



ORMAZABAL

Focus on Medium Voltage

ekorSYS units: protection, telemanagement & communication

ekorRPT

Protection and metering unit for fuse protection cubicles



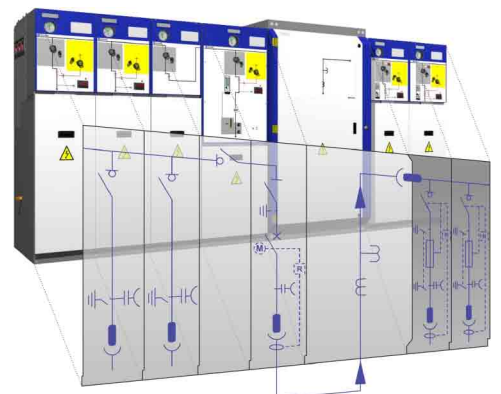
Protection, metering and control unit, integrated in Ormazabal switch-fuse combination cubicles for transformer protection.

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

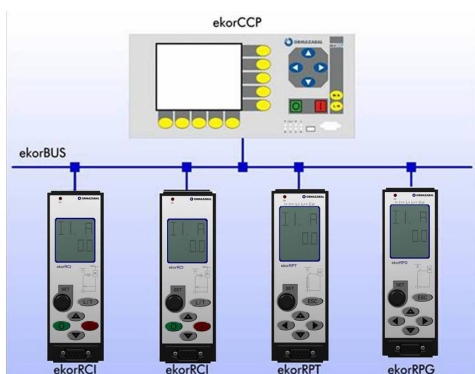
APPLICATIONS

- Protection of Medium Voltage customers.
- Protection of Transformer Substations and industrial customers:
 - Transformer protection (up to 2000 kVA – 24 kV and up to 1250 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



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...Vac]	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 / 5P20
Output contacts	Voltage	[Vac]	250
	Current	[A]	10 (AC)
	Switching power	[VA]	500 (resistive load)
Measurements	Current		Amperimeter Function
	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 (5 kV) – RJ45
	Protocol		MODBUS (RTU)
	Setup and monitoring program		ekorSOFT (optional)
Indications	Tripping cause indication		
	Error display		
	History Log		
Test	Test blocks for current injection		
	Output contact for test		

CONFIGURATOR

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Protection functions:

- 10 - Three phases (3 x 50/51)
- 20 - Three phases and neutral (3 x 50/51 + 50N/51N)
- 30 - 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.)

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

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