HOCHIKI

World Class Leaders in Fire Detection Since 1918

VADs

Visual Alarm Devices

Range Overview

EN54-23 AN INTRODUCTION

Visual Alarm Devices (VADs) are an essential component to most fire alarm systems. They provide a visual indication of an alarm condition to those people who wouldn't normally be alerted to a fire by standard audible-only devices such as sounders and bells.

The Disability Discrimination Act of 1995 has highlighted the need for the inclusion of VADs in all public buildings, specifically in areas where people with impaired hearing work in isolation. However VADs are also required in noisy environments where staff might be wearing ear defenders such as factories, foundries etc.

A new product standard, BS EN 54-23:2010 (Fire detection and fire alarms systems. Part 23: Fire alarm devices - Visual alarm devices), has been introduced primarily to standardise the requirements, test methods and performance of VADs and ensure their light output is measured in a uniform manner. This standard became mandatory throughout Europe from 31st December 2013 and all manufacturers of VADs were affected.

WHITE OR RED LEDS

The new Wall and Ceiling Beacons in our new EN54-23 compliant range are available with either red or white LEDs offering additional flexibility to the end-installer when deciding on the requirements of each installation

ADJUSTABLE ILLUMINATION

The EN54-23 ratings of these Beacons (the brightness of the LEDs – which affects the area that is illuminated) can be adjusted on each model from the control panel*. This reduces the number of devices required in the range as each one can produce up to three different ratings making it easier to choose the right VAD for the task.

SELF-MONITORING

The circuitry in our new Wall and Ceiling Beacons is continually monitored to ensure that it is still functioning. A malfunctioning device will show at the panel as a fault saving time and effort on maintenance inspections*.

TIME-SAVING

When in operation, these Beacons monitor the LED light output via a separate sensor to ensure that a flash occurs, again saving time on scheduled walk-tests. A failure to operate is indicated as a fault at the panel**.

REDUCED LIKELIHOOD OF FAILURE

The control panel can be programmed to perform an automatic daily LED check on our Wall and Ceiling Beacons, consisting of a lower power single flash, recorded by the in-built sensor. This reduces the probability of a failure on demand, just when the device is needed. A failure is indicated at the panel**.

SEPARATE POWER SUPPLY

Our new Wall and Ceiling Beacons have the ability to be powered externally from a separate 24V power supply. This means for projects that require many VADs the loop current isn't drained by the LEDs when they are activated (meaning more devices on the loop is possible)**.

WEATHERPROOF FUNCTIONALITY

Outdoor variants are also available (used with the wall sounder weatherproofing kit)

Hochiki is a wholly independent, multinational, publicly listed group of companies with over 2000 employees working across six manufacturing plants, 38 sales offices and 14 subsidiaries.

One of the world's leading manufacturers of commercial and industrial fire detection and emergency lighting solutions, Hochiki has acquired global acceptance as the benchmark for high-integrity and long-term reliability.

91%
of customer reviews rated our product quality as "VERY GOOD" or "EXCELLENT"

88%
of our customers are extremely likely to recommend our products based on quality

92%
of our customers rated us as VERY GOOD or EXCELLENT.

Statistics from the Hochiki customer service survey

Hochiki's facilities in Japan, the United States of America and Europe design and manufacture products and provide technical support suited to local standards and customer requirements.

Total commitment to meeting the needs of individual national markets has reinforced the company's global reputation, resulting in Hochiki products being installed in many prestigious sites and in over 80 countries worldwide.

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ESP Intelligent

Calculating coverage volume

THE NEED FOR VADs

The needs for VADs will be identified as part of the risk assessment. As with other fire alarm system components, there are a number of challenges that must be considered in the layout design and installation of VADs.

One challenge is the illumination of the entire volume of the open space where the alarm must be visible. VADs must produce sufficiently intense light, so that an individual located anywhere in the space, looking either towards or away from the VAD, would be alerted in the event of an emergency. The performance of VADs under the standard is assessed against a minimum required illumination of 0.4lux on surfaces perpendicular to the direction of the light emitted from the device.

VADs will now be classified into three categories based on their application:

W - Wall-mounted
C - Ceiling-mounted
O - Open Category

W and C mounting categories are specified at specific installation heights and particular patterns of coverage - see below for more information. Within these two categories, the shape of the volume covered is fixed by the standard. The dimensions of this coverage volume are specified by the manufacturer. For all categories, the volume covered can be used to determine VAD spacing within the building.

W CATEGORY

(WALL-MOUNTED) COVERAGE VOLUME

Wall mounted VADs cover a cuboid volume with a square floor area. The coverage volume is presented as a code in the form of W - X - Y, where W = Wall-mounted category. X is the maximum mounting height (m) and Y is the width and length (m) of the coverage floor area - see diagram. The minimum mounting height allowable by the standard is 2.4m.

