

IND

ELECTRICITY MEASUREMENT



INGENIEROS ASOCIADOS DE CONTROL S.L.

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Panel Mounted Meters

MultiCube DIN 96 x 96 Multifunction Meter

One **MultiCube** replaces Ammeters, Voltmeters, Phase Selector switches, PF & kW Indicators, kWh Meters and many more. With 9 different 3 ϕ models – from simple analogue meter replacement to comprehensive Power Quality monitoring – there is a **MultiCube** available for all applications. All models measure Current Demand, 4 are designed specifically for generator applications (with Import & Export measurement), and %THD is available on the **MultiCube6** for Power Quality monitoring. Special single phase models available.



- **Easy to install.** Most models include software to detect & correct wiring errors. Terminals accept cables from 0.25mm² to 4mm²
- **Easy to see.** Large backlit display with wide viewing angle. Visible under all lighting conditions
- **Small.** DIN 96 x 96 case, only 71mm deep
- **Safe.** Fully isolated current inputs. The **MultiCube** can be direct connected
- **Precise.** Continuous measurement - every single cycle is measured for maximum accuracy, %THD calculation includes harmonics up to the 20th
- **Easy to use.** Simple menu structure gives the right reading quickly. Full display legends for maximum clarity
- **Designed for system use.** Volt-free pulse outputs and optional internal RS485 MODBUS[®] communications
- **Universal.** 73 Power Parameters measured including %THD & Current Demands. 3 phase 3 or 4 wire.
- **User configurable.** CTs from 1 Amp to 20kA. VT primaries up to 50kV
- **Accurate.** 0.2% base accuracy
- **Retro-fit Option Modules.** Fast Serial Comms or Quad isolated Analogue Outputs. A factory-fit internal RS485 MODBUS[®] is also available
- **DC Auxiliary Supply.** A dc supply option is available for all **MultiCube** Meters

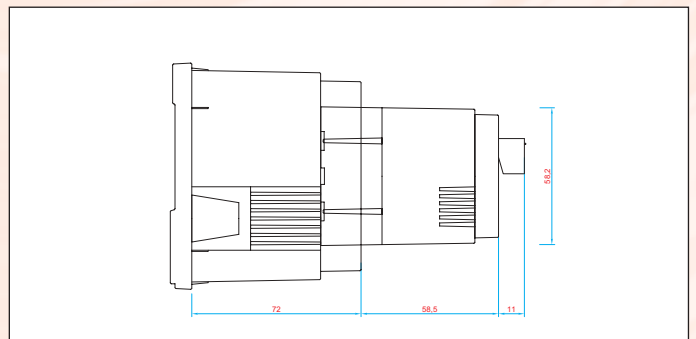
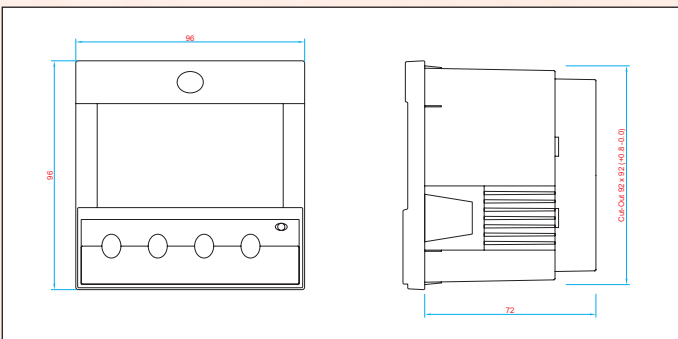
MultiCube Models & Parameters - 3 Phase Models

