

A1120/40

Polyphase Phase Meter

End User's Guide



M181 001 6A
12.2011

ABOUT THIS DOCUMENT

This document is intended as a guide to help Suppliers of Elster Metering Systems A1120 Meters produce User Manuals for End Users.

Example text you may wish to use:-

ABOUT YOUR METER

Your Elster A1120 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



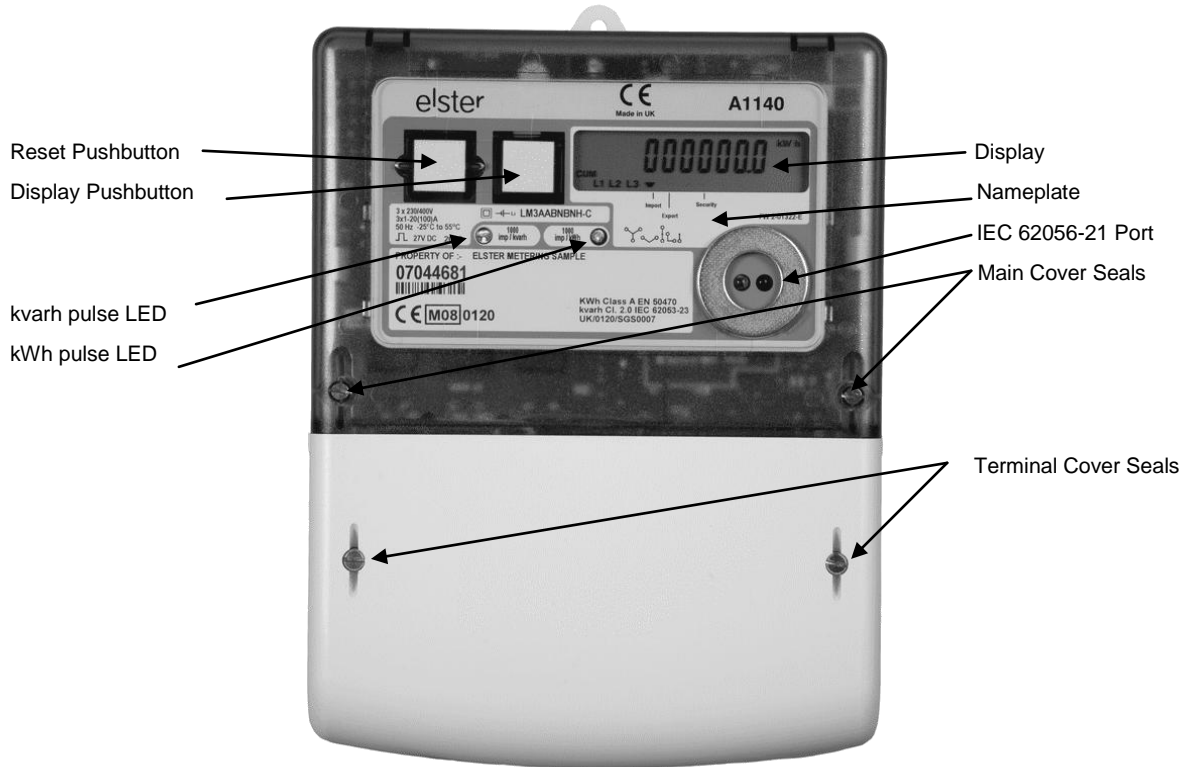
SAFETY

- 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 all internal circuits are protected by covers with seals. You should '**never**' attempt to remove the seals of the Main Meter Cover or Terminal Cover.

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(s), flush the eye(s) 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 the damage to your Service Provider**

MAIN FEATURES OF YOUR SMART 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 - 013862.6kW
- Energy Reading After 24 Hours - 013868.7kW
- Energy Produced Over 24 Hour Period - 6.1kW

READING YOUR SMART METER DISPLAY



The meter display will display information chosen by your Service Provider to best suit your home requirements. The display will be in one of the following formats:

English Descriptors

OBIS Identification Codes

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

The following definitions (English Descriptors Only) will help to explain some of the terms used on your display:

Identifier: The identifier gives the register number: example: 1 = Rate 1, 2 = Rate 2)
(As an alternative an OBIS identification code can be displayed)

Active: The register displayed is currently active (example - in Rate 1)

TOU: The register displayed is a Time of Use register (example - used with identifier to signify Rate 1 or Rate 2)

Cum: The register displayed is a Cumulative register (example - the sum of Rate 1 and Rate 2)

Max Dem: A maximum demand value is being displayed

kWh: Amount of energy used by a load of one kilowatt over a period of one hour

Display Mode

The display has two modes of operation, Default Mode and Utility Mode. Up to 40 displays can be made available for each mode of operation.

