

Single Phase BS Standard Credit Meter

5254E

Technical data



The 5254E meter is a British Standard single phase multi rate time-of-use static watt-hour meter

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5254E Technical Specification

5254E Technical Specifications

General

Voltage

Nominal Voltage U_n 220-240V

Voltage Range 80-115% U_n

Voltage Withstand 415V Continuous

Frequency

Nominal Frequency 50Hz

Frequency Variation +/- 2%

IEC-Specific Data

Current

Base Current

Direct Connection I_b 20A

Current Max

I_{max} 100A

Measurement Accuracy

Measuring Accuracy

IEC 62053-21 Class 1 or 2

Measurement Behaviour

Starting Current

IEC Class 1 0.4% of I_b
Class 2 0.5% of I_b

Max Measuring Range

80mA up to 100A

Approvals

Quality

Manufactured to IS) 9001:1994

OFGEM Approval Number

1013

Certified Life

20 Years

General

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

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 -20°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 $\pm 0.015\%$ per K

$\cos\varphi = 1$ (from I_{min} to I_{max}) $\pm 0.05\%$ per K

$\cos\varphi = 0.5$ (from I_{tr} to I_{max}) $\pm 0.07\%$ 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 to IEC 61000-4-3

80 MHz to 2 GHz at least 10V/m

Radio Interference suppression to IEC/CISPR 22

Class B

Fast Transient Burst Test to IEC 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	LCD
Digit size	7mm
Number of Digits	6 significant numbers 2dp

Communication interfaces

Optical Interface

Type	Serial, bi-directional interface
Protocol	IEC62056-21

Case Material

Base, Top Cover and Terminal Cover

Flame retardant and UV stabilised polycarbonate

Weight and Dimensions

Weight

Standard	400g
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Dimensions

Width	125mm
Height	117mm
Depth	45.5mm
Height (with extended terminal cover)	148mm

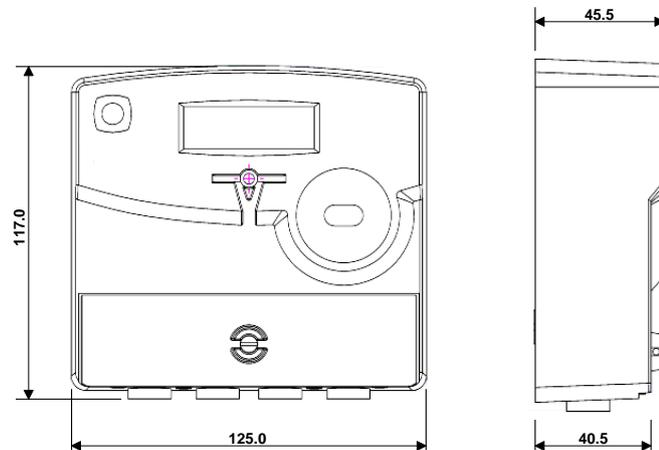
Terminal Details

Arrangement	BS5685
Size	6mm diameter

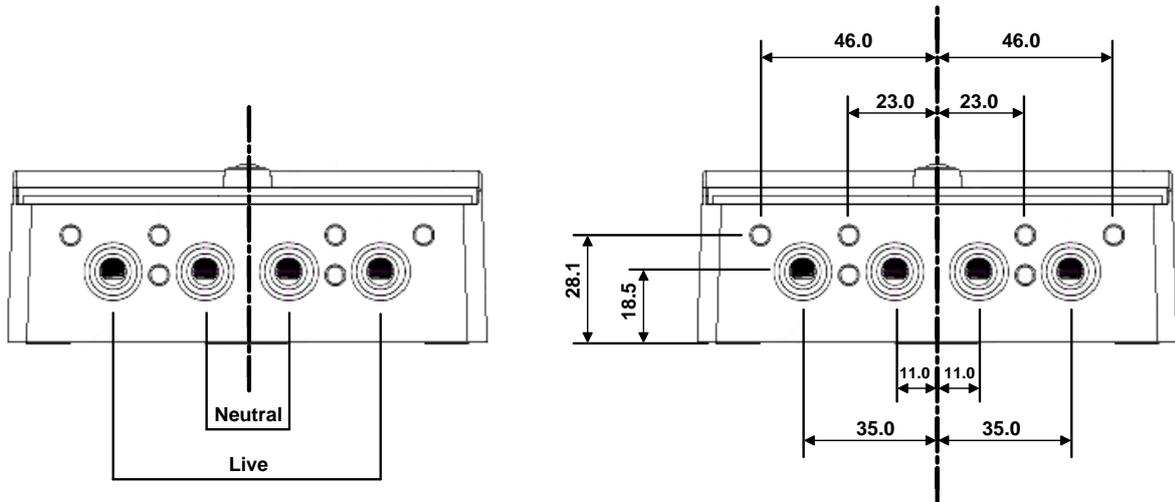
Connections

Standard layout and dimensions

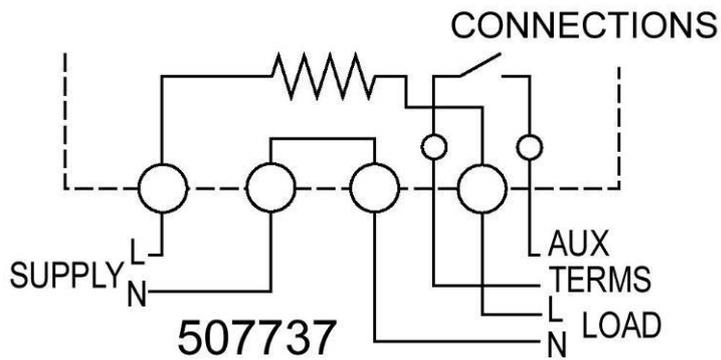
Dimensions



Terminal layout and phase connection (Dimensions in mm)



Wiring Diagram



Single phase with Auxillary 2A Relay

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