MultiCube Model	Standard					Import/Export			
	1	2	3	4	6	9.1	9.2	9.3	9.4
Phase Amps	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak Amps				✓	✓				✓
Ampere Demand	✓	✓	✓	✓	✓				✓
Peak Amp Demand	✓	✓	✓	✓	✓				✓
% THD Amps					✓				
Phase Volts	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak Phase Volts				✓	✓				✓
Line Volts	✓	✓	✓	✓	✓	✓	✓	✓	✓
Voltage Demand	✓	✓	✓	✓					
Peak Voltage Demand	✓	✓	✓	✓					
% THD Volts					✓				
per phase PF	✓	✓	✓	✓	✓	✓	✓	✓	✓
per phase kW	✓	✓	✓	✓	✓	✓	✓	✓	✓
per phase kvar			✓	✓	✓			✓	✓
per phase kVA				✓	✓			✓	✓
3 ϕ PF	✓	✓	✓	✓	✓	✓	✓	✓	✓
3 ϕ kW	✓	✓	✓	✓	✓	✓	✓	✓	✓
3 ϕ kvar			✓	✓	✓	✓	✓	✓	✓
3 ϕ kVA				✓	✓	✓	✓	✓	✓
Frequency	✓	✓	✓	✓	✓	✓	✓	✓	✓
Import kWh		✓	✓	✓	✓	✓	✓	✓	✓
Export kWh						✓	✓	✓	✓
Import kVAh				✓	✓				
Capacitive kvarh			✓	✓	✓				
Inductive kvarh			✓	✓	✓				
Import kvarh						✓	✓	✓	✓
Export kvarh						✓	✓	✓	✓
Total kvarh			✓	✓	✓	✓	✓	✓	✓
kW Demand			✓	✓	✓				✓
Peak kW Demand			✓	✓	✓				✓
kVA Demand					✓				
Peak kVA Demand					✓				
kvar Demand					✓				
Peak kvar Demand					✓				
Neutral Current				✓	✓				✓
kWh Pulse (Import)		✓	✓	✓	✓	✓	✓	✓	✓
kWh Pulse (Export)						o	o	o	o
Total kvarh Pulse		✓	✓	✓		✓	✓	✓	✓
KVAh Pulse				o	o				

Notes: ✓ Fitted

o Optional. kvarh pulse output replaced by kVAh or Export kWh

Cube Meters - Dimensions



MultiCube Options

MultiCubes can be supplied with a factory-fitted internal MODBUS® RS485 communications option. Alternatively, retro-fit Option Modules are available which can be added at any time to any **MultiCube**, thus providing extra features to the Meter.

Quad Analogue Output

- **Flexible.** 4 isolated programmable output signals, each selectable to any one of 15 or 16 parameters.
- **Universal.** Available with 4-20mA or dc voltage outputs
- **Simple to install.** Loop test signal available for installation test.



Communications

- **Fast.** Data from up to 20 **MultiCube** meters can be read in one second
- **Standard protocol.** MODBUS® RTU ensures connectivity to most systems and off-the-shelf software
- **Standard connection.** RS485 (plus RS422 on the retro-fit Option Module). Allows cables up to 1200 metres without using repeaters
- **Low loading multi-drop.** Up to 128 Meters can be connected on a single cable without using repeaters
- **Support Software.** Busker - to aid set up and configuration - available FOC on request

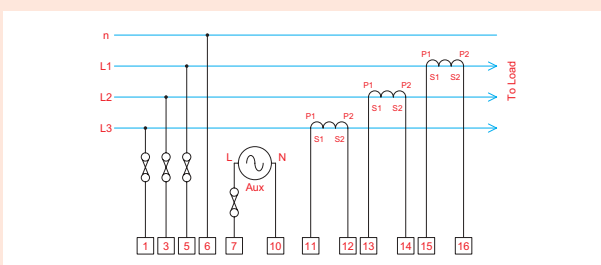
Voltage Expander

The **Voltage Expander** is a small module that extends the voltage measurement range of the **MultiCube** or other ND Meter up to a maximum of 750 Volt Line/line. It mounts on the existing voltage terminals of the meter and provides a new set of terminals for the high voltage connection. The module is an entirely passive device, containing high surge rated precision resistors and fitted with special high voltage terminals. The effect of the **Voltage Expander** on accuracy and performance (magnitude & phase) is equivalent to a Class 1 Potential Transformer.