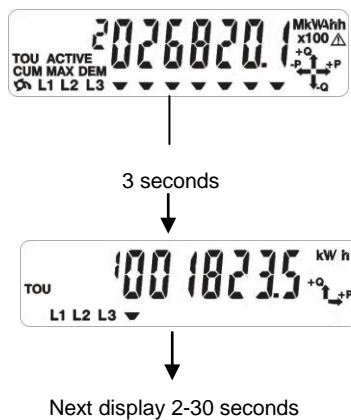
Default Mode

The Default Mode can operate in two ways, Auto-cycle or single step.

Auto-cycle

At power up the segment test pattern is shown. This will remain displayed for a period of 3 seconds.

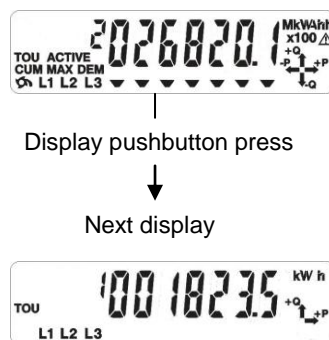
The display will then sequence through the programmed displays, remaining on each display item for one step duration time, called the Auto-cycle step duration (2-30 seconds).



Step

Step mode is entered by a single press of the Display Pushbutton. The first display in the autocycle sequence is displayed. Further presses of the pushbutton allow the consumer to step through the autocycle display items, and then through the single step display items.

The display will default to autocycle mode at a programmed time after the last press of the display pushbutton.



Utility Mode

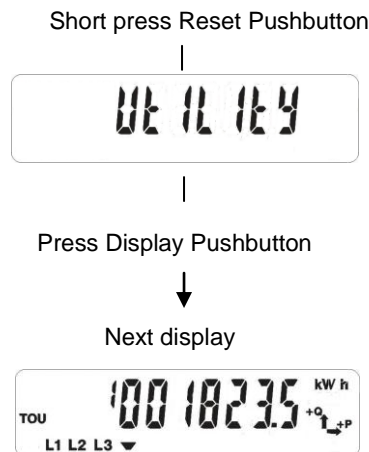
The Reset button may be sealed in which case you cannot access Utility Mode.

If the Reset button is not sealed, Utility mode is entered by pressing the Reset Pushbutton.

'Utility' appears on the display.

Single presses of the Display pushbutton will then step through the Utility displays.

The display will default to Autocycle Mode at a programmed time after the last press of the Display Pushbutton, or if the Reset Pushbutton is again pressed.

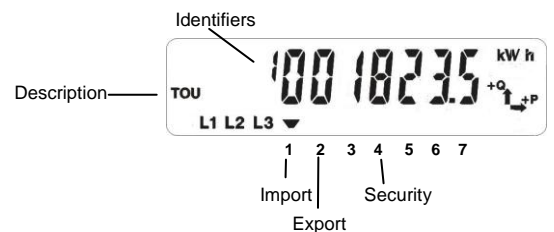


Displays with English Descriptors

Chevrons/Identifiers/Descriptors

The chevrons on the display have the following meaning:

Chevron	
1	Import
2	Export
3	-
4	Security
5	-
6	-
7	-
Identifiers	
1	Rate 1
2	Rate 2
Descriptors	
TOU	Time of Use
Active	Active Rate
CUM	Cumulative
MAX DEM	Maximum Demand



The display identifiers give a description of the main register displayed.

Displays with OBIS Codes

The OBIS code gives a description of the main register displayed.

Chevron 7 indicates the register is active.

Examples of displays and a full list of displays are given towards the back of this manual.



Display Indicators



Energy Direction Indicators



System Reverse Run Indicator



Phase Failure Indication



Error/Alarm

Communications Indication

When communications are taking place the following indicator is displayed.

