

RESIDENTIAL

Landis+Gyr Domestic

ZCG100AT, ZCG100CT (TOU)

TECHNICAL DATA



General

Voltage

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

Frequency

Nominal frequency f_n 50 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 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 $\pm 20\%$

Power Consumption

Voltage circuit 2 W

Current circuit

at I_b < 0.1 VA

at I_{max} < 2.5 VA

Environmental Influences

Temperature Range

operation $-25\text{ }^{\circ}\text{C}$ to $+60\text{ }^{\circ}\text{C}$

limit range of operation $-25\text{ }^{\circ}\text{C}$ to $+55\text{ }^{\circ}\text{C}$

storage $-25\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$

this complies with EN 62052-11:2003 Section 6.1

Temperature Coefficient

range from $-10\text{ }^{\circ}\text{C}$ to $+45\text{ }^{\circ}\text{C}$

typical mean value $\pm 0.015\text{ }\%$ per K

$\cos\phi=1$ (from $0.1 I_b$ to I_{max}) $\pm 0.05\text{ }\%$ per K

$\cos\phi=1$ (from $0.2 I_b$ to I_{max}) $\pm 0.07\text{ }\%$ per K

Impermeability to IEC 60529 IP 51

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 $2\ \Omega$

rise-/decay time of impulse voltage $1.2\ \mu\text{S}/50\ \mu\text{S}$

rise-/decay time of impulse voltage $8\ \mu\text{S}/20\ \mu\text{S}$

Insulation Strength

Insulation Strength 4.4 kV at 50 Hz for 1 min.

Impulse Voltage strength to IEC 62053-11

impulse voltage 6 kV

impedance of source $500\ \Omega$

rise-/decay time of impulse voltage $1.2\ \mu\text{S}/50\ \mu\text{S}$

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

Real Time Clock

Accuracy typically

± 0.5 seconds per day at $23\text{ }^{\circ}\text{C}$

Inputs and Outputs

Optional output contacts

1 x 5A resistive rated contact (inductive rating 2A)

2 x 8A resistive rated contacts (inductive rating 2A)

Communication Interface

Optical interface

type serial, bi-directional interface

protocol according to IEC 62056-21

Weight and dimensions

Weight 420 g

Dimensions

width 125 mm

height (meter case only) 115 mm

height (with terminal cover) 165 mm

depth 46 mm

Dimensions (with terminal cover and hanger)

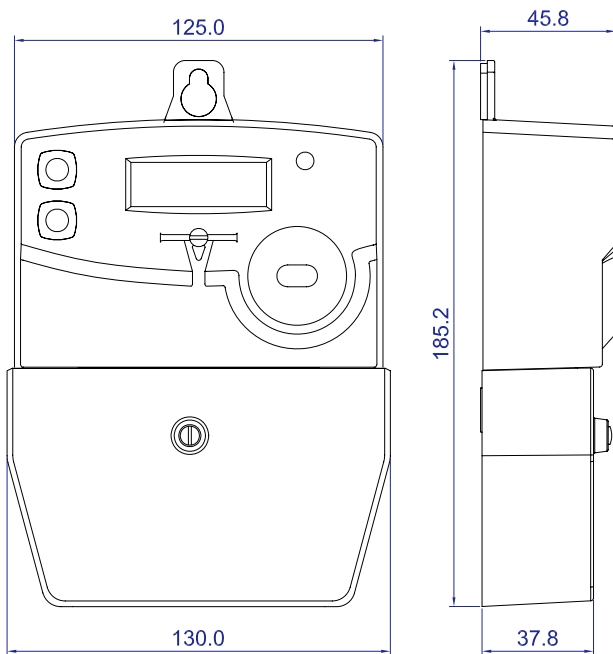
width 125 mm

height 185 mm

depth 46 mm

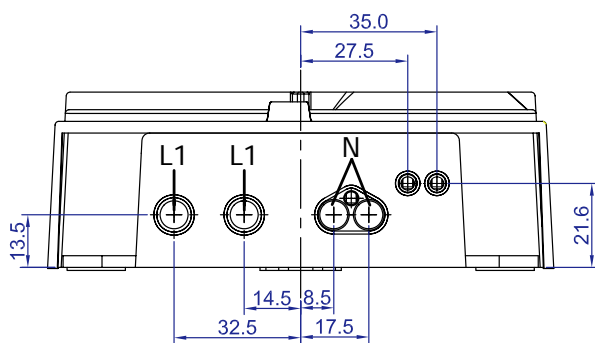
DIN mount (mount holes centre to centre)

width	105 mm
height	155 mm



Connections

Standard layout and dimensions



Type designation

ZCG 1 2 0 AT 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 (except TOU meters)
2 DIN-standard Type 230 V with Non Power Read
3 DIN-standard Type 120 V, with Non Power Read (except TOU meters)
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
C01 1 control output (contact 5 A resistive, 2 A inductive rating)*
C02 2 control outputs (contact 8 A resistive, 2 A inductive rating)*

* Only for TOU meters

Data subject to change without notice

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