

## 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  $\leq 10$  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 $\mu$ 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 $\leq 10$ 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 $\mu$ 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

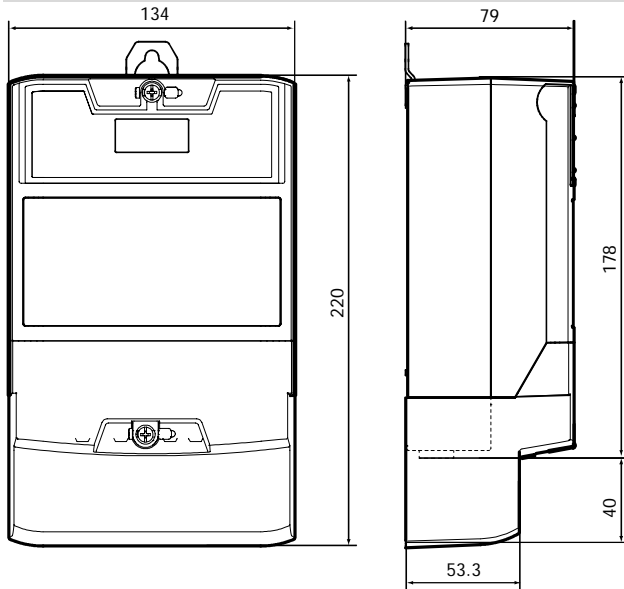
## Weight/dimensions without disconnector

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

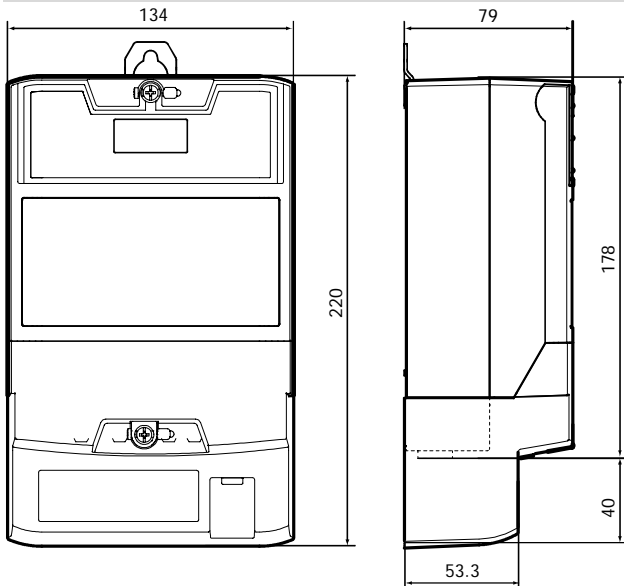
depth 75 mm

## Suspension triangle

height 155 mm

width 105 mm

## Dimensions



## Terminal cover

standard 40 mm free space

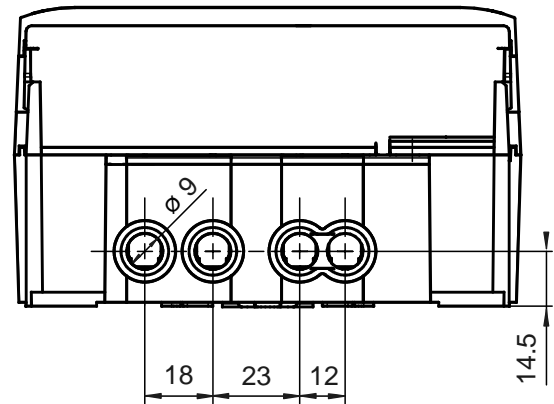
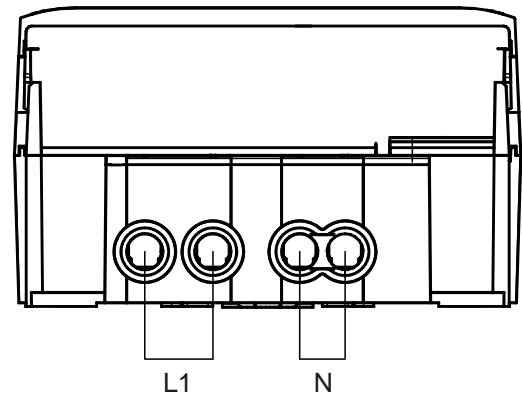
## Connections

### Phase connections

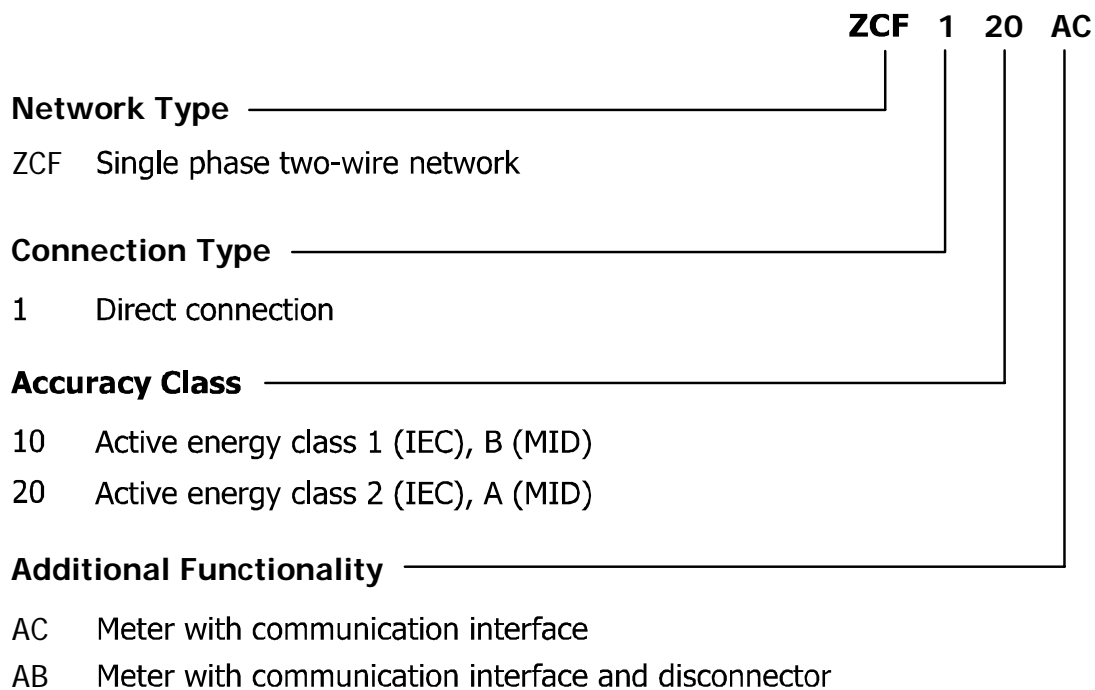
type	screw type terminals
diameter steel type	8.5 mm
diameter brass type	8.5 mm
minimal conductor cross section	4 mm <sup>2</sup>
maximal conductor cross section cable	35 mm <sup>2</sup>
maximal conductor cross section strand	25 mm <sup>2</sup>
screw dimensions	M6 x 14
maximal screw head diameter	≤ 6.6 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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