ekor.rpg
Protection and metering unit for circuit-breaker protection cubicles

ekorsys units: protection, telemanagement & communication

Reliable innovation. Personal solutions.
**Applications**

- Protection of Medium Voltage customers.
- Protection of Transformer Substations and industrial customers:
  - Transformer protection (up to 15 MVA - 24 kV and up to 25 MVA - 36 kV)
- General and line protection
- Capacitor banks and motors
- Switching substations

**Most notable features:**

- Selfpowered from 5 A
- IEC inverse time curves
- 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

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**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

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**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, Vca)
  - > 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)
- 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 (CA)

**Switching power [VA]**
- 500 (resistive load)

**Measurements**
- Amperimeter Function

**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: R5485 (5kV – 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

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**Configurator**

**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:**
- D - Without toroidal-core current transformers
  - 1 - Range 5-100 A
  - 2 - Range 15-650 A

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

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