



ekorsys units: protection,
telemangement & communication

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Protection and metering unit for fuse
protection cubicles

Reliable innovation. Personal solutions.

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

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

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 (I_3)
- » 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

Tests

Insulation

IEC 60255-5

Electromagnetic Compatibility

IEC 60255-11
IEC 60255-22-1
IEC 60255-22-2
IEC 60255-22-3
IEC 60255-22-4
IEC 60255-22-5
IEC 60255-22-6
IEC 61000-4-8
IEC 61000-4-12
IEC 60255-25

Climatic

IEC 60068-2-1
IEC 60068-2-2
IEC 60068-2-78
IEC 60068-2-30

Mechanical

IEC 60255-21-1
IEC 60255-21-2
IEC 60255-21-3

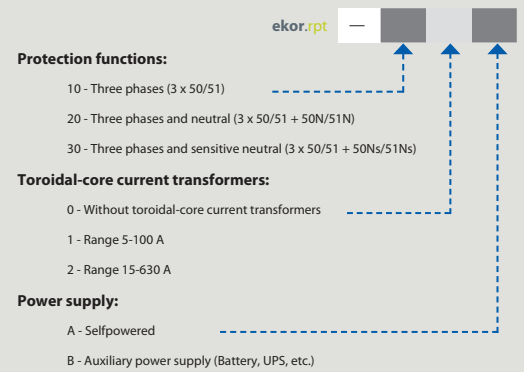
Power

IEC 60265
IEC 60056

CE Conformity

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

Configurator



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



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%
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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 / 5P20

Output contacts

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

Measurements

Current	Amperimeter Function
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Protection Functions

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

Communications

Front port configuration	DB9 RS232
Rear port remote control	RS485 (5kV) -RJ45
Protocol	MODBUS (RTU)
Setup and monitoring program	ekor.soft (optional)

Indications

Tripping cause indication	
Error display	
History Log	

Test

Test blocks for current injection	
Output contact for test	

