

	<b>POWER METER TECHNICS (PTY) LTD</b>		<b>PLE34D</b>
	<b>POWER LINK PLE34D</b>		<b>REL 1.1</b>
	<b>SOLID-STATE ELECTRONIC ELECTRICITY METER</b>		<b>SEP 2004</b>

## DESCRIPTION

The POWER LINK PLE34D static three-phase electricity meter is the latest development in the range of electronic revenue metering. The meter has been designed to meet the modern standards of electrical utilities.



High metering security against illegal abstraction and fraud is one of the main features of the PLE34D. Protection from mechanical, magnetic, or electrical interference is built into the product by careful circuit design and layout.

## APPLICATION

The PLE34D meter enables electricity supply-authorities to install the meter with total confidence at three-phase end consumers. The high accuracy, wide operating range, and very low starting current makes it the ideal choice.

The meter is a secure investment where fraud is suspected, and is also an excellent replacement for single-phase electromechanical meters where the terminal configuration and size are standard.

The PLE34D excels in applications where high-density automatic meter reading is required as it is fitted with both an easy to read register and an electronic pulse output.

## OPERATION

In order to ensure ultra high reliability, the number of electronic components in the PLE34D have been kept to an absolute minimum. This high level of integration has been achieved by making use of a sophisticated mixed

signal analogue and digital integrated circuit, which performs power calculations across a dynamic power range of 1000:1, to an overall accuracy of better than 1%.

## CONSTRUCTION

The state of the art design and construction guarantee a long and service free life. Using modern application specific integrated circuitry and surface mount printed circuit board technology ensures the high stability and accuracy of the metrology.

### Case and Cover

The base, terminal block and terminal cover are made of flame resistant polycarbonate. This material ensures high mechanical rigidity and is highly resistant to extreme environmental conditions. The excellent insulating properties of polycarbonate also protect against electric shock hazards, and fire.

The meter cover is manufactured from a transparent polycarbonate material. The meter is well protected against tropical conditions by means of a gasket seal located between the base and terminal cover. The cover is fastened to the base by a single sealable screw.

### Terminals

The terminal arrangement complies with BS5685. The terminals are made of high quality brass with two screws for each connection point.

An extended terminal cover is available as an option in either opaque or transparent polycarbonate.

### Register

The meter is supplied with either a standard and well-proven electromechanical register. The electromechanical register incorporates six digits. The design of the register ensures easy reading of the meter, and a permanent display. The number wheels are made from heat resistant plastic with white digits on a black background. The digits are 6mm x 4.5mm.