For example Hochiki's wall-mounting VAD has a classification of W-2.4-5. This means it should be mounted at 2.4m from the floor and will cover an area of up to 5m by 5m

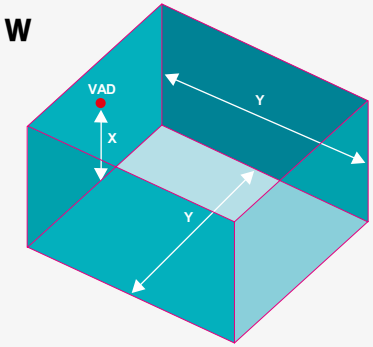
C CATEGORY

(CEILING-MOUNTED) COVERAGE VOLUME

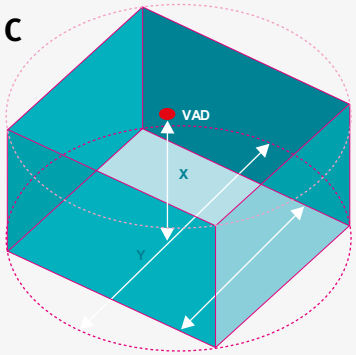
Ceiling-mounted VADs cover a cylindrical area. The coverage volume is presented as a code in the form C - X - Y, where C = Ceiling-mounted category. X is the maximum mounting height (m) and Y is the diameter (m) of the coverage volume's floor area - see diagram. The maximum mounting height can only be specified as 3, 6 or 9m.

For example Hochiki's ceiling-mounting VAD has a classification of C-3-15. This means it can be mounted up to 3m from the floor and will cover a cylindrical area of 15m diameter. The width of the room is Y/1.414

W



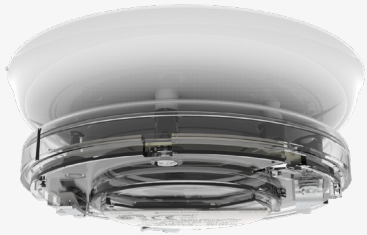
C



CHQ-CB

An Addressable Loop-Powered Beacon

- Loop Powered
- Single loop address via TCH-B100
- High Intensity LED technology
- 0.5/1 Hz flash frequency
- Addressable via TCH-B100
- Choice of 2 LED colours (red and white)
- Approved to EN54-23:2010 - Category 'C'
- High efficiency
- Selectable light output**
- Operating voltage 17-41 vdc



YBO-BSB2

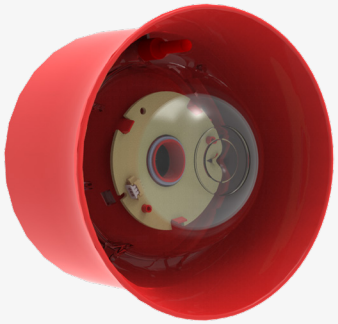
An Addressable Loop-Powered Base Sounder Beacon

- Loop Powered
- Single Loop Address. Addressable through the control panel or TCH-B100
- 50 ~ 98 dB(A) (±2 dB(A)) output at 1m
- Fits Hochiki Standard or Isolator, Bases and supports ESP Sensors and Remote Indicator
- 51 User-Selectable Tones (all tones EN54-3 compatible)
- Beacon and Sounder can be controlled independently**
- Approved to EN54-23: 2010 - Category 'O'
- Operating voltage 17-41 vdc

CHQ-WB

An Addressable Loop-Powered Beacon

- Loop Powered
- Single loop address via TCH-B200
- High Intensity LED technology
- 0.5/1 Hz flash frequency
- Addressable via TCH-B200
- Choice of 2 LED colours (red and white)
- Approved to EN54-23:2010 - Category 'W'
- High efficiency
- Selectable light output**
- Operating voltage 17-41 vdc



CHQ-WSB2

An Addressable Loop-Powered Wall Sounder Beacon

As per CHQ-WS2 plus:

- Variable flash frequency
- High Intensity LED technology
- Independent control of Sounder and Beacon
- Auto-shutdown Mode available - can be set independently for sounder or beacon**
- Approved to EN54-23: 2010 - Category 'O'
- Operating voltage 17-41 vdc

CWST-S5

A Conventional Beacon

- Approved to EN54-23, C & W categories
- Advanced optics ensures superior light coverage at low current draw.
- Synchronised flash exceeds EN43-23 standard
- Soft start feature reduces power surges on system start-up
- Available in either red or white casings
- Available with either a red or white LED

CWST-W5

A Conventional Weatherproof Beacon

- Approved to EN54-23, C & W categories
- Advanced optics ensures superior light coverage at low current draw.
- Synchronised flash exceeds EN43-23 standard
- Soft start feature reduces power surges on system start-up
- Available in either red or white casings
- Available with either a red or white LED

With the wide choice of VAD variants available it might seem a daunting task to identify the best unit for the application. Therefore we have devised a simple configuration table which allows you to source the correct VAD. Visit www.hochikieurope.com/vads for further information.

VADs
Visual Alarm Devices

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Your Safety Our Technology