TITLE: PRODUCT AND SPECIFICATION MANUAL

1. Introduction

This is a meter with RS232 and wireless GSM communication using Cicada GSM module. It has various event alerting functions including kWh remote reading and logging, using remote management and tampering provides customers a convenient remote reading method, on the air top-up. This meter is favored by customers and manufacturers with the features of high accuracy, wide measuring range and competitive cost performance.

2. Tariff

Tariff is software adjustable by energy provider as desired for meter.

3. Communication

Meter support RS232/2G/3G GSM, baud-rate: 115000.

4. Measurement

Meter measures voltage, current, active power and voltage is displayed on the 16x2 LCD, accumulative power and top-up history is logged every 24 hours on the web-based software.

5. Mode

Meter has 2 operation modes:

1. On the air top-up.

2. STS token mode using keypad.

Over the air top-up

Over the air top-up is done via the web-based software available, with meter to be topped up pre-registered with a unique meter-id, the rest is handled between the software and firmware to top-up the corresponding meter whose meter-id is entered automatically.

STS operation

Enter 20-digit token via keypad available on meter, the token is generated from the website in event of network failure or malfunction.

6.   Technical Parameter

DESCRIPTION	SINGLE PHASE VALUE
Accuracy	**CLASS 1**
Voltage	

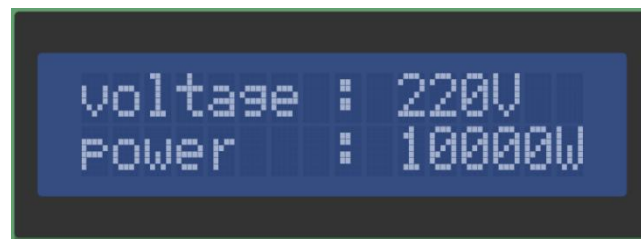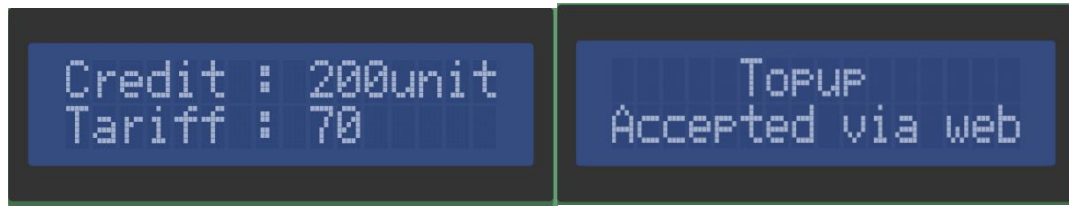|	
Reference voltage	240 V
Operating voltage range	70% - 120% Reference voltage
Current	5 (80A)
Frequency	50Hz
Temperature Operating range Limit range for storage and transport	- 25^{0}C to 70^0 C -40^{0}C to 100^{0}C
Power consumption Power consumption in voltage circuit(active) Power consumption in voltage circuit(apparent) Power consumption in current circuit	2W 10VA 1VA
Communication Interface	DLMS / COSEM Compliance (GPRS)First Electric web API
Dimension	18cm x 15cm
Display:	LCD 16x2

Indicator

1	Credit Indicator	Bi-color LED (red) Green LED light on when credit is in high level Red LED light on when credit is low Red LED blinks when credit has finished
2	Alarm indicator	The indicator blinks when event occur, event such as overload, low voltage, low credit or credit exhausted.

7. communication:

1. RS232 communication, used for local reading/monitoring.

2. GPRS communication, used for on the air top-up, remote monitoring and controlling.

8. Display of details on LCD

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Credit : 200unit        Topup
Tariff : 70             Accepted via web


Developed by            STS Token
First Electric          Accepted via key


                voltage : 220V
                Power   : 10000W
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9. Safety Instructions

Information for Your Own Safety

This manual does not contain all the safety measures for operation of this equipment (module, device) because special operating conditions, local code requirements or local regulations may necessitate further measures.

10. Qualified personnel

Installation and operation, assembling of this equipment described in this manual may only be performed by qualified personnel. Only people who have good knowledge on power/embedded system should assemble this equipment.