869 MHz Door Usage Sensor 41005/23

Installation and User Manual

Functionality

The 869 MHz Door Usage Sensor is a Telecare Sensor intended for use with Tunstall 869 MHz Social Alarm Equipment. Please refer to the Social Alarm Equipment documentation for compatibility and other Social Alarm Equipment specific information.

The Door Usage Sensor can be used to monitor opening and closing of doors, drawers etc. or similar. A radio signal is generated to indicate the opening and closing events

The Door Usage Sensor can be used either with external switches or an internal reed switch and is configurable for normally open or normally closed switching devices

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The Door Usage Sensor can be typically used by the Social Alarm to provide an input to intruder/inactivity processing and/or to provide data for MIDAS 2 applications

The Door Usage Sensor is powered by an internal battery with a minimum battery life of 5 years with typical usage. This battery is automatically tested and when found to be low, will be signalled to the Social Alarm equipment by radio

General Installation

The Door Usage Sensor should be installed in a clean, dry environment and for optimum radio performance should be mounted away from metallic surfaces

The Door Usage Sensor can be fastened to the wall etc. by a variety of methods – integral keyhole slots, sticky pads, Velcro etc. The installer must determine the most appropriate method. Note that if the integral keyhole slots are used, then care must be taken to ensure that the screw heads do not foul on the circuit board within the Door Usage Sensor

The internal reed switch position is marked on the side of the Door Usage Sensor and is also indicated in Figure 1.

Configuration

The Door Usage Sensor can be configured for a variety of input switches by means of a Configuration Link (shown in Figure 1) as defined in the following table: -
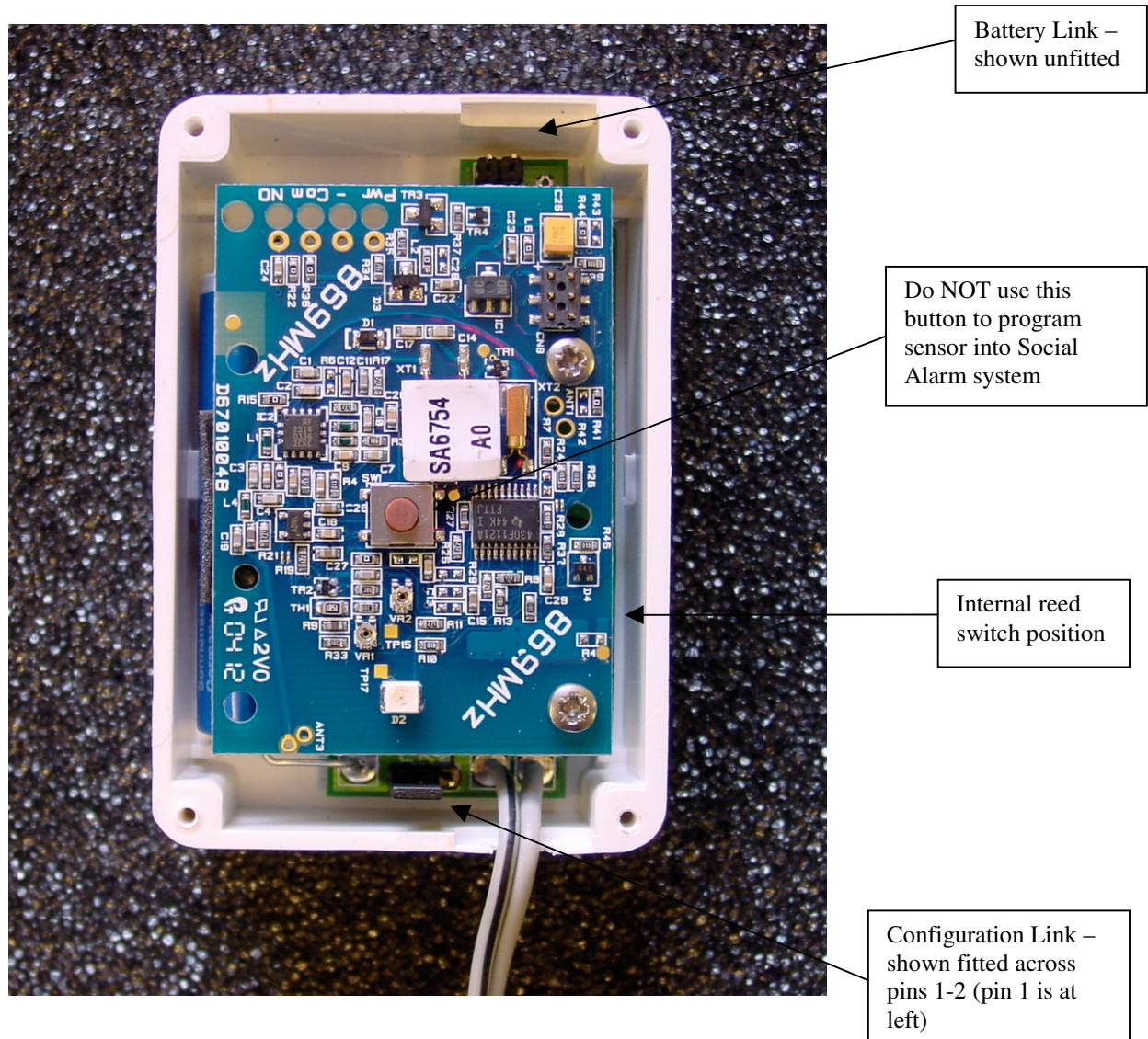
Type of Switch	Configuration Link Position	Notes
Internal Reed Switch	Jumper across 1-2	External cable should be cut off as not required
External Door Contacts (supplied)	Jumper across 1-2	
User supplied external switch (contacts closed when door closed)	Jumper across 1-2	Voltage free contacts or open collector outputs only. For open collector outputs – stripe on cable is 0V
User supplied external switch (contacts open when door closed)	Jumper across 2-3	Voltage free contacts or open collector outputs only. For open collector outputs – stripe on cable is 0V

