









# StarPAS Personal alarm system

**Description** – StarPAS is an ultrasonic based emergency notification system. Individuals moving throughout a facility can immediately identify their exact location in a crisis via the transmitter carried with them. Unlike radio signals (RF), ultrasonic signals do not penetrate walls, ceilings or floors. Therefore, the transmission / reception is confined to the immediate area of the transmitter and there is no confusion regarding where response should be sent.

**Application** – The StarPAS system is based on ultrasonic technology to ensure that location identification is accurate since there is no "bleeding" of signal between walls or floors.

# **Features**

- · Identifies location
- · Choice of transmitters that are interchangeable in system
- · Audible low battery signal in transmitters
- Network version simplifies integration with Security Management Systems (SMS) such as StarNeT™ 1000
- Interferences with CCTV, access control and other systems
- · Multiple control stations
- · Custom site graphics
- · Highly adaptable, expandable system
- · Easy administration

# **Markets**

- · Correctional facilities
- Government agencies and laboratories
- · Commercial and industrial sites
- · Educational institutions
- Medical facilities

# **StarPAS**

### Personal alarm system

#### How it works

The ultrasonic transmission is modulated, meaning that local receivers will only alarm when they receive a transmission containing two set frequencies in an established pattern. This eliminates false alarms from items such as jangling keys, metallic items, and HVAC systems as it is virtually impossible for the same modulated frequency pattern to be duplicated. Upon activation, the system transmitter carried by an individual emits a continuous ultrasonic signal. The signal is omni-directional, eliminating the need to point or direct the transmission.

The StarPAS monitor and control is a PC based, highly flexible system that provides speed, reliability, user friendliness and easy integration with other subsystems. Operator keyboard input is required for only a few administrative functions; standard operation is via mouse, trackball and / or touchscreen. Event specific audio prompts, automated event processing and high resolution site graphics are easily established to meet facility specific requirements.

The system is flexible enough to suit any site, from a simple standalone solution to a multiple workstation, multiple site application with multi-language support and high level interfaces to CCTV and other systems. A StarPAS system can be expanded, upgraded or modified at any time.



#### 03RM - Receiver

The 03RM is the receiving unit that decodes the modulated ultrasonic signal sent by the Personal Alarm Transmitter (PAT). The alarm and auxiliary contact and LED latch each time an alarm is received. They remain latched as long as an activated transmitter is within range. The latching condition is held for 5 seconds after the transmitter is deactivated. The LED assures the user that the transmitter signal has been received and the alarm message sent.

For wet (kitchens, bathrooms) or exterior applications (exercise yards, courtyards, entries, areas between buildings), two weatherproof versions are available. One has a thermostatically controlled heater for areas colder than freezing point and the other, for milder climates, does not. Both are shipped with a surface mount, two gang weather proof EO box and gasket.





PAT/S & PAT/MD





PAT with Holster & PAT/C

#### PAT - Personal Alarm Transmitter Series

The PAT is activated by pushing a latching alarm button which has been specifically designed to prevent accidental activation. Additional methods are also available as options: pull-pin, keeper switch for use with key chain or break away lanyard and "man down". The "man down" provides automatic transmission whenever an individual is in a prone position (greater than 60° from vertical). In order to prevent accidental transmissions, the transmitter emits a warning tone first and allows a 4 second time delay to correct the transmitter position before an alarm signal is sent. A break away lanyard is supplied with the PAT/C.

Transmitter housings are made from rugged Lexan™ cases. Sturdy pocket/belt clips provide a variety of carrying positions. An optional holster is available for the Standard (PAT/S) and Man Down (PAT/MD) when they are intended to be worn on a service belt. A lithium battery is included with each transmitter along with a special tool to gain access to the battery compartment. When battery life begins to run low, an audible tone is emitted that sounds for several days. All transmitters are completely interchangeable within the system.

#### **PAT** test unit

The PAT Test Unit is designed specifically for use with the Senstar PAS Transmitters. A transmitter is activated and the test initiated when the PAT is inserted into the tester. A yellow LED indicates the test is in progress. Within 2 seconds, the tester checks the transmitter signal strength, frequencies and modulation rate. A green LED indicates a satisfactory test completion and fully operational transmitter. A red LED and alert tone signify any fail conditions.



