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.

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 Ib	5, 10, 15, 20A
Current Max	
Imax	40, 60, 80, 100A
Starting Current	
IEC	0.004Ib

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 Ib
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
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	±0.015% per K
IEC 62053-21	
cosφ =1 (from 0.1 Ib to Imax)	±0.05% per K
cosφ=0.5 (from 02 Ib to Imax)	±0.06% per K
IEC 62053-23	
sinφ =1 (from 0.1 Ib to Imax)	±0.10% per K
sinφ=0.5 (from 02 Ib to Imax)	±0.15% per K
Impermeability to IEC 60529	IP51

Shock Test	BS EN60068-2-27

Electromagnetic Compatibility

Electrostatic Discharges	to IEC 610000-4-2
Contact Discharges	8kV
Air Discharges	15kV
Electromagnetic RF Fields	to IEC 610000-4-3
80 MHz to 2 GHz	at least 10V/m

Radio Interference suppression to IEC/CISPR 22 Class B

Fast Transient Burst Test	to IEC 610000-4-4
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 IEC 610000-4-5
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

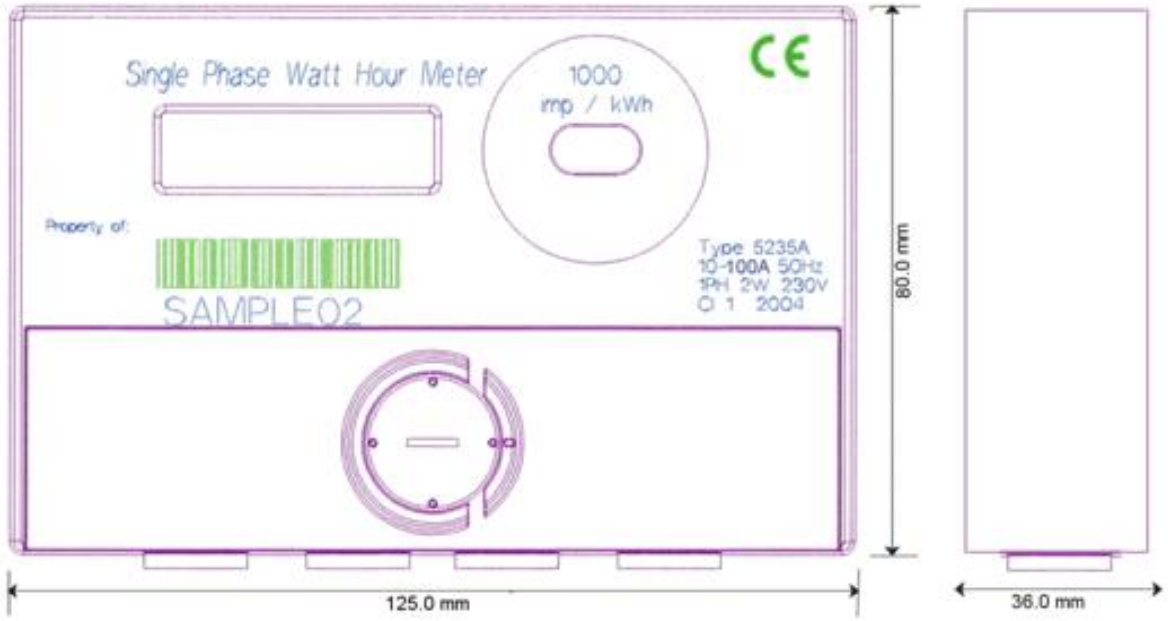
Dimensions (with Extended Terminal Cover)	
Width	125mm
Height	113mm
Depth	41mm

Terminal Details	
Arrangement	BS5685
Size	8.3mm diameter

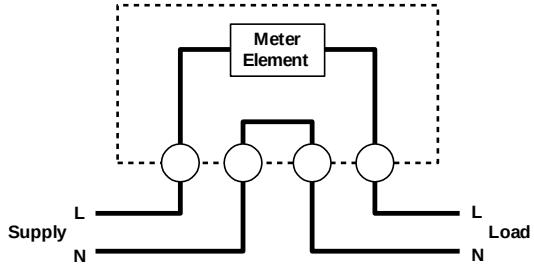
Connections

Standard Layout and Dimensions

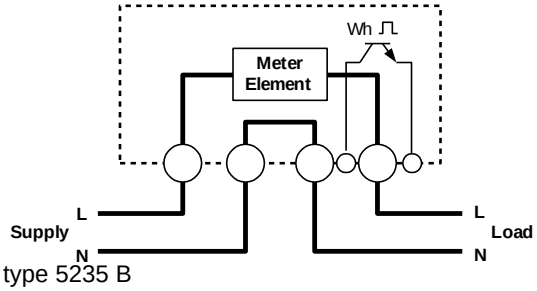
Dimensions



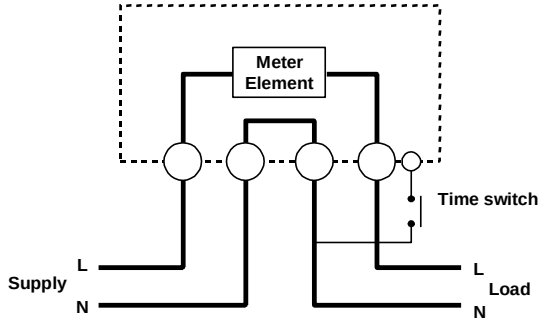
Terminal Connection Diagrams



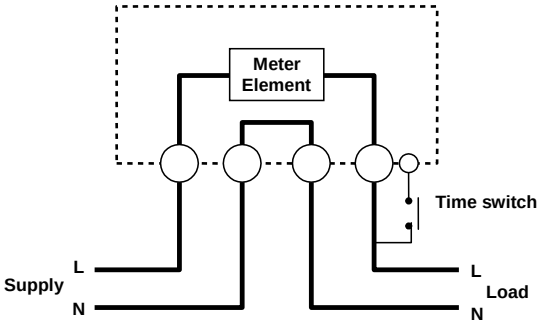
Meter type 5235 A and F



Meter type 5235 B



Meter type 5235 D – N



Meter type 5235 D - L

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