



This module provides Power Line Carrier communication between the ZMF meter and the concentrator according to IEC 61334-5-1.

PLC Module**Power Consumption**

Max. 3 W / 5.5 VA

Voltage

Normal Voltage 3*230/380V

Voltage Range 80%–115%

Frequency 50 Hz

Backup Time

With super cap >7 days

Loading time for max. backup 8 hours

Fitting

Direct in meter ZxF100AC family, sealable

Functions

Extended metering functions:

- power quality supervision
- daily and hourly profiles for up to 4 register
- internal clock, synchronised remotely
- remotely configurable tariff/rate control

PLC interface:

- plug and play installation according to IEC 61334-4-511/512

CS interface:

- local readout of meter data
- re-configuration
- local synchronisation of internal clock

Control interface:

- for local load control

PLC

Spread-FSK Modulation	IEC 61334-5-1
Baud rate	1200 bit/sec
Link layer	IEC 61334-4-32
Application layer, DLMS	IEC 61333-4-41
Signal level	CENELEC 50065-1/A1

Environmental Influences**Temperature Range**

Operation –40 to +65 °C

Storage –40 to +85 °C

Impermeability to IEC 60529

IP 52

Electromagnetic compatibility

Electrostatic Discharges to IEC 61000-4-2

Contact discharge 8 kV

Electromagnetic RF Fields 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


Fast Transient Burst Test	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	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 to IEC 6050-131	 2
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Inputs and Outputs

CS (active/passive)	
Serial, bi-directional current interface	
Standard	IEC 62056-61/46
Maximum transmission rate	9'600 bps
Maximum line length	3 m

Load control output	
Voltage	12–240 V AC/DC
Current	max 100 mA
Isolation resist. to module	4 kV AC / 50 Hz, 1min

Tariff control (2 rates)	
Control voltage U_t	230 V
Permissible range	80–115% U_t
Current consumption	< 2 mA ohmic at 230 V

Weight and Dimensions

Weight	approx. 150 g
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Width / Height / Depth	90 / 165 / 45 mm
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Connections

Terminal Layout	
CS Interface	screwless spring-type terminals
Control Output	screwless spring-type terminals
Tariff Control	screwless spring-type terminals

Connection to meter

6-pin connector at rear of module for data
4 spring contacts for 3 x 230 V supply

Material

Case	polycarbonate
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Type designation

AD - FP 9 0 A 1 7 A

Type of module

- C Internal module ZCF
- F Internal module ZMF
- G Internal module ZFF

Communication medium

- X None
- P PLC
- G GSM/GPRS

Rate control

- 0 None
- 1 1 Control Input
- 9 Internal Time of Use

Pulse inputs

- 0 None

Communication gateway

- X None
- A CS-Master/Slave
- B Reserve

Pulse output

- 0 None
- 1 1 Control Input

Load control

- 0 None
- 1 1 Relay
- 3 1 Output contact
- 5 1 Relay, and breaker control
- 7 1 Output contact, and breaker control
- 9 Breaker control

Extended functions

- X None
- A Load profile

Data subject to change without notice

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