

Secure Liberty 100 Single Phase Electric Meter

Part Code	Name
SE201EL	Liberty 100 Single Phase Electric Meter, NB-IoT, Credit and PAYG Operation WITHOUT In Home Display Unit
SE202EL	Liberty 100 Single Phase Electric Meter, NB-IoT, Credit and PAYG Operation c/w In Home Display Unit



Secure has developed Liberty 100 single phase smart electricity meter to meet UK smart metering requirements. Liberty 100 has modular architecture for both WAN / HAN enabling multiple communications options to be deployed.

The communications module acts as hub for communication to head end system and to the in home display. The meter and communications hub are capable of remote firmware upgrade after installation to allow features and functionality to be changed. Liberty 100 supports both credit and Pay As You Go (PAYG) modes of operation.

Application	Features	Benefits
Smart electricity meter with integrated communication hub for domestic customers and small commercial premises in both credit and PAYG.	Four-quadrant measurement with import/export registration	Uses NB-IoT / Cat-M1 technology for reliable and scalable remote communication
Import and export metering for local generation	Time of use/complex tariffs and maximum demand	Credit and PAYG modes (meter maintains account and tariffs)
	Logging of multi parameter load survey, billing data, events including power outage and abnormalities	Keypad to enable local entry of Pay as You Go token if WAN not available
	Integrated contactor	Support Remote firmware upgrade (not metrology)
	Provides near real-time notification for critical events	Supports friendly credit hours and emergency credit for PAYG consumers
		Modular communication module allows multiple WAN and HAN options for different communication providers
		Easy to install and commission
		Remotely switchable between credit and PAYG modes
		Assists consumers in reducing energy consumption
		Improve billing cycle and accuracy through remote reading

Technical Specifications

Electrical

Connection type	Direct connected
Wiring configuration	Single phase, two wire
Voltage range	230 Vac (nom)
Current range	0.5-20 (100) A
Accuracy	Active energy MID class B, reactive energy class 2.0
Mains frequency	50 Hz ± 5%
Burden	Compliant with relevant standard

Compliance

Standards	MID / RED class B EN 50470-1,3; IEC62053-23
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Mechanical

Modular design	Field replaceable communication module
Dimensions (W x H x D)	140 x 178 x 64 ± 0.5 mm
Terminals	Tunnel type with 2 screws compliant to Bs7856
Weight	1 kg (approx.)
Enclosures	Flame retardant polycarbonate

Environmental

Ingress protection	IP 54
Insulation class	Protective class II
Temperature	-25 °C to +55 °C (operating), -25 °C to +70 °C (storage)
Humidity	95% non-condensing

Features

Firmware	Remote firmware upgrade with rollback
Tariff	Time of use (TOU) and complex (slab with TOU) supported Pending tariff structures supported
Load survey	13 months, 4 channels
Display	Backlit 10-character alphanumeric starburst display with icons for status
Keypad	12 way - 0-9, A, B for local entry of PAYG code and access to displays
PAYG functionality	Credit and PAYG modes (meter maintains account and tariffs) Display of current and historical consumption with cost of consumption data Emergency credit with optional load limiting Friendly credit (avoids disconnection during unsocial hours or weekends) Debt recovery
Security	AES128 encryption
Tamper detection	Removal of terminal cover, main meter cover, communications hub Excessive magnetic field

Communication

Local diagnostic port	Optical 1107 hardware-compatible port
Communication module options	NB-IoT / Cat-M1 WAN + ZigBee HAN Multi operator (roaming) SIMs supported



Customer
Billing
Services

Meter Data
Management

Billing Solutions

PAYG
Management

Online Account
Management

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