Cube 400
Feature rich and powerful.

Features
• Panel mount (96x96)
• Large backlit display
• Individual Harmonics to the 15th, THD to the 30th (Option)
• Selection of communications options
• 2 pulse outputs as standard

Benefits
• All the electrical parameters you should ever need in one meter
• Easy commissioning with auto-rotation functionality
• Serial or TCP/IP communication allow flexible solutions around application requirements
• Suitable for both energy management and power quality applications
• 5 year warranty = fit & forget reliability

ndmeter.co.uk
Designed and made in the UK
Cube 400

The Cube 400 is a metering solution designed to meet the requirements of both energy managers and electrical engineers. It provides a powerful platform to analyse the power quality yet allows for an extremely flexible communications output to fit around most requirements. The backlit 3 line display allows for clear display of data in switch-room environments. The Cube 400 is fitted with large rising cage terminals, allowing connection to a wide range of cables, from 0.25mm² to 4mm².

Standard feature on the Cube 400 is 2 pulse outputs, which can be configured for kWh, kvarh or kVAh. To aid with installation and commissioning the meter offers a pulse test function to simulate pulses without any load being measured, allowing installation engineers to check cabling is complete. Our useful auto-rotation feature, enables the meter to detect and correct any current transformers that may have been installed the wrong way around.

Cube 400 uses standard RS485 ModbusRTU communication, however the Cube 400 is available with a range of powerful IP communications options MODBUS TCP and other TCP/IP protocols such as HTTP, FTP, TFTP, SNMP. The various TCP/IP protocols make this the ideal meter to interface directly with energy management software and building control solutions, without the need for data loggers or concentrators. The IP enabled Cube 400 (Cube400IP) also has data logging functionality and an additional 3 Pulse inputs plus 2 pulse/alarm outputs. These allow collection of additional utility data such as incoming electricity meters, water, air, gas and steam. Simple setup and instantaneous values are also available remotely through the Cube 400IP's web pages.

Options

- CC-Link
- MODBUS RTU
- Harmonics
- IP communications (all IP meters include logging, 3 additional pulse inputs and 2 programmable pulse/alarm outputs)
- 1amp or mV current transformer inputs (5 amp is standard)
- Custom wall mount enclosure.
- 110V Aux power supply

Technical Specifications

Multi-Parameter Available via Display & MODBUS

<table>
<thead>
<tr>
<th></th>
<th>All phases</th>
<th>Sum</th>
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<tbody>
<tr>
<td>Volts, L-N &amp; L-L</td>
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<td>Amps</td>
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<tr>
<td>Power Factor</td>
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<tr>
<td>Import kWh, kWh, kvarh</td>
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<td>Export kWh, kWh, kvarh</td>
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<td>Inductive and Capacitive kvarh</td>
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<tr>
<td>Peak Volts, L-N</td>
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<td>Peak Amps</td>
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<td>Neutral Amps</td>
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<tr>
<td>kW, kVA &amp; kvar</td>
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<tr>
<td>kW, kVA &amp; kvar Demand</td>
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<td>Peak kW, kVA, &amp; kvar Demand</td>
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<tr>
<td>Average Volt &amp; Peak</td>
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<tr>
<td>Amp Demand &amp; Peak</td>
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<tr>
<td>Frequency</td>
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<tr>
<td>Hours run (on load)</td>
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<tr>
<td>(Option) % THD Volts &amp; Amps</td>
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<tr>
<td>Individual harmonics 2nd – 15th</td>
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</table>

True rms measurement of Volts & Amps – and true Power Measurement – to the 30th harmonic at 50Hz (>25th@60Hz).

SAFETY

Conforms to EN 61010-1 Overvoltage Category III Accreditation UL, cUL, RCM-C-Tick, CB, GE

Inputs

- System: 3 Phase or 4 Wire Unbalanced Load
- Voltage U: 480/277V
- 110/63V & 208/120V (optional)
- Current I: 5 amp, 1 amp or 0.333V
- Measurement Range: Voltage 20% to 120%
- Current 0.2% to 120%
- Frequency Range: Fundamental 45 to 65Hz
- Harmonics Up to 30th harmonic at 50Hz (Option)

Auxiliary Supply

- Standard 230V 50/60Hz at 5W max
- Option 110V 50/60Hz at 5W max

Accuracy

- kWh: Class 1 per EN 62053-21 & BS 8431. ANSI C12.20 Class 0.5
- kvarh: Class 2 per EN 62053-23 & BS 8431
- kW & kVA: Class 0.25 IEC 60688
- Amps & Volts: Class 0.1 IEC 60688
- PF: ±0.2°
- Neutral Current: Class 0.5 IEC 60688

Pulse Outputs

- Function: 1 pulse per unit of energy
- Scaling: Configurable
- Pulse duration: 0.1 second default (other durations configurable)
- Type: N/O volt free contact. Optically isolated.
- Contacts: 100mA ac/dc max ; 70Vac/33Vac max ; 5W maximum load
- Isolation: 3.5KV 50Hz 1 minute

General

- Operating Temperature: -10°C to +55°C
- Storage Temperature: -25°C to +70°C
- Humidity: <75% non-condensing
- Environment: IP24

Mechanical

- Terminals: Rising cage. 4mm² (12AWG) cable max
- Enclosure: DIN 43700 96x96
- Material: Mablex with fire protection to UL94-V-O. Self extinguishing.
- Dimensions: 96x96x3.5mm (3.8”x3.8”x1.3”)
- Weight: ~ 250 gms (0.55lbs)

Contact Us

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ISO 9001 Registered Firm
ISO 14001 Registered Firm
OHSAS 18001 Registered Firm

ND Metering Solutions