Metering Solutions

LEADERS THROUGH INNOVATION

MultiCube 950mV

3 powerful meters in 1

Standard Features

- Measures 3x 3ø, 9x 1ø 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

Benefits

- Lower cost per meter point on 950 & 650
- Reduced installation time by up to 50-75%
- Space saving 3 in 1 panel mount case - 650, 2 in 1
- Reduced installation errors
- Powerful feature rich options
- Flexible input options

Model Options

- MultiCube 950mV - 3x 3ø meters in 1
- MultiCube 650mV - 2x 3ø meters in 1
- MultiCube 350mV - Standard 3ø Meter

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ISO 9001 Registered Firm
ISO 14001 Registered Firm
OHSAS 18001 Registered Firm
Designed & Made In the UK

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MultiCube 950mV

The MultiCube 950mV is a powerful and extremely cost effective, 3in1 metering solution, designed to meet the requirements of both energy managers and electrical engineers. As well as measuring 3X the loads of a standard sub-meter, in any combination of 3ph/1ph, the MultiCube 950mV also 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 MultiCube. Further savings come from the 'Plug & Play' RJ12 to RJ12 CT adaptor, included in the price, with just one to plug in for each 3ph load or set of 3 X1ph loads making installs 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 950mV 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 MultiCube950mV provides a warning on its large, backlit display 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 950mV, across each 3ph load or group of 1ph loads. We have also included a MODBUS test facility to test the MODBUS wiring.

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. But 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 3in1 meter data and optional 100mS reading updates for truly responsive remote measurement.

The MultiCube950mV is a highly accurate, 3 in 1 energy management sub-meter that provides a powerful platform to anaylise 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 alarm
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 Categc
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

BACNET:
In development

Wireless Logger:
In development

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