Vantor VR-83

10kV Microprocessor Protection Relay - Line, Transformer, Motor

The Vantor VR-83 is a microprocessor-based integrated protection relay for 6 - 35 kV medium-voltage switchgear. Each version is factory-configured for its application - feeder line, transformer, motor, PT switch, capacitor bank, backup auto-transfer or differential protection - and combines protection, measurement, control and event recording in one panel-mount unit. It is the natural fit for the incomer and feeder panels of a substation, mini-sub or industrial MV board, and reports over RS485 Modbus to a SCADA or energy-management system.



Key Features

- Versions for line, transformer, motor, PT switch, capacitor, battery/bus-bar backup auto-switch and motor/transformer differential protection
- 32-bit processor with DSP, real-time operating system, 16-bit sampling at 24 samples per cycle
- Overcurrent, differential, over/under-voltage, zero-sequence and thermal overload protection elements
- Measurement error within 0.2% (analogue) and 0.5% (power)
- Records at least 32 fault and sequence-of-event entries
- Graphic LCD with menu-driven setup; digital input resolution 2 ms
- RS485 Modbus RTU communication for SCADA integration
- Panel / flush mounting for MV switchgear

Technical Specifications

- Model: VR-83 series (select application below)
- System voltage: 6 - 35 kV switchgear (via VT/CT)
- Processor: 32-bit + DSP, 16-bit A/D, 24 samples/cycle
- Accuracy: analogue <= 0.2%, power <= 0.5%
- Event records: >= 32 fault / SOE records
- Digital inputs: 220 V binary, <= 2 ms resolution
- Communication: RS485 Modbus RTU
- Consumption: < 12 W normal, < 15 W operating; < 1 VA per voltage phase
- Display: graphic LCD
- Mounting: panel / flush

Ordering information

Order code	Description
VR-83L	VR-83L - Line protection
VR-83T	VR-83T - Transformer protection
VR-83M	VR-83M - Motor protection
VR-83P	VR-83P - PT switch protection
VR-83C	VR-83C - Capacitor bank
VR-83B	VR-83B - Backup battery auto-switch
VR-83BU	VR-83BU - Bus-bar backup auto-switch
VR-83MD	VR-83MD - Motor differential
VR-83TD	VR-83TD - Transformer differential