Note that anti-static precautions should be observed when handling the Door Usage Sensor with the cover removed

Once the Door Usage Sensor has been configured for the switch type used, then power should be applied to the unit by fitting the Battery Link (shown in Figure 1)

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across the two jumper pins. This link must be fitted quickly otherwise there is a risk that the Door Usage Sensor will not power up correctly – indicated by no radio transmission when the switch is activated. If this is the case then remove and refit the battery link until the Door Usage Sensor operates correctly

Figure 1. Configuration and Battery Link Positions

Battery Link – shown unfitted

Do NOT use this button to program sensor into Social Alarm system

Internal reed switch position

Configuration Link – shown fitted across pins 1-2 (pin 1 is at left)

Programming to Social Alarm System

The Door Usage Sensor should be programmed into the Social Alarm system in accordance with the standard procedures for the Social Alarm system.

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The Door Usage Sensor can be made to generate a radio transmission by opening or closing the switch contacts. Either an opening or closing event can be used to program the Social Alarm system. The switch on the top of the radio module (see Figure 1) MUST NOT be used to generate a radio transmission

Service Information

The Door Usage Sensor contains no user serviceable parts

The Door Usage Sensor contains a Lithium Thionyl Chloride battery, which has an anticipated minimum life of 5 years (typical usage). This battery is not user-replaceable and when it has expired, the Door Usage Sensor should either be disposed of according to local regulations or returned to Tunstall for a new battery to be fitted.

Notices

Approval: This product is marked with a CE mark and constitutes a Class 2.7 device. The radio system has been designed to comply with EN50134 series of European Norm standards specific to Social Alarms.

The product exceeds the requirement for Electromagnetic Compatibility (EMC) standard BS EN 50130 part 4; which sets criteria for EMC Immunity for components of fire, intruder and social alarm systems.

- The radio triggers (and receiver) are in accordance with the specific European Social Alarm radio frequency band allocation (from 869.20 to 869.25MHz). They operate at 869.2125 MHz.
- The radio transmitters comply with mandatory radio standards for Short Range Devices (SRD) ETSI EN 300-220: The radio receiver also conforms and exceeds the mandatory class 1 criteria necessary for **"Highly reliable SRD…serving human life inherent systems."**

Transmitter parameters

The transmitter follows a pre programmed cycle leading to a typical duty cycle class of 1 (<0.1%):	A class 2.7 device
Effective radiated power 200 micro Watts	Frequency error ± 3 kHz maximum
Adjacent channel power <100 nano Watts	
Effective range up to 50m (into standard alarm telephone)	Intended area for use is Europe
Intended environment is group II - indoor in general with intended operating temperature between -10 to +55 Celsius	

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Declaration of Conformity

We, Tunstall Telecom of Whitley Lodge, Whitley Bridge, Yorkshire, United Kingdom, DN14 0HR
Declare that the 869MHz Door Usage Sensor conforms with the essential requirements of the RTTE directive 1999/5/EC. Essential radio test suites have been carried out.

Model Number: 41005/23

Applicable standards

EMC   EN 55022:1998
                   ETSI EN300-683:1997 (Class 1)
                   ETSI EN301-489-1:(2000-08) Class 1
Safety   EN 60950:2000
Radio   ETSI EN 300 220-3:(2000-09)
Social Alarm EN50130-4:1995 + amendment A1:1998

Signed

Technical Director   Date: August 2004

Associated Summary Information 04RTTE006A
The CE mark was first applied in August 2004