

RESIDENTIAL

Landis+Gyr Domestic

ZCG100AC, ZCG100CC (EXT. SWITCHED)

TECHNICAL DATA



General

Voltage

Nominal voltage U_n 220, 230, 240 VVoltage range 80%–120% U_n

Frequency

Nominal frequency f_n selectable: 50 or 60 Hzfrequency variation $\pm 5\%$

IEC-specific data

Current

Base Current I_b 5, 10 or 20 AMaximum current I_{max} 40, 60 or 80 A

Metrological 80 A

Thermal 100 A

Short Circuit ≤ 10 ms 3'000 A

Measurement Accuracy

ZCG110, to IEC 62053-21 Class 1

ZCG120, to IEC 62053-23 Class 2

Measurement Behaviour

Starting Current 0.4% I_b

MID-specific data

(not yet available)

Current (for Classes A and B)

Reference current I_{ref} 5 A; 10 A; 20 AMinimum current I_{min} $\leq 0.05 \times I_{ref}$ Transitional current I_{tr} 0.5 A; 1 A; 2 AMaximum current I_{max} 100 A

Measurement Accuracy

ZCG110, to EN 50470-3 Class B

ZCG120, to EN 50470-3 Class A

Measurement Behaviour

Starting current I_{st} Class A: $I_{st} \leq 0.005 \times I_{ref}$ Class B: $I_{st} \leq 0.004 \times I_{ref}$

General

Operating Behaviour

Voltage Interruption (Power Down)

Blocking of inputs and outputs immediate

Standby operation for 0.15 s

Data storage after 0.15 s

Switch off after approx 0.5 s

Voltage Restoration (Power Up)

Function standby (depending on duration of failure) < 5 sDetection of energy direction and phase voltage < 3 s

Power Supply quality
 The meter complies with EN 62052-11 Section 7.1.1 Voltage range and 7.1.2 Voltage dips and short interruptions.
 Supply voltage 220–240 Vac \pm 20%

Power Consumption

Voltage circuit < 2 W, < 12 VA

Current circuit
 at I_b < 0.1 VA
 at I_{max} < 2.5 VA

Environmental Influences

Temperature Test
 IEC62053-21, IEC62053-23

Temperature Range
 Operation –25 °C to +60 °C
 Limit range of operation –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
 $\cos\phi=1$ (from 0.1 I_b to I_{max}) \pm 0.05% per K
 $\cos\phi=1$ (from 0.2 I_b to I_{max}) \pm 0.07% per K

Impermeability to IEC 60529 IP 51

Shock Test
 BS EN60068-2-27

Electromagnetic compatibility

Electrostatic Discharges to IEC 61000-4-2
 Contact discharges 8 kV
 Air Discharges 15 kV

Electromagnetic RF Fields to IEC 61000-4-3
 80 MHz to 2 GHz at least 10 V/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 4 kV
 for auxiliary circuits > 40 V 4 kV
 with open current circuit
 for voltage and current circuits 4 kV

Fast Transient Surge Test to IEC 61000-4-5
 Impulse voltage 10 kV
 Impedance of source 2 Ω
 Rise-/Decay time of impulse voltage 1.2 μ S/50 μ S
 Rise-/Decay time of impulse voltage 8 μ S/20 μ S

Insulation Strength

Insulation Strength 4.4 kV at 50 Hz for 80 seconds

Impulse Voltage strength to IEC 62053-11
 Impulse voltage 6 kV
 Impedance of source 500 Ω
 Rise-/Decay time of impulse voltage 1.2 μ S/50 μ S

Protection class II to IEC 62050-131  2

Display

Characteristics
 Type LCD liquid crystal display
 Digit size 8 mm
 Number of digits 6 integers + 1 dp or 5 integers + 2 dp

Communication Interface

Optical interface
 type serial, bi-directional interface
 protocol according to IEC 62056-21

Case Material

Base, top cover and terminal cover
 10% glass filled flame retardant polycarbonate

Weight and dimensions

Weight 340 g

Dimensions

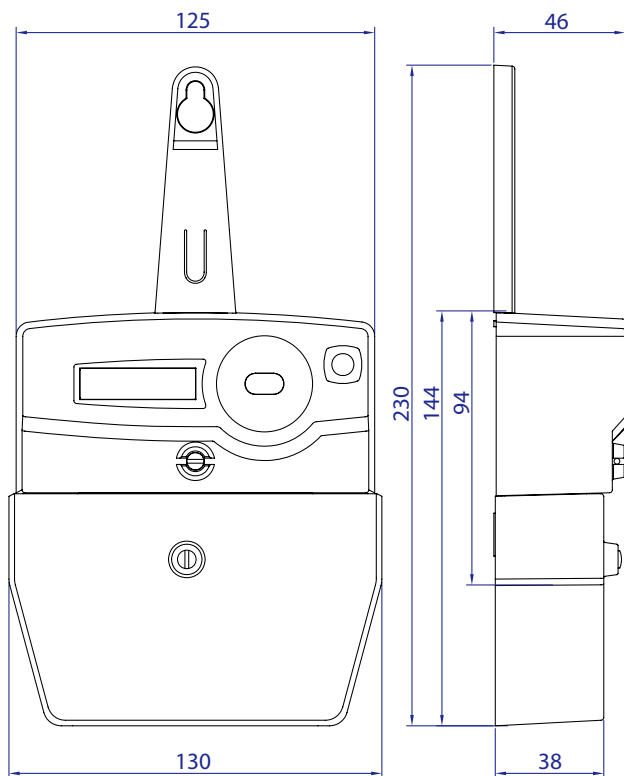
width 125 mm
height (meter case only) 110 mm
height (with terminal cover) 160 mm
depth 46 mm

Dimensions (with terminal cover and hanger)

width 125 mm
height 230 mm
depth 46 mm

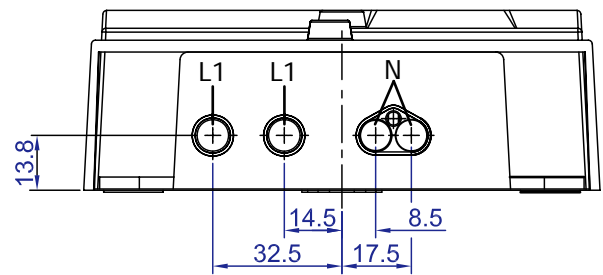
DIN mount (mount holes centre to centre)

width 105 mm
height 155 mm



Connections

Standard layout and dimensions



Type designation

ZCG 1 2 0 AC e r53

Type of Meter

ZCG Digital meter/single phase/meter generation G

Connection Type

1 Direct connection

Accuracy Class

1 Active energy class 1 (IEC); B (MID)
2 Active energy class 2 (IEC); A (MID)

Meter Standard

0 DIN-standard Type 230 V
1 DIN-standard Type 120 V
2 DIN-standard Type 230 V with Non Power Read
3 DIN-standard Type 120 V, with Non Power Read
7 BS-standard Type 230 V

Additional Functionality

AS Standard active only meter
CS Standard combi meter
AC Enhanced active only meter with control input
CC Enhanced combi meter with control input
AT Active only meter with TOU (Time of Use)
CT Combi meter with TOU

Number of Rates

e Single rate
d Double rate
t Multi rate (not for AS/CS type)

Electronic Interface + Options

r53 Pulse output

Data subject to change without notice

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