

## A1140 Mid-Range Meter

Programmable Multi-Function Polyphase Meter for commercial and industrial applications

The A1140 electricity meter from Elster is a world leading technology, high quality, reliable and robust product that is available ex-stock supported with technical advice and training from Elster Solutions.

The meter complies with the latest national and international metering standards. Elster Solutions (Pty) Ltd is accredited to IEC 17025:2005 to provide individual meter accuracy verification certificates when requested.

The A1140 provides extensive measurement and tariff capabilities for use in both Industrial and Commercial CT and direct connected metering applications. The A1140 can operate as a stand alone or as part of a comprehensive AMR/AMI metering system via a variety of communication modules. Batteries for Clock & Calendar back up never need to be changed as they will provide support 'on the shelf' for the meters design life.

Elster support software for programming, configuration and reading with a site installation verification application is available.



## Innovative Metering Solutions...

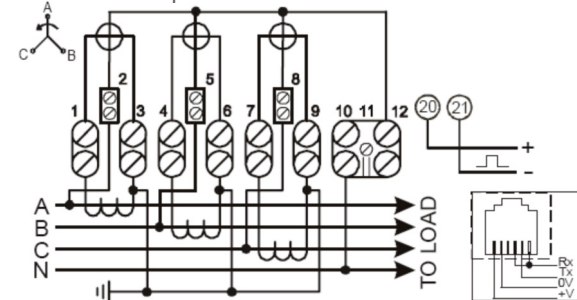
### Features

- 5A CT Operated & 100A Direct Connect variants
- kWh, kvarh, KVA four quadrant measurement
- 8 Time of Use and 4 Maximum Demand tariffs
- LCD Display
- Instrumentation displays
- Accuracy class 0.5 for CT, 1.0 for 100A
- 300 days Load Profile Data
- During power down clock & calendar battery back up for Design Life
- Compact & High Security Cover Design
- Inbuilt RJ12 socket for RS232 Interface
- Multi-drop capable (upto 32 meters on RS485 bus)
- 2 independent kVA registers
- 1 of Relay Pulse Output rated 230V AC/DC, 100mA
- Data Stream Mode for rapid data transfer
- SMARTset Programming software
- Supporting AMI/AMR Solutions/Packages
- Main Cover removal tamper detection
- Terminal Cover removal tamper detection
- 15 Year Design Life
- Independent per phase kWh recording and display

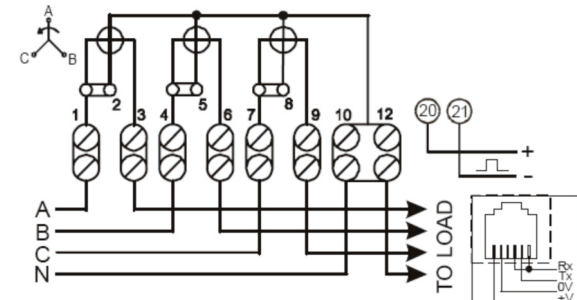
### Communication Devices

- GSM/GPRS Modem
- Ethernet
- Modbus Converter
- RS485 BusBox Module
- Optical Flag Probe
- Wireless RF Module
- Ongoing Developments - contact Elster

### 5-6A CT Operated



### 20-100A Direct Connected



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## A1140 Measurement Provided

Import/Export (Wh),  
Q1, Q2, Q3, Q4 (varh),  
Import/Export (VAh)

## System Connections

3 Element	3 phase 4 wire 2 phases of a 3 phase 4 wire 2 phase 3 wire 1 phase 3 wire
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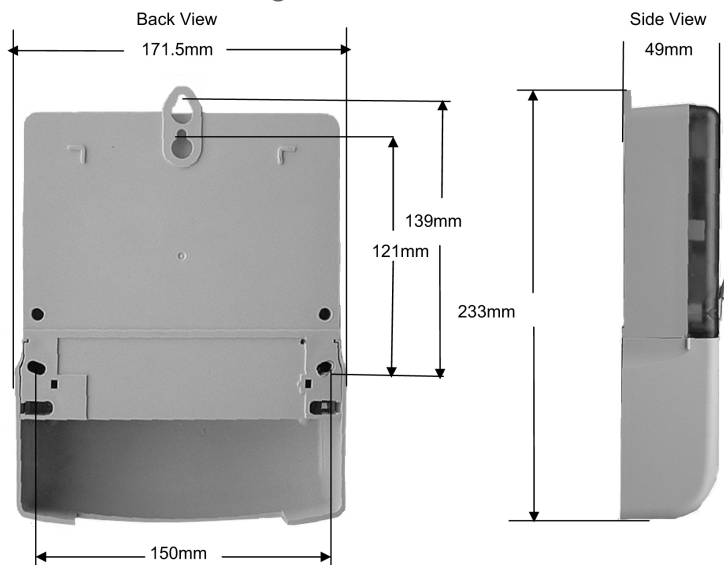
## Technical Data

Current Range	Direct connected 20 – 100A CT operated 5 – 6A
Voltage Range	230V (L-N) 400V (L-L)
Frequency	50Hz
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
Baud Rates	Up to 9600 Baud
Certified Product Life	10 years
Temperature	-40° to + 55° C (operational range) -40° to + 85° C (storage)
Humidity	Annual Mean 75% (for 30 days spread over one year, 95%)
Pulse Width	Programmable from 10 to 250 mS
Pulse Weight	Programmable from 1, 2, 4, 5, 10, 20, 25, 40, 50, 100 Wh
Weight	940 grams
Specifications	kWh Class 0.5 IEC 62053:21 5-6A CT Operated kvarh Class 1.0 or 2.0 IEC 62053:23
Case	IP53 to IEC 60529:1989

## Optional Module Housing

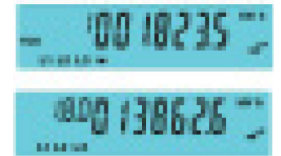
A housing that supports a range of communications modules can be fitted beneath the terminal cover.

## Dimensions and Fixing Centres



## Display

The A1140 can be configured by the customer to display English characters or OBIS identification codes.



An optional battery can support the display during power outages.

## Communications

Local: IEC 62056-21  
Remote: Serial Data Port

Fast data collection of cumulative registers, historical data and load profiling using Data Stream Mode.



## Tariff Structure

- 8 Time-of-use (TOU) registers
- 4 Maximum demand registers
- 48 Switching times
- 6 Seasons
- 12 Change of season dates
- 32 Exclusion dates
- 13 End of billing dates
- Independent day control
- Daylight saving
- Deferred tariff

## Data Storage (A1140)

300 days of half hour data available when one channel selected, using a programmable integration period for up to four selectable channels of load profile for any measured quantity.

## Security

The A1140 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. Recordable security features are illustrated below.