

A100C/102C

BS Single Phase Meter



Applications

Residential

Brief Description

The successful range of A100C meters from Elster Metering Systems provides a cost effective solution for one or two rate domestic applications. The meter is housed in an extremely compact case. To enhance security, the main meter cover is permanently secured to the base during the manufacturing process.

The meter offers high security and detects many of the most commonly used tamper techniques. The security data can be included as part of the display sequence and read via the optical communications port.

The A100C has the option of IrDA or optical IEC 62056-21 communications. Both methods of communication allow the meter registers and security data to be read electronically from a laptop or hand-held device, greatly reducing the possibility of manual meter reading errors.

The A100C can be a simple import only meter, an import/export meter or can be used for domestic or small scale generation sites. The meter offers one or two rate operation.

The A102C measures reactive energy in addition to active energy and is ideally suited for utilities who wish to bill or monitor energy consumption based on kvarh measurement. The A103C meter offers additional instrumentation values and maximum demand.

Meters are approved to EN62053-21:2003, have an ingress protection of IP53 to IEC60529:1989 and comply with EMC standard EN50081-1 1992.

Features

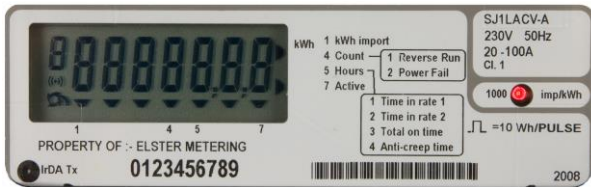
- Accuracy Class 1 or Class 2 EN50470-3 (MID), Class A or Class B (IrDA meter only)
- kWh import or kWh import/export kWh + kvarh (A102C)
- 20 years certified life
- Large digit (9.8mm) multilingual display with chevron information indication
- Extensive security data
- Communications as standard
- 12kV impulse withstand
- High security, compact design
- BS double insulated, glass filled polycarbonate case
- Permanently fixed main cover
- Rate select for two rate meters, switch to neutral.
- IP53 in accordance with IEC60529:1989

Options

- One or two rates controlled by an external device
- IrDA communications or IEC62056-21 (formerly IEC1107) optical communications for red sensitive probes
- IEC - 62056-21 for infrared only optical probes
- Auxiliary terminals configured for:
 - SO Pulse output (IEC62053-31)
 - Serial data output (IrDA meter)
- A102C - kWh and kvarh energy measurement
- A103C - Maximum demand, voltage and current instrumentation values
- Backlit display
- Extended terminal cover



Display



The liquid crystal display is programmable to meet a customer's requirements. Chevrons and the index digit indicate the information being displayed.

The nameplate information can be printed in any language. There is an option for the display to be backlit.

Security Data

The A100C offers many useful security features. The meter stores all registration and security data to non-volatile memory. This data can be shown on the display. 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
- Time in rate 1 and rate 2
- Hours since last power-up
- Hours spent in anti-creep

As an option the kWh register can increment in power flow insensitive mode i.e. it increments regardless of energy flow direction.

Communications



Optical Port



IrDA Port

The A100C has the option of IrDA (Infrared Data association) data stream communications or optical IEC 62056-21 (formerly IEC 1107) two way communications. The table below shows the functions available for each type of communications:

	Configure Meter	Meter Data Via Optical Port	Meter Data Via Auxiliary Terminals
IEC 62056-21	Yes	Yes	No
IrDA	No	Yes	Yes

Pulse Output

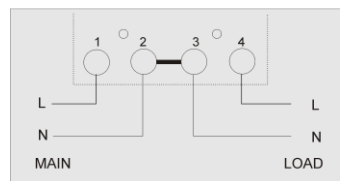
An opto-isolated pulse output can provide the basis for an energy management system or AMR. These pulses are output via the auxiliary terminals.

Technical Data

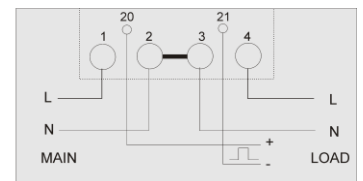
Current Range	10-100A, 20-100A
Voltage Range	220-250V, 110-127V
Frequency	50 or 60Hz
System Connection	1phase, 2 wire
Burden (230V)	0.66W, 8.5VA (capacitive burden)
Insulation	4kV RMS 50Hz
Impulse Withstand	12kV 1.2/50µS from a 40 ohm source
Display	9.8mm x 3.5mm characters High contrast, wide angle
IrDA Baud Rates	2400, 4800 or (9600 without serial port)
IEC 62056 - 21 Rate	2400 or 4800
Serial Baud Rates	2400 or 4800
Certified Product Life	20 years (OFGEM model)
Temperature	-20° C to + 55° C (operational range) -25° C to + 85° C (storage)
Humidity	Annual Mean 75% (for 30 days spread over one year, 95%)
Pulse Output	100ms pulse 100 p /kWh (=10Wh/pulse) (other pulse rates, durations, available)
Weight	349 grams
Specifications	EN50470 - 3 (MID), Class A or B kWh Class 1 or 2 EN62053-21:2003 kvarh Class 2 or Class 3 EN62053-23
Case	IP 53 to IEC60529 : 1989

Terminal Arrangements

Single Rate



Pulsed Output



Dimensions and Fixing Centre

