RESIDENTIAL

Landis+Gyr Domestic

ZCG100AC, ZCG100CC (EXT. SWITCHED)

TECHNICAL DATA

General

Voltage

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

Frequency

Nominal frequency f_n	selectable: 50 or 60 Hz
frequency variation	±5%

IEC-specific data

Current

Base Current I_b	5, 10 or 20 A
Maximum 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 A
Minimum current I_{min}	≤ 0.05 x I_{ref}
Transitional current I_{tr}	0.5 A; 1 A; 2 A
Maximum 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}	≤ 0.005 x I_{ref}
Class B: I_{st}	≤ 0.004 x 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 s
Detection 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 ±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	± 0.015% per K
cosφ=1 (from 0.1 I_b to I_{max})	± 0.05% per K
cosφ=1 (from 0.2 I_b to I_{max})	± 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 µS/50 µS
Rise-/Decay time of impulse voltage	8 µS/20 µS

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 µS/50 µS

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

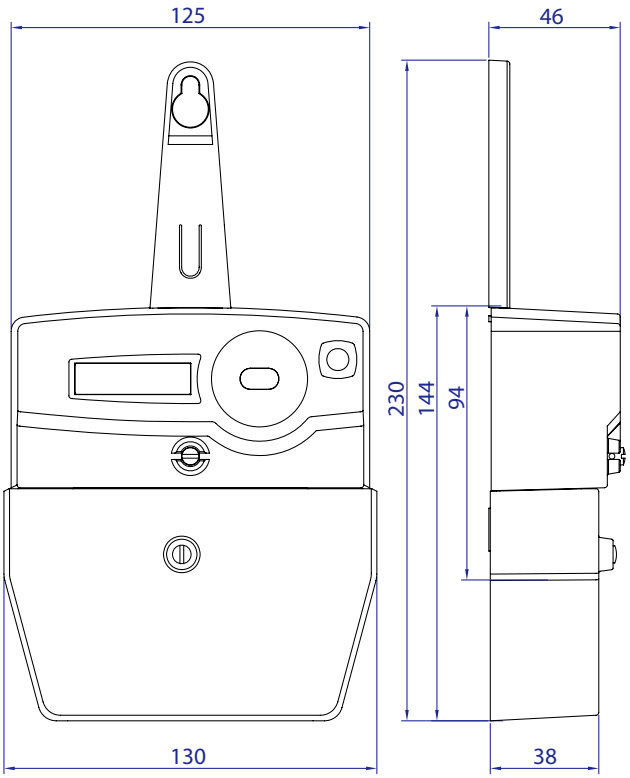
Weight and dimensions

Weight	340 g

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

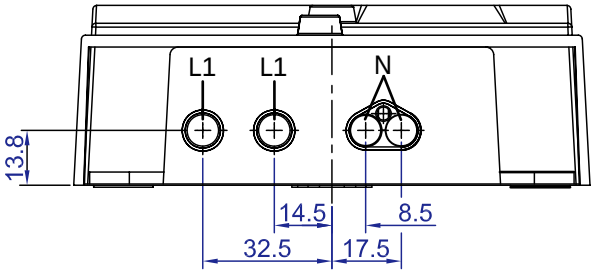
Dimensions (with terminal cover and hanger)	
width	125 mm
height	230 mm
depth	46 mm

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

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