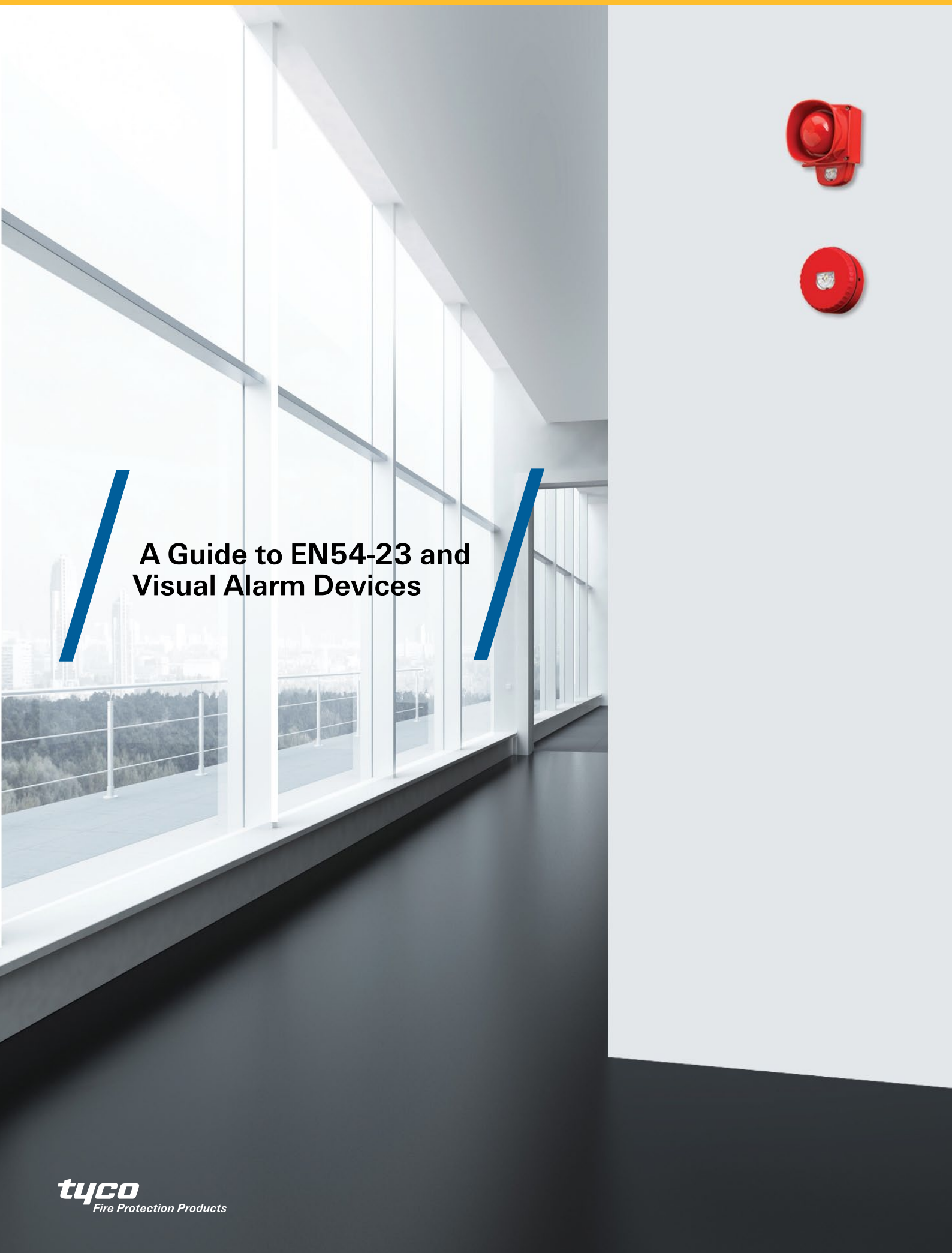
ZETTLER

Safer. Smarter. Tyco.™



A Guide to EN54-23 and Visual Alarm Devices

tyco Fire Protection Products

Contents

ZETTLER	1
EN54-23 - Overview	2
Frequently Asked Questions about EN54-23	3
Understanding Coverage Volume	5
Unique Light Management	6
Implications of EN54-23 for Risk Assesors	7
Implications of EN54-23 for System Designers	8
Implications of EN54-23 for an Installer	9
Implications of EN54-23 for a Commissioning Engineer	10
A Consultant's Guide	11
Solista LX Wall	13
Solista LX Ceiling	14
RoLP LX Wall	15
Symphoni LX Wall	16
Symphoni LX WP Wall	17
ZETTLER Website	19
Product Solutions from ZETTLER	21

A tradition of
Fire Detection Innovation

// ZETTLER has a long and proud tradition in fire detection. Founded in Munich in 1877 as Elektrotechnische Fabrik Alois ZETTLER it quickly became a recognized name for quality fire detection, light call and other building control solutions. When ZETTLER became part of Tyco International in 1996 the fire detection product line was available throughout Europe and has since gone from strength to strength benefitting from the resources and investment available from Tyco.

