

PolyPhase BS Standard Credit Meter

5219

Technical Data



The 5219 is a whole current three phase credit meter, capable of measuring Active (kWh) (class 1.0) and Reactive energy (KVArh) (class 2.0).

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5219 Technical Specification

5219 Technical Specifications

General

Voltage

Nominal Voltage U_n	220-240V
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}	80, 100, 105, 120, 125A

Measurement Accuracy

Measuring Accuracy	
	IEC 62053-21 Class 1 or 2
	IEC 62053-23 Class 2 or 3

Measurement Behaviour

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

Max Measuring Range

20mA up to 100A

Approvals

Quality	Manufactured to ISO 9001:2000
Certified Life	20 years
	15 years with Neutral Disconnection Functionality
OFGEM Approval Number	981

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

General

Power Consumption

Voltage Circuit	<3W
	<15VA
Current Circuit	<4VA

Environmental Influences

Temperature Test	IEC62053-21, IEC62053-23
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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
$\cos\varphi = 1$ (from 0.1 I_b to I_{max})	±0.05% per K
$\cos\varphi = 1$ (from 0.2 I_b to I_{max})	±0.07% per K

IEC 62053-23

$\sin\varphi = 1$ (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	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

Case Material

Base, Top Cover and Terminal Cover

Flame retardant and UV stabilised polycarbonate


Communication Interfaces

Optical Interface

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

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

Weight and Dimensions

Weight

Standard	950g
With extended terminal cover	1070g

Dimensions

Width	167.9mm
Height	175.8mm
Depth	56.3mm

Terminal Details

Arrangement	BS5685
Size	8.3mm diameter

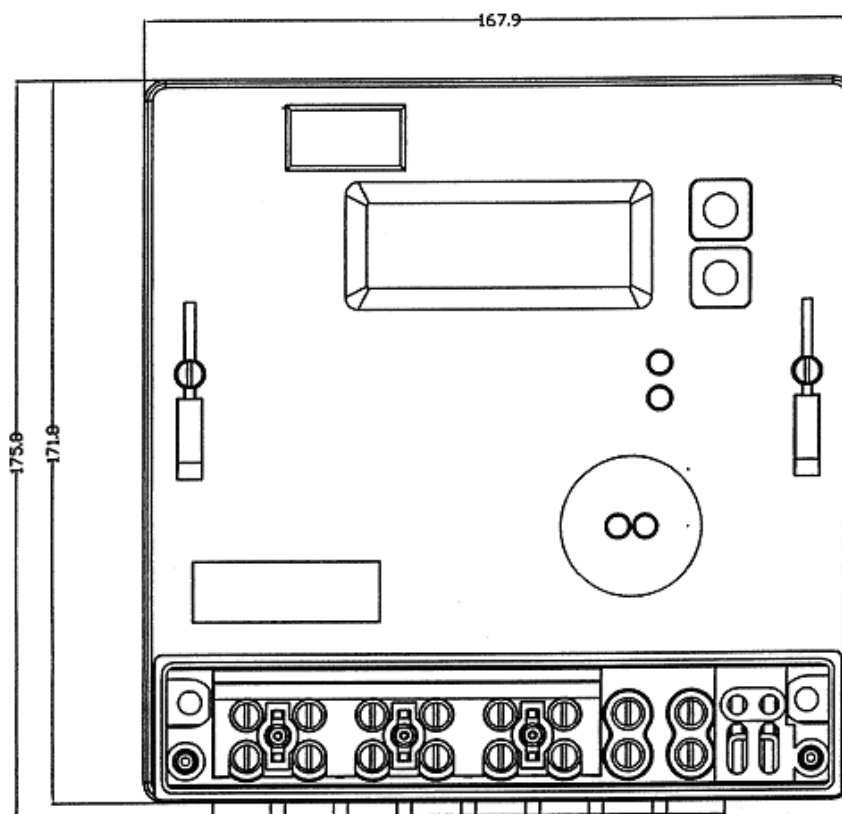
IP Rating

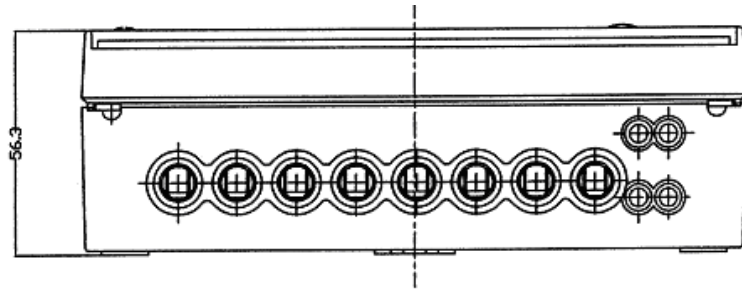
With Short Terminal Cover	IP51
With Extended Terminal Cover	IP54

Connections

Standard Layout and Dimensions

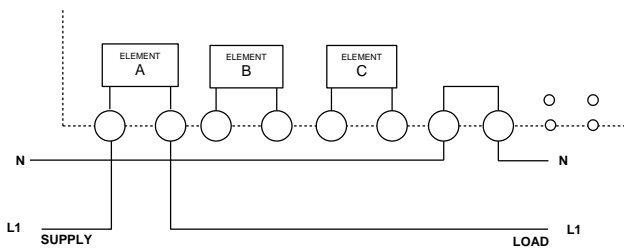
Dimensions



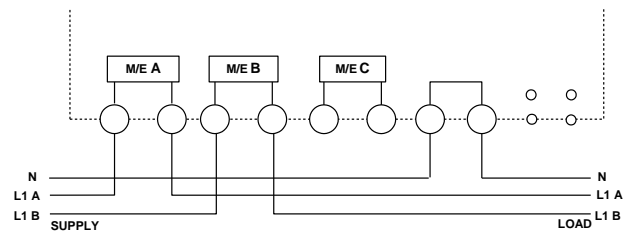


Terminal Connection Diagrams

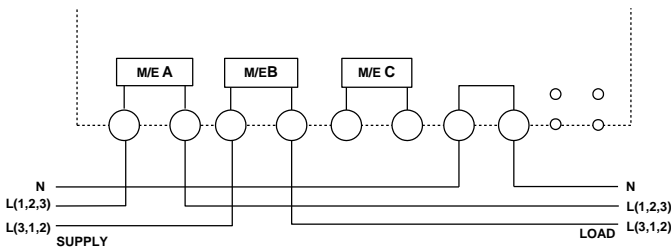
The Meter has 3 measuring elements capable of being configured as:



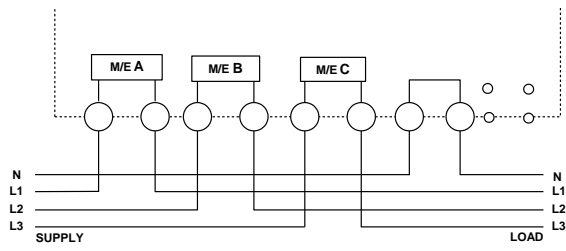
Single Phase 2 Wire



Single Phase 3 Wire



2 Phases of 3 Phase 4 Wire



3 Phase 4 Wire

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