ekorsys units: protection, telemanagement & communication

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Protection and metering unit for fuse protection cubicles

Reliable innovation. Personal solutions.

CA-416-EN-1407

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### Applications

- Protection of Medium Voltage customers.
- Protection of Transformer Substations and industrial customers:
  - Transformer protection (up to 2,000 kVA – 24 kV and up to 1,250 kVA – 36 kV)
  - General protection
- Communicable electronic relay
- Current sensors (1000/1 or 300/1)
- Power supply and test board
- Selfpowered toroidal-core current transformers
- Bistable trigger

### Most notable features

- Selfpowered from 5 A
- Improved selectivity than fuse protection: IEC inverse time curves
- Protects against phase-neutral faults
- Prevents unsafe fuse blowing (I₃)
- External trip
- Primary and secondary tests
- Phase metering from 5 A
- Earth current metering from 0.5 A
- Factory-installed toroidal-core current transformers: prevention of errors on site

### Technical Characteristics

#### General

- Phase current sensors: 3
- Zero-sequence earth current sensor: 1 (optional)
- Digital Inputs: 1 (external trip)
- Digital outputs: 2

#### Power Supply Options

- Selfpowered (A, Vac): > 5, 230 ±30%
- AC (Vac...Vca): 24 ... 110 ± 30%
- DC (Vdc...Vdc): 24 ... 125 ± 30%
- Consumption [VA]: < 1

**Frequency**

- [Hz; Hz]: 50; 60 ±1%

#### Current inputs

- Primary phase [A ... A]: 5 ... 630 (acc/ model)
- Earth [A ... A]: 0.5 ... 50 (acc/ model)
- I thermal/dynamic [kA/kA]: 20 / 50
- Impedance [Ω]: 0.1

#### Accuracy

- Time delay: 5% (minimum 20 ms)
- Metering / Protection: Class 1 / SP20

#### Output contacts

- Voltage [Vca]: 250
- Current [A]: 10 (AC)
- Switching power [VA]: 500 (resistive local)

### Measurements

#### Protection Functions

- Phase overcurrent: 50-51
- Earth overcurrent: 50N-51N
- Ultrasensitive earth leakage protection: 50Ns-51Ns
- Thermo meter (external trip): 49T

### Communications

- Front port configuration: DB9 RS232
- Rear port remote control: RS485 (5kV – RJ45)
- Setup and monitoring program: MODBUS (RTU) ekor.software
- Indications
  - Tripping cause indication
  - Error display
  - History Log

### Test

- Test blocks for current injection
- Output contact for test

### CE Conformity

- CE-26/08-43-EE-1
- IEC60255

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**Preface**

Protection, metering and control unit, integrated in Ormazabal switch-fuse combination cubicles for transformer protection.

Microprocessor-based with protection functions for timed (overload) and instant (shortcircuit) overcurrent of phases and neutral.

- Communicable electronic relay
- Current sensors (1000/1 or 300/1)
- Power supply and test board
- Selfpowered toroidal-core current transformers
- Bistable trigger

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**Tests**

### Insulation

IEC 60255-5

### Electromagnetic Compatibility

IEC 60255-11

### Climatic

IEC 60068-2-1

### Mechanical

IEC 60255-21-1

### Power

IEC 60265

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**Configurator**

Protection functions:

15 - Three phases (3 x 50/51)
25 - Three phases and neutral (3 x 50/51 + 50N/51N)
35 - Three phases and sensitive neutral (3 x 50/51 + 50ns/51Ns)

Toroidal-core current transformers:

- 0 - Without toroidal-core current transformers
- 1 - Range 5-100 A
- 2 - Range 15-630 A

Power supply:

- A - Selfpowered
- B - Auxiliary power supply (Battery, UPS, etc.)

Not all the combinations of this configurator are possible. Please ask our Technical-Commercial Department about availability of models.