

# ACE1000

## Single rate / two rate Electronic Meter With LCD

- ▶ Two rate operation with external tariff control
- ▶ Display operational with meter disconnected from power
- ▶ Display backlit to enable reading in low light conditions
- ▶ Class 1 accuracy for 5(60)A
- ▶ DIN terminal configuration

The Actaris ACE1000 type 280 electronic meter with LCD is one element in a range of products created to answer the needs of today's utility companies. The meter is a compact electronic credit meter for single phase residential applications. It is available as a single rate product or as a two rate meter with external tariff switching and is the latest in a long and successful line of residential products from Actaris Metering Systems.

### Cost Effective Revenue Metering

Specifically designed to provide cost-effective, entry level functionality for customer revenue metering, the ACE1000 type 280 combines modern metering technology with a long life, high resolution Liquid Crystal Display to deliver outstanding performance.

### Compact and lightweight

Designed with a significantly reduced footprint when compared to more traditional metering equipment, this meter is simple to install and easy to store and transport, a factor that is becoming increasingly important in today's competitive marketplace.

### Firmware calculator

The ACE1000 type 280 meter uses standard shunt technology to sense current signals for the determination of the power being consumed. Processing of this information is carried out using a standard microcontroller running specially designed software to offer a wide current dynamic whilst achieving high accuracy and high performance.

### High performance Liquid Crystal Display

The display used in the ACE1000 type 280 meter is clear and easy to read and offers a backlight to enable reading under low light conditions. The ACE1000 type 280 display can also be powered when the meter is disconnected from the mains supply for a period.

### Communication

Optionally the meter can be produced with an optical port as defined by IEC 62056-21.

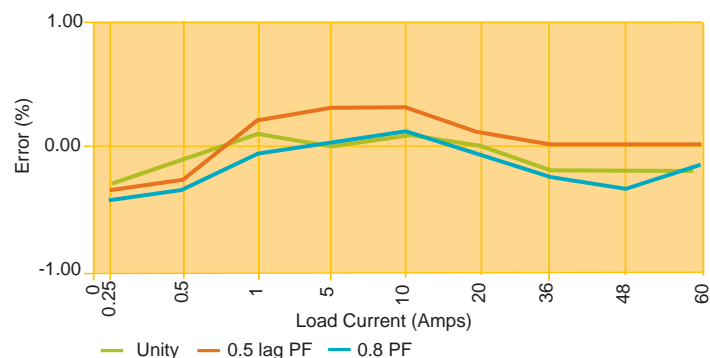
### External Tariff Switching

Neutral or Live switching as required.

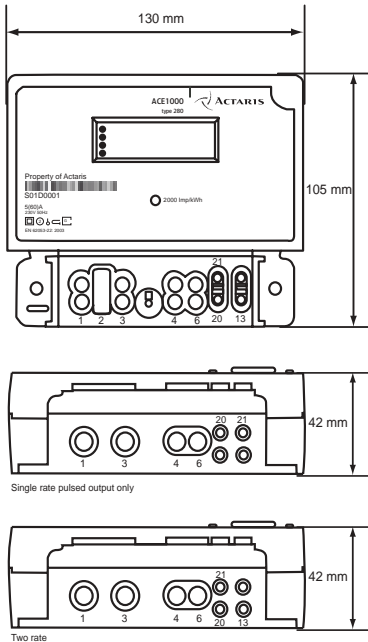


▶ ACE1000 type 280

### Typical Performance Curves



## Dimensions



### Terminal Identification

- |   |                  |
|---|------------------|
| 1. Live (in)  | 6. Neutral (out) |
| 3. Live (out)   | 20. Aux (+)      |
| 4. Neutral (in)   | 21. Aux (-)      |
| 13. External tariff switch (Live or Neutral switching depending on requirement) |                  |

The mains supply and load should be connected to the meter as shown in the connection diagram which can be found inside the meter terminal cover.

**NOTE:** The installation of the meter should be carried out by a qualified electrician and in accordance with any current national wiring regulations which are applicable.

## Technical Specifications

Parameter	Characteristics
Meter type	Electronic single phase credit watt-hour meter Single-rate or two rate with external switch
Approval	IEC 62052-11 & IEC 62053-21
Measuring scope	Active energy
Class index	Class 1 or Class 2
Display	Minimum overall viewing size 12mm x 51 mm Characters 8mm high & 5mm wide Resolution 5, 5+1, 6 and 6+1 integer/decimal digits
Meter registration modes	Import only Uni-directional Bi-directional
Network	1 phase 2 wire
Reference voltage/frequency	220 – 240V 50 Hz
Operating voltage range	-20% to +15%
Power consumption	0.5VA @ 10A <1.3W, <9VA max @ 230V
Basic current	5A, 10A, 15A
Maximum current	40A, 60A
Starting current	<20mA
Meter constant	1000 impulses per kWh
Indicators	Forward energy indicated by red LED Reverse energy indicated by icon on LCD
Operating temperature range	-20°C to +60°C (-40°C approval pending)
Limit temperature range of operation	-20°C to + 70°C
Limit transportation range for storage	-25°C to + 80°C (storage and transportation of the meter should only be at the extremes of this temperature range for a maximum period of 6 hours)
Degree of protection (IEC 60529)	IP51 (IP53 with extended terminal cover)
Terminal material	Brass
Terminal arrangement	DIN 43 857
Pulse output (optional)	In accordance with IEC 62053-31
Wiring capacities	Main cables must be a min. of 16mm <sup>2</sup> and a max. of 25mm <sup>2</sup> (copper)
Material	Meter case, base and terminal cover – recyclable Polycarbonate
Meter and terminal cover seals	Provision for sealing using conventional wire or plastic seals
Meter weight	0.34 kg
Battery (optional)	Internal lithium battery to support reading of display with power off
Dimensions (L x W x D)	105mm x 130mm x 42mm (excluding terminal cover)

CE The ACE1000 type 280 will comply with Council Directive 89/336/EEC on Electromagnetic Compatibility as amended by Council Directive 92/31/EEC and 93/68/EEC

Manufactured under a quality system approved to ISO9001

### Actaris UK Ltd.

Langer Road, Felixstowe  
Suffolk, IP11 2ER - England  
For more information, [www.actaris.com](http://www.actaris.com)

tel +44 1394 69 40 00  
fax +44 1394 27 60 30