- o Optical communication
- r RS232 Communication

DISPLAYS

English Displays

Cumulative



Customer Defined (1-2)



Rising Demand (Export)



Maximum Demand (1-4)



Maximum Demand (1-4) Date



Cumulative Maximum Demand (1-4)



Time of Use (1-8)



OBIS Displays



A1120/40 Displays

English Displays

Historical



Security (Reverse Run Event Count)



Instrumentation (Phase A Voltage)



Dial Test

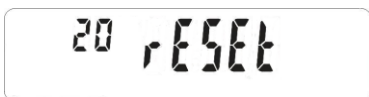


Communications Indicators

Optical



End of Billing (Change of Season)



Error (Power Fail Data)



CT (Scalar)



External Registers



OBIS Displays



Remote RS232



End of Billing (Internal Battery Fail)



Error (Internal Battery Fail)



CT (Ratio)



A1120/40 Displays (continued)

Description	Units	OBIS Display Code	English Display		
			Identifier	Chevron	Index
Segment Test	-	-	-	-	-
Current Time	-	0.9.1	-	-	-
Current Date	-	0.9.2	-	-	-

Cumulative

Total Import kWh	kWh	1.8.0	CUM	1	-
Total Export kWh	kWh	2.8.0	CUM	2	-
Q1 kvarh	kvarh	5.8.0	CUM	-	↳ 1
Q2 kvarh	kvarh	6.8.0	CUM	-	↳ 2
Q3 kvarh	kvarh	7.8.0	CUM	-	↳ 3
Q4 kvarh	kvarh	8.8.0	CUM	-	↳ 4
kVAh 1	kVAh	D.8.0	CUM	-	-
kVAh 2	kVAh	E.8.0	CUM	-	-
Total Import kWh Phase A *	kW	21.8.0	CUM	1	A
kWh Phase B *	kW	41.8.0	CUM	1	B
kWh Phase C *	kW	61.8.0	CUM	1	C
Total Export kWh Phase A *	kW	21.8.0	CUM	2	A
kWh Phase B *	kW	41.8.0	CUM	2	B
kWh Phase C *	kW	61.8.0	CUM	2	C
Customer Defined 1	**	A.8.0	CUM	-	Cd 1
Customer Defined 2	**	B.8.0	CUM	-	Cd 2

Rising Demand

Total Import kW	kW	1.4.0	DEM	1	-
Total Export kW	kW	2.4.0	DEM	2	-
Q1 kvar	kvar	5.4.0	DEM	-	↳ 1
Q2 kvar	kvar	6.4.0	DEM	-	↳ 2
Q3 kvar	kvar	7.4.0	DEM	-	↳ 3
Q4 kvar	kvar	8.4.0	DEM	-	↳ 4
kVA 1	kVA	D.4.0	DEM	-	-
kVA 2	kVA	E.4.0	DEM	-	-
Total Import kWh Phase A *	kW	21.4.0	DEM	1	A
kWh Phase B *	kW	41.4.0	DEM	1	B
kWh Phase C *	kW	61.4.0	DEM	1	C
Total Export kWh Phase A *	kW	21.4.0	DEM	2	A
kWh Phase B *	kW	41.4.0	DEM	2	B
kWh Phase C *	kW	61.4.0	DEM	2	C
CD 1	**	A.4.0	DEM	-	Cd 1
CD 2	**	B.4.0	DEM	-	Cd 2

Cumulative MD (1-4)

Total Import kW	kW	1.2.(1 - 4)	CUM MAX DEM	-	1 - 4
Total Export kW	kW	2.2.(1 - 4)	CUM MAX DEM	-	1 - 4
Q1 kvar	kvar	5.2.(1 - 4)	CUM MAX DEM	-	1 - 4
Q2 kvar	kvar	6.2.(1 - 4)	CUM MAX DEM	-	1 - 4
Q3 kvar	kvar	7.2.(1 - 4)	CUM MAX DEM	-	1 - 4
Q4 kvar	kvar	8.2.(1 - 4)	CUM MAX DEM	-	1 - 4
kVA 1	kVA	D.2.(1 - 4)	CUM MAX DEM	-	1 - 4
kVA 2	kVA	E.2.(1 - 4)	CUM MAX DEM	-	1 - 4
1 - 4 CD 1	**	A.2.(1 - 4)	CUM MAX DEM	-	1 - 4
1 - 4 CD 2	**	B.2.(1 - 4)	CUM MAX DEM	-	1 - 4

