**Electricity Meters**
Residential

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 Un | 220-240V |
| Voltage Range | 80-115%Un |
| 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 | 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 Ib |
| | Class 2 0.5% of Ib |

| 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 (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 |

## General

### Power Consumption

| | |
|---|---|
| Voltage Circuit | <3W |
| | <15VA |
| 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=1 (from 02 Ib to Imax) | ±0.07% 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 |

### 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 |

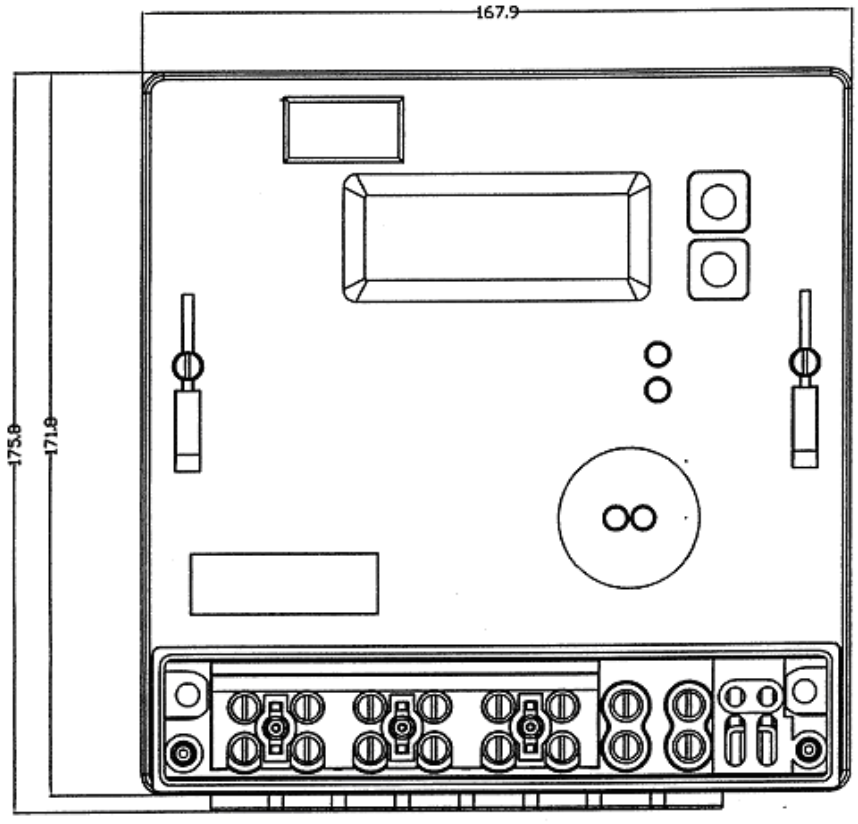
## IP Rating

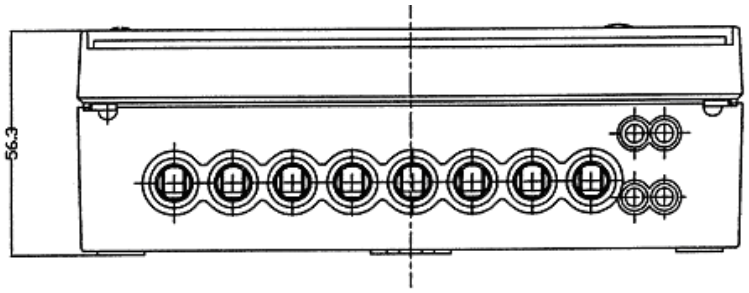
| With Short Terminal Cover | IP51 |
|---|---|
| With Extended Terminal Cover | IP54 |

## Connections

Standard Layout and Dimensions

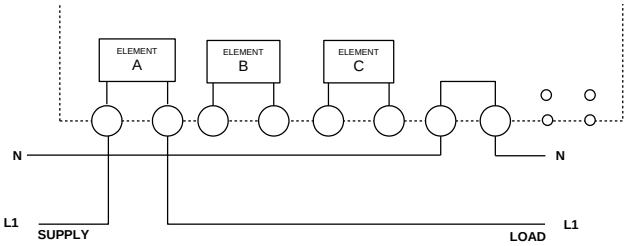
### Dimensions



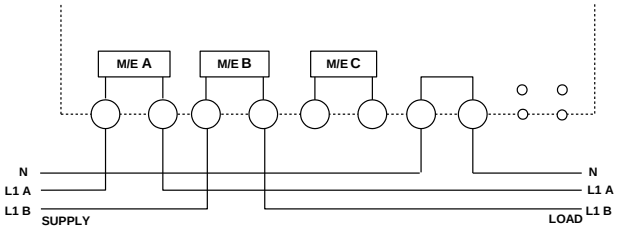



## Terminal Connection Diagrams

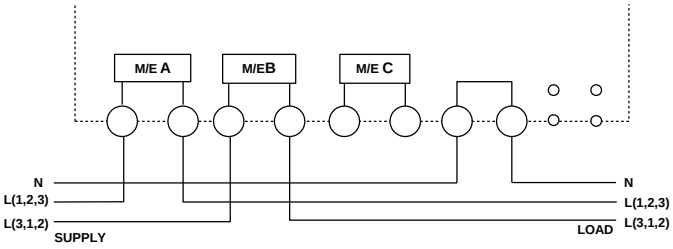
The Meter has 3 measuring elements capable of being configured as:



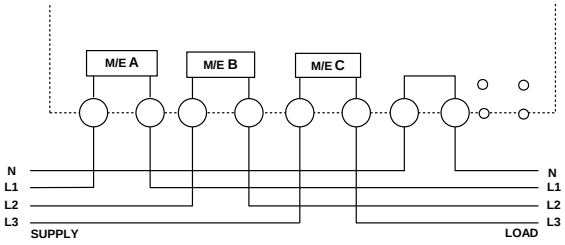

**Single Phase 2 Wire**




**Single Phase 3 Wire**




**2 Phases of 3 Phase 4 Wire**




**3 Phase 4 Wire**



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