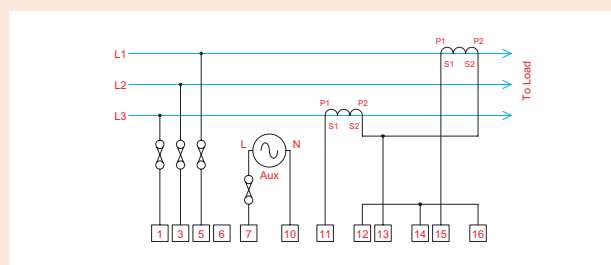


Cube Meters - Connections

Cube Meters - Typical Connection Drawings



3 phase 4 wire



3 phase 3 wire

Panel Mounted Meters

kWh and Demand Meters

PowerCube and kWhCube

kWh and kW Demand Meters designed for easy panel mounting and quick commissioning. Simple to install, convenient to use, and suitable for all types of loads.

- **Easy to use.** Clear legends (kW, kWh, MD, Peak etc.) ensure unambiguous information. High contrast backlit LCD visible under all lighting conditions.
- **Easy to install.** Rising cage terminals accept cables from 0.25mm² to 4mm².
- **Small.** DIN 96 x 96 case, only 71mm deep
- **Safe.** Fully isolated current inputs. The **PowerCube** and **kWhCube** can be direct connected
- **Precise.** Analogue measurement ensures accuracy even in the presence of distorted or intermittent waveforms such as those generated by variable speed drives, computers, lighting dimmers, temperature controllers etc.
- **Universal.** User configurable from 1 Amp to 2000kA. VT connection fully supported
- **Universal connection.** Suitable for 3φ 3 or 4 wire loads and single phase.
- **Accurate.** kWh: Class 1 EN61036. kW & kW MD: ±0.2%



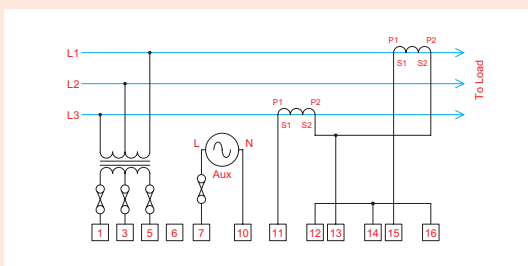
PowerCube Demand Meter

- **Measures kW, kWh, MD & Peak MD**
- **Easy to see.** High contrast giant backlit display that can be seen under all lighting conditions. 4½ digit 21mm for kW, 7 digit 12mm for kWh
- **Pulse output.** Fitted as standard

kWhCube kWh Meter

- **Cost-effective functionality.** Dual kWh registers - one resettable and the other non-resettable – plus instantaneous kW to allow the load to be checked at any time
- **Easy to install.** kW display simplifies and speeds test & commissioning
- **Easy to see.** 8 digit 9mm bold display with full legends
- **Pulse outputs.** Single or dual outputs available
- **MODBUS® communications.** The **kWh Cube** can be supplied with an internal RS485 multi-drop comms option

Cube Meters - Typical Connection Drawing



3 phase 3 wire VT connection

Precision Meters, Class 0.5

PM390 and PM305 Multi-Function Electricity Meters

The **PM390** and **PM305** are high accuracy multi-function electricity meters, providing precise measurement of 3 ϕ power systems - LV, MV & HV. All measurements are continuous and uninterrupted — the inputs from the 3 phases are continuously monitored, a multi tasking operating system ensuring that no event is missed.

- **High accuracy**
0.1% for Volt & Amp, 0.2% for kW, Class 0.5 IEC61036 for kWh & Class 1 for kvarh
- **Safe.** Fully isolated current inputs. The **PM305** and **PM390** can be direct connected
- **Precise low load measurement.** Dynamic Display Resolution ensures full 4 digit resolution even at low loads. Legends change to suit the load: Watts ↔ kW ↔ MW etc.
- **All values measured.** 71 Power Parameters measured. Per phase & total. kW, kVA, kvar, Volts, Amps, Power Factors etc. Import & Export Powers & Energies. Rolling & Real Time MD c/w RTC
- **Designed for system use.** Serial Communications with industry standard MODBUS® RTU protocol. RS422/485 Multi-drop or RS232. 3 to 4 meters can be read every second.
- **Real world connectivity.** Dual digital outputs, user programmable for Pulse or Alarm. Dual isolated Analogue Outputs to SCADA, etc, with user settable parameters & full scale values.
- **Real world measurement.** Distorted waveforms with harmonics to the 20th are accurately detected, and non continuous loads (with missing cycles and abrupt load changes) are precisely measured
- **True rms measurement** over a wide range of inputs
- **Universal connectivity.** Suitable for 3 ϕ 3 or 4 wire unbalanced loads, balanced loads (including 1VT 2CT MV/HV systems) and single phase
- **Support software.** **ND-COM** software – to aid set-up and configuration of communications systems – available FOC on request