// Built on 100 years of product innovation

The ZETTLER range has been built around MZX Technology which provides some of the most advanced fire detection capabilities available.
Developed from integrating many years of product innovation through research and development across Europe, the MZX Technology platform has provided some of the best sensing technologies over 100 years and has been a great contributor to early detection and minimizing false alarms.

It has also been responsible for some of the best installation techniques allowing easy and flexible engineering and installation. This has resulted in the ZETTLER range being the most resilient, reliable and serviceable systems available and has the broadest level of standards compliance.

// Global Certifications

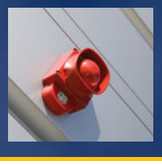
ZETTLER products have global certification from many approval authorities and product development and manufacturing procedures are regularly audited and inspected by independent test houses from around the world.

// Lower Life Time Cost & Improved Serviceability

ZETTLER has always stood for high quality and excellent value for money. Today's ZETTLER systems extend this value through the whole lifetime of the fire detection system. The ZETTLER fire detection products are packed with features that start saving money from the day that installation commences. Features to reduce install costs, simplify configuration and speed up servicing are provided as standard. The use of MZX Technology ensures extended life time and forward compatibility with next generation products.

FAQ

Frequently Asked Questions



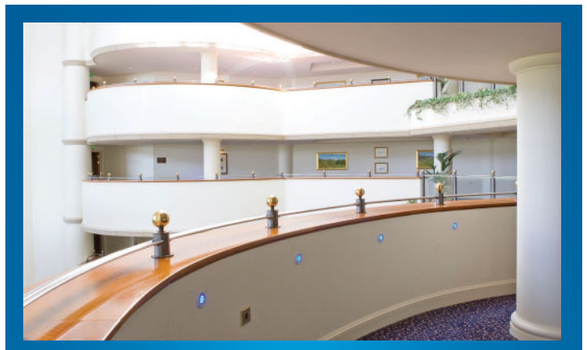
European Standard
EN54-23 Purpose

Over recent years, the installation of visual alarm devices (VADs) has experienced considerable growth. This is in response to the Equalities Act* and the proven effectiveness and reliability of VADs in the event of a fire, either in the form of a separate unit or integrated with an audible alarm.
The European Committee for Standardization, CEN has released a new standard, EN54-23 which directly affects the use of visual alarm devices in fire detection and fire alarm systems in non-domestic premises. Prior to the release of EN54-23, no EN standard existed. Misinterpretation and confusion over a product's performance was therefore a common concern in the industry. The purpose of EN54-23 is to standardise the requirements, test methods and performance criteria of VADs and ensure light output is now measured in a uniform manner throughout Europe.

Power Consumption

Power consumption is the biggest consideration when complying with EN54-23. VAD devices must now reach the required minimum illumination of 0.4 lux over the entire area of coverage. Doubling the area of coverage from a light source will take four times the power at the same level of illumination. Consequently the larger the area, the higher the required light output or the higher the current consumption. Flash colour can also influence the power consumption. Across most of Europe a flashing red light denotes a fire alarm signal, however red light consumes more power than white light for the same intensity. A red filter absorbs the blue and green spectrum of light, allowing only the red wavelengths to pass and so the energy emitted is reduced, which can result in a loss of up to 80% of the light output. This makes red flash devices power hungry and drastically reduces the coverage area compared to a white flash.

*Relevant to UK only. Please refer to your regional or local requirements if outside the UK.



Compliance
EN54-23 Requirements

- Required illumination of 0.4 lux or lm/ m^2 on a surface perpendicular to the direction of the light emitted from the VAD.
- The room size must be stated on the product or supporting documentation
- Flash rate must be between 0.5Hz and 2Hz.
- EN54-23 becomes mandatory from 1st March 2013 across Europe. For the UK, Portugal, Eire and Sweden CPD opt outs end 30th June 2013.

Q. Who is affected by EN54-23?

A. The standard applies to manufacturers selling a VAD into the EU Fire Market, designers and Installers of fire detection systems.
EN54-23 is mandatory from 1st January 2014 across Europe. For the UK, Portugal, Eire and Sweden CPD opt outs ended 30th June 2013, when the Construction Products Regulation (CPR) replaced the Construction Products Directive (CPD).

