

# The Tiny

## Brief Description

The Tiny is a SINGLE PHASE kWh Electricity Meter. This is for domestic use and works on a pulse system. Small with a digital display - entry level meter.

## Order Codes

SC100 : Standard  
 SC100/P : with Pulsed Output  
 SC100/IE : with Import & Export facilities

## Voltage

Nominal Voltage UN	220-240V, 120V
Voltage Range	80 - 115% Un
Voltage Withstand Continuous	415V

## Frequency

Nominal Frequency	50/60Hz
Frequency Variation	± 2%

## Current

Base Current Direct Connection Ib	5, 10, 15, 20A
Current Max Imax	40, 60, 80, 100A
Starting Current EC	0.004Ib

## Measurement Accuracy

Max Measuring Range	20mA upto 100A
Measuring Accuracy	
Class 1 or 2	IEC 62053-21
Class 2 or 3	IEC 62053-23

## Measurement Behaviour

Starting Current IEC	0.4% of Ib
Max Measuring Range	20mA upto 100A

## Power Consumption

Voltage	< 5W
Current Circuit	< 4VA

## Environmental Influences

Temperature Test	IEC 62053-21/IEC62053-23
Temperature Range Operation	-10°C to + 45°C
Power Measurement Range	- 25°C to + 55°C
Storage	- 25°C to + 70°C

This complies with EN 62052-11 : 2003 section 6.1



## Shock Test

BS EN60068-2-27

## Temperature Coefficient

Range	-10°C to + 45°C
Typical Mean Value	± 0.015% per K
IEC 62053-21	
cosφ = 1 (from 0.1 Ib to Imax) per K	± 0.05%
cosφ = 0.5 (from 0.2 Ib to Imax) per K	± 0.06%
IEC 62053-23	
sin = 1 (from 0.1 Ib to Imax) per K	± 0.10%
sin = 0.5 (from 0.2 Ib to Imax) per K	± 0.15%
Impermeability to IEC 60529	IP51

## Electromagnetic Compatibility

Electrostatic Discharges to IEC 61000-4-2  
 Contact Discharges 8kV  
 Air Discharges 15 kW  
 Electromagnetic RF Fields to IEC 61000-4-3  
 80 Mhz to 2 Ghz at least 10 V/m  
 Radio Interference suppression to IEC/CISPR 22 Class B  
 Fast Transient Burst Test to IEC 61000-4-4

## With Basic Current Ib

For current and voltage circuits 4kV  
 For auxiliary circuits > 40V 4kV  
 With open current circuit for voltage and current circuits 4kV  
 Fast Transient Surge Test to IEC61000-4-5  
 Impulse Voltage 4 kV  
 Impedence of source 2Ω  
 Rise | Decay time of impulse voltage 1.2μs | 50μs  
 Rise | Decay time of impulse voltage 8μs | 50μs

### Insulation Strength

4.4kV at 50Hz for 80 seconds  
 Impulse Voltage Strength to IEC62053-11  
 Impulse Voltage 6 kV  
 Impedence of source 500Ω  
 Rise | Decay time of impulse voltage 1.2μs | 50μs

### Display

Characteristics Type : 7 Character  
 7 Segment LCD Digit Size : 8 x 3.5mm  
 Number of Digits : 6 x 2dpi

### Operating Behaviour

Voltage Interruptions (Power down)  
 Blocking of inputs and outputs Immediate  
 Standby Operation for 0.15s  
 Data Storage after 0.15s  
 Switch off after approx. 0.15s

Voltage Restoration (Power Up)  
 Function Standby < 5s (depending on duration of failure)  
 Detection of energy direction and phase voltage < 5s

### Power Supply Quality

The meter complies with EN63052-11 Section 7.1.1  
 Voltage range and 7.1.2 voltage dips and short interruptions

### Case Material

Base, top cover and terminal cover  
 Flame retardant and UV stabilised polycarbonate

### Weight and Dimensions

Weight : 304g  
 Width : 125mm  
 Height : 80mm  
 Depth : 36mm

### Terminal Details

Arrangement BS 5685  
 Size 8.3mm diameter

### Connections

Standard Layout and Dimensions

### Pulsed Output (where fitted)

Code SC100/P  
 Output : Transistor  
 Pulse : Voltage Free  
 Pulse Width : 100m/s  
 Measurement 1 pulse = 1 watt/hr 1000 pulses per kWh  
 No of pulses maximum per second @ 100 amps = 6.6

### Enclosures

Required when installation is external or have environmental influences



Viewing Window



Standard Enclosure

### Approvals

Quality Manufactured to ISO 9001:1994  
 OFGEM Approval Number: 986  
 Certified Life 20 years  
 Reference Standards IEC 62052-121 | IEC 62053-21 | IEC 62053-23