# A1700 Meter

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 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 functionality
• Multi-drop capable (upto 32 meters on RS485 bus)
• 4 Pulse Outputs
• Data Stream Mode for rapid data transfer
• SMARTset 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
• Wireless RF Module
• 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
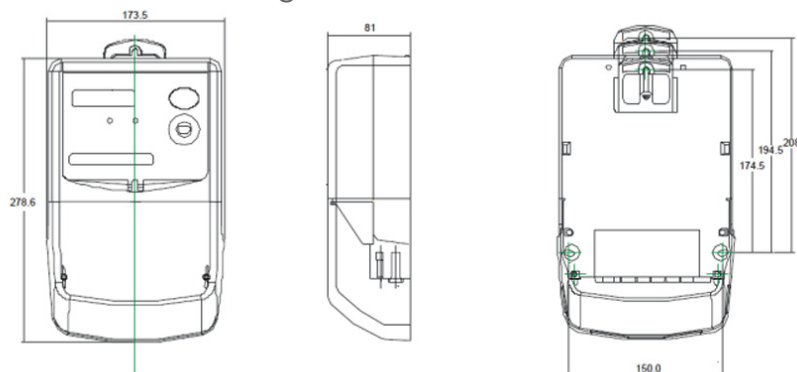
# A1700 Meter

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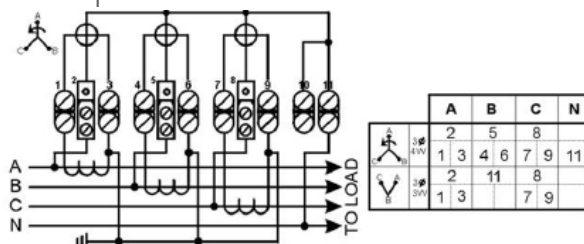           specific)

## 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
• ANSI communications port (optional)
• 9.5mm terminal block (optional)

## CT Operated.



## Direct Connect

**Honeywell**