A1100

Polyphase Meter

Applications

Residential and Light Industrial

Brief Description

The use of innovative metering technology provides cost-effective metering that is highly secure and maintains a high degree of accuracy over its full operating range. The A1100 meter is suitable for direct connected or CT operated domestic, commercial and light industrial polyphase applications. The meter is available as import only or import and export.

The A1100 is available with a Liquid Crystal Display or a Mechanical Register. The Liquid Crystal Display version of the meter can be supplied with one or two rates. The display has a customer defined display sequence that can include security information. Chevrons and legends on the nameplate identify the data being displayed.

The meter records extensive security data that can be viewed on the display. The same data is can be read via the IrDA communications port.
The display has the option to be backlit.

The mechanical stepper register has 7 number wheels, large with digits. The most significant digit of the register can be blanked off by fitting a special nameplate to the meter at manufacture. Nameplate information can be in any language. The mechanical register version offers import kWh one rate only. Five LED's are used to identify the status of the meter.

Communications is provided via the IrDA port allowing the meter registers and security data to be read electronically using a hand-held device or via a hardwired connection. As an alternative to serial data the auxiliary terminals or RJ11 can be configured at manufacture to give SO type kWh consumption pulses. The pulsed output pulse value and pulse width is configured at manufacture and is independent of the test indicator pulse value.

Meters can be supplied to meet accuracy Class 1 or Class 2 or EC Directive 2004/22/EC (MID) - kWh Class A or Class B.

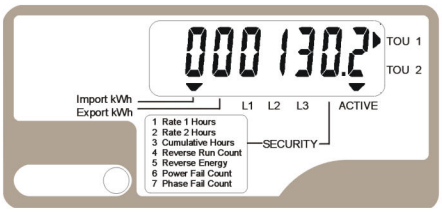
Features

- Accuracy – Class 1 or Class 2, EC Directive 2004/22/EC (MID) kWh Class A or Class B
- kWh import or kWh imp/exp
- Direct or CT connected
- 3 ph, 4 wire or 3 ph, 3 wire
- 16 year product life
- Large figure display (9.8mm)
- Extensive security data
- IrDA (Infrared Data Association) output for transmitting billing, security and status data
- 12kV impulse withstand
- Compact design
- Double insulated, glass filled polycarbonate case
- DIN 43857 Part 2 and Part 4 (except for top fixing centres)
- IP53 in accordance with IEC 60529:1989

Options

- Liquid Crystal Display or mechanical register
- LCD display backlit
- One or two rates controlled by an external device (LCD meter only)
- Auxiliary terminals configured for:
- - SO pulsed output (IEC 62053-31)
- - Rate selection (two rate meters)
- - Serial data output
- Short terminal cover
- Extended terminal cover with or without cut-out
- 8.2mm, 9.0mm or 9.5mm terminal bores

Display



The LCD version of the A1100 displays register and security information by the use of chevrons and digits. The mechanical register version has up to 7 digits and five LED's for reporting status information.

Meter nameplates can be printed in any language.

Security

The A1100 offers high security with 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. Security features are illustrated below.

	LCD Meter		Mechanical Meter	
Event	**LCD**	**IrDA/Serial**	**LED**	**IrDA/Serial**
Phase A Present	✓		✓	
Phase B Present	✓		✓	
Phase C Present	✓		✓	
Reverse Event Count	✓	✓		✓
Reverse Run Reading	✓	✓		✓
Reverse Alarm	✓		✓	
Power Fail Count	✓	✓		✓
Phase Fail Count	✓	✓		✓
Elapsed Hours Rate 1	✓	✓		
Elapsed Hours Rate 2	✓	✓		
Elapsed Hours Cumulative Display	✓			
Meter Error	✓	✓	✓	✓

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

Pulsed Output

An opto-isolated pulse output can provide the basis for an energy management system or AMR. These pulses are output via the meter's auxiliary terminals. The output conforms to IEC 62053-31.

System Connections

2 Element	3 phase, 3 wire
3 Element	3 phase, 4 wire
	2 phases of a 3 phase, 4 wire
	2 phase, 3 wire
	1 phase, 3 wire
	1 phase, 2 wire (LCD meter only)

Communications

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

As an option the same absolute data is available via the meter's auxiliary terminals. Both ports use the OBIS: IEC 62056-61 data identifiers.

Important information is provided:

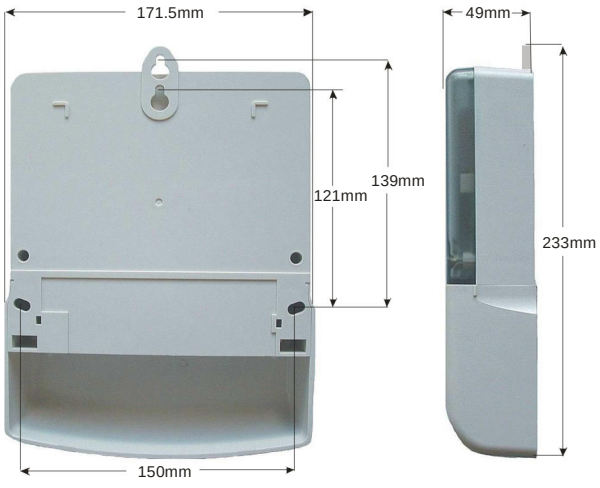
- Meter registers
- Security features
- Status information
- Identification

The port transmits over a distance of 250mm.

Technical Data

Current Range	Direct connected 20-100A, 10-60A
	CT operated 5-10A
Reference Voltage	220-240V (L-N) or 220-240V (L-L)
	110-120V (L-N) or 110-120V (L-L)
Frequency	50 or 60Hz
Burden	
Voltage Circuits (230V)	0.9W, 9VA capacitive burden/phase [max]
Current Circuits	2VA @ 100A/phase [max]
Insulation	4kV RMS 50Hz
Impulse Withstand	12kV 1.2/50µs 500 ohm source
Display LCD	9.8 x 3.5mm characters
	High contrast, wide angle
	5, 6 or 7 digits
Mechanical Register	6.7 x 3.5mm characters
	6 or 7 digits
IrDA Baud Rates	2400, 4800 or 9600 (Without serial port)
Serial Baud Rates	2400 or 4800
Product Life	16 years
Certified Product Life	10 years
Temperature	-40° C to + 70° C (Operational range)
	-40° C to + 85° C (Storage)
Humidity	Annual mean 75% (For 30 days spread over one year, 95%)
Pulse Width	10 to 250ms or equal mark/space
Wh/pulse	1, 2, 4, 5, 10, 20, 25, 40, 50, 100
Weight	860 grams
Specifications	kWh Class 1 or 2 IEC 62053-21
	EC Directive 2002/22/EC (MID) kWh Class A or Class B
Case	IP53 to IEC 60529:1989
Terminal Bores	Options of 8.2mm, 9.0mm or 9.5mm

Dimensions and Fixing Centres



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Vital Connections

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