- **Multifunction Meter**
3 line LCD display, bold 12.5mm digits
- **DIN 96x96 enclosure**
- **Dual pulse and alarm outputs**
Available as an option
- **Dual option capacity**
MODBUS® RTU, either RS422/485 or RS232
Dual Analogue Outputs

- **Miniature Multifunction Meter**
2 line 7 digit LCD display, 7mm high
- **DIN 96x48 enclosure**
- **Dual pulse and alarm outputs**
Fitted as standard
- **Single option capacity**
RS422/485 MODBUS® RTU
RS232 MODBUS® RTU
Dual Analogue Outputs

DIN Rail Mounted Meters

DIN Rail Multifunction Meters & Relays

MultiRail and RailRTU

- **Easy to install.** Includes software to detect & correct wiring errors. Mount on a standard DIN Rail. Rising cage terminals accept cables from 0.25mm² to 4mm²
- **Safe.** Fully isolated current inputs. The **MultiRail** and **RailRTU** can be direct connected
- **Precise.** Continuous measurement - every single cycle is measured for maximum accuracy, %THD calculated up to the 20th harmonic
- **Universal.** 73 Power Parameters measured including %THD, Current Demands, etc. Suitable for 3φ 3 or 4 wire loads and single phase
- **Accurate.** 0.2% base accuracy for Volts & Amps
- **Fast communications.** Typically 10 meters can be read every second via MODBUS[®] RTU



- **Easy to see.** Backlit display with wide viewing angle. Visible under all lighting conditions
- **Easy to use.** Simple menu structure gives the required reading quickly. Full display legends for maximum clarity
- **Designed for system use.** Optional volt-free pulse outputs and RS485 MODBUS[®] RTU communications
- **Designed for system use.** RS485 MODBUS[®] RTU communications plus optional volt-free pulse outputs
- **Commissioning aids.** LED display of address & baud rate plus diagnostics LEDs
- **Support software.** Busker software – to aid set-up and configuration – available FOC on request

Measured Parameters *MultiRail and Rail RTU*

Phase Amps	Phase Volts	per phase PF	3φ PF
Peak Amps	Peak Phase Volts	per phase kW	3φ kW
	Line Volts	per phase kvar	3φ kvar
Amp Demand	Voltage Demands	per phase kVA	3φ kVA
Peak Amp Demands	Peak Voltage Demands		Frequency
Current % Harmonic Distortion	Voltage % Harmonic Distortion		Neutral Current
Import kWh	Import kVAh	Capacitive kvarh	Inductive kvarh
		Total kvarh	

DIN Rail kWh and kW Demand Meters

PowerRail303 and PowerRail323

The **PowerRail303** and **PowerRail323** are electronic kWh meters - DIN rail mounting, easy to install, safe and convenient to use.

- **Easy to install.** Mount on a standard DIN Rail. Rising cage terminals accept cables from 0.25mm² to 4mm². Wall-mount option available
- **Easy to see.** High clarity backlit LCD, visible under all lighting conditions. This overcomes the small character size, poor visibility and short life of many electromechanical counters and provides the necessary legends (Wh, kWh, MWh) for maximum clarity
- **Accurate.** Class 1 kWh
- **Safe.** Fully isolated current inputs. The PowerRail303 and PowerRail323 can be direct connected
- **Pulse output.** Single isolated output available. Pulse rate user settable
- **Universal.** User configurable from 1 Amp to 2000kA. Available for all LV and MV/HV systems
- **Precise.** Analogue measurement ensures accuracy even in the presence of distorted or intermittent waveforms such as those generated by variable speed drives, computers, lighting dimmers, temperature controllers etc.
- **Universal connection.** Suitable for 3φ 3 or 4 wire loads and single phase



