

Technical Data SC300/P 3 Phase Electricity Meter

3 Phase Credit Meter – Wholecurrent – 230/415volts 100amps



**/MID Approved For Billing
Pulsed Output Facility
Manufactured to ISO EN1436**

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

Case Material

Base, Top Cover and Terminal Cover

Flame retardant and UV stabilised polycarbonate

Communication Interface

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 IEC 626050-131 □ 2

Display Characteristics

Type 7 character, 7 segment LCD

Digit size 8x3.5mm

Number of Digits 6 significant numbers 2dp

Pulse Output

Optically Isolated

Volt Free Open Collector

10 pulses = 1 kWh

Pulse Width 200mSecs

Maximum Voltage 15Vdc

Output meets IEC62053-31 Class B

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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 $\pm 0.015\%$ per K
IEC62053-21
 $\cos\phi = 1$ (from 0.1 Ib to I_{max}) $\pm 0.05\%$ per K
 $\cos\phi = 1$ (from 0.2 Ib to I_{max}) $\pm 0.07\%$ per K

IEC 62053-23

$\cos\phi = 1$ (from 0.1 Ib to I_{max}) $\pm 0.10\%$ per K
 $\cos\phi = 0.5$ (from 0.2 Ib to I_{max}) $\pm 0.15\%$ 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
80MHz 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 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 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

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
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 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
OFGEM Approved 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



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