TECHNICAL DATASHEET

ELV-PRO RV ANALYSER

Designed to AS/NZS 4871 and AS / NZS 2081:2011

Application

The ELV-PRO RV is intended for use in high impedance IT power systems. The relay is intended to be used as the backup earth fault protection relay in conjunction with the OCS-RV providing primary protection on each outlet. The relay allows greater earth fault data to be captured relating to variable frequency components not identified by the OCS-RV.

The relay also provides data logging to assist in fault finding. On each event trigger, the relay stores system data for a window of two seconds before and two seconds after the triggered event, which includes system time, wideband earth fault voltages and phase current.

Ethernet connection to the relay provides the ability to monitor the device parameters and real time measured current from an internet browser. All data logs stored on the unit can also be viewed.

Features

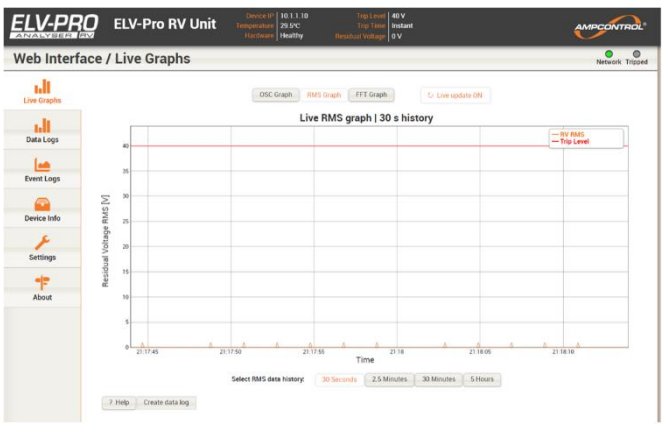
The ELV-PRO RV has the following key features:

- Compliance to AS/NZS 4871 and designed to AS/NZS 2081
- Patented analysis method*
- Fail Safe operation
- Wide range residual voltage measurement (20Hz to 8kHz)
- Wideband, Narrowband and Weighted frequency response modes (Wideband Mode recommended for most scenarios)
- Adjustable trip level and trip times
- On board memory logs last 1000 data logs and 50 events
- CIP over Ethernet/IP for control and monitoring
- Modbus TCP
- Continuous CCM connection monitoring
- DIN rail mounted

* International patent application number PCT/AU2011/000705

Description

Ampcontrol's ELV-PRO RV is a high performance, microprocessor based, wide bandwidth earth fault protection relay, that is capable of measuring and analysing Residual Voltages of a high impedance IT power system. The ELV-PRO RV uses patented technology (US20130258537) to characterise residual voltage components giving superior fault discrimination.
The relay is designed to identify faults in these power systems that may exhibit complex residual voltages and hazardous touch potentials typically associated with variable speed drives in mining environments.



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Specifications	
Supply	
Regulated Voltage	24 VDC ± 25 %
Power Supply Requirement	12 W
Dimensions	
ELV-PRO (W x H x L)	135 x 135 x 107 *(mm)*
Operating Conditions	
Ambient operating temperature	0 °C - 60 °C
IP Rating	IP20
Residual Voltage Protection	
Trip Current Level	40 V – 500 V (40 V – 100 V in 10 V increments, 100 V – 500 V in 50 V increments)
Trip Operation Time	Instantaneous – 500ms in 50ms increments
Output Contacts	
Relay 1 – Fail Safe	1xCO (Mechanical) 250 VAC 1.6 A / 30 VDC 1.6 A (@50 VDC ~0.3 A)
Relay 2 – Fail Safe	1xNO (Solid State) 110 VAC/DC 0.2 A
Communication Interface	
Ethernet Socket	Relay 10BASE-TX or 100BASE-TXaccessible via http (using a standard web browser)
Ethernet IP & Modbus IP	Standard Protocol, See user manual for details
Certification Details	
Certification Number	IECEx ExTC 22.0005X
Type	[Ex ia Ma]
Temperature	0 °C ≤ Ta ≤ 60 °C
I.S. Parameters:	HVR Base Flying Leads
	Um: 2286Vrms Phase to Earth Uo: 28.0V Io: 114uA Po: 1mW Co: 3.76uF Ci: NIL Lo: 300H
	CCM Adapter Terminals
	Um: 132Vrms Phase to Earth

Part Number	Description
199326	ELV-PRO RV - Wideband Residual Voltage Relay
199313	ELV-PRO RV Settings Dongle
199350	ELV-PRO RV CCM Adapter Kit

199350 - ELV-PRO RV CCM Adapter Kit	
Part Number	**Description**
199351	CCM Adapter
180902	IPX Base

DISCLAIMER

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