

RESIDENTIAL

Landis+Gyr Domestic

ZCF100AX

TECHNICAL DATA



General

Voltage

Nominal Voltage

ZCF100AC 230 V

Voltage range 80% – 115% U_n

Frequency

Nominal frequency f_n 50 Hz

IEC-specific data

Current

Base current I_b selectable: 5 A; 10 A; 20 A; 40 AMaximum current I_{max}

metrological 80 A

thermal 100 A

Short circuit ≤ 10 ms 10'000 A

Measurement Accuracy

ZCF110 according to IEC 62053-21 Class 1

ZCF120 according to IEC 62053-21 Class 2

Measurement Behaviour

Starting current

according to IEC 0.5% I_b typical ca. 0.3% I_b

MID-specific data

Current (for Classes A and B)

Reference current I_{ref} 5 A; 10 AMinimum current I_{min} $\leq 0.05 \times I_{ref}$ Transitional current I_{tr} 0.5 A; 1 AMaximum current I_{max} 80 A

Measurement Accuracy

ZCF110, to EN 50470-3 Class B

ZCF120, 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 failure (Power Down)

bridging time 0.2 s

Voltage restoration (Power Up)

function standby < 5 sdetection of energy direction and phase voltage < 3 s

Power Consumption

Power consumption in voltage circuit	per phase
active power at U_n (typical)	0.6 W
apparent power at U_n (typical)	4.5 VA

Power consumption in current circuit	
apparent power at 5 A (typical)	0.01 VA

Environmental Influences

Temperature range	
operation	-40 °C to +70 °C
storage	-40 °C to +85 °C

Temperature coefficient	
range	-25 °C to +70 °C
average value (typical)	$\pm 0.02\%$ per K
at $\cos\varphi=1$ (from $0.1 I_b$ to I_{max})	$\pm 0.05\%$ per K
at $\cos\varphi=0.5$ (from $0.2 I_b$ to I_{max})	$\pm 0.075\%$ per K

Impermeability to IEC 60529	IP 52
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Electromagnetic compatibility

Electrostatic discharges according to IEC 61000-4-2	
contact discharge	8 kV

Electromagnetic RF fields acc. to IEC 61000-4-3	
80 MHz to 2 GHz	10 and 30 V/m

Radio interference suppression according to IEC/CISPR 22	class B
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Fast transient burst test acc. to IEC 61000-4-4	
current and voltage circuits not under load	4 kV
current and voltage circuits under load according to IEC 62053-21	2 kV
auxiliary circuits > 40 V	1 kV

Fast transient surge test acc. to IEC 61000-4-5	
current and voltage circuits	4 kV
auxiliary circuits > 40 V	1 kV

Insulation Strength

Insulation strength	4 kV at 50 Hz during 1 min.
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Impulse voltage 1.2/50 μ s to IEC 62052-11	
current and voltage circuits	8 kV
According to SP	12 kV

Protection class II acc. to IEC 62052-11	
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Display

Characteristics	
type	LCD liquid crystal display
digit size	8.4 mm
number of digits	7

Inputs and Outputs

Optical test output	Active Energy
type	infrared LED
combined with optical interface (i.e. infrared-LED is integrated in optical interface)	
pulse length	approx. 2 ms
meter constant	1000 imp/kWh

Communication Interface

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

Application	
interface to AMR system	to IEC 62056-21
(Data readout, rate control)	
test output (physically combined with test diode)	

Disconnecter add-on (option)

Contact data	
maximum switching voltage	400 V AC
maximum switching current	100 A
short circuit ≤ 10 ms to EN62053-21	3000 A
maximum switching power	25 kVA
power consumption in current path at 5 A:	0.08 VA

Insulation strength	4 kV at 50 Hz during 1 min.
contact-contact; coil-contact	

Impulse voltage 1.2/50 μ s to IEC 62052-11	
contact-contact	12 kV
coil-contact	12 kV
open contact	2 kV