PowerRail303

Measures kWh plus kW

- **Cost-effective functionality.** Dual kWh registers – one resettable and the other non-resettable – plus instantaneous kW
- **Easy to use.** 8 digit 9mm bold display with full legends
- **Easy to install.** Display kW as well as kWh to simplify test & commissioning



PowerRail323 with Option Module

Measures kW, kWh, Rolling and Peak Demand

- **Communication.** Plug-in Option Module for 4-20 mA & MODBUS® Communications can be retrofitted at any time, or installed with the meter. Module also provides dual 4-20mA outputs.
- **Easy to use.** 2 line 7 digit 7mm bold display with full legends.
- **High accuracy.** kW $\pm 0.2\%$, kWh Class 1

RM10 Low Cost single phase Meter

The **RM10**, a low cost Whole Current single phase kWh Meter.

- **Easy installation.** Just clips onto a DIN Rail. 45mm long
- **Wide measurement range.** From less than 50mA to 40 Amp
- **Pulse output.** Optional fully isolated output. 100 pulses per kWh
- **Accurate.** Class 2 as standard, Class 1 available



DIN Rail Meters and Transducers

PowerRail 303-V kWh Metering Kit

A complete kit designed to simplify retro-fitting meters onto an existing installation. Supplied as a special version of the **PowerRail 303** kWh Meter together with 3 split-core Current Transformers.

- **Easy to use.** Complete kits ready to install
- **Multi-range.** User settable to 50, 100 or 200 Amp
- **Easy to install.** Display kW as well as kWh to simplify test & commissioning
- **Mounting options.** DIN rail mounting, suitable for a standard MCB enclosure. Just 6 units wide. Alternatively, can be supplied complete with a wall-mounting enclosure



XD303F Power Transducer with Frequency Output



The **XD303F** is a precision kW transducer with an isolated frequency output proportional to true power. It allows both Energy and Power to be simply measured:

- Measure frequency to obtain Power with 0.2% accuracy
 - Count the output pulses to measure the Energy used with full Class 1 (EN 61036) accuracy
 - **Multiple applications.** Include Process Control & White Goods equipment test
Suitable for 3 ϕ 3 or 4 wire or single phase systems
 - **Short term energy usage.** High Frequency Output provides High Resolution Measurements
- **Safe to use.** Isolated Frequency Output. Fully Isolated Current Inputs
 - **Simple to install.** Standard DIN Rail mounting. Can be surface mounted in a standard MCB enclosure
 - **Flexible in use.** Frequency proportional to Power - Total Count proportional to Energy
 - **Accurate & precise.** Measures True Power, even in the presence of Harmonics

DRIVE Series Current and Voltage Transducers

Miniature Current and Voltage Transducers designed for mounting on a symmetrical DIN rail. Four basic types are available:



- DRIVE VI** AC voltage input for a 4-20mA output
- DRIVE VV** AC voltage input for a 0-1V dc output
- DRIVE II** AC current input for a 4-20mA output
- DRIVE IV** AC current input for a 0-1 V dc output

- **Small size.** Just 22.5 mm wide
- **Output options.** 4-20 mA or dc Volt
- **Simplified stocking.** Current Transducers have dual 1 Amp and 5 Amp Inputs
- **Voltage transducers.** FS input from 60 Volt to 600 Volt ac

XD Series Current Transducers

XD Current Transducers offer a simple method of measuring currents up to 300 Amp. No need to install separate Current Transformers and then wire to a Transducer – just pass the conductor through the XD Transducer.

