

## ELV - WIDEBAND EARTH LEAKAGE RELAY

Compliant with AS/NZS 2081:2011, Section 6

### Applications

The Ampcontrol ELV is the next generation of earth leakage relays and provides earth leakage protection (earth fault protection) as per AS/NZS 2081:2011. It has been designed for use on earth fault-limited systems, and particularly coal mining applications. The relay is also suitable for other applications where equipment or system-wide earth leakage protection is required.

### Features

- AS/NZS 2081:2011 (Section 6) compliant
- Wide operating bandwidth (5Hz to 10kHz)
- Wide current range (down to 30mA)
- Fail safe operation
- Continual monitoring of the toroid
- Adjustable trip level and time delay settings
- Uses patented technology (AU2011264414) to characterise earth leakage currents giving superior fault discrimination, particularly in applications involving switching power electronics and variable speed drives



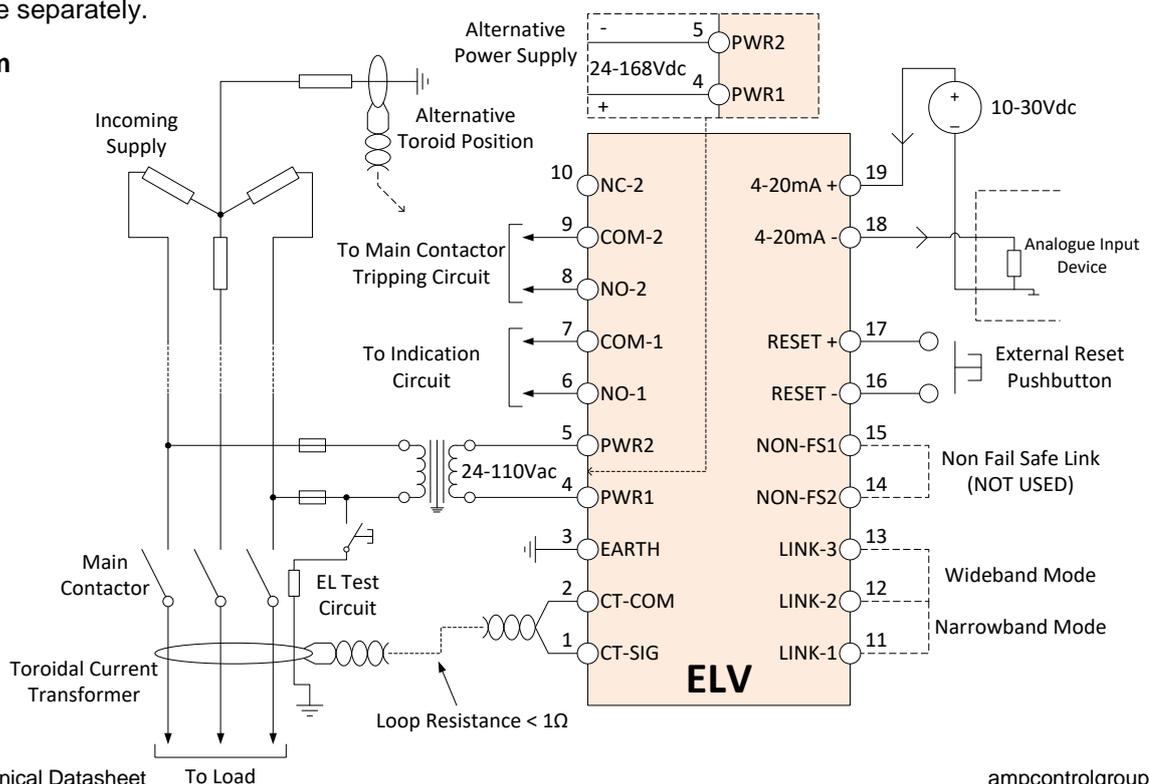
### Product description

The ELV relay provides a definite time operating characteristic with adjustable trip sensitivity and time delay. The relay latches when tripped and provides normally open and change-over relay contacts. The relay supports an external reset switch, and a 4-20mA interface allows external monitoring.

