

Single Phase BS Standard Credit Meter
5235
Technical data



The 5235 is a whole current static electricity meter capable of measuring kWh in single and two rate variants.

Date: 05/12/08
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5235 Technical Specification

5235 Technical Specifications

General

Voltage

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

Frequency

Nominal Frequency	50/60Hz
Frequency Variation	+/- 2%

IEC-Specific Data

Current

Base Current	
Direct Connection I_b	5, 10, 15, 20A
Current Max	
I_{max}	40, 60, 80, 100A
Starting Current	
IEC	0.004 I_b

Measurement Accuracy

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

Measurement Behaviour

Starting Current	
IEC	0.4% of I_b
Max Measuring Range	20mA up to 100A

Approvals

Quality	Manufactured to ISO 9001:1994
OFGEM Approval Number	986
Certified Life	20 years
Reference Standards	IEC 62052-11, IEC 62053-21, IEC 62053-23

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 (depending on duration of failure)	<5s
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

Power Consumption

Voltage Circuit	<5W <25VA
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Current Circuit

<4VA

Environmental Influences

Temperature Test

IEC62053-21,
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

Temperature Coefficient

Range	From -10°C to +45°C
Typical mean value IEC 62053-21	±0.015% per K
$\cos\varphi = 1$ (from 0.1 I_b to I_{max})	±0.05% per K
$\cos\varphi = 0.5$ (from 0.2 I_b to I_{max}) IEC 62053-23	±0.06% per K
$\sin\varphi = 1$ (from 0.1 I_b to I_{max})	±0.10% per K
$\sin\varphi = 0.5$ (from 0.2 I_b to I_{max})	±0.15% per K
Impermeability to IEC 60529	IP51

Shock Test

BS EN60068-2-27

Electromagnetic Compatibility

Electrostatic Discharges	to IEC 61000-4-2
Contact Discharges	8kV
Air Discharges	15kV
Electromagnetic RF Fields 80 MHz to 2 GHz	to IEC 61000-4-3 at least 10V/m

Radio Interference suppression to IEC/CISPR 22 Class B

Fast Transient Burst Test

to IEC 61000-4-4

With basic current I_b :

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 IEC 61000-4-5

Impulse Voltage	4kV
Impedance of source	2Ω
Rise/Decay time of impulse voltage	1.2μs/50μs
Rise/Decay time of impulse voltage	8μs/50μs

Insulation Strength

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

Protection Class II to IEC626050-131  2

Display

Characteristics

Type	7 character, 7 segment LCD
Digit size	8x3.5mm
Number of Digits	6 significant numbers 2dp

Communication Interfaces

Optical Interface

Type	serial, bi-directional interface
Protocol	IEC 62056-21

Case Material

Base, Top Cover and Terminal Cover

Flame retardant and UV stabilised polycarbonate

Weight and Dimensions

Weight

Standard	304g
With extended terminal cover	338g

Dimensions

Width	125mm
Height	80mm
Depth	36mm

Dimensions (with Extended Terminal Cover)