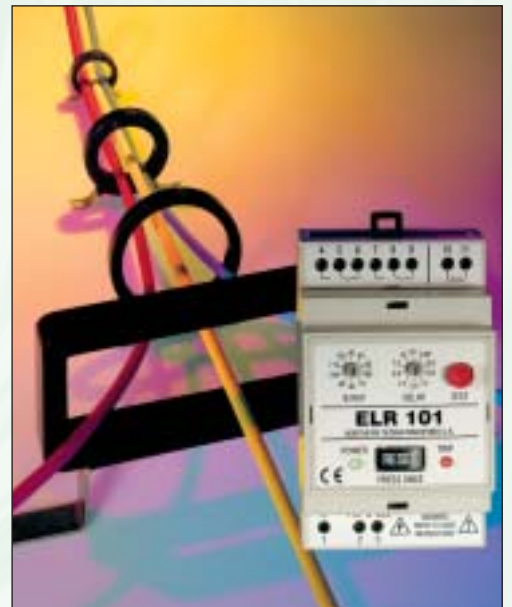
- **Direct measurement.** No Current Transformers required
- **Low cost**
- **Accurate.** Typically $\pm 0.5\%$
- **Wide range.** From milliamps to 300 Amp
- **Mounting options.** Surface and DIN Rail
- **Output Options.** 4-20 mA or 0 – 5 Volt dc
- **Applications include:**
 - Process Control**
 - Plastics machinery** – Heater monitoring
 - Outdoor lighting** – Luminaire failure
 - H & V** – Circuit operation
 - Motor circuits** – Operation / Failure
 - Process heating** – Operation / Consumption
 - Alarm systems** – Deviation monitoring



ELR101 Earth Leakage Relay

The **ELR101** is designed for maximum operator safety - in the event of a trip occurring, ***the reset operation may be carried out with the panel totally isolated - with no auxiliary supply to the ELR101.*** The **ELR101** provides a simple system of protection for motor control gear, operating from one of a dedicated range of special Core Balance Current Transformers.

- **Operator safety.** Relay may be reset with panel Totally Isolated
- **System safety.** Protects motors against fire hazard
- **Wide range.** Trip range selectable between 30mA and 36 Amps
- **“Fail safe”.** Energised in the Non-Trip Mode
- **Anti-nuisance.** A trip delay (1 – 10 sec) can be set to prevent nuisance tripping on start-up or sudden load changes
- **Field testable.** Test Button tests relay & delay time. CTs are fitted with a test winding



C104 Split-Core AC & DC Current Transducer



High current split-core sensor for DC and AC applications. Easy to install and easy to use.

- **Wide current range.** $\pm 15,000$ Amp max
- **High overload.** 36,000 Amp continuous
- **Wide frequency range.** DC to 1kHz
- **Simple installation.** Split-core construction
- **Large cable aperture.** 104 x 104 mm
- **Accurate.** $\pm 1\%$ basic accuracy
- **Special OEM versions available.**

Data Logging

PowerLog Data Logger

The **PowerLog**, a Data Logger that has been specially designed for power measurement. Data is read from the meters via a high speed RS485 MODBUS® link and stored within the PowerLog. An RS232 port is provided for connection to a PC – which can be local or remote connected via a MODEM.

