



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 |

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|------------------------------|------------------|
| Fast Transient Surge Test | to IEC 61000-4-5 |
| Current and voltage circuits | 4 kV |
| Auxiliary circuits > 40 V | 1 kV |

Insulation Strength

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|---------------------|-----------------------------|
| 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 |

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|----------------------------------|---|
| Protection class to IEC 6050-131 |  2 |
|----------------------------------|---|

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 |

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

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|--------------------------|-----------------------|
| 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 |
|------------------------|------------------|

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 |
|------|---------------|

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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