Mechanical life	
at maximum power, PF=1	10.000 cycles

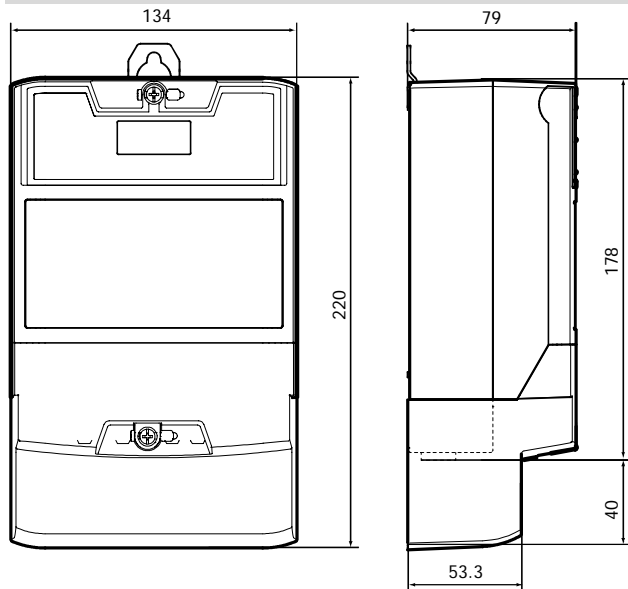
Weight/dimensions without disconnector

Weight	approx. 0.5 kg
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External dimensions	comply with DIN 43857
width	134 mm
height	233 mm
depth	75 mm