#### **StarPAS Monitor and Control**

The StarPAS control system is based on the proven proprietary StarNet software program. The system is available in large or small versions that can communicate with up to 128 or 32 transponders (I/O collectors) respectively. Either version can be bundled with hardware to form a complete workstation and up to 64 workstations can be networked together. The software / hardware bundle consists of Windows® XP PRO and StarNet software pre-installed on a commercial desktop computer with a 15" LCD monitor.

Upgrade options include:

- 19" rack mounted industrial PC
- Additional RAM to 256 MB
- Variety of sizes of desktop and rackmount LCD and SVGA monitors with or without touchscreens
- Ethernet adapters and hubs for multi-workstation systems (10BaseT,100BaseT or 100BaseFX fiber optic)

Communication takes place via dual physical data paths (fiber optic or copper) or the TCP / IP backbone.

Powerful data protocol allows multiple workstations to monitor and control any I/O point operating on any system data path connected to the TCP / IP network.

The system configuration software provides a powerful tool for system design. Default device icons can be used to represent alarm points which provide rapid "out of the box" funtionality or they can be fully customized with different graphics by importing CAD files.

#### PLC 420 I/O module controller

The PLC-420 supervises the I/O modules and reports their status to the StarPAS workstations. A single PLC-420 can monitor a maximum of 64 inputs and 64 outputs using any combination of I/O modules. The I/O modules are connected to the PLC-420 by a ten conductor ribbon cable which provides both data and power. Separate in and out ribbon connectors are provided on each I/O. PLC-420s and I/O modules can be mounted to a NEMA panel or in a NEMA 19" Senstar PC card rack shelf.



#### I/O - 102 High Security Input Module

The I/O –102 monitors 16 supervised sensor inputs providing both alarm and tamper supervision. The status of both are reported to the PLC-420 using 32 input points. The tamper supervision is always active.

#### I/O - 202 Low Current Relay Output Module

The I/O-202 module provides 16 low current dry contact relay outputs, reporting their status to the PLC-420 controller. Typically, these outputs are used for triggering alarm signals, CCTV switchers, and intercom controllers.

#### **PLC-430D/F Field Transponders**

This is an advanced multiplex transponder designed for high security applications requiring alarm and tamper monitoring, hardware self-testing and remote control. Alarm, tamper, and remote control are performed by the PLC-430 and forwarded to the StarPAS work station(s). PLC-430 is available in version "D" with 8/4 relay inputs / outputs and version "F" with 8/8 relay inputs / outputs.



# **Technical Specifications**

#### **PAT/S TRANSMITTER**

Dimensions: 6.1 W x 9.7 H x 2.3 cm D

(2.4 W x 3.8 H x 0.9 in. D) Weight: 113.4 g (4 oz.)

Colour: Dark grey with red button

Activation: Latching push switch, optional

man-down or pull-pin

Pocket clip: Molded Lexan® - moveable for left or

right access

Battery: 9 volt lithium

Estimated battery life: 3 years with normal use

#### PAT/C TRANSMITTER

**Dimensions:** 3.8 W x 6.04 H x 2.1 cm D

(1.5 W x 2.35 H x 0.825 in. D) Weight: 42.5 g (1.5 oz.)

Colour: Light grey with dark grey button

Activation: Latching push button and keeper / loop

pull-pin

Pocket clip: Spring steel Battery: Three - 3 volt lithium cells

Estimated battery life: 1 year with normal use

#### **PAT** test unit

Power: 16.5 VAC, 20 VA class II, transformer

furnished with unit

Mounting: Wall or tabletop Enclosure: Cast metal box -

15.2 W x 20.3 H x 5.1 cm D (6 W x 8 H x 2 in. D)

Weight: 0.91 kg (2 lbs.)



Circuit components: 100% solid-state conformal coated PCB

Power requirement: 40 mA @ 12 VDC or

24 VDC, noise ±0.5 Vp-p

Connection: Plug-in terminal block Alarm contacts: NO / NC supervised or non-supervised dry contact relay

Tamper switch: 2 NC magnetic reed switches

(0.25 Amp @ 12 VDC)

Enclosure requirements (interior): 10.2 cm x 5.4 cm (4 in. x 2.125 in.) deep electrical box (not supplied), flush or recessed with plaster right optional

Enclosure requirements (exterior): 2 gang weatherproof box filled with gasket (supplied with WP units)

03RM / WPH heater unit: 5.0 Amp @ 12 VDC,

1.0 Amp @ 24 VDC

Specifications are subject to change without prior notice.







: DAS-T0/A1-IN-R1-E-09/09

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