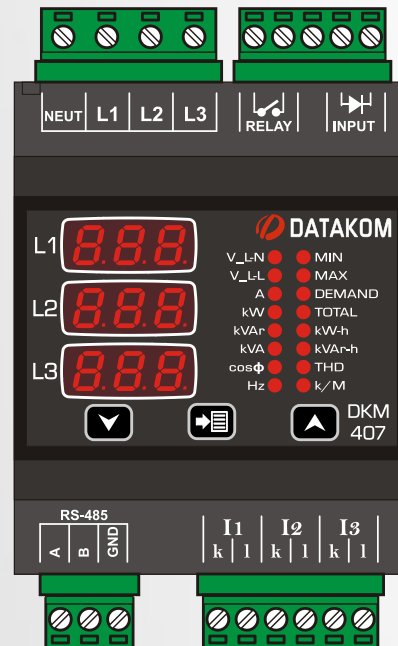


DKM-407

DIN RAIL TYPE NETWORK ANALYZER

WITH THD DISPLAY



DESCRIPTION

The DKM-407 is a DIN rail mounted precision and low cost unit allowing measurement and remote monitoring of AC parameters of a distribution panel.

Main applications are remote monitoring and energy management.

The unit is supplied between L1 and Neutral terminals. Thanks to the supply range of 85-305V, it is not affected by voltage fluctuations and is capable of operating in any network.

The unit features an 32-bit ARM core microcontroller. With a sampling rate of 4096s/s it reaches 0.5% measurement precision.

The unit provides harmonic analysis of all voltage and current channels, up to the 31th component.

The unit provides 1 programmable digital input and 1 programmable relay output. Input/output functions are selected from a list.

The isolated RS-485 MODBUS RTU data port is not affected by ground potential differences and allows safe transfer of data to monitoring and management systems.

Program parameters may be uploaded from a PC. The parameter setup and multiple-unit monitoring programs are free of charge and may be downloaded from the manufacturer's website.



FEATURES

- **True RMS measurements**
- **0.5 % measurement precision**
- **Total harmonic distortion display**
- **Demand, Min and Max records**
- **Fully isolated RS-485 serial port**
- **MODBUS-RTU communications**
- **Programmable relay output**
- **Energy pulse output capability**
- **Isolated, programmable digital input**
- **kW and kVAr energy counters**
- **Hours run counter**
- **VT ratio for medium voltage applications**
- **Front panel programming**
- **Wide operating temperature range**
- **2 part connectors**

MEASURED PARAMETERS

PN and PP voltages: V1-V2-V3-U12-U23-U31

Phase currents: I1-I2-I3

Phase active powers: P1-P2-P3

Phase reactive powers: Q1-Q2-Q3

Phase apparent powers: S1-S2-S3

Phase power factors: cos1-cos2-cos3

Total active power: $\sum P$

Total reactive power: $\sum Q$

Total apparent power: $\sum S$

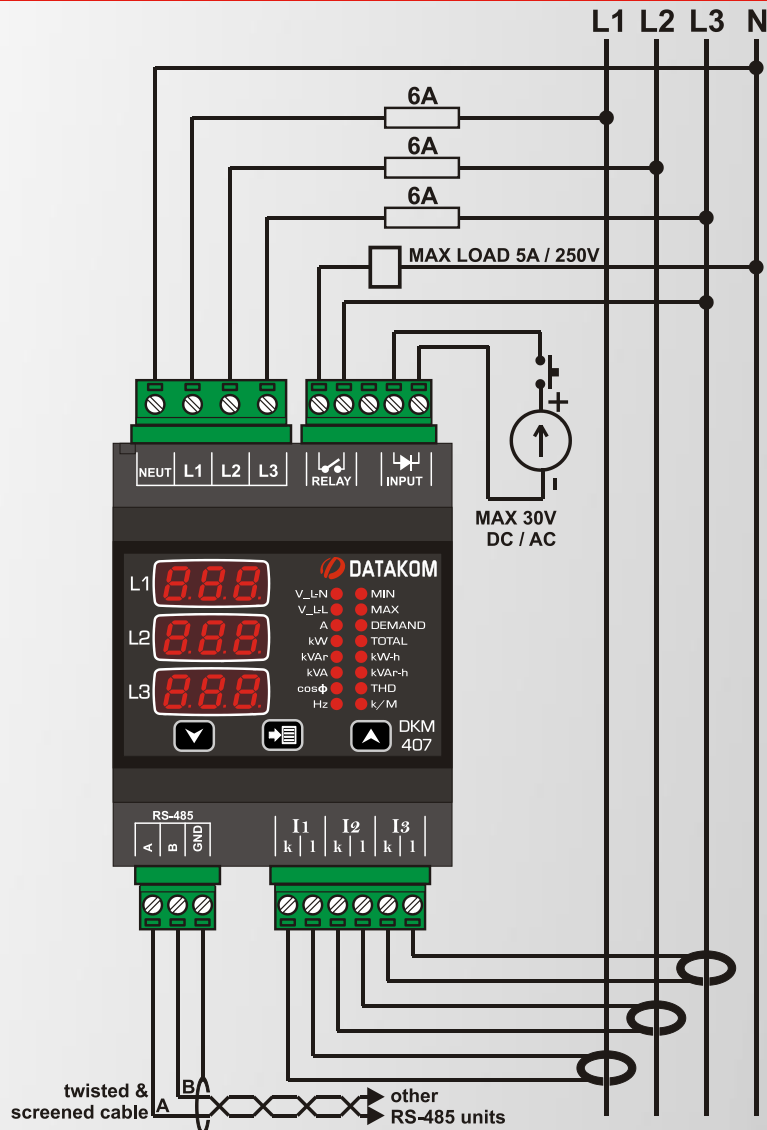
Total power factor: $\sum \cos$

Active and reactive counters: Pc1-Qc1

Hours run counter: Hc1

THD of all voltage and current inputs

INSTALLATION DIAGRAM



TECHNICAL SPECIFICATIONS

Supply voltage: 85-305 V AC (L1-NEUTRAL)

Supply frequency: 45-65Hz

Measurement inputs:

Voltage: 10 - 305 V AC (P-N)

20 - 530 V AC (P-P)

Current: 0.2 - 6.00 A AC

Frequency: 30 - 100 Hz

Accuracy:

Voltage: % 0.5 + 1 digit

Current: % 0.5 + 1 digit

Frequency: % 0.5 + 1 digit

Power (kW,kVA): %1.0 + 2 digit

Cos: %2.0 + 2 digit

Measurement range:

CT range: 5/5A to 5000/5A

VT range: 0.1/1 to 200.0/1

kW range: 0.1 kW to 6.5 MW

Power consumption: < 4 VA

Loading:

Voltage inputs: < 0.1VA per phase

Current inputs: < 1VA per phase

Relay output: 5A @ 250V AC

Digital input:

Active level: 5 - 30V DC or AC

Min pulse: 250ms.

Isolation: 1000V AC, 1 minute

Operating temp. range: -20°C to +70 °C

-4 °F to 158°F

Max. Relative humidity: 95% non condensing

Enclosure: Flame retardant, ROHS compliant, high temperature ABS/PC (UL94-V0)

Installation: DIN rail mounted

Dimensions: 70x115x66mm (WxHxD)

Weight: 200 g (approximative)

EU Directives:

2006/95/EC (LVD)

2004/108/EC (EMC)

Reference standards:

EN 61010 (safety)

EN 61326 (EMC)