Q. How does an EN54-23 compliant VAD differ from current products?

A. To comply with EN54-23, the coverage volume of the VAD, based on the required minimum illumination of 0.4 lux must be stated. This coverage volume must be presented on the product or in the accompanying product.
A product manufactured using existing technology may conform, but because its light output may be poorly distributed compared to the coverage requirements of EN54-23,the system design will be impractical for the room size and it may consume excessive current.

Q.Do EN54-23 products consume more power?

A. Yes. Products currently available in the market will achieve the required light level for small rooms but will need to increase their power consumption to achieve reasonable room coverage. This increase in current consumption will limit the number of devices that can be supported by the alarm circuit so that the system could become impractical and uneconomic to install. The inverse square law states that, "the coverage distance from a light source will require four times the power to achieve the same level of luminosity".

Q.What are Wall, Ceiling and Open Class applications?

A. Devices conforming to EN54-23 fit into one of three classes – wall, ceiling or open class. Wall and ceiling have an installation height and area coverage defined by the standard. Open category devices allow the manufacturer to specify the coverage volume to any desired coverage shape. The minimum required illumination of 0.4 lux is used to determine area coverage in all cases.

Q.Is the mounting height fixed under EN54-23?

A. Wall based products must be mounted a minimum height of 2.4m from the floor. Ceiling products must define the maximum height of the ceiling at which they are designed to operate – 3m, 6m or 9m.

Q. How does EN54-23 impact on system design?

A. If you are designing a fire alarm system, you will need to be aware of the coverage volume of your chosen device. ZETTLER offers a number of support tools to help with product specification. For further information, see page 7 or 22.

FAQ
Frequently Asked Questions

// Q. Does the ambient light level matter?

A. CoP 0001 makes recommendations for various ambient lighting levels and suggests alterations to the coverage volume dependent on the amount of ambient light. For more information, please go to the ZETTLER website.

// Q. What are the advantages of white light over red light?

A. Red or white light can be specified; however products featuring a red flash can lose up to 80% of the energy emitted compared to that of a white flash, increasing overall system current consumption to cover the same distance. This is due to the colour spectrum being filtered to only allow red wavelengths to pass. Red light has also been shown to be less effective at attracting attention.

// Q. I may struggle to supply enough current from my panel. What can I do?

A. The flash rate on ZETTLER's new LX range can be switched down from 1Hz to 0.5Hz thus reducing current consumption down to almost half.

// Q. How can I avoid wasting current if the area to be covered is smaller than the size stipulated on the product?

A. ZETTLER's new LX range has a switch which allows the installer to select a coverage of 7.5m or 5m, allowing the power consumption to be reduced by almost half for smaller rooms using the 5m setting.

// Q. Does EN54-23 affect Installers?

A. Yes. The product must be installed at the correct mounting height and in line with the system design. It is important that the coverage volume is understood in order to effectively install the device. The distance between VADs and to adjacent walls is important as it may be checked by the Commissioning Engineer as part of the building sign-off. For more information on the implications for Installers and Commissioning Engineers, please see page 19 and 20.

Understanding Coverage Volume

// On all products in ZETTLER's new EN54-23 compliant LX range, you will find a coverage volume code that identifies three pieces of essential information. If a product does not specify this code, then it is probably not compliant to EN54-23.

// 1. Specified Application

VADs will now be classified into three categories based on their intended application; namely 'ceiling mounted', 'wall mounted' and 'open class'. Each of these categories has unique targets for light distribution patterns in order to be compliant.

// 2. Specified Mounting Height (x)

A specified maximum mounting height will be provided by the manufacturer. The VAD is required to cover the volume below its mounting height. In a wall application, for example, any light travelling upwards beyond the mounting height may be wasting current. A ceiling VAD will radiate light in a cylinder below the mounting point.

// 3. Product Coverage (y)

Ceiling

(y) indicates the diameter in metres, of the coverage cylindrical volume when the device is mounted at the ceiling height (x).

Wall

(y) indicates the width of a square room in metres, covered by the device when the device is mounted at the maximum mounting height (x)

// Wall Category

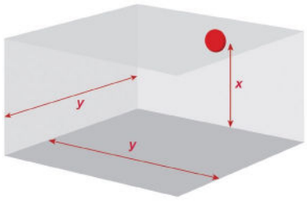
The coverage volume code should be presented as W – x – y, where W is for Wall, x is the maximum mounting height and y is the width of the square area covered (in metres) by the device. Please note that the minimum mounting height for wall category is 2.4m.
For example, the coverage code on a product may be presented as W – 2.4 – 7.5

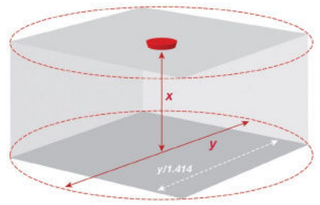
// Ceiling Category

The coverage volume code should be presented as C – x – y, where C is for Ceiling, x is the maximum mounting height and y is the diameter in metres of the cylindrical coverage volume. Please note that ceiling mounted products are specified for maximum heights of 3m, 6m or 9m. For example, the coverage code on a product may be presented as C – 3 – 7.5.

