Honeywell | Smart Energy

A1160 Mid-Range Meter

Programmable Multi-Function Polyphase Meter for Commercial and Industrial applications up to 160A

The A1160 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 A1160 provides extensive measurement and tariff capabilities for use in Commercial direct connected metering applications. The A1160 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.

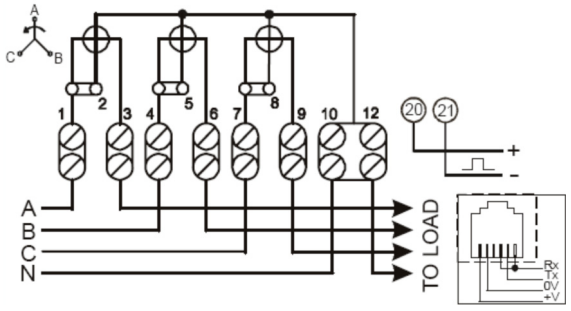
Elster support software for programming, configuration and reading with a site installation verification application is available.

Innovative Metering Solutions...

Features

- 20 - 160A Direct Connect variants
- kWh, kvarh, KVA four quadrant measurement
- 8 Time of Use and 4 Maximum Demand tariffs
- LCD Display
- Instrumentation displays
- Accuracy class 1.0 for 160A
- 150 days Load Profile Data, 150 days instrumentation 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
- Net consumption register for renewable energy applications

20-160A Direct Connected



Options

- IEC 17025:2005 accuracy verification certificate and test report
- Protocol available under Licence
- Short Terminal Cover
- OBIS Display Configurable
- Read Without Power
- Register Zeroing Service Available
- Training Courses for meter, software and communications at Elster

Communication Devices

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

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A1160 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 1 phase of a 3 phase 4 wire

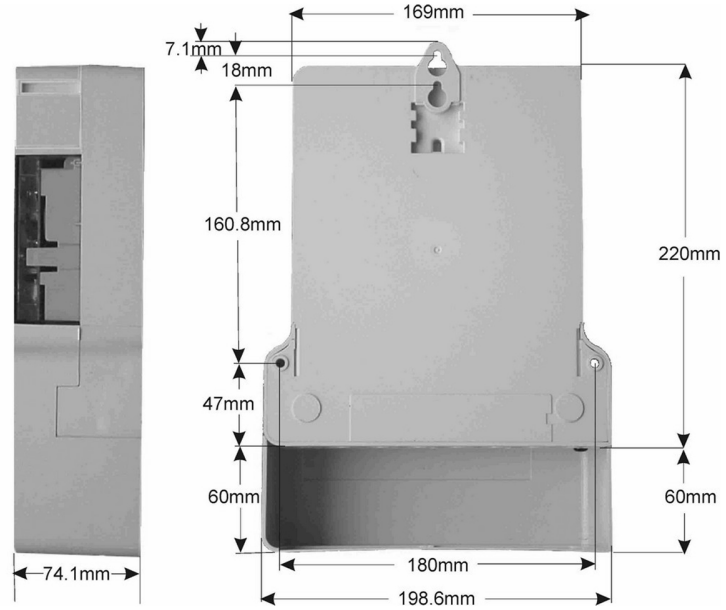
Technical Data

Current Range Voltage Range Frequency	Direct connected 20 – 160A 230V (L-N) 400V (L-L) 50Hz
Burden Voltage Circuits (230V) Currect Circuits	 1.15W 2.8VA 0.36VA (@40A)
Insulation Impulse withstand	4kV RMS 50Hz 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 Humidity	-40° to + 55° C (operational range) -40° to + 85° C (storage) Annual Mean 75% (for 30 days spread over one year, 95%
Pulse Width Pulse Weight	10 to 250ms 1, 2, 4, 5, 10, 20, 25, 40, 50, 100
Weight	1570 grams
Specifications Case	kvarh Class 1.0 or 2.0 IEC 62053:23 IP53 to IEC 60529:1989

Optional Module Housing

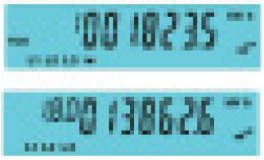
A housing that supports a range of communications modules can be fitted beneath the terminal cover.

Dimensions and Fixing Centres



Display

The A1160 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 (A1160)

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 A1160 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.

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