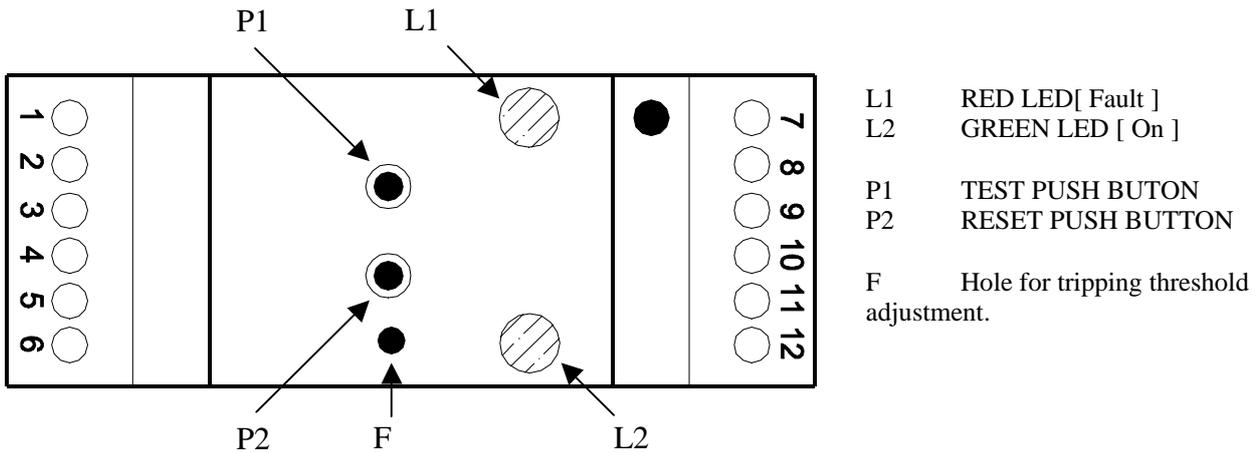


**Device for low isolation control for 2 phase or 3 phase networks.**

mod AN/V



**Description**

SENTINEL ISOLATION CONTROLLER mod. AN/V can monitor isolation for systems working in AC installed without Ground connections.

Adjusting the tripping threshold, it is possible to set the tripping isolation value from 50KOhm to 300 KOhm .

The device can be mounted on a standard DIN EN 50022 rail, and occupies 2 module space.

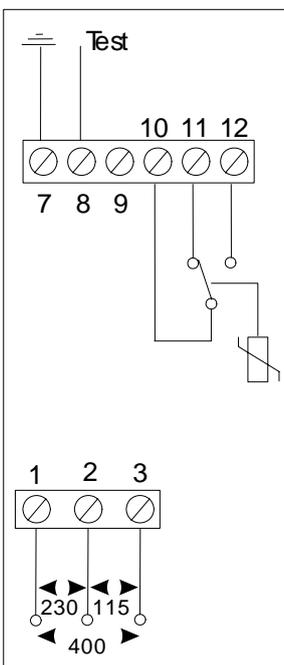
**Operation**

SENTINEL Isolation controller is a device checking whether isolation on a 2-3 phase networks drops below a certain set threshold. The isolation between terminal 7 and 8 is monitored continuously. These terminals should be connected to the network as illustrated in the diagrams below (diag. 2 and diag. 3.) Working principle is shown in diag. 1, a two position relay connected to terminal 10, switch from terminal 11 to 12, allowing normally open or normally closed cabling.

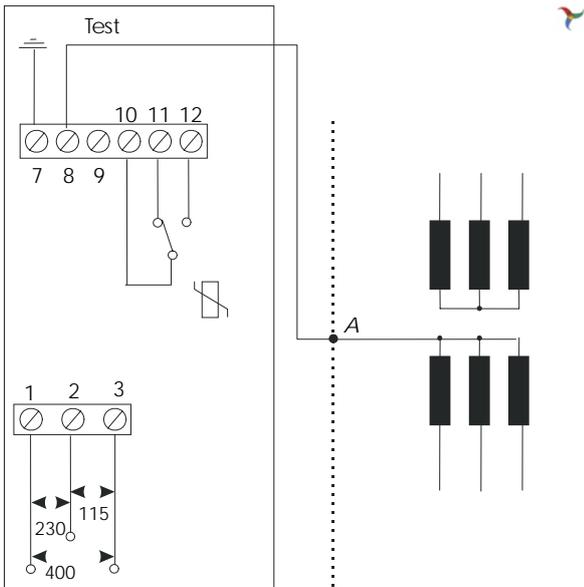
Right after connection to network, a green led signal that the circuit is monitoring the network. When the isolation drops below the user set threshold, system goes in FAULT mode, and red led turns on, switching the internal relay from termina 11 to 12.

