

# A1100

## Single Phase Meter

### End User's Guide



M180 002 2A  
7.2013



## **ABOUT THIS DOCUMENT**

This document is intended as a guide to help suppliers of Elster Metering Systems A1100 Meters produce User Manuals for End Users.

Example text you may wish to use:-

### **ABOUT YOUR METER**

Your Elster A1100 Meter has been chosen by your Service Provider to measure the amount of energy flowing through your installation. Some features described in this manual may not be exactly the same as your particular installation. For instance information viewed on the Liquid Crystal Display (LCD) may not be exactly the same as shown in this manual. Rest assured, the basic operation is exactly the same and you should have no difficulty in following the 'step by step' guides described in this manual.

## SAFETY



### SAFETY

To prevent fire or shock hazard, never expose the meter to water.

Parts of the internal circuits of your meter are connected to phase voltages. These circuits are highly dangerous if they are touched in any way, and could result in an electric shock or fatality. For this reason the internal circuits of the meter are protected by a cover which cannot be removed without breaking the meter seals. The phase voltages are protected by a sealed terminal cover. You should **'never'** attempt to remove the Meter Cover or Terminal Cover of the meter.

### Liquid Crystal Display

Liquid crystals are toxic. If the display of your meter is damaged you should avoid contact with any liquid that may be seeping from it.

If the liquid makes contact with your skin, wash the affected area thoroughly with running water and soap.

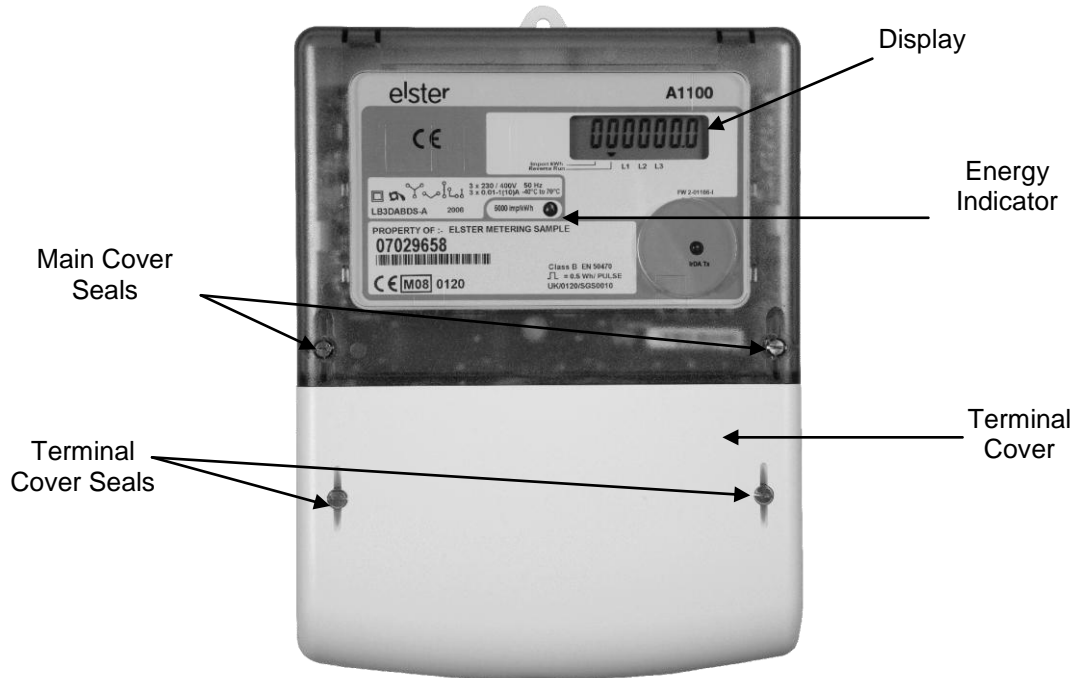
If liquid crystals get into your eye, flush the affected eye with clean water for at least 15 minutes.

If liquid crystal is swallowed, flush your mouth thoroughly with water, drink large quantities of water to induce vomiting.

**Immediately Seek medical advice.**

**Report any damage to the A1100 meter to your Service Provider.**

### MAIN FEATURES OF YOUR A1100 METER



### HOW TO CHECK YOUR METER IS WORKING

As your installation generates electricity a display (similar to the one shown opposite) will increment, allowing you to calculate exactly how much electricity you are generating over a given period of time.

When the Red kWh Energy Indicator is 'Flashing' the generating system is producing electricity. The faster it 'Flashes' the more electricity you are producing. If the indicator is permanently 'On', no electricity is being produced.

#### Energy Generated Example:

- Cumulative Energy Register Reading - 00146.0kW
- Energy Reading After 24 Hours - 00153.3kW
- Energy Produced Over 24 Hour Period - 7.3kW



(Showing 1 decimal place)



(Showing 0 decimal places)

### READING YOUR DISPLAY

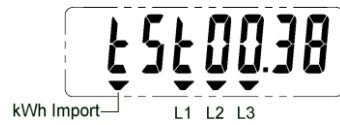


The meter display will display information chosen by your Service Provider to best suit your home requirements.

The items displayed will be chosen from the "Test Display" shown above.

