

FEATURES

- True RMS measurements
- Harmonic distortion display (down to 31st harmonic)
- Oscilloscope, waveform display
- Max demand display
- User configurable display screen
- Fully isolated RS-485 serial port
- MODBUS-RTU communication
- 2 configurable relay outputs
- Energy pulse output capability
- Optically isolated, configurable digital inputs
- Switched dual active-reactive power counters
- Independent mains/generator energy metering
- Configurable user counters
- Voltage transformer ratio for MV applications
- Password-protected front panel programming
- High visibility, 128 x 64 pixel graphic LCD
- Reduced panel depth
- Wide operating temperature
- Sealed front panel (IP54)
- Plug-in connection system for easy replacement

MEASUREMENTS

- Phase-to-Phase Volts: U12-U23-U21
- Phase-to-Neutral Volts: V1-V2-V3
- Phase Currents: L1-L2-L3
- Phase Active Power: P1-P2-P3
- Phase Reactive Power: Q1-Q2-Q3
- Phase Apparent Power: S1-S2-S3
- Phase Power Factor: cos1-cos2-cos3
- Total Active Power: ΣP
- Total Reactive Power: ΣQ
- Total Apparent Factor: ΣS
- Total Power Factor: ΣCOS
- Active Power Counters: Pc1-Pc2
- Reactive Power Counters: Qc1-Qc2
- User Counters: USR1 - USR2 - USR3 - USR4
- 2 ... 31 Harmonics of any voltage or current



DESCRIPTION

The DKM-409 is a precision instrument designed for displaying various AC parameters in 3-phase distribution panels.

Thanks to its isolated RS-485 Modbus RTU communication port, the device is free from ground potential difference issues. Measured parameters are safely transferred to factory and building automation systems.

The power supply of the unit is isolated, thus the same device can be used in both 230/400V and 120/208V systems.

The graphic screen allows display of waveforms and harmonic analysis graphs.

Various display screens can be scrolled automatically. The user configurable screen can be set to display any measured parameter, transforming the unit into a custom designed measurement panel.

The unit fits into a standard 92x92mm panel opening.

TECHNICAL SPECIFICATIONS

Power Supply Input 170 - 275V,AC
 50 - 60Hz nominal ($\pm 10\%$)
 Different supply voltages available

Measurement Input Range
Voltage: 10 - 300V,AC (L-N)
 20 - 520V,AC (L-L)
Current: 0.2 - 5.5A,AC
Frequency: 30 - 100 Hz

Accuracy
Voltage: 0.5% + 1 digit
Current: 0.5% + 1 digit
Frequency: 0.5% + 1 digit
Power (kW, kVAR): 1.0% + 2 digit
Power Factor: 2.0% + 2 digit

Measurement Range
CT Range: 5/5A to 5000/5A
VT Range: 1.0/1 to 5000.0/1
kW Range: 1.0 kW to 50.0 MW

Power Consumption <4VA
Voltage Burden <0.1VA per phase
Current Burden <1VA per phase
Relay Outputs 5A @ 250V,AC

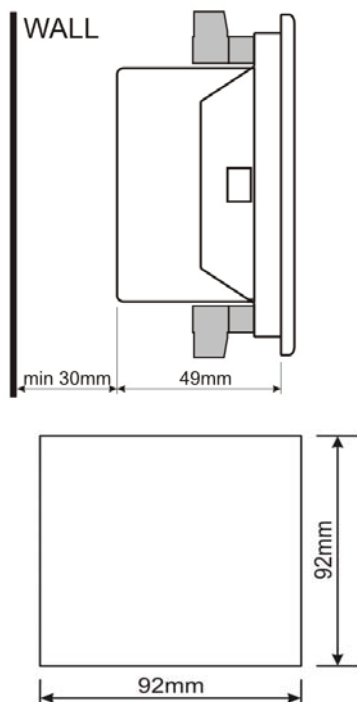
Digital Inputs
Active Level: 5 to 30V,DC or AC
Min. Pulse: 250 ms.
Isolation: 1000V,AC, 1 minute

Serial Port
Signal Level: RS-485
Protocol: Modbus RTU
Data Rate: 9600 baud
Isolation: 500V,AC, 1 minute
Operating Temperature -4°F to 158°F (-20°C to 70°C)
Maximum Humidity 95% non-condensing
Degree of Protection IP 54 - front panel
 IP 30 - back panel

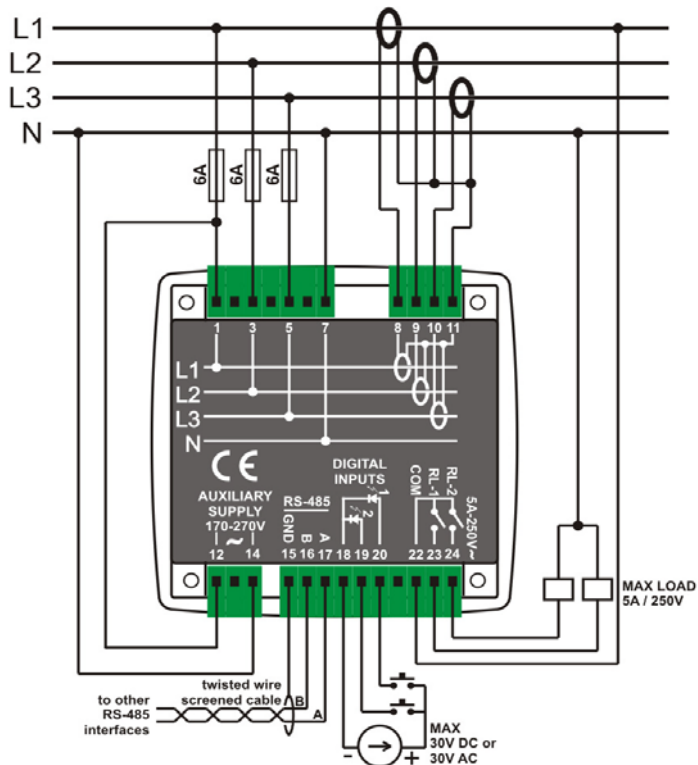
Enclosure Non-flammable, ROHS compliant
Installation Flush mounting with rear brackets
Dimensions 4.01" W x 4.01" H x 2.09" D
Panel Cutout 3.62" W x 3.62" H
Weight 0.77 lbs.

Applied Standards
General: LVD: 2006/95/EC
 EMC: 2004/108/EC
Safety: Safety: EN61010
 EMC: EN61326

MOUNTING TOLERANCES AND PANEL CUTOUT



TYPICAL CONNECTIONS



PANEL COMPONENTS & SYSTEMS, INC.
MAIN OFFICE: Tel.: (973) 448-9400 Fax: (973) 448-1674
 149 Main Street, Stanhope, NJ 07874 USA

Or, please contact:

Additional Offices:
 South East: Charlotte, NC Phone: (704) 535-3357
 South Central: Tulsa, OK Phone: (862) 258-6974
 Canada: Edmonton, AB Phone: (877) 962-0557

+1 (800) 523-9194 ● www.pc-s.com