Once the low isolation condition cease to be, the device remains in FAUL mode, till the user presses the RESET push button, then the red led turn off, and the relay switches back to rest position.

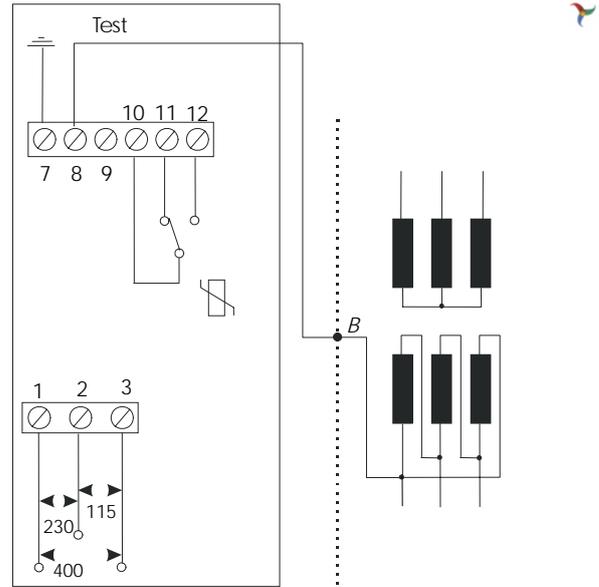
Operating the TEST pushbutton, it is possible to simulate a fault condition, with the same exact behaviour following a low isolation condition.



Diag.1



Diag. 2



Diag. 3

## Installation

In order to connect correctly SENTINEL, please refer to diagram 2 and 3, indicating installation for 3 phase systems, with or without neutral conductor. If neutral is present, TEST terminal should be connected to it, otherwise it should be connected to one of the phases in a triangular configuration (diag. 3).

Inside Relay can stand resistive loads up to 8 A 250VAC or 8A 24VDC..

### Attention:

Tripping time is dependent from the difference between the isolation measured on the network and the threshold set by the user, the larger the difference, the fastest it will react.

**The isolation controller adjusted for a threshold of 100Kohm will react to isolation dropping below 50Kohm trips in about 500mS.**

## Regulations

SENTINEL mod.AN/V follows regulations CEI 41-1, CEI 66-3 , CEI 12-13, CEI 64-8, CEI 11-1

## ADJUSTMENT procedure for SENTINEL mod. AN/V for a given resistive value:

1. Connect 220V network to terminals 1 and 2
2. Power device  
GREEN LED WILL TURN ON [ On ]
3. Press TEST Push Button  
RED LED WILL TURN ON [ Fault ]
4. Press RESET T Push Button  
RED LED WILL TURN OFF [ Fault ]
5. Insert sample resistance between terminals 7-8
6. **Keeping reset button pressed**, adjust slowly, with an insulated screwdriver, the trimmer trough the hole placet under the green led, till the red led turn off, and then, even slower, backward to the position when the red led lights back on. ( *if at the beginning of procedure red led is already off, turn it on, turning the trimmer to one side of the scale* )
7. Remove sample resistance
8. Press RESET T Push Button  
RED LED WILL TURN OFF [ Fault ]
9. Insert sample resistance between terminals 7-8  
RED LED WILL TURN ON [ Fault ]

Steps 1-2-3-4 check if device is working properly. Adjustment is carried out in steps 5-6.

Steps 7-8-9 check if adjustment has been carried out correctly, if red led does not light at the end of step 9, please repeat adjustment procedure.

## Technical Data

Supply Voltage	115-230-400 VAC	50/60 Hz
Max Voltage to Monitor	500 VAC	50/60 Hz
Max Power dissipation.	2VA	
Max Relay Current	8A 250VAC or 8A 24VDC on resistive load	
Tripping threshold	50...300 KOhm	
Threshold precision	15%	
Tripping time (threshold 100KOhm)	c.a. 500mS	(insulation 50Kohm)
Internal resistance	1 MOhm	
Insulation	2.5 kV	
Working Temperature	-10 +40 °C	
Protection Class DIN 40050 (on terminals)	IP 20	
Dmensions	35x90x75 mm	
Weight	213 gr.	

**ArSilicii s.r.l.**

Loc. Fosci 25/F 53036 POGGIBONSI (SI)

Declares that:

**ISOLATION CONTROLLER**

mod SENTINEL AN/V

Is built according European community regulation, including last modifications, and national regulations following this:

89/336/CEE Electromagnetic Compatibility  
73/23/CEE Low Voltage

The following regulations have been fulfilled:

EN 50081-1, EN 50081-2, EN 50082-1, EN 50082-2, EN 61000-3-2, EN 61000-3-3,  
EN 61000-4-2, EN 61000-4-4, EN 60335-1

**ArSilicii s.r.l.**

Paolo Meschinelli



Year of CE marking apposition