

A100

DIN Series of Electronic Single Phase Meters



Advanced domestic metering...

Features

- Accuracy - kWh Class 1 or Class 2
- kWh import or kWh import/export
- 20 years certified life
- Large digit (7.5mm) multilingual display with chevron information indication
- IrDA (Infrared Data Association) output for transmitting billing, security and status data
- 12kV impulse withstand
- DIN double insulated, glass filled polycarbonate case
- High security, sealed case design
- IP53 in accordance with IEC 60529:1989

Options

- One or two rates controlled by external device
- Auxiliary terminals configured for rate selection (two rate meters) and pulsing output or serial data output
- RJ11 socket configured as pulsing output or serial data output
- Pulsed output (IEC 62053-31)
- A102 - kWh and kvarh energy measurement
- A100L - 2 rate, switch to live

The successful A100 range of meters from Elster Metering Systems has been enhanced. The range provides an extremely cost-effective solution for one or two rate domestic applications. The use of leading edge electronic metering technology ensures outstanding accuracy and a long service life. Serial communications and security data are provided as standard.

The liquid crystal display has large (7.5mm), high contrast characters that are viewable over a wide angle. Chevrons and multilingual legends on the nameplate identify the values being displayed. The energy registers can be configured at manufacture for the required number of digits and the position of the decimal point.

The A100 range of meters offer high security and detect many of the most commonly used tamper techniques. Security features of the meter include reverse run energy total and count; power fail and elapsed time count; hours in anti-creep; hours in Rate 1, Rate 2 and total on time. These are stored as security data and can be included as part of the display sequence.

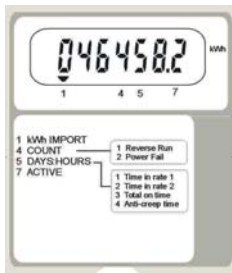
Communications is provided via an IrDA port allowing the meter registers and security data to be read electronically using a hand-held device, greatly reducing the possibility of manual meter reading errors. As a manufacturing option the serial data output or the pulsed output can be transmitted via an RJ11 socket or the meters auxiliary terminals.

The A100 and A100L can be used as a simple import meter or for import/export schemes for domestic or small scale generation sites. The meters offer one or two rate operation. The rate select for the A100 is switch to neutral, A100L is switch to live.

The A102 is an active/reactive meter ideally suited for utilities who wish to bill or monitor energy consumption based on kvarh measurement. The meter measures import or import and export energy.

Meters can be supplied to meet accuracy Class 1 or Class 2 requirements. They are approved to EN 61036:1996, have an ingress protection of IP53 to IEC 60529:1989 and comply with EMC standard EN50081-1:1992.

Display



The liquid crystal display is programmable at manufacture to meet customer's requirements. A typical display for an A100 meter showing kWh import is shown. The chevrons and index digit indicate the information being displayed. The nameplate information can be printed in any language.

Security Data

The A100 offers many useful security features. The meter stores all registration and configuration data to non-volatile memory. All data is retained for the life of the meter.

Recordable security features are listed below.

- Reverse run/event count
- Reverse run energy total
- Reverse run indication on LCD
- Power fail count
- Elapsed time count, in rate 1, rate 2
- Hours since last power up
- Hours spent in anti-creep

IrDA Communications



The IrDA (Infrared Data Association) communications port provides one way communications, transmitting a continual data stream from the meter to an external device. An error checking algorithm protects the integrity of the data. As an

option the serial data can be configured to either the RJ11 socket or auxilliary terminals.

Important information is provided:

1. Absolute meter readings
2. Security register's, status and identification data

The transmission can be 2400, 4800 (serial data port) or 9600 baud without the serial port. The port will transmit over a distance of 250mm.

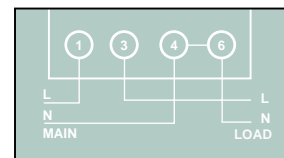
Pulse Output

An opto-isolated pulse output can provide the basis for an energy management system or AMR. These pulses are output via the auxilliary terminals or via the RJ11 socket.

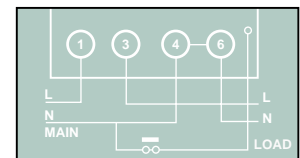
Technical Data

Current Range	10 - 65A, 5 - 65A
Voltage Range	210 - 250V, 105 - 127V
Frequency	50 or 60Hz
System Connection	1 phase, 2 wire
Burden (230V)	0.66W, 8.5VA (Capacitive burden)
Insulation	4kV RMS 50Hz
Impulse Withstand	12kV 1.2/50µS 500ohm source
Display	7.5mm characters, High contrast, wide angle
IrDA Baud Rates	2400, 4800 or 9600
Serial Baud Rates	2400 or 4800
Certified Product Life	20 years (OFGEM model)
Temperature	-20° to +55°C (Operational range) -25° to +85°C (Storage)
Humidity	Annual mean 75% (For 30 days spread over one year, 95%)
Pulse Output	100ms pulse 200p/kWh (=5Wh/pulse) (Other pulse rates, durations available)
Weight	340 grams
Specifications Case	kWh Class 1 or 2 EN 61036:1996 IP53 to IEC 60529:1989

Terminal Arrangements



Single Rate



Two Rate

Dimension and Fixing Centres