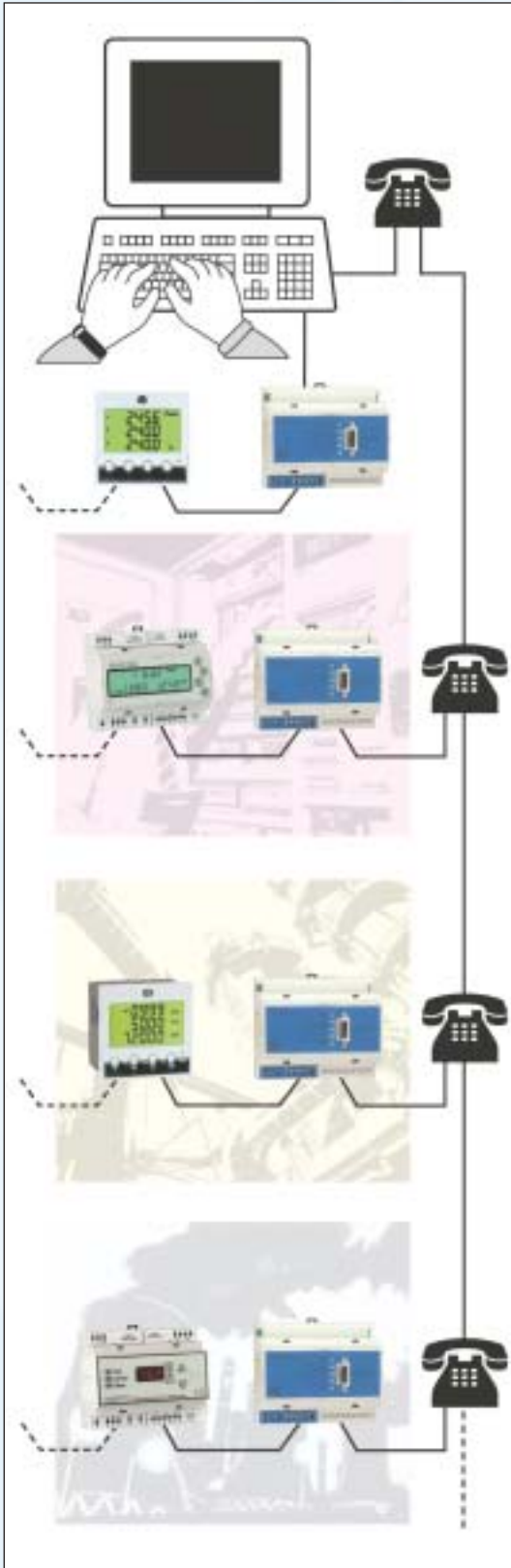
The **PowerLog is** versatile and can be used in a variety of applications:

Energy management - logging Energy and Demand at standard intervals.

Power Quality - logging Voltage and Current Distortion.

Demand Analysis - logging Currents and Power Demands.

Plant Maintenance - detecting deviations from normal operation for early indication of possible plant failure.



- **Easy to install.** Auto-detects connected meters. Works with **MultiCube, MultiRail, Rail RTU & kWh Cube** Meters
- **Local or remote operation.** Direct connection to a PC or remotely via a MODEM
- **Supplied ready for use.** Software for Set-up, Download & Export (for analysis) included
- **Real-time operation.** Real-time readings available from individual meters
- **Flexible.** Log Interval user selectable from 1 minute to 24 hours. Parameters individually selectable for each Meter.

Logging capacity

From 12 meters at 15 minute intervals

kWh only	> 90 days
Amps plus Amps MD	37 days
Amps, Volts & % THD (Volts & Amps)	18 days

Power, Energy and Harmonic Analysis

The **PHS50** and **PHS51**, portable 3 ϕ Power Analysers for complete measurement, recording & compliance testing - the ideal tool for any Power Engineer. The **PHS50** for Power, Energy & Harmonic analysis, and the **PHS51** for EN50160 reporting, Transient Analysis and Fast Logging.

Complete Power Quality, Supply & Energy analysis in one instrument.

- **Ready to use.** Software and necessary accessories supplied, including 1000 Amp Clamp-on CTs
- **Fully portable.** Mains and battery powered. Carry cases supplied for Meter & for Clamp-on CTs
- **Accurate.** 0.5% accuracy for Volts & Amps
- **Wide voltage range.** Standard 10-550 Volt L-N with 100mV resolution. HV model offers 10-750 Volt L-N
- **High Current Resolution.** 300mA resolution with 1000 Amp CTs



Comprehensive analysis features

- **Real time.** All events are analysed & logged
- **Data logging.** 2MB of battery backed memory
- **Diagnostic analysis.*** Comprehensive event trigger selection & user-settable pre and post event logging
- **EN50160.*** EN50160 compliance reports generated automatically

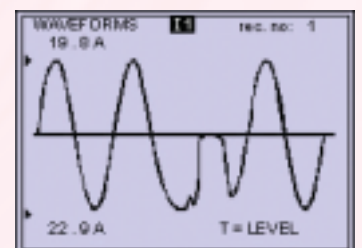


- **Disturbance & transient.*** Logs voltage disturbances & transients
- **Flicker.*** Standard Flicker measurement
- **Fast logging.*** For motor start or other short events. Amplitude and/or waveforms
- **Statistical analysis.** Allows simple & quick testing of supply quality
- **Harmonics.** Up to the 63rd component
- **Scope function.** Voltage & Current waveforms displayed
- **Energy management.** Comprehensive Energy and Demand monitoring