Maximum Demand (1-4)

1 - 4 Import kW	kW	1.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Import Time	-	1.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Import Date	-	1.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Export kW	kW	2.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Export Time	-	2.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Export Date	-	2.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q1 kvar	kvar	5.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q1 Time	-	5.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q1 Date	-	5.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q2 kvar	kvar	6.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q2 Time	-	6.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q2 Date	-	6.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q3 kvar	kvar	7.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q 3 Time	-	7.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q3 Date	-	7.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q4 kvar	kvar	8.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q4 Time	-	8.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 Q4 Date	-	8.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 kVA 1	kVA	D.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 kVA 1 Time	-	D.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 kVA 1 Date	-	D.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 kVA 2	kVA	E.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 kVA 2 Time	-	E.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 kVA 2 Date	-	E.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 CD 1	**	A.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 CD 1 Time	**	A.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 CD 1 1 Date	**	A.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 CD 2	**	B.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 CD 2 Time	**	B.6.(1 - 4)	MAX DEM	-	1 - 4
1 - 4 CD 2 Date	**	B.6.(1 - 4)	MAX DEM	-	1 - 4

Display Table

Description	Units Note 1**	OBIS Display Code	English Display		
			Identifier	Chevron	Index
TOU (1-8)					
1 - 8 Import kWh	kWh	1.8.(1 - 8)	TOU	-	1 - 8
1 - 8 Export kWh	kWh	2.8.(1 - 8)	TOU	-	1 - 8
1 - 8 Q1 kvarh	kvarh	5.8.(1 - 8)	TOU	-	1 - 8
1 - 8 Q2 kvarh	kvarh	6.8.(1 - 8)	TOU	-	1 - 8
1 - 8 Q3 kvarh	kvarh	7.8.(1 - 8)	TOU	-	1 - 8
1 - 8 Q4 kvarh	kvarh	8.8.(1 - 8)	TOU	-	1 - 8
1 - 8 kVAh 1	kVAh	D.8.(1 - 8)	TOU	-	1 - 8
1 - 8 kVAh 2	kVAh	E.8.(1 - 8)	TOU	-	1 - 8
1 - 8 CD 1	**	A.8.(1 - 8)	TOU	-	1 - 8
1 - 8 CD 2	**	B.8.(1 - 8)	TOU	-	1 - 8

External Registers

Register Set 1 (1-4)	-	User selectable	Cum	-	S1 - (1 - 4)
Register Set 2 (1-4)	-	User selectable	Cum	-	S2 - (1 - 4)
Register Set 3 (1-4)	-	User selectable	Cum	-	S3 - (1 - 4)

Security

Program Event Count	-	C.2.0	-	4	1
Program Event Time	-	C.2.0	-	4	1
Program Event Date	-	C.2.0	-	4	1
CT Ratio Change Count	-	C.72.0	-	4	2
CT Ratio Change Time	-	C.72.0	-	4	2
CT Ratio Change Date	-	C.72.0	-	4	2
Phase Fail Event Count	-	C.54.0	-	4	3
Phase Fail Event Time	-	C.54.0	-	4	3
Phase Fail Event Date	-	C.54.0	-	4	3
Power Fail Event Count	-	C.7.0	-	4	4
Power Fail Event Time	-	C.7.0	-	4	4
Power Fail Event Date	-	C.7.0	-	4	4
Rev Run Event Count	-	C.53.0	-	4	5
Rev Run Event Time	-	C.53.0	-	4	5
Rev Run Event Date	-	C.53.0	-	4	5
End Billing Count	-	0.1.0	-	4	7
End Billing Time	-	0.9.6	-	4	7
End Billing Date	-	0.9.7	-	4	7
Main Cov RemCount	-	C.70.0	-	4	8
Main Cov Remove Time	-	C.70.0	-	4	8
Main Cov Remove Date	-	C.70.0	-	4	8
Term Cov Rem Count	-	C.71.0	-	4	9
Term Cov Remove Time	-	C.71.0	-	4	9
Term Cov Remove Date	-	C.71.0	-	4	9
Est Battery Life Remain	-	C.6.0	-	4	10
In Service Hours	-	C.8.0	-	4	11
Active Tariff CRC	-	C.80.1	-	4	CrC1
Deferred Tariff CRC	-	C.80.4	-	4	CrC4
CT Ratio	-	0.4.2	-	4	Ct

