

AS300P

Single Phase Smart Meter



Applications

Residential

Brief Description

The AS300P forms an integral part of Elster's AMI solution that manages data from Smart Electricity, Gas and Water meters. MDMS and Head End applications are available to meet individual utility's requirements. A range of communications solutions can be deployed to ensure secure and reliable communications.

The meter offers a modular solution for both WAN/LAN and HAN communications infrastructures. This modularity ensures a future proof solution for the utility by allowing for a change of communications technology. Elster offer a variety of solutions to match market requirements including GSM/GPRS; PLC (SFSK and OFDM); LP RF for WAN/LAN communications and a range of HAN technologies are available including MB and ZigBee SEP. The AS300P offers a highly flexible platform that should match current and anticipated market needs. The product is focused on the UK requirements and therefore matches the existing requirements of advanced metering. The firmware is downloadable so any enhancements could be introduced at a future date. The metrological code cannot be updated.

The meter design offers high security to the latest industry standards. Security features include main and terminal cover removal and magnetic field detection monitoring. Extensive alarm and event logs with time and date stamps can be read via local or remote communications.

Smart Grid applications in the future will greatly benefit from the existence of Smart Meters installed on the networks. The AS300P has been designed to anticipate this requirement of smart grids. The meter offers comprehensive power quality monitoring and instrumentation profiling. By utilising this information, utilities/network operators can gain a detailed understanding of their network performance.

Features

- Flexible modular communications
- Full measurement capability
 - Import/Export kWh
 - Q1 - Q4 kvarh
- 3 Concurrent tariffs
- 3 Line dot matrix display
- Menu driven display
- 2 Push buttons
- DLMS protocol
- Optical communications port
- Firmware download
- Load profiling (hourly, daily)
- Instrumentation
- Instrumentation profiling
- Power quality monitoring
- Smart grid capability
- Integrated contactor
- Main & terminal cover removal monitoring
- Magnetic field detection monitoring
- Extensive security data
- External meter reading storage
- Historic billing information
- Daily information
- Electronic output
- RS485 – optional



Technical Data

Current: IEC Ratings MID/EN Rating Frequency Reference Voltage Voltage Operating Range	Ib - I _{max} = 5 - 100A, 10 - 100A, 20 - 100A I _{min} - I _{tr} (I _{max}) = 1.0 - 20(100)A, 0.5 10(100)A, 0.25 - 5(100)A 50 Hz 230V a.c. ±20%
Short Circuit Current Insulation Voltage Maximum Neutral Fault Voltage Maximum Phase Consumption (Voltage) Maximum Phase Consumption (Current) Impulse Withstand - Live to Neutral - Live and Auxiliary Outputs	Short circuit current withstand: 30 I _{max} 4000 Vac 1 min 1.9 U _n (BS EN 50470-3) ≤ 2W ≤ 10VA (BS EN 50470-3) ≤ 2.5VA (BS EN 50470-3) at I _{ref} 12kV (40 ohm source) 6kV (40 ohm source)
Display	High contrast, 2 or 3 line display. Wide viewing angle
Meter Constant (pulsing LED output) Pulse Width	1000, 2000 or 4000 (Default) pulses/kWh (kvarh) - Default (Wavelength 880nm) 5 ms
Auxiliary Relay	230V 100mA, a.c
Product Design Life Service Design Life	20 years 15 years
Temperature Humidity	Specified Operational range: -10° C to +55° C Limit Operating Range: -25° C to +70° C Storage Range: -25° C to +70° C Non - Condensing Annual Mean 75% (95% for 30 days spread over one year)
Dimensions - Long terminal cover - Short terminal cover Weight	219.4mm (High) x 131.90mm (Wide) x 65mm (Deep) 170mm (High) x 131.90mm (Wide) x 65mm (Deep) 781g - Long terminal cover, no module 853g - Long terminal cover, AM100 module 730g - Short terminal cover, no module 801g - Short terminal cover, AM100 module
Accuracy Class kWh kvarh	EC Directive 2004/22/EC (MID) - Class A or Class B. (EN 50470-3) IEC 62053-21, Class 1 or Class 2 Class 2 or Class 3 - EN 62053-23
Case	BS 7856:1996 IP53 to IEC 60529:1989
Terminals Main Auxiliary	8.2 mm cable entry, M6 (x2) Terminal Screws - max torque 2.8 N m 2.5 mm bores, M3 Terminal Screws - max torque 0.45 N m