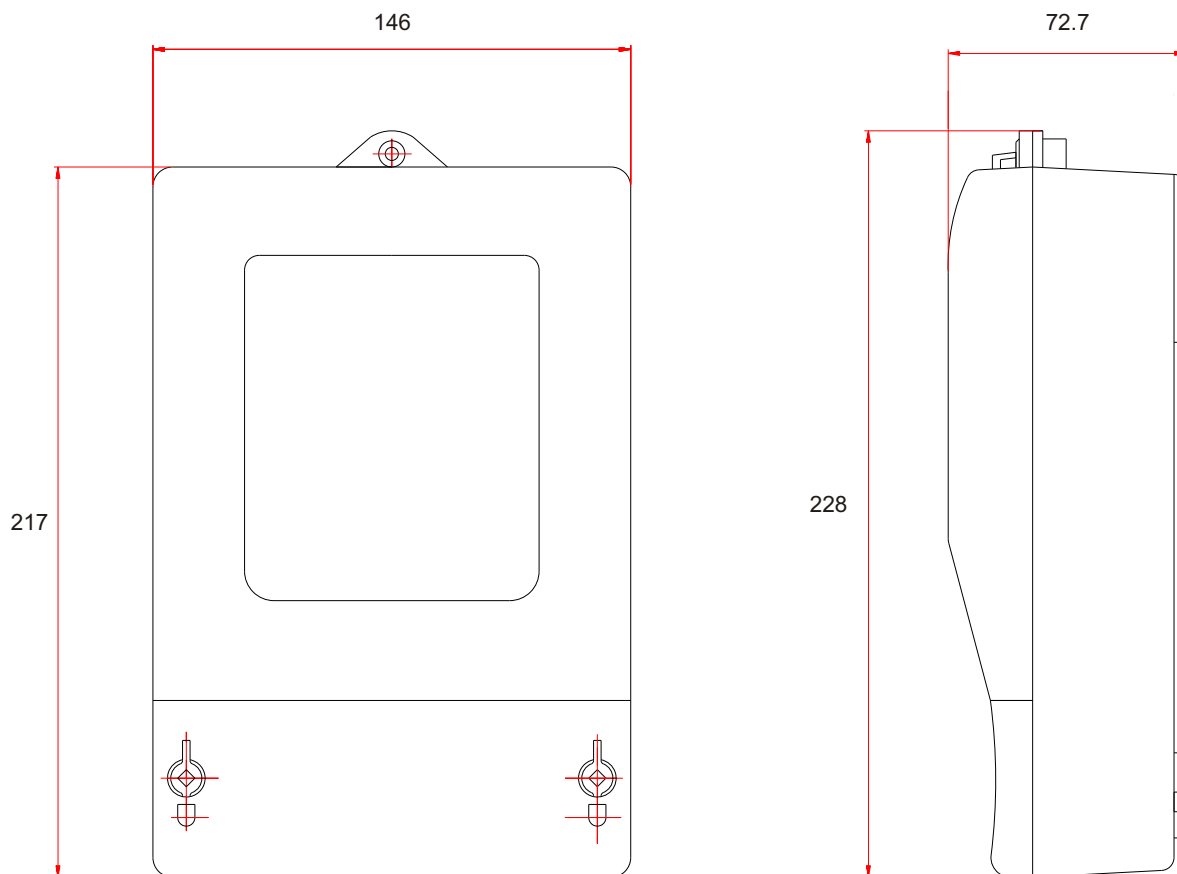
The register is mounted on a nylon frame, which is secured to the meter base in a way that ensures that the meter is highly resistant to mechanical damage.

### Output Pulse

The meter is fitted with an optically isolated potential free output pulse for use with secondary data collections devised. The pulses are proportional to the energy measured and are entirely bounce-free.

### Seals

The meter has three sealing points: one on the meter cover and two on the terminal cover. It is this possible to seal the meter and terminal covers independently.



Note: All dimensions in mm

## TECHNICAL SPECIFICATIONS

Nominal voltage	4 wire meter, 3 systems	3x58/100V, 3x63/110V, 3x220/380V, 3x230/400V, ( -20% – +15%)
Nominal frequency		50 / 60Hz, +/-5%
Nominal / maximum current	Continuous current Short duration	5(60)A, 5(100)A, 10(100)A, 20(100)A, 7000A for 2 cycles
Starting current		< 0.4%I <sub>b</sub>
Accuracy	IEC 61036 and IEC 60687	Class 1, 0.5S or 0.2S (Optional)
Power supply	Nominal voltage	3x220/380V 3x230/400V ( -20%– +15%) Still operates even with the failure of two phases or one phase and the neutral
Interfaces	Optical interface	IEC 1107, 1200Baud (Optional)
Temperature	Operating temperature Storage temperature Humidity Temperature coefficient	-30C ~ +65C -40C ~ +85C 0 to 100% rel. humidity, non condensing 0,01% per ~C (PF=1), <0,04% (PF= 0,5)
EMC compatibility	Surge withstand (1,2/50ps) Dielectric test	6KV 12kV 4kV
Power consumption		< 1,5W, <2,2VA per phase
Connections		Terminals 10mm (Diameter)
Housing	Dimensions Protection class Material	145 X 224 X 68 MM Housing: IP52, terminal block: IP31 Polycarbonate, non inflammable, self-extinguishing synthetic material, recyvable
Weight		1.2kg