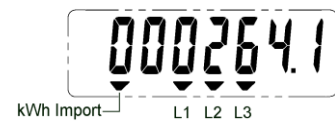
The following definitions will help to explain the terms used on your display:

- kWh import currently displayed
- kWh export currently displayed (or reverse alarm)
- L1 Phase A present (or failed, manufacturing option)
- L2 Phase B present (or failed, manufacturing option)
- L3 Phase C present (or failed, manufacturing option)
- Security data (See security data)
- Active rate – Rate displayed is currently active
- TOU currently displayed
- TOU 2 currently displayed
- TOU 1 and TOU 2, Cumulative TOU1 + TOU 2 displayed

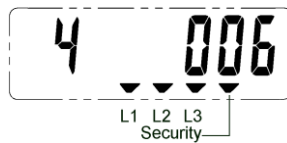
**Display 1**

Dial Test Display

For 1 or 2 hours after each power up

**Display 2**

kWh Cumulative

**Display 3**

Reverse Run Count

**Display 4**

Reverse Energy kWh

**Chevron Position on Display and Typical Nameplate**

1. kWh import
2. Reverse alarm (or export kWh)
3. L1 Phase A present/failed
4. L2 Phase B present/failed
5. L3 Phase C present/failed
6. Security data

**Typical Single Rate Meter**



**Display 1**



kWh Import - Cumulative

**Display 2**



kWh Import - Rate 1

**Display 3**



kWh Import - Rate 2

**Display 4**



Hours in Rate 1

**Display 5**



Hours in Rate 2

**Display 6**



Cumulative Hours  
Rate 1 Plus Rate 2

**Display 7**



Power Fail Count

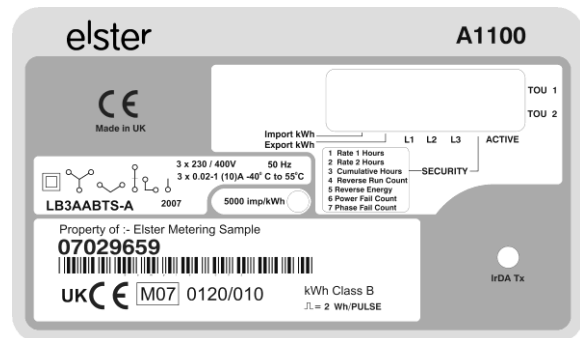
**Display 8**



Phase Fail Count

**Chevron Position on Display and Typical Nameplate**

1. kWh
2. Reverse alarm (or Export kWh)
3. L1 Phase A present/failed
4. L2 Phase B present/failed
5. L3 Phase C present/failed
6. Security Data
7. Rate Active
8. TOU Rate 1 kWh
9. TOU Rate 2 kWh



**Typical Two Rate Meter**

**Normal Display**

Time in Rate 1



Time in Rate 2



Cumulative Time



Count of Reverse Events



Reverse Energy Consumed



Power Fail Count



Phase Failure Count

Display Chevron		Reference Indicator	Action
Security	6	1	Time in Rate 1
Security	6	2	Time in Rate 2
Security	6	3	Cumulative Hours (Rate 1 + Rate 2)
Security	6	4	Count Reverse Run Events
Security	6	5	Reverse Energy Consumed
Security	6	6	Power Fail Count
Security	6	7	Phase Fail Count

**Security Data**

**Display**



Chevrons	Function
Import	Import kWh
Reverse Alarm	Import meter only (Optional at manufacture)
Export	Export meter only
L1 Phase A Present	Chevron 'On' for phase present (Default)
L2 Phase B Present	Chevron 'Off' for phase present (Manufacturing option)
L3 Phase C Present	
Security	Security data is being displayed
Active	Rate displayed is active
TOU 1	TOU Register 1 is displayed
TOU 2	TOU Register 2 is displayed
TOU 1 and TOU 2	Cumulative (TOU 1 + TOU 2) is displayed

Security Identifier	Display Identifier (Optional in display sequence)
Elapsed Time	1 Time in Rate 1
	2 Time in Rate 2
	3 Cumulative time (Rate 1 plus Rate 2)
Reverse Run	4 Count of reverse run events
	5 Reverse energy consumed
Power Fail	6 Power fail count
Phase Fail	7 Phase fail count

Other Options	Option (set at manufacture)
Number of Digits	5, 6 or 7
Decimal Point Separator	Point or comma
Number of Decimal Places	2 or 1
Display Dwell Time	2 to 30 seconds
Dial Test	For 1 or 2 hours after power up

Error Reporting	Error (Optional)
Hardware Error	Er00001
Configuration Checksum Error	Er00010
Billing Data Checksum Error	Er00100

**Display Data**

**21 TECHNICAL DATA**

**21.1 A1100 Meter**

Current: Standard Range	20 - 100A (BS), 10 - 60A (DIN)
Extended Range	5 - 100A (BS), 5 - 85A (DIN)
Frequency	50 Or 60Hz
Voltage Operating range	230V $\pm$ 20%
Display	LCD (9.8 x 3.5) mm characters, high contrast, wide viewing angle)
Meter Constant (pulsing LED output)	500 p/kWh (exceptional value 1000 p/kWh)
Accuracy Class kWh	EN 61036:1996 (plus amendment 1:2000) - Class 1 or Class 2 EC Directive 2004/22/EC (MID) - Class A or Class B

## About Elster Group

**Elster Group is the world's leading manufacturer and supplier of highly accurate, high quality, integrated metering and utilisation solutions to the gas, electricity and water industries.**

**In addition, through its subsidiary Ipsen International, it is the leading global manufacturer of high-level thermochemical treatment equipment.**

**The group has over 9,000 staff and operations in 38 countries, focused in North and South America, Europe and Asia. Elster's high quality products and systems reflect the wealth of knowledge and experience gained from over 170 years of dedication to measuring energy and scarce natural resources.**



The company's policy is one of continuous product improvement and the right is reserved to modify the specification contained herein without notice.

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