



Stephen P. Wales Ltd

The Old Brewery Works, Lr Ellacombe Church Rd,
Torquay. UK. TQ1 1JH

Tel: 01803 295430 Fax: 01803 212819

email: sales@stephenwales.co.uk

Stephen P. Wales stock No. CRN100p



Single Phase kWh Meter with LCD Digital Display OFGEM APPROVED

The successful range of CRN100 meters from SPW Metering Systems provide a cost effective solution for one or two rate domestic applications. The new A100C meter is housed in an extremely compact case. To further enhance security, the main meter cover is permanently secured to the base during the manufacturing process. The meter also provides the choice of IrDA communications or optical IEC 62056-21 (formerly IEC 61107) communications.

The liquid crystal display has large (9.8mm), high contrast characters that can be viewed from a wide angle. Chevrons and multilingual legends on the nameplate identify the values being displayed. The energy registers can be configured for the required number of digits and for the position of the decimal point.

The CRN100 offers high security and detects many of the most commonly used tamper techniques. Security features of the meter include reverse run energy total and count; power fail and elapsed time count; hours in anti-creech; hours in Rate 1, Rate 2 and hours since last power up time. These are stored as security data and can be included as part of the display sequence and read via the optical communications ports.

Features

- Accuracy Class 2
- kWh import or kWh import/export
- 20 years certified life
- Large digit (9.8mm) multilingual display with chevron information indication
- Extensive security data
- Communications as standard
- 12kV impulse withstand
- High security, compact design (130mm Wide x 97mm High x 47mm Deep)
- BS double insulated, glass filled polycarbonate case
- Permanently fixed main cover
- IP53 in accordance with IEC 60529:1989

Options

- One or two rates controlled by external device
- IrDA communications or IEC 62056-21 (formerly IEC 61107) optical communications
- Auxiliary terminals configured for:
 - SO Pulse output (IEC 62053-31)
 - Serial data output (IrDA meter)
- A102C - kWh and kvarh energy measurement

Meters are supplied to meet accuracy Class 2 requirements. They are ofgem approved to EN62053-21:2003, have an ingress protection of IP53 to IEC 60529:1989 and comply with EMC standard EN 50081-1:1992.

Display



The liquid crystal display is programmable to meet a customer's requirements. A typical display for CRN100 meter showing kWh import is shown. The chevrons and index digit indicate the information being displayed. The nameplate information can be printed in any language.

Security Data

The CRN100 offers many useful security features. The meter stores all registration and security data to non-volatile memory. This data can be shown on the display. All data is retained for the life of the meter. Recordable security features are listed below.

- Reverse run event count
- Reverse run energy total
- Reverse run indication on LCD
- Power fail count
- Elapsed time count
- Time in rate 1 and rate 2
- Hours since last power-up
- Hours spent in anti-creep

As an option the kWh register can increment in power flow insensitive mode i.e. it increments regardless of energy flow direction.

Communications



Optical Port



IrDA Port

The CRN100 has the option of IrDA (Infrared Data Association) data stream communications or optical IEC 62056-21 (formerly IEC 61107) two way communications. The table below shows the functions available for each type of communications.

| | Configure Meter | Register, Security and Status Data Via Optical Port | Register, Security and Status Data Via Auxiliary Terminals |
|-----------|-----------------|---|--|
| IEC 62056 | Yes | Yes | No |
| IrDA | No | Yes | Yes |

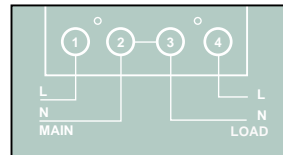
Pulse Output

An opto-isolated pulse output can provide the basis for an energy management system or AMR. These pulses are output via the auxiliary terminals.

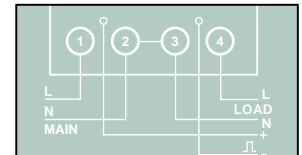
Technical Data

| | |
|------------------------|--|
| Current Range | 20-100A |
| Voltage Range | 210-250V, 105-127V |
| Frequency | 50Hz |
| System Connection | 1 phase, 2 wire |
| Burden (230V) | 0.66W, 8.5VA (Capacitive burden) |
| Insulation | 4kV RMS 50Hz |
| Impulse Withstand | 12kV 1.2/50µs 40ohm source |
| Display | 9.8mm x 3.5mm characters, High contrast, wide angle |
| IrDA Baud Rates | 2400, 4800 or 9600 (Without serial port) |
| IEC 62056-21 Rate | 9600 |
| Serial Baud Rates | 2400 or 4800 |
| Certified Product Life | 20 years (OFGEM model) |
| Temperature | -20° to +55°C (Operational range) -25° to +85°C (Storage) |
| Humidity | Annual mean 75% (For 30 days spread over one year, 95%) |
| Pulse Output | 100ms pulse 100p/kWh (=10Wh/pulse) (Other pulse rates, durations available) |
| Weight | 345 grams |
| Specifications | kWh Class 2 EN 62053-21:2003 kvarh Class 2 or Class 3 En 62053-23 |
| Case | IP53 to IEC 60529:1989 |

Terminal Arrangements



Single Rate



Pulsed Output

Dimensions and Fixing Centres

