

## ekorSYS units: protection, telemanagement & communication

### ekorRCI

Integrated control and monitoring unit



Integrated control unit associated to Ormazabal feeder functional units.

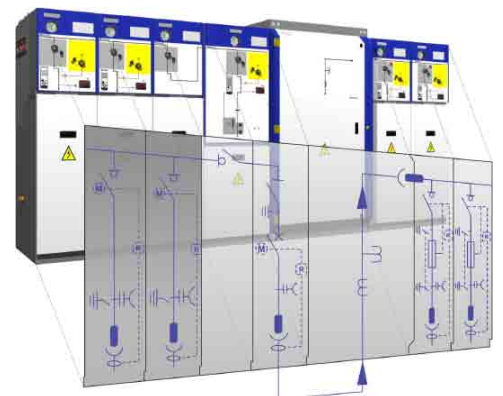
- Control and command of switch
- Presence / absence of voltage
- Detection of phase-phase and phase-earth (directional and non-directional) and earth ultrasensitive overcurrent faults
- Zero-sequence voltage detection
- Web server

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)

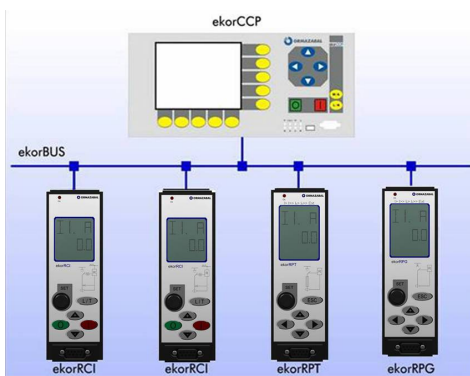
#### APPLICATIONS

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





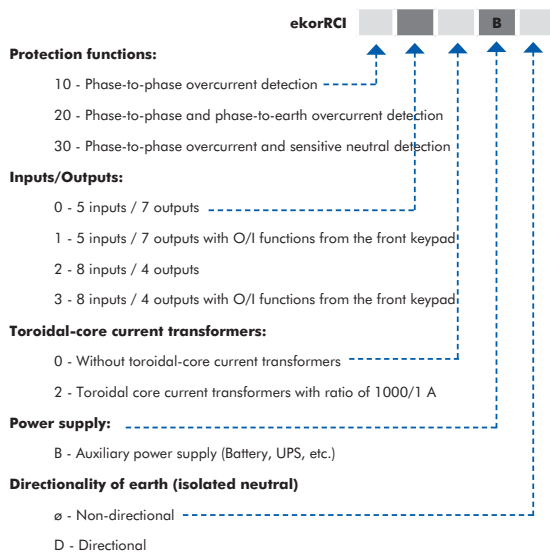
- ➔ Most notable features:
- IEC inverse time curves
  - Directional earth fault
  - Automatic sectionaliser
  - V, P and Q without the need for Voltage Transformers
  - Direct operation of cubicle from relay, display or remote controlled
  - Phase metering from 5 A
  - Earth current metering from 0.5 A
  - Factory-installed toroidal-core current transformers: prevention of errors on site



### Technical Characteristics

<b>General</b>	Phase current sensors		3
	Zero-sequence earth current sensor		1 (optional)
	Voltage sensors		3
	Time synchronisation		Yes
<b>Power Supply Options</b>	AC	[Vac...Vac]	24 ... 110 ± 30%
	DC	[Vdc...Vdc]	24 ... 125 ± 30%
	Consumption	[VA]	< 1
<b>Frequency</b>		[Hz; Hz]	50; 60 ± 1%
<b>Current inputs</b>	Primary phase	[A ... A]	5 ... 1200
	Earth	[A ... A]	0,5 ... 480
	I thermal/dynamic	[kA/kA]	20 / 50
	Impedance	[Ω]	0,1
<b>Accuracy</b>	Time delay	[%]	5 (minimum 20 ms)
<b>Output contacts</b>	Voltage	[Vac]	270
	Current	[A]	5 (AC)
	Switching power	[VA]	750 (resistive load)
<b>Measurements</b>	Current		Amperimeter Function
	Voltage		
	Power (P, Q)		Optional
<b>Earth fault detection</b>	Phase-to-phase overcurrent (DT)		
	Phase-to-earth overcurrent (DT, NI, VI, EI)		Optional
	Ultrasensitive overcurrent (DT, NI, VI, EI)		Optional
	Phase-to-earth directional overcurrent		Optional
<b>Voltage detection</b>	Voltage presence/absence detection		
	Zero-sequence voltage detection		
<b>Automation and control</b>	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		
	Front port configuration		DB9 RS232
	Rear port remote control		RS485 (5 kV) – RJ45
	Protocol		MODBUS (RTU) PROCOMÉ 60870-5-104 Web server
<b>Communications</b>	Setup and monitoring program		ekorSOFT (Optional)
	History Log		
<b>Indications</b>	Fault display		
	History Log		

### CONFIGURATOR



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

Tests		
<b>Insulation</b>		IEC 60255-5
<b>Electromagnetic Compatibility</b>	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
<b>Climatic</b>	IEC 60068-2-1	IEC 60068-2-2
	IEC 60068-2-78	IEC 60068-2-30
	IEC 60255-21-1	IEC 60255-21-2
<b>Mechanical</b>	IEC 60255-21-3	
<b>Power</b>	IEC 60265	IEC 60056
<b>CE Conformity</b>	CE-26/08-43-EE-1	IEC60255

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