Full range of additional accessories available

- **Clamp-on CTs.** From 5 Amp to 3000 Amp
- **5 or 1 Amp Input.** Special interface unit

*PHS51 only



		Parameters Monitored			
		Power Quality	Real Time	EN50160 Testing	Special
	rms Volt & Amp Min, Max & Average	✓	✓	✓	✓
	% THD & Harmonic Analysis	✓	✓	✓	✓
	Power (Import & Export)	✓	✓	✓	✓
	Volt Dips, Sags & Interruptions	✓	✓	✓	✓
	Periodic Analysis	✓	✓	✓	✓
	Statistical Analysis	✓	✓	✓	✓
	Voltage Events	✓	✓	✓	✓
	Neutral Current	✓	✓	✓	✓
	Metering - Table of Readings	✓	✓	✓	✓
	Oscilloscope Mode	✓	✓	✓	✓
	Harmonic Spectrum Analysis	✓	✓	✓	✓
	Auto set up for EN50160	✓	✓	✓	✓
	Voltage	✓	✓	✓	✓
	THD & Harmonics	✓	✓	✓	✓
	Dips, Sags & Interruptions	✓	✓	✓	✓
	Flicker	✓	✓	✓	✓
	Frequency	✓	✓	✓	✓
	Interharmonics	✓	✓	○	○
	Mains Signalling	✓	✓	○	○
	Unbalance	✓	✓	✓	✓
	EN50160 Test Report	✓	✓	✓	✓
	Fast Logging	✓	✓	✓	✓
	Waveform Logging	✓	✓	✓	✓
	Transient Monitoring	✓	✓	✓	✓
	Energy Analysis	✓	✓	✓	✓
PHS50		✓	✓	✓	✓
PHS51		✓	✓	✓	✓

Clamp-on Current Transformers

The most comprehensive range available. Physical and electrical specifications to suit all applications. Currents from 1mA to 7500 Amps. These compact hand-held devices offer non-contact current measurement for all types of portable instrumentation, including DMMs, Oscilloscopes and all types of recorders and analysers. Models can be supplied to suit virtually all applications – from 1 off to 1000+ quantities.

There are four basic types:

➔ AC Current Transformers

AC Current Input – AC Current Output
Hand-held openable Current Transformers

➔ AC Current Transducers

AC Current Input – AC Voltage Output
The widest range, optimised for modern electronic instruments

➔ AC Current Transducers

AC Current Input – DC Voltage Output
Special models for Data Logging & Recording with an integral AC/DC transducer

➔ AC/DC Hall Effect Clamps

AC/DC Current Input – AC/DC Voltage Output
For DC and mixed AC plus DC measurement



Thirteen different Models to suit virtually all current ranges & cable sizes:



M1 & M2	1mA to 300A	15mm cables 17x11 or 13x15 bars
US	1A to 1000A	43mm cables 44x12 or 30x33 bars
S	500mA to 2000A	50 mm cables 51x12 or 41x36 bars
SM	100mA to 1200A	54 mm cables 50x5 or 30x20 bars
E16	10A to 1500A	54 mm cables 103x20 or 128x18 bars
H16	10A to 1500A	68 mm cables 100x45 or 123x35 bars
P16	10A to 1500A	80 mm cables 100x56 or 124x46 bars
E32	25A to 3000A	58 mm cables 100x32 or 130x19 bars
H32	25A to 3000A	70 mm cables 100x46 or 126x35 bars
P32	25A to 3000A	83 mm cables 100x58 or 126x47 bars
Hxx.C	10A to 5000A DC	72 mm cables 100x53 or 127x43 bars
Pxx.C	10A to 7500A DC	83 mm cables 100x64 or 122x54 bars

C104 ±15,000 Amp AC & DC
Current Sensor
104 x 104mm aperture
(See Page 9)



INGENIEROS ASOCIADOS DE CONTROL S.L.

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