EOB Events (All Meters)

Code (HEX)	Display
01	rESEt
02	rESEt
04	rESEt
08	rESEt
10	rESEt
20	rESEt
40	rESEt
80	rESEt

Meter Errors

Power fail data	-	FF 0040	Error 0040
Period backup data error	-	FF 0080	Error 0080
ROM checksum error	-	FF 0100	Error 0100
I ² C Bus error	-	FF 0200	Error 0200
Internal battery life exceeded	-	FF 0400	Error 0400
Internal battery fail	-	FF 0800	Error 0800

Display Table (continued)

Description	Units Note 1**	OBIS Display Code	English Display		
			Identifier	Chevron	Index
Historical (Most recent only)					
Total Import kWh	kWh	1.8.0.1	CUM	-	H1
Total Export kWh	kWh	2.8.0.1	CUM	-	H1
Q1 kvarh	kvarh	5.8.0.1	CUM	-	H1
Q2 kvarh	kvarh	6.8.0.1	CUM	-	H1
Q3 kvarh	kvarh	7.8.0.1	CUM	-	H1
Q4 kvarh	kvarh	8.8.0.1	CUM	-	H1
Import kVAh	kVAh	D.8.0.1	CUM	-	H1
Export kVAh	kVAh	E.8.0.1	CUM	-	H1
Total Import kWh Phase A *	kW	21.8.0.1	CUM	1	H1 A
kWh Phase B *	kW	41.8.0.1	CUM	1	H1 B
kWh Phase C *	kW	61.8.0.1	CUM	1	H1 C
Total Export kWh Phase A *	kW	21.8.0.1	CUM	2	H1 A
kWh Phase B *	kW	41.8.0.1	CUM	2	H1 B
kWh Phase C *	kW	61.8.0.1	CUM	2	H1 C
Customer Defined 1	**	A.8.0.1	CUM	-	H1
Customer Defined 2	**	B.8.0.1	CUM	-	H1

Historical MD's					
1 - 4 Import kW	kW	1.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Import Time	-	1.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Import Date	-	1.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Export kW	kW	2.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Export Time	-	2.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Export Date	-	2.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q1 kvar	kvar	5.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q1 Time	-	5.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q1 Date	-	5.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q2 kvar	kvar	6.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q2 Time	-	6.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q2 Date	-	6.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q3 kvar	kvar	7.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q3 Time	-	7.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q3 Date	-	7.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q4 kvar	kvar	8.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q4 Time	-	8.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 Q4 Date	-	8.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 kVA 1	kVA	D.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 kVA 1 Time	-	D.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 kVA 1 Date	-	D.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 kVA 2	kVA	E.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 kVA 2 Time	-	E.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 kVA 2 Date	-	E.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 CD 1	**	A.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 CD 1 Time	**	A.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 CD 1 Date	**	A.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 CD 2	**	B.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 CD 2 Time	**	B.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)
1 - 4 CD 2 Date	**	B.6.(1 - 4).1	MAX DEM	-	H1 (1 - 4)

