



**Loop Control electronic board.** 

ZUC 40 is a board that analyzes the current loop of the general security systems. ZUC 40 electronic card is used in order to control the devices from a cut off detection (PERISTOP®, PERIFENCE, PERISAS, PERICOIL). It is protected against electromagnetic interference and provides dry contact information and IP or RS485 "MODBUS" protocol.

Monitoring two independent loops

Detecting cuts off and short circuit

Analysis of leakage current - Protection against sabotage

Immunity to electromagnetic interference

Interfacing with systems monitoring via dry contact / RS485 / IP Ethernet

Ground cabinet version 2 or 4 zones

Rack Version in centralized bay



# Description

The electronic card ZUC 40 is an analysis module which is used to control systems by using the technique of controlling a loop current. ZUC 40 is the heart of

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perimeter protection system, its electronic monitor's measures the integrity of a sensor wire connected between its two input terminals. It analyzes the measurements by statistical treatment and generates alarms or faults if necessary.

ZUC 40 electronic card is protected against power surge, it has a high immunity to interference and algorithm analysis was designed to provide security against sabotage.

### Main Uses

- Monitoring two independent loops
- Detection of the short circuit
- Detection when there is a cut off
- Control the leakage current to ground
- Ability to monitor the status of 4 auxiliary contacts
- SCADA systems interface via dry contacts or via "MODBUS" communication (RS485 or IP)

## **Application**

ZUC40 analysis module is used for monitoring loop, performs two types of measurements on the wire detector:

- A impedance measurement to detect shunts or wire cuts
- ✓ A measurement of leakage current to ground to detect if the sensor cable is in contact with the ground.

It is thus possible to control within very precise limits, programmable by PC, the values of the electrical impedance of the loop and the value of leakage current between the loop and the ground and / or armoring protection.

### Security against sabotage

The accuracy and sensitivity of the measurement technique makes a decommissioning of the detection system by a destroyer, without causing an alarm, extremely long and difficult.

#### **High noise immunity**

Because of the long length of the loops, short interference or noise spikes induced voltages can be captured in a highly disturbed electric environment. They are then processed by the evaluation device to be discriminated and removed.

### Protection against voltage surges

The spikes of high energy (example due to indirect exposure to a lightning strike) are limited by the use of a daughter card to protect against lightning. Galvanic insulation between the different cards prevents any transfer of the destructive effect.



**ZUC I/O IP:** Communication card Input and Output under IP.

- Auxiliary Input
- Dry contact Output
- MODBUS Communication under IP/RS 485

Alarm information report on a centralized bay (SCADA)

Programmable to assigned Inputs to Outputs in order to command security devices (CCTV, Lighting, Electric lock...)

