

ekorsys units: protection,  
telemangement & communication

## ekor.rci

Integrated control and  
monitoring unit

Reliable innovation. Personal solutions.

## Preface

Integrated control unit associated to **Ormazabal** feeder functional units.

- » Control and command of switch
- » Presence / absence of voltage
- » Detection of phase-phase and phase-earth (directional and non-directional) and earth ultrasensitive overcurrent faults
- » Zero-sequence voltage detection
- » Web server

Microprocessor-based for the treatment of signals and the performance of integrated control functions: monitoring, automation and remote control of Transformer and Switching Substations.

- » Communicable electronic relay
- » Voltage and current sensors installed on cubicle bushings (1000/1)

## Applications

- » Remote controlled Transformer Substations
- » Automatic sectionaliser
- » Automatic line transfer
- » Remote control

## Most notable features

- » IEC inverse time curves
- » Directional earth fault
- » Automatic sectionaliser
- » V, P and Q without the need for Voltage Transformers
- » Direct operation of cubicle from relay, display or remote controlled
- » Phase metering from 5 A
- » Earth current metering from 0.5 A
- » Factory-installed toroidal-core current transformers: prevention of errors on site
- » Neutral Directional Unit with configurable MTA to detect directional earth faults in any earthing system

## Tests

### Insulation

IEC 60255-5

### EMC

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

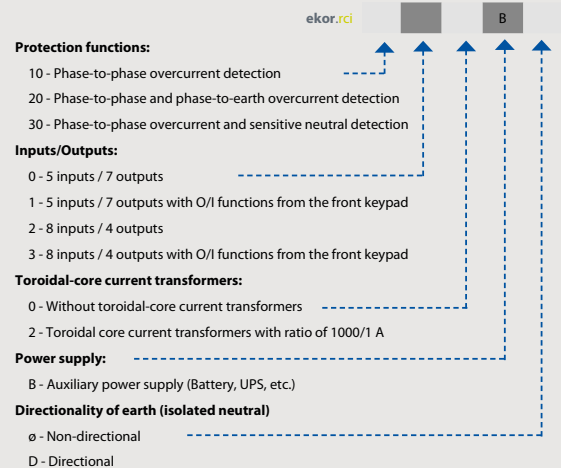
### CE Conformity

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

### Current Transformers

CT Ratio [A]	1000 / 1
Measuring accuracy	CI 0.2s
Protection accuracy	5P
Measuring range for CI 0.2s [A]	5-1200
Rated burden [VA]	1
Saturation current [A]	8000
Thermal current $I_{th}$ [kA - s]	20 - 1
Dynamic current $I_{dyn}$	2.5 $I_{th}$ (50 kA)
Standard	IEC 60044-1

## 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)
Voltage sensors	3
Time synchronisation	Sí

### Power Supply Options

A [Vac...Vac]	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 ... 1200
Earth [A ... A]	5 ... 480
Impedance [Ω]	0,1

### Accuracy

Time delay	5% (minimum 20 ms)
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### Output contacts

Voltage [Vac]	250
Current [A]	5 (CA)
Switching power [VA]	750 (resistive load)

### Measurements

Current	Amperimeter Function
Voltage	
Power (P, Q)	Optional

### Earth fault detection

Phase-to-phase overcurrent (DT) 50-51	
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Phase-to-earth overcurrent (DT, NI, VI, EI) 50N-51N	Optional
Ultrasensitive overcurrent (DT, NI, VI, EI) 50Ns-51Ns	Optional
Phase-to-earth directional overcurrent 67N-67Ns (*)	Optional

### Voltage detection

Voltage presence/absence detection	
Zero-sequence voltage detection	

### Automation and control

5 inputs / 7 outputs (*)	Optional
8 inputs / 4 outputs (*)	Optional
Switchgear condition Switch operation	
Switch operation from the front keypad	Optional
Automatic sectionaliser	
Reset display	

### Communications

Front port configuration	DB9 RS232
Rear port remote control	RS485 (5kV) -RJ45
Protocol	MODBUS (RTU) PROCOM 60870-5-104 Web server
Setup and monitoring program	ekor.soft (Optional)

### Indications

Fault display	
History Log	

ⓘ (\*) Both modules are not cumulative. The availability of one or the other depends on the model.  
(\*) For capacitive or resistive currents