Historical Registers					
CUM MD 1 - 4 Import kW	kW	1.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD 1 - 4 Export kW	kW	2.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD Q1 1 - 4 kvar	kvar	5.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD Q2 1 - 4 kvar	kvar	6.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD Q3 1 - 4 kvar	kvar	7.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD Q4 1 - 4 kvar	kvar	8.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD kVA 1 1 - 4 kVA	kVA	D.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD kVA 2 1 - 4 kVA	kVA	E.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD CD 1 1 - 4	**	A.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
CUM MD CD 2 1 - 4	**	B.2.(1 - 4).1	CUM MAX DEM	-	H1 (1 - 4)
TOU 1 - 8 Import kWh	kWh	1.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 Export kWh	kWh	2.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 Q1 kvarh	kvarh	5.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 Q2 kvarh	kvarh	6.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 Q3 kvarh	kvarh	7.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 Q4 kvarh	kvarh	8.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 kVAh 1	kVAh	D.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 kVAh 2	kVAh	E.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 CD 1	**	A.8.(1 - 8).1	TOU	-	H1 (1 - 8)
TOU 1 - 8 CD 2	**	B.8.(1 - 8).1	TOU	-	H1 (1 - 8)
Rev Run Count	-	C.53.0.1	-	4	H1 5
Phase Fail Count	-	C.54.0.1	-	4	H1 3
Power Fail Count	-	C.7.0.1	-	4	H1 4
Program Count	-	C.2.0.1	-	4	H1 1
CT Ratio Change Count	-	C.72.0.1	-	4	H1 2
Main Cover Remove Count	-	C.70.0.1	-	4	H1 8
Term Cover Remove Count	-	C.71.0.1	-	4	H1 9
End Billing Count	-	0.1.0.1	-	4	H1 7
In Service Hours	-	C.8.0.1	-	4	H1 11
Estimated Battery Life	-	C.6.0.1	-	4	H1 10

Display Table (continued)

Description	Units Note 1**	OBIS Display Code	English Display		
			Identifier	Chevron	Index
Instrumentation					
Volts Phase A	V	32.7.0	-	-	Ins A
Volts Phase B	V	52.7.0	-	-	Ins B
Volts Phase C	V	72.7.0	-	-	Ins C
Current Phase A	A	31.7.0	-	-	Ins A
Current Phase B	A	51.7.0	-	-	Ins B
Current Phase C	A	71.7.0	-	-	Ins C
Watts Phase A	kW	21.7.0	-	-	Ins A
Watts Phase B	kW	41.7.0	-	-	Ins B
Watts Phase C	kW	61.7.0	-	-	Ins C
Watts Phase System Import	kW	1.7.0	-	-	Ins
Watts Phase System Export	kW	2.7.0	-	-	Ins
Phase Angle Phase A	-	81.7.4	-	-	Ins A
Phase Angle Phase B	-	81.7.15	-	-	Ins B
Phase Angle Phase C	-	81.7.26	-	-	Ins C
Phase Rotation	-	C.90.0	-	-	Ins
Power Factor Phase A	-	33.7.0	-	-	Ins A
Power Factor Phase B	-	53.7.0	-	-	Ins B
Power Factor Phase C	-	73.7.0	-	-	Ins C
PF Phase System	-	14.7.0	-	-	Ins
Frequency Phase A	-	34.7.0	-	-	Ins A
Frequency Phase B	-	54.7.0	-	-	Ins B
Frequency Phase C	-	74.7.0	-	-	Ins C

Note 1 - ** Units depend on register selected

* Available for Model Code Feature Set F only

METER MODEM

Your A1120/40 Meter may be fitted with a modem which will allow your Service Provider to access the meter remotely via the GSM Network.

The modem may be fitted under the meter terminal cover and therefore can only be accessed by your Service Provider.

TECHNICAL DATA

Current: Standard Range (direct connected)	20 - 100A, 10 - 100A
Extended Range (direct connected)	5 - 100A
Standard Range (CT operated)	1 - 2A, 5 - 10A
Extended Range (CT operated)	1 - 10A
Frequency	50 or 60Hz
Reference Voltage	220V - 240V (L - N) 220V - 240V (L - L) 105V - 127V (L - N) 105V - 127V (L - L)
Voltage Operating range	±20%
System Connection - 2 element meter	3 phase 3 wire
- 3 element meter	3 phase 4 wire 2 phases of 3 phase 4 wire 2 phase 3 wire 1 phase 3 wire 1 phase 2 wire
Display	9.8mm characters, high contrast, wide viewing angle
Meter Constant (pulsing LED output)	1,000 p/kWh (kvarh) Direct connected 10,000p/kWh (kvarh) CT Operated Approximately 6ms Pulse width
Product Life	15 years
Certified Life	10 years
Maximum Dimensions	233mm (High) x 174 mm (Wide) x 50mm (Deep)
Weight	904 grams
Accuracy Class kWh	EN 62053-21/22 - Class 0.5s, 1 or 2
kWh	EC Directive 2004/22/EC (MID) - Class A, B or C
kvar	EN 62053-23 - Class 2 or Class 3

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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