A1700

Commercial and Industrial

Direct Connect & CT Metering

The A1700 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 A1700 provides extensive measurement and tariff capabilities for use in both Industrial and Commercial CT/VT, CT and direct connected metering applications. The A1700 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.

Features

- 5A or 1A CT & CT/VT operated and 100A Direct variants
- kWh, kvarh, KVA four quadrant measurement
- 32 Time of Use and 8 Maximum Demand tariffs
- 2 line user configurable dot matrix display
- Instrumentation displays & monitoring
- OBIS Configurable Display
- Accuracy class 0.2 or 0.5s for CT, 1.0 for 100A
- 450 days Load with 370 days Instrumentation profiling
- During power down clock & calendar battery back up for Design Life
- 2 independent kVA registers
- 5 co-incident demand value
- Voltage imbalance detection
- Summation of upto 5 input values
- 2 module slots for extended funcionality
- Multi-drop capable (up to 32 meters on RS485 bus)
- 4 Relay Pulse Outputs rated 230V AC/DC, 100mA
- Data Stream Mode for rapid data transfer
- Power Master Unit Programming Software
- Supporting AMI/AMR Solutions/Packages
- 15 Year Design Life

Communication Devices

- GSM/GPRS Modem
- Ethernet
- Modbus Converter
- RS232 & RS485 Modules
- Optical Flag Probe
- Ongoing Developments - contact Elster

Measured Quantities

kWh total import/export
kvarh Q1, Q2, Q3, Q4
kVAh (2 calculated values)
3 customer defined registers -
summation of up to 5 values
4 inputs for external meters (if fitted)

Options

- IEC 17025:2005 accuracy verification certificate and test report
- 4 Pulse Output Module
- 4 Pulse Input Module
- Protocol Available under Licence
- Tranformer Loss Compensation
- Short Terminal Cover
- Backlight Display
- Read Without Power
- Auxiliary Supply Interface (from 50 to 230 V AC)
- Register Zeroing Service Available
- Terminal Cover Removal Tamper Detection
- Training Courses for meter, software and communications at Elster

elster

Tariff Structure

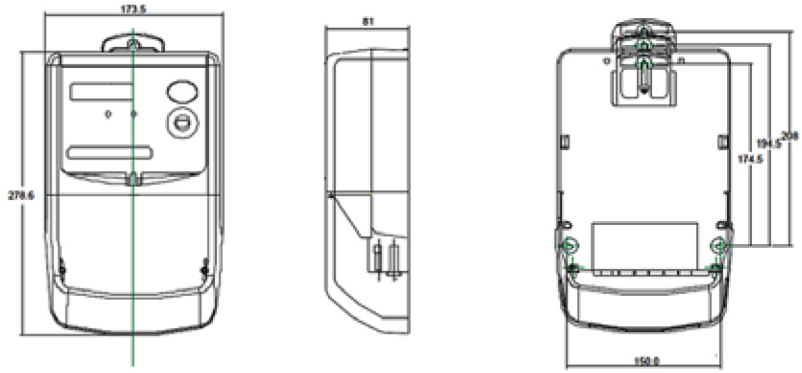
32 Time of use registers
8 Maximum demand registers (block or sliding)
5 Co-incident demands
2 Sliding demands
12 Seasons
24 Season changeover dates
96 Switching times
64 Exclusion dates
The above may vary according to firmware version

Programmable deferred tariff and display

Technical Data

Current Range Voltage Range Frequency	CT operated – 5-6A, 5-10A, 1-2A, 1-1.2A Direct connected – 10-100A (widest range) 57.5 – 240V (3 phase 4 wire) 50 Hz
Burden Voltage Circuits (230V) Current Circuits	 Single element – 1.92W, 4.17VA Two/three element – 1.12W, 2.45VA CT operated – 0.12VA @ 5A/phase, 0.02VA @ 1A/phase Direct connected – 0.2VA @ 100A/phase
Insulation Impulse Withstand	4kV RMS 50Hz 12kV 1.2/50µS 50ohm source
Display	2 line, 16 character dot matrix Liquid crystal display 8mm digits
Baud Rates	1200, 2400, 4800, 9600
Product Life	15 years
Certified Product Life	10 years (by Ofgem)
Temperature Humidity	-20° to + 55° C (Operational range) -25° to + 70° C (Storage) Annual Mean 75% (for 30 days spread over one year, 95%)
Pulse Width / Value	Programmable
Dimensions	297mm (high) x 170mm (wide) x 81mm (deep)
Weight	1500 grams
Specifications Case	IEC 62052-11 and IEC 62053-21, 022, -23 IP53 to IEC 60529:1989

Dimensions and Fixing Centre



Data Storage

Programmable integration period
Load profile storage or instrumentation
Demand & instrumentation integration periods independently defined.

Number of days based on 30min period, 1 channel

Measured load profile	Instrumentation profile
900	0
450	0
450	370
0	450

Up to 36 sets of historical data

Fully customer defined, multilingual

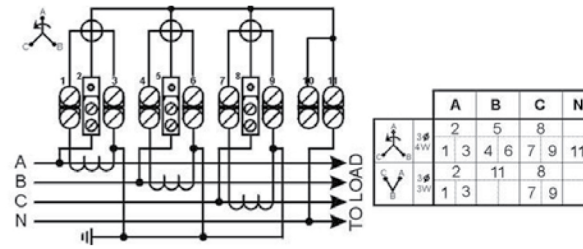
Communications

Local: IEC 62056-21 (formerly IEC 61107)
Remote: Interchangeable modules (RS232, RS485 or customer specific)

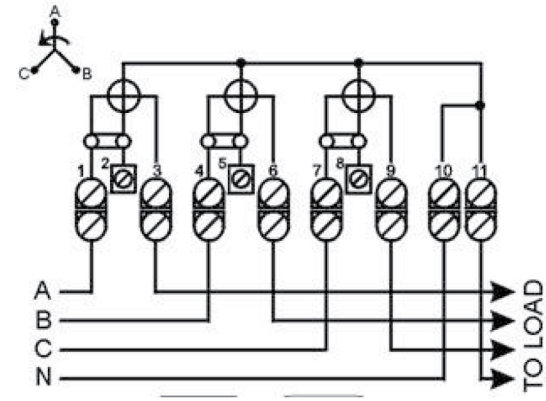
Case

Sealed flip-up lid:
• Conceals utility/reset pushbutton
• Provides for customers own information to be securely added to the nameplate
• Allows visual identification of modules fitted
Options
• 9.5mm technical block (optional)

CT Operated.



Direct Connect



elster