A1120/40
Programmable Electronic Polyphase Meter

Innovative Metering Solutions...

Features

- Whole current or CT operated
- Accuracy – kWh Class 0.5s (CT only), 1 or 2
  kWh Class C (CT only), A or B, EC Directive 2004/22/EC [MID]
  kvarh Class 2 or Class 3
- kWh import/export, kvarh and kVA
- Comprehensive tariff structure
- Instrumentation
- Large digit (9.8mm) display
- IEC 62056-21 communications port
- Internal clock with battery back-up
- 10 year product life
- Extensive security data
- High security, compact design
- 12kV impulse withstand
- Double insulated, glass filled polycarbonate case to DIN 43857 Part 2 and Part 4 (except for top fixing centres)
- IP53 in accordance with IEC 60529
- Windows™ 'Power Master Unit' programming and reading software

Options

- CT or Direct Connected
- Serial communications
- Load profiling (A1140)
- Range of communications media (GSM, PSTN)
- Multi-drop for up to 10 meters
- English or OBIS display characters
- SO Pulsed output (IEC 62053-31)
- Terminal cover removal detection switch
- Main cover removal detection or CT ratio programming switch
- Terminal cover with cut-out
- External battery for viewing display and reading register data during power outages

The A1120/40 offers highly secure tariff metering with a variant to suit any direct connected or CT, commercial or light industrial application. The A1140 offers additional load profiling.

The Liquid Crystal Display has large characters that can be viewed from a wide angle. Displayed information can be English characters or OBIS codes.

Communications are provided via the optical port and are supported by data stream mode, allowing fast reading of meter data. The A1140 permits up to 90 days of load profile data to be collected in less than 30 seconds. The RJ11 socket provides optional serial communications allowing remote access to the same data as the optical port. This port can be multi-dropped, allowing access to up to 10 meters in a single installation. A further option allows a pulsed output to be transmitted via the meters auxiliary terminals.

The meter is available in a number of variants that measure active energy, four quadrant reactive energy and kVA.
Two customer defined registers can be used to summate pulses from like unit registers. A comprehensive range of instrumentation quantities are available that can be included in the display sequence.

The meter offers extensive security data and the option of main cover and terminal cover removal detection.
As an alternative option, the main cover switch can be used to allow the CT ratio to be changed. An optional module carrier designed to house a range of modules fits beneath the terminal cover. Windows™ 'Power Master Unit' software programs or reads the meter data.

Meters can be supplied to meet EN 62053-21/22, kWh accuracy Class 0.5s, 1 or 2 (EN 50470 [MID], kWh Class A, B or C). kvarh is to EN 62053-23 Class 1 or 2. The meter has an ingress protection rating of IP53 to IEC 60529.

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Optional Module Housing

A module chosen for the required application can be sealed in the housing beneath the terminal cover, providing a high degree of protection from fraud or tampering. It is simple to install and securely locks into place.

Display

The A1120 can be configured by the customer to display English characters or OBIS identification codes.

An optional battery can support the display during power outages.

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)

Up to 300 days of half hour data for one channel

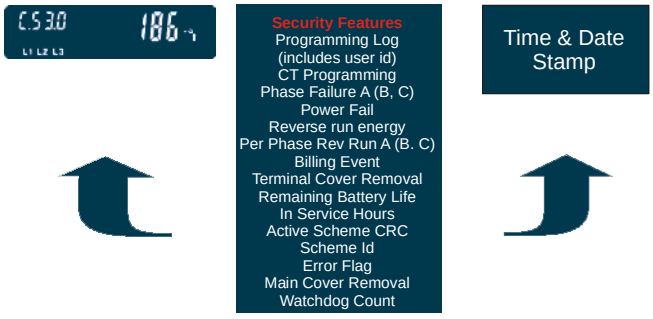
Programmable integration period

Four channels of load profile storage for any measured quantity

Instrumentation values

Security

The meter 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.



Meter Variants

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

Communications

Local: IEC 62056-21 Remote: Optional Serial Data Port

Fast data collection of cumulative registers, historical data and load profiling (A1140) using data stream mode

System Connections

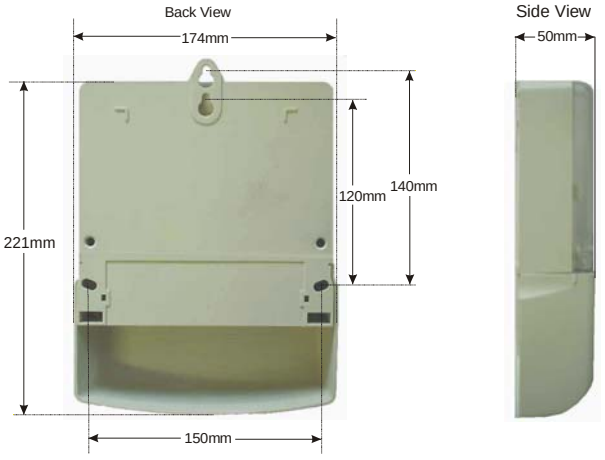
3 Element	3 phase, 4 wire* 2 phases of a 3 phase, 4 wire 2 phase, 3 wire 1 phase, 3 wire 1 phase, 2 wire
2 Element	3 phase, 3 wire*

*** Variant for Class 0.5s, CT operated meter**

Technical Data

Current Range	Direct connected 20-100A, 10-100A, 5-100A CT operated 5-10A*, 1-10A, 1-2A
Voltage Range	220-240V* (L-N) or 220-240V (L-L) 105-127V (L-N) or 105-127V (L-L)
Frequency	50 or 60Hz
Burden	
Voltage Circuits (230V)	0.8W, 1.3VA burden/phase [max]
Current Circuits (DC)	4VA @ 100A/phase [max]
Current Circuits (CT)	0.22VA per phase
Insulation	4kV RMS 50Hz
Impulse Withstand	12kV 1.2/50µs 40 ohm source
Display LCD	9.8 x 3.5mm characters High contrast, wide angle
Baud Rates	2400, 4800 or 9600
Certified Product Life	10 years
Temperature	-25° to + 65° C (Operational range) -25° to + 85° C (Storage)
Humidity	Annual mean 75% (95% for 30 days spread over one year)
Pulse Width	10 to 250ms
Wh/pulse	1, 2, 4, 5, 10, 20, 25, 40, 50, 100
Weight	940 grams
Specifications	kWh Class 0.5s, 1 or 2 EN 62053-21/22 kWh Class A, B or C, EN 50470 (MID) kvarh Class 2 or 3 EN 62053-23
Case	IP53 to IEC 60529

Dimensions and Fixing Centres



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