SmartNet-100 Ceiling Beacon Visual Alarm Device with Standard Radio Base

Part Number: S1.VAD0.RB00.1 / S1.VAD0.RB00.2

Ceiling Mounting Beacon VAD with Standard Radio Base (White/Red)

The Cygnus SmartNet wireless fire detection and alarm system is a network of battery powered, wireless fire detection and alarm products suitable for permanent installations, commercial premises and HMOs.

The Ceiling mounting VAD Beacon with Radio Base is available for use with up to 511 other devices, serving small and large sites. It provides a beacon with radio in a single device.

Other products in the range include: Smoke and Heat Detectors, Manual Call Points, First Aid Alarms, Alarm Interface Unit and Control Panel.

Overview

- Reliable wireless mesh radio technology
- Completely wireless – no cables required
- Sensitive radio with up to 350m range
- 868MHz radio (915MHz also available)
- 3+ year battery life
- Designed to be EN 54 compliant
- Certified by Intertek
- Easy configuration via the Windows based CygnusConfig application
- Compatible with other Cygnus SmartNet devices

Features

Beacon	Ceiling mounting Beacon VAD head
Beacon type	C-3-9
Sounder	No (see SN.VAD0.RB10.x)
Silent test	Yes
Tamper detection	Two (radio base and head)

Parameters

Dimensions (mm)	123Ø x 95h (inc Beacon VAD)
Weight	482g
Operating temperature	-10°C to +55°C
Storage temperature	-10°C to +55°C
IP rating	IP21C, Type A (Indoor)
Relative humidity	>95% @ 25°C to 55°C

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Power

Operating voltage range	2.5 to 3.8V (from lithium batteries)
Main battery	3x ER26500 Li-SOCl$_2$ (lithium thionyl chloride)
Backup battery	1x CR123 (must be fitted)
Battery Voltages	ER26500 = 3.6V nom. CR123 = 3.0V nom.
Power consumption	3mW
Battery life	Min 3 years (normal operation)

Radio

Radio operating frequency	865 to 868 MHz
Radio category	Category 1
Channels	10 (with channel hopping algorithm)
Bandwidth	250kHz
Channel spacing	300kHz
Transmit power	10mW (maximum)
Duty cycle	<0.1%
Protocol	Cygnus mesh protocol
Encryption	TDES (64-bit payload, 192-bit encryption key)
Self-forming	Cygnus self-forming algorithm
Self-healing	Cygnus self-healing algorithm

Additional Information

Beacon VAD flash rate: 1Hz and 0.5Hz	Beacon type: C-3-9
Model SN.VAD0.RB00.1	White
Model SN.VAD0.RB00.2	Red

Compliance

Current:

- ETSI EN 300 220-1 V3.1.1 (2017-02)
- ETSI EN 301 489-1 V2.2.2 (2019-09)
- ETSI EN 301 489-3 V2.1.1 (2019-03)
- EN61000-6-3:2007 +A1:2011
- EN50130-4:2011 +A1:2014
- EN61000-3-2:2014
- EN61000-3-3:2013

- EN 54-18:2005
- EN 54-23:2010
- EN 54-25:2008

UK CA 0359

CE 0905

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Ordering Information

Detector Head Options	VAD Ceiling- Mounted (White)	SN.VAD0.1
Device Base(s) Options	Standard Radio Base (White)	S1.RB00.1
	Standard Radio Base (Red)	S1.RB00.2

IO Functions (for EN 54-18:2005)

Inputs:
- Radio messaging from other devices
- Installation tamper switch

Outputs:
- Radio messaging to other devices
- Visual Alarm Device (VAD) beacon

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Beacon VAD

Beacon	Ceiling mounting Beacon VAD head
Beacon type	C-3-9
Flash colour	White
Flash rate	1Hz (1 second) and 0.5Hz (2 seconds)
Coverage	190m^3 cylindrical volume coverage
Operating voltage range	2.5 to 3.8V (from radio base batteries)
Beacon Head Power consumption (nominal)	360mW, 100mA (when flashing)

Installation Information:

The VAD must be installed horizontally on the ceiling.

There is no preferred orientation for ceiling mounted VADs.

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