

MultiCube 650mV
2 powerful meters in 1

Standard Features

- Measures 2x 3 ϕ , 6x 1 ϕ circuits or any combination
- RJ12 to RJ12 CT connections
- Only 1 voltage & 1 comms connection to make per MultiCube
- Combine CT types on a MultiCube
- Wide range of mV CTs & Rogowski Ropes
- Auto CT rotation
- Auto CT ratio recognition
- Crossed phase warning
- Demands & alarms
- Wide range auxiliary supply - 100-240vac
- Single voltage input range - 100V-480V
- Class 0.5
- CE, CB, UL, CUL, CTick
- ND 5 year Warranty



Options

- MODBUS - instantaneous updates & 20 reads per second
- Correct installation check
- MODBUS+ 100mS reading updates
- M-Bus
- THD & Individual Harmonics to 63rd
- Virtual Residual or Summating Meter
- Class 0.2s

Model Options

- MultiCube 950mV - 3x 3 ϕ meters in 1
- MultiCube 650mV - 2x 3 ϕ meters in 1

Benefits

- Lower cost per meter point
- Reduced installation time by up to 50-75%
- Space saving 2 in 1 panel mount case
- Reduced installation errors
- Powerful feature rich options
- Flexible input options

The MultiCube is a powerful and extremely cost effective, metering solution, with currently 2 model options: the 950mV with 3 meters in 1 & the 650mV with 2 meters in 1. Each meter point can monitor 1 x 3Ø load or 3 x 1Ø loads in any combination. The MultiCube range is designed to meet the requirements of both energy managers and electrical engineers and packs in market leading innovations, with Accuracy Class 0.5 standard, and Class 0.2 optional.

In addition to very competitive pricing per meter point is the reduced cost of just one voltage and comms connection per Multi-Cube. Further savings come from the 'Plug & Play' RJ12 to RJ12 CT adaptor, included in the price, with just one to plug in for each 3Ø load or set of 3 X 1Ø loads making installation even quicker.

The MultiCube also features innovative, patented, Auto CT Recognition. This avoids errors from programming the CT primaries incorrectly by automatically recognising the CT's primary for you; plus Auto CT Rotation - to compensate for CTs installed the wrong way round; and Auto CT Accuracy Compensation - guaranteeing the accuracy of your data. This means that you will know the combined accuracy of the MultiCube and CTs because the MultiCube can compensate for the phase angle of our CTs giving you peace of mind that your data will not contain any hidden inaccuracies.

Further safeguards against error are provided by the RJ12 plugs that cannot be installed the wrong way round. This just leaves the possibility of installing the CTs on the wrong phases, and for this the MultiCubes provide a warning on their large, backlit displays so that costly returns to site can be avoided.

To provide the ultimate in flexibility for installation, our comprehensive range of mV CTs and Rogowski Rope CTs can be used in any combination required, on the same MultiCube, across each 3ph load or group of 1ph loads. Our unique 5A to mV converter will also allow you to connect 5A inputs with mV inputs on the same meter as well as mixing mV & Rogowski CT input amperages. We have also included a MODBUS test facility to test the MODBUS wiring is correct before leaving site.

Covered by ND's industry leading 5 year warranty, and accredited for CE, CB, UL, CUL and CTick this is the ultimate fit & forget submetering solution. The very powerful MultiCube also packs in demands and alarms as standard and fast communication options that allow up to 20 reads every second. The fast Modbus RTU feature also provides aggregated 2 in 1 meter data and optional 100mS reading updates for truly responsive remote measurement.

The MultiCube is a highly accurate, energy management sub-meter that provides a powerful platform to analyse power quality with options of THD and Individual Harmonics to the 63rd, and an optional Virtual Summating or Residual Meter. The Virtual Meter provides a full set of power and energy measurements (apart from power quality) and can be configured, by the user, to provide the SUM of measured loads, thus saving the cost of an additional incomer meter; or can be configured to detect the incoming power, and subtract the other measured sub-loads, to provide a Residual Meter point for the total of all those insignificant loads which normally go unmeasured.

Technical Specifications

Multi-Parameter Available via Display & MODBUS	Phases	Sum
Volts, L-N & L-L	1-3	
Amps	1-9	
Power Factor	1-9	•
Import kWh, kVAh, kvarh	1-9	•
Export kWh, kvarh	1-9	•
Peak Volts, L-N	1-3	
Peak Amps	1-9	
Neutral Amps		•
kW, kVA & kvar	1-9	•
kW, kVA & kvar Demand	1-9	•
Peak kW, kVA, & kvar Demand	1-9	•
Average Volt & Peak	1-3	
Amp Demand & Peak	1-9	
Frequency	1.	
(Option) % THD Volts & Amps Individual harmonics 2nd to 63rd	All	
True rms measurement of Volts & Amps and true Power Measurement to the 80th Harmonic at 50Hz (>70th @60Hz).		

INPUTS:

System: 3Ø 3 or 4 Wire Unbalanced Load or 1Ø

Voltage Un: 480/277V Line-Line

Current In: 0.333V from auto-setting CTs

MEASUREMENT RANGES:

Voltage: 20% to 120%

Current: 0.2% to 120%

Frequency (Fundamental): 45 to 65Hz

Input Signal Harmonics: 80th harmonic at 50Hz

Individual Harmonics Measured: Up to 63rd (Option)

ACCURACY:

kWh: Class 0.5 -per EN 62053-22 (Class 0.2 option)

ANSI C12.20: Class 0.5

kvarh: Class 1 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° (0.05In – 1.2In and 0.2Un – 1.2Un)

Neutral Current: Class 0.5 IEC 6068

AUXILIARY SUPPLY:

Standard 100-240V 45 - 65Hz at 4W max

DIGITAL OUTPUTS:

Function: 1 pulse per unit of energy or Event alarms

Configuration: Scaling and ON-Time

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

ENVIRONMENT:

Enclosure: IP54 rated

Operating: -10°C to +55°C (14°F to 131°F)

Storage: -25°C to +70°C (-13°F to 158°F)

Humidity: <75% non-condensing

MECHANICAL:

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)

COMPLIANCE:

Safety: Conforms to EN 61010-1 Installation Category III

Accreditations: CE, CB, UL, cUL, RCM/C-Tick

COMMUNICATION OPTIONS:

Modbus RTU:

Baud: 4800-38400

Parity: Selectable NONE/ODD/EVEN

IDs: Combined Master + Individual Meters

Fast: Up to 20 reads per second

Instantaneous: Readings updated every

second

Modbus+ Option: Readings updated every

100mS

Isolation: 3.5kV

MBus:

Baud: 1200-9600

IDs: Master + Individual Meters

Short/Long tables: Configurable

Isolation: 3.5kV

Ethernet:

In development