

GEOQUIP



WORLDWIDE

The Leader in Perimeter Protection Solutions

MICRALERT SUMMARY INFORMATION

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1 INTRODUCTION

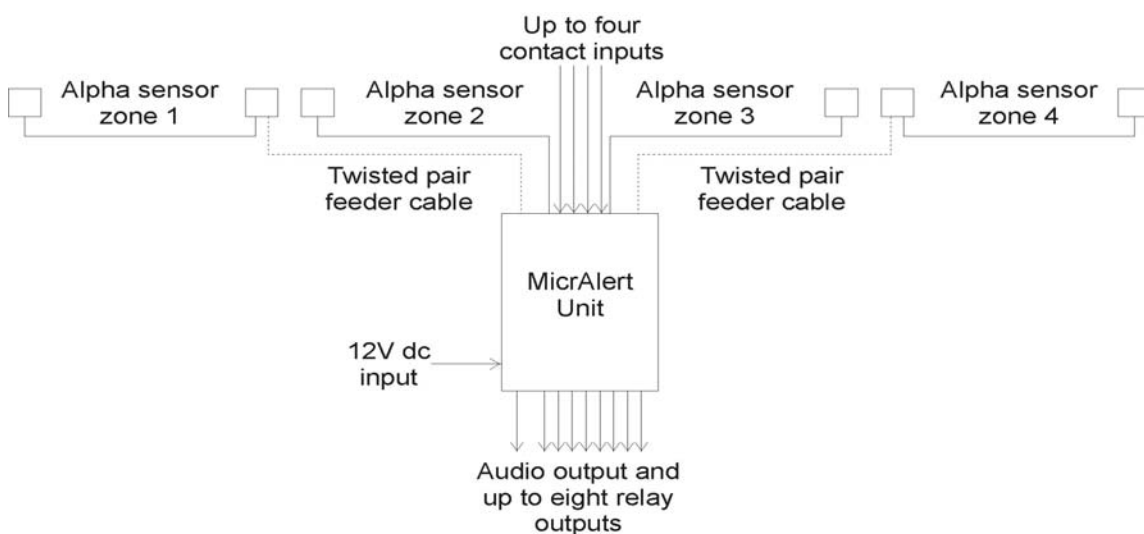
Perimeter fencing is an effective initial deterrent to intruders. However a determined intruder can breach any type of fence structure, usually by cutting through or climbing over. Early detection of an intrusion gives security staff more time to mobilise and deal with the threat and Geoquip have developed a range of detection systems to achieve this.

MicrAlert is the latest addition to our range of Perimeter Protection products, combining the world beating detection standard of our established Defensor system with new Integration, Communication and Control options. Each MicrAlert unit provides up to four zones of perimeter protection using Geoquip's acclaimed Alpha sensor cable, as well as accepting up to four additional contact inputs for monitoring other equipment. Each unit is also has eight relay outputs configurable for annunciation or switching and a range of options for controlling its operation and for its integration with other components of an overall security system.

Resulting from many years of experience of sensor design, the Alpha sensor achieves the highest levels of detection by sensing the fence vibrations caused by an intrusion. These high-quality signals are analysed by the MicrAlert unit using multiple channel Digital Signal Processing to detect cutting, climbing or sawing of the fence fabric. The Alpha sensor's reproduction of the fence vibrations is of such high quality that the Audio signal produced may also be directly monitored by security staff to provide verification of activity at the perimeter. The result is the highest quality of detection with an extremely low false alarm rate, providing the user with a highly reliable perimeter protection system.

2 SYSTEM CONFIGURATION

The MicrAlert unit itself may be mounted either on the fence fabric or indoors. The Alpha sensor cables may either be connected directly to the MicrAlert unit or remotely via twisted-pair connections of up to 2km length. In most applications twisted pair cables are used to connect 12V dc power to the unit and to bring the Audio and Relay output signals back to a central monitoring station. Alternatively annunciation may be made by an RS232 link to an alarm management system.



Typical MicrAlert configuration (four zones)

3 SYSTEM ADJUSTMENT

For system set up and adjustment each MicrAlert unit may be fitted with an integral LCD screen and buttons, providing a simple yet comprehensive interface for configuring the system's operation. Alternatively, an optional Hand-held Controller may be connected temporarily to the unit when adjustments are needed. The system is fully password protected against unauthorised adjustment.

As well as the Integral Screen and Hand-held Controller options, the system may also be configured and adjusted remotely via the RS232 Management System interface. The protocol for this interface is published separately – please contact Geoquip for further details if required.

4 CONNECTIONS

Inputs	Power supply input Up to four alpha sensor circuit inputs Up to four dry contact circuit inputs
Outputs	Eight relay outputs for annunciation and/or switching of external equipment Audio output for verification of sensor alarms
Other	RS232 connection for annunciation and system adjustment by external management system RJ45 connection for system adjustment by optional handheld controller

5 OUTPUT RELAY OPERATION

MicrAlert's output relays may be configured for different modes of operation. They may be used for annunciation of alarms and tampers or they can be used as general purpose switching relays driven by an external management system.

The relay outputs can be individually configured to be either Form A or Form B by altering which pins on jumpers 1 – 8 are shorted together. If the left pin and the middle pin are shorted together then the relay is Form B and if the right pin and the middle pin are shorted together then the relay is Form A. Jumpers 1 – 8 are located on the main PCB underneath the square PCB housing the alarm and contact input terminal blocks and this board needs to be removed to change the jumpers from the default setting of Form A.

6 ADJUSTABLE PARAMETERS

All parameters may be adjusted using the onboard screen and buttons, with the optional hand-held controller or via the RS232 management system interface.

Sensor circuits	Climb/lift detection sensitivity Cut detection sensitivity Hacksaw detection sensitivity Event count for cut detection Time window for multiple-event cut detection Pre-alarm sensitivity
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Contact circuits	Polarity (secure = open/closed) Tamper-monitoring resistor values (serial and parallel) Time delay
System parameters	Audio mode Display illumination mode Relay operation mode

7 TECHNICAL SPECIFICATION

Maximum sensor zone length	400m
Max interconnecting twisted pair length	2km
Lightning Protection	Sensor inputs transformer-isolated Suppression diodes and gas discharge tubes on all inputs
Output Relays	Switchable between Form A and Form B Maximum voltage 110V ac or 30V dc Maximum current 0.3A ac or 1.0A dc Maximum power 30VA
Audio output	600 ohm balanced output at nominal 0dB
Power requirements	6 – 24V dc Maximum current 400mA at 12V dc Protected against reverse polarity and overvoltage
Housing	Aluminium housing rated to IP65
Dimensions	330mm x 220mm x 110mm
Weight	kg
Operating temperature	-40°C to +80°C
Tamper monitoring	All sensor and contact inputs monitored for tampering Housing monitored for tampering
Fault monitoring	Inbuilt regular self-test and fault-monitoring
The RS-232 serial port connections	Pin 2 Tx Pin 3 Rx Pin 5 Ground This should be connected to the SMS PC's serial port using a straight-through cable (i.e. 1-1, 2-2, 3-3 etc., not null-modem)

8 OVERALL LAYOUT AND CONNECTORS