Suspension triangle	
height	155 mm
width	105 mm

Dimensions



Terminal cover

standard 40 mm free space

Weight and dimensions with disconnecter

Weight approx. 1.2 kg

External dimensions comply with DIN 43857

width 134 mm

height 233 mm

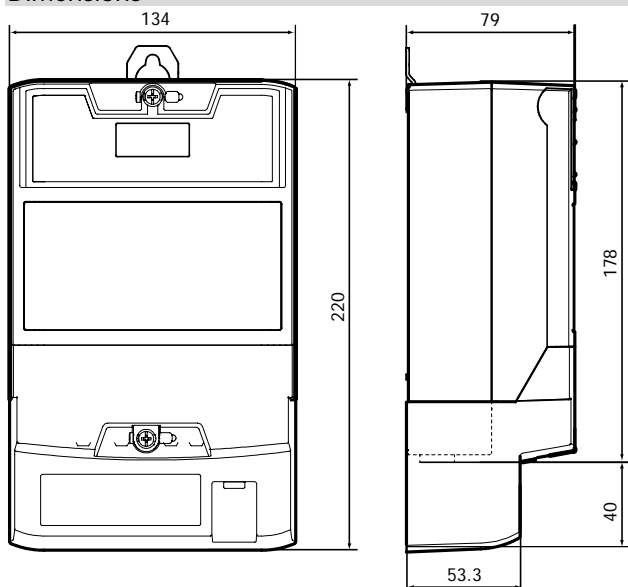
depth 75 mm

Suspension triangle

height 155 mm

width 105 mm

Dimensions



Terminal cover

standard 40 mm free space

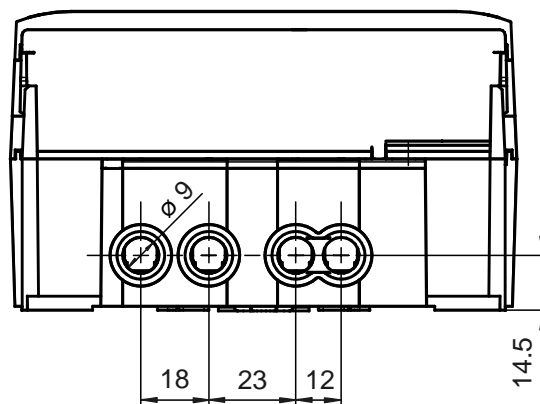
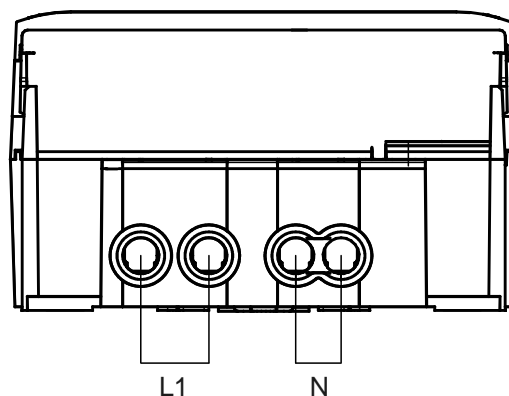
Connections

Phase connections

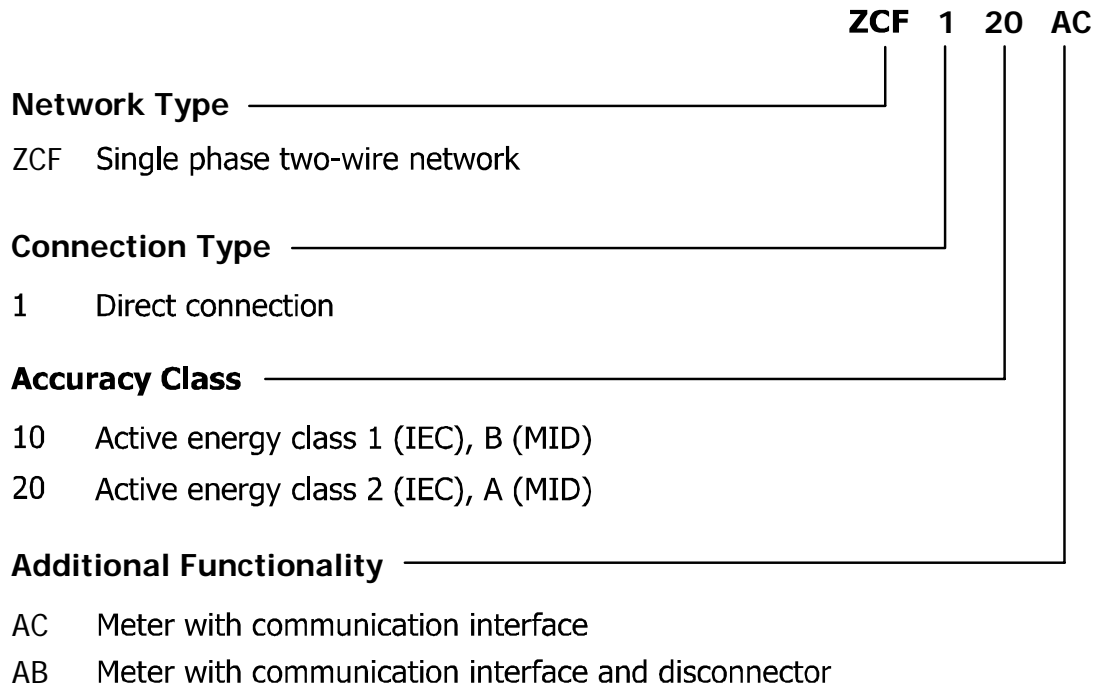
type	screw type terminals
diameter steel type	8.5 mm
diameter brass type	8.5 mm
minimal conductor cross section	4 mm ²
maximal conductor cross section cable	35 mm ²
maximal conductor cross section strand	25 mm ²
screw dimensions	M6 x 14
maximal screw head diameter	≤ 6.6 mm
cross-slot	type Z, size 2, to ISO-4757-1983
tightening torque	< 3 Nm

Standard layout and dimensions

For versions with and without disconnecter.



Type designation



Data subject to change without notice.

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