Grid Solutions



Dual Powered Overcurrent Relay

The P15D is a dual powered non-directional overcurrent and earth fault relay which provides protection for applications where no external auxiliary power supply is available, or where the auxiliary supply available does not guarantee the dependability required for protection applications.

The P15D relay offers supervision functions including measurement, monitoring and recording. Industry and utility protocols are available for transmitting relay data to a supervisory control system via communication networks. This relay is mainly deployed in medium voltage and low voltage industrial installations, distribution network substations and most specifically in ring main unit (RMU) networks for monitoring and protection purposes.

ANSI	FUNCTION OVERVIEW	P15D
	Protection	
50	Definite time overcurrent	•
50N	Neutral/Earth definite time overcurrent	•
51	IDMT overcurrent	•
51N	Neutral/Earth IDMT overcurrent	•
68	Inrush blocking	•
49	Thermal overload	•
37	Undercurrent detection (aux. power mode)	•
CLP	Cold load pick-up	•
	Communication	
	USB Port/ Modbus/IEC 60870-5-103 IRS485)	•
	Binary Input/ Output	4/2
	Low energy pulse output for tripping	•
	Energy output for external flag indicator	•
	Analogue input	
	Phase current input 3× 1 ph / Earth current input Ix 1 ph	•
	General	
	Setting groups	2
	Self diagnostics/ Measurements	•
	Event /Fault/ Disturbance Record	•
Hardware		
Auxiliary supply	a. Internal from CT b. External: 24-50 V DC or 100-230 V AC/DC (Option)	
Climatic conditions	tic conditions Operating - 25°C to+ 65°C / Storage -25°C to+ 65°C	
	Housing	IP 52



Key Benefits

- CT only or dual powered relay
- Less burden on substation battery when CT energised
- Internal battery for maintaining
- LCD/communication during faults

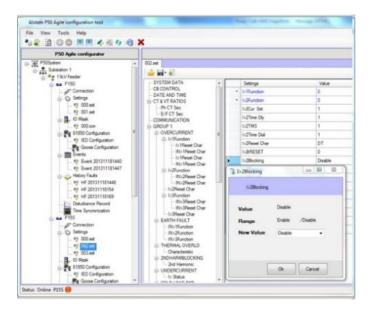
User-friendly Design

- User-friendly operator interface facilitates easy reading of measured values and simple configuration of the relay
- Compact size measurement, protection and monitoring in one box
- Front USB port for real-time data viewing, device setting, and upload/download

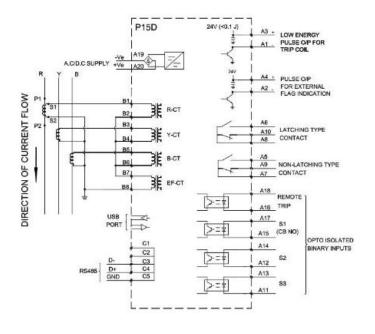
Advanced Communications

- Rear EIA (RS) 485 port for SCADA communication
- Multiple protocols Modbus/ IEC60870-5-103 (user selectable)





Connection Diagram



Protection Control

- Timed and instantaneous phase and earth fault protection (3 independent stages)
- Wide range of IEC/IEEE curves
- Thermal overload protection
- Cold load pickup protection
- · Inrush blocking
- 4 Digital inputs
- · 2 Digital outputs
- 1 A/5 A ordering option for CTs
- Low energy pulse output tripping for RMU
- Dual power supply option
- Internal battery for maintaining LCD/communication during faults
- 2 setting groups
- · Password protection
- Self-supervision & internal diagnostics

Measurement, Recording & Post Fault Analysis

- Metering of phase & neutral currents
- · Measurement of thermal state
- Up to 100 time tagged event records
- Up to 5 disturbance records
- · Battery-backed indication

Front Panel Interface

- · 4 LEDs for status indication
- Backlit LCD display (16 × 2)
- 8 navigation keys for setting and interrogation

For more information, visit **gevernova.com/grid-solutions**

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