Width	125mm
Height	113mm
Depth	41mm

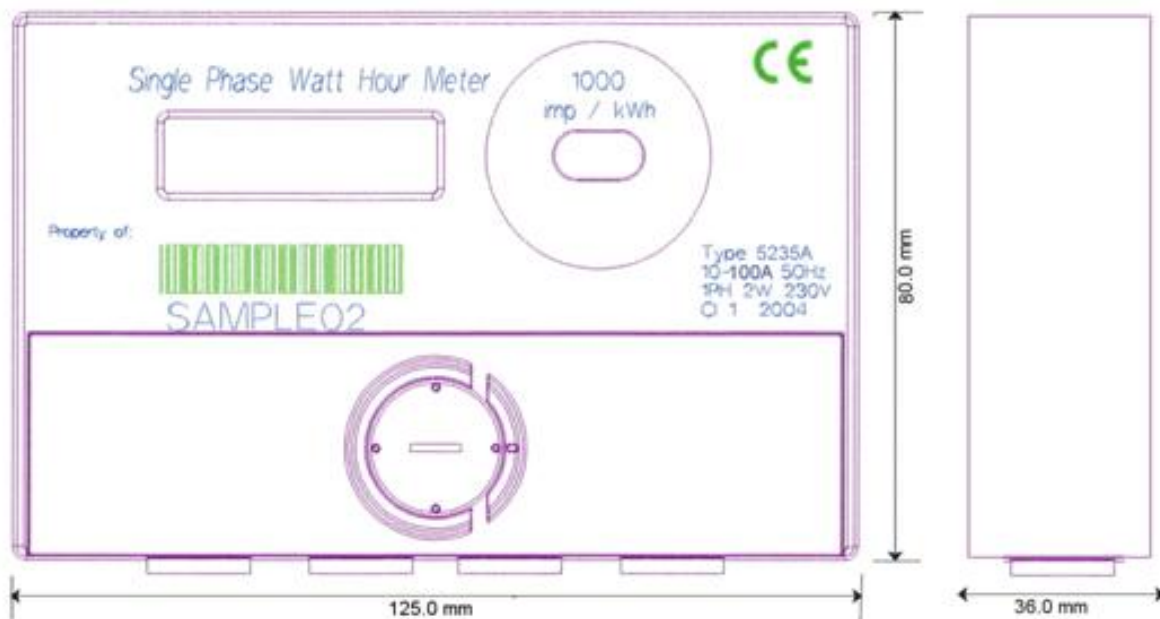
Terminal Details

Arrangement	BS5685
Size	8.3mm diameter

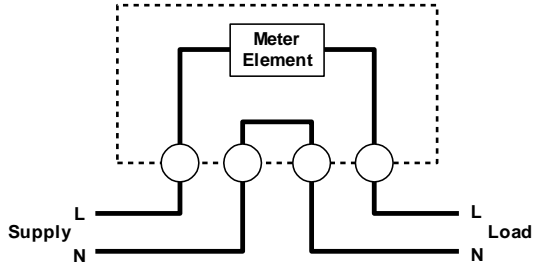
Connections

Standard Layout and Dimensions

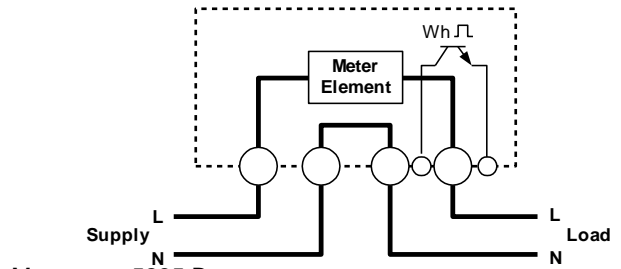
Dimensions



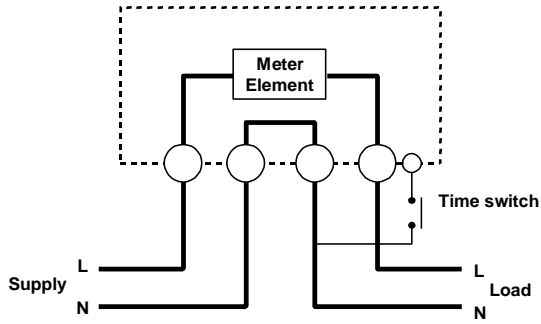
Terminal Connection Diagrams



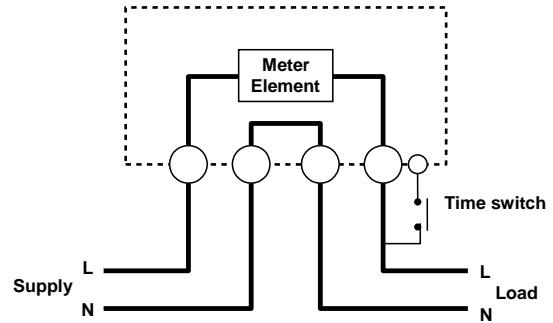
Meter type 5235 A and F



Meter type 5235 B



Meter type 5235 D - N



Meter type 5235 D - L

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