

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

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

	All phases	Sum
Volts, L-N & L-L	•	
Amps	•	
Power Factor	•	•
Import kWh, kVAh, kvarh		•
Export kWh, kVAh, kvarh		•
Inductive and capacitive kvarh		•
Peak Volts, L-N	•	
Peak Amps	•	
Neutral Amps		•
kW, kVA & kvar	•	•
kW, kVA & kvar Demand		•
Peak kW, kVA, & kvar Demand		•
Average Volt & Peak	•	
Amp Demand & Peak	•	
Frequency		
Hours run (on load)		•
(Option) % THD Volts & Amps	•	
Individual harmonics 2nd – 15th		

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

SAFETY
Conforms to EN 61010-1 Installation Category III Accreditation UL, cUL, RCM/C-Tick, CB, CE

INPUTS

System Voltage U	3 Phase 3 or 4 Wire Unbalanced Load 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) Individual up to the 15th (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
kvar	Class 0.5 IEC 60688
Amps & Volts	Class 0.1 IEC 60688
PF	±0.2°
Neutral Current	Class 0.5 IEC 6068

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 ; 70Vdc/33Vac max ; 5W maximum load
Isolation	3.5kV 50Hz 1 minute

GENERAL

Operating	-10°C to +55°C
Storage	-25°C to +70°C
Humidity	<75% non-condensing
Environment	IP54

MECHANICAL

Terminals	Rising cage. 4mm ² (12AWG) cable max
Enclosure	DIN 43700 96x96
Material	Mablex with fire protection to UL94-V-O. Self extinguishing.
Dimensions	96x96x83.5mm (3.8"x3.8"x3.3")
Weight	~ 250 gms (0.55lbs)