The user has the ability to switch the relay between wideband (up to 10kHz), narrowband (power frequency) and weighted frequency mode (up to 10kHz, high frequency compensated).

The ELV Earth Leakage Relay is housed in a stainless steel case and can be either 'DIN Rail' or 'Panel' mounted through a 69 x 39mm cut out. When panel mounted the front of the ELV relay is designed to provide IP56 ingress protection. An attachment to prevent unauthorised adjustment of the trip settings is available separately.

### Diagram



**SPECIFICATIONS**

<b>Supply Voltage</b>			
<i>Voltage</i>	24-110VAC +/- 20%, 50Hz 24-168VDC +/- 10%		
<i>Power Consumption</i>	< 3W		
<i>Operating Temperature</i>	0 to 60°C		
<i>Humidity</i>	Between 10% relative humidity and the dew point, non-condensing		
<b>Operating Frequency</b>			
	<b>Narrow Bandwidth</b>		<b>Weighted/Wide Bandwidth</b>
<i>Frequency</i>	50Hz		5Hz – 10kHz
<i>Accuracy</i>	10% @ 50Hz		10% @ 50Hz
<b>Operating Modes</b>			
	<b>Narrow Bandwidth</b>	<b>Wide Bandwidth</b>	<b>Weighted Bandwidth</b>
<i>Links (Bridged)</i>	1-2	2-3	1-3 or no links bridged
<b>Relay Contacts</b>			
<i>Contacts</i>	1 x NO / 1 x CO		
<i>Ratings</i>	250V, 1.6A, 400VA		
<i>Relay to Toroid</i>	< 1Ω		
<b>4-20mA Output</b>			
<i>4-20mA Output</i>	The 'Loop Powered' current represents the leakage current as a % of the trip level. 4mA => 0% leakage, 20mA => 120% leakage (100% = 17.33mA)		
<i>Loop Supply Voltage</i>	10 – 30VDC		
<i>Max. Loop Resistance</i>	700Ω at 24V loop supply		
<i>Accuracy</i>	+/- 2% of full scale		
<b>Mechanical</b>			
<i>Dimensions</i>	77w x 47h x 116d (mm)		
<i>Cut-Out Dimensions</i>	69w x 39h (mm)		
<i>Weight</i>	500g		
<i>IP Rating</i>	IP56 (when panel mounted)		
<b>Trip and Time Delay Settings</b>			
<i>Switch Position</i>	<i>Trip Level (mA) ±10%</i>		<i>Time Delay (ms) +0ms, -20ms</i>
0	30		50
1	60		100
2	100		150
3	150		200
4	200		250
5	250		300
6	300		350
7	350		400
8	400		450
9	450		500
A	500		500
B	750		500
C	1000		500
D	1500		500
E	2000		500
F	2500		500
<b>Item Numbers</b>			
170447	ELV Wideband Earth Leakage Relay		
101399	DIN Rail Mounting Kit (suit ELD, ELV & ELM)		
164672	Lockable Front Cover (suit ELD, ELV & ELM)		
115437	Toroid – 25 mm ID (DIN Rail Mounted)		
101658	Toroid – 60 mm ID		
101656	Toroid – 112 mm ID		
<b>Find Out More</b>			
For more information on this product, contact Ampcontrol Customer Service on +61 1300 267 373 or <a href="mailto:customerservice@ampcontrolgroup.com">customerservice@ampcontrolgroup.com</a> or visit the Ampcontrol website: <a href="http://www.ampcontrolgroup.com">www.ampcontrolgroup.com</a>			

**DISCLAIMER**

While every effort has been made to assure the accuracy of this document at the date of issue, Ampcontrol assumes no liability resulting from any omissions or errors in this document, and reserves the right to revise content at any time.