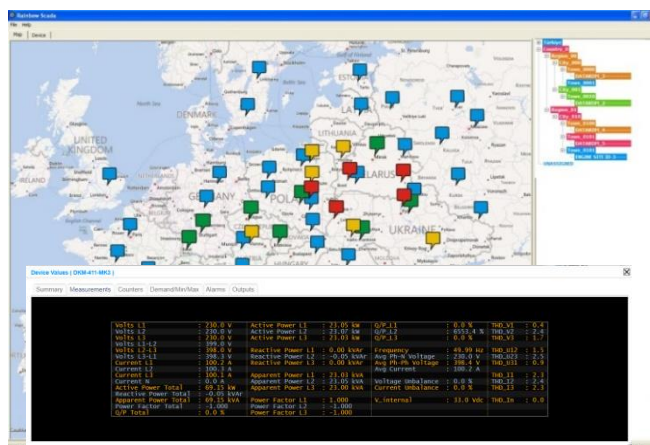
SCOPEMETER & HARMONICS



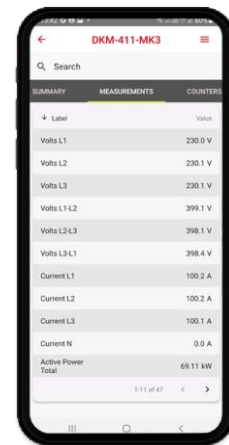
RAINBOW PLUS PROGRAM



RAINBOW SCADA CENTRAL MONITORING

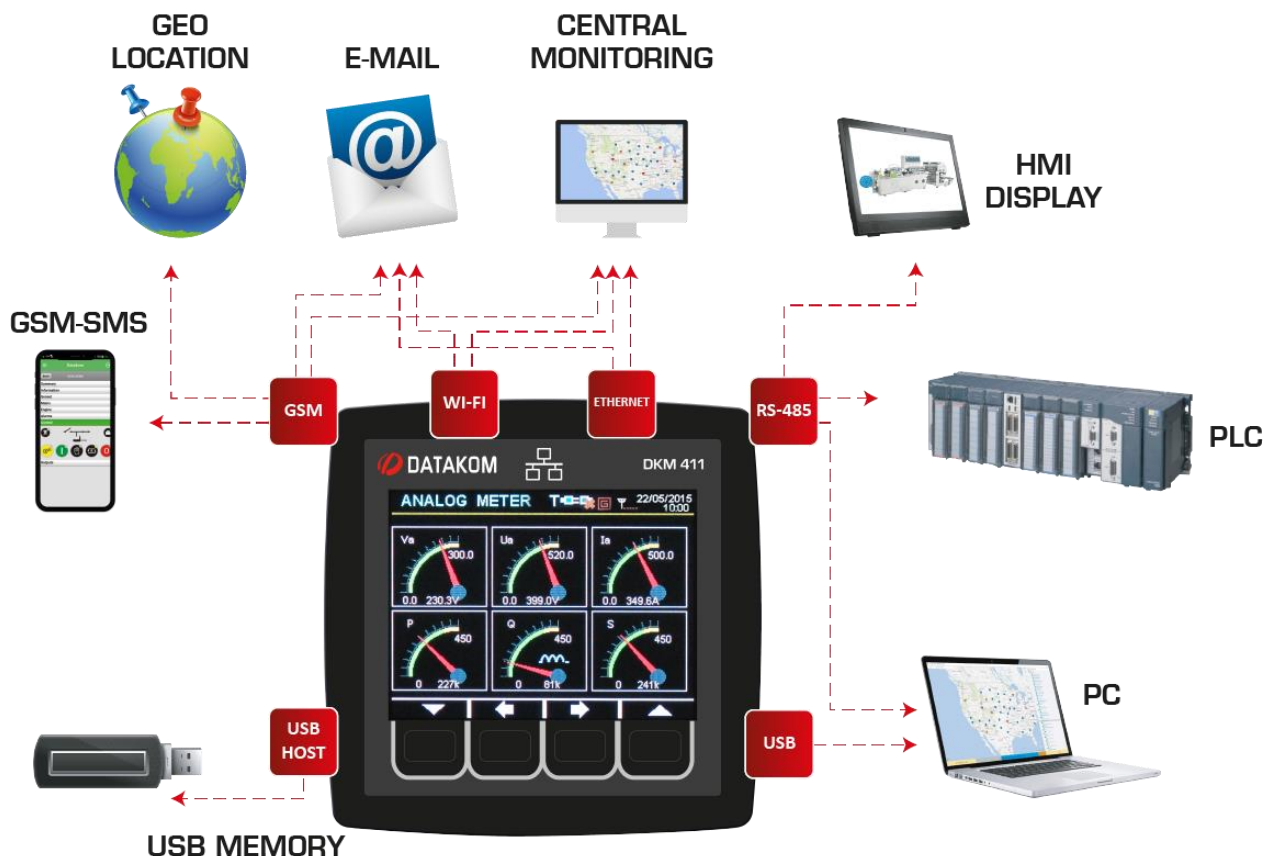


Display on Map, online monitoring



Smartphone Support

COMMUNICATIONS



TECHNICAL SPECIFICATIONS

Power Supply Input: 19–150 VDC

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%+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

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