// Open Class

Open class allows the manufacturer to specify the coverage volume and coverage shape does not restrict mounting height. The required illumination of 0.4 lux still applies.





Unique Light Management
The Latest Optic and LED Technology

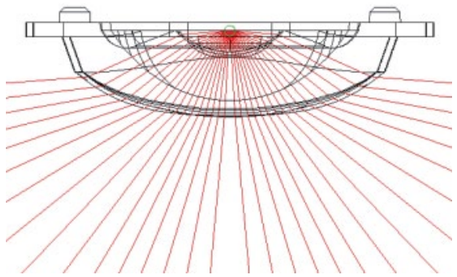
// Optimised Light Dispersal

Over recent decades, there has been a widespread growth in the use of LEDs in many industries due to their advantages over Xenon technology, such as power efficiency and long life. With this in mind, ZETTLER's new LX range has been designed to incorporate the latest LED technology, ensuring that a stable, bright and reliable light output is guaranteed with all EN54-23 compliant products.

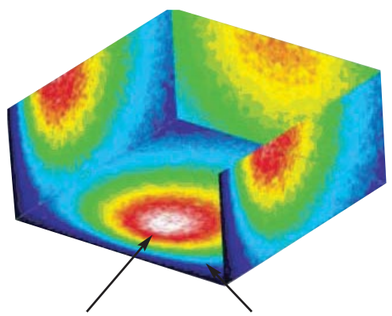
The new LX range combines the latest developments in LED technology with a unique lens design, delivering an efficient, low current solution to the challenges of EN54-23.

Manufactured to exacting standards and tolerances, the ZETTLER LX lens refracts light to remove hot spots of light directly in front of the LED. It redistributes the light to dark spots, where traditional LED solutions would fail to meet the 0.4 lux minimum requirement of the standard. Consequently current consumption is optimised and the power required to illuminate the room is minimised.

Ceiling Application Lens Design



Light output without optical correction

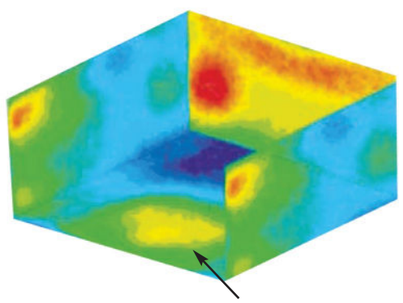


Too much light

Not enough light

Wall Application Lens Design Patent pending

Light output with optical correction



Hot spots reduced

Implications of EN54-23
for Risk Assessors

// The introduction of EN54-23 has no implications with regards to how a risk assessment is carried out today, but it may impact possible alarm solutions. If you are new to the process a few points are highlighted below. For a more in-depth understanding of fire risk assessment go to www.fia.uk.com and review the training section.

The need for visual alarm devices in a building should be determined by a fire risk assessment, carried out by a competent person. The main criterion for the installation of visual alarm devices is to provide a warning of fire in situations in which audible fire alarm devices alone may not be suitable.

Typical situations where VADs would be required include:

- To comply with the Equalities Act*, local building regulations or related legislation
- Warning deaf or hard of hearing people
- Areas of high ambient noise
- Staff warning systems
- Nursing homes or hospitals
- Public assembly buildings
- Broadcast studios
- Hospital operating theatres

If uncertain of the need for a VAD, reference should be made to one or more of the following:

- The relevant part of BS 9999*
- Guidance documents that support fire safety legislation
- Disabled access legislation and associated standards, such as BS 8300 and Part M of the Building Regulations*
- Any authority responsible for enforcing fire safety legislation that applies to the premises
- Custom and practice - local, regional or national
- Health and safety legislation such as the requirement to wear personal protective equipment (PPE), such as ear defenders

*Relevant to UK only. Please refer to your regional or local requirements if outside the UK.

Implications of EN54-23 for System Designers

// The ZETTLER range of EN54-23 compliant visual alarm devices have been designed with the system designer in mind. The key driver across the LX range is to minimise current consumption whist meeting the extremely demanding illumination and coverage requirements of EN54-23.

The ZETTLER solution is unique, with an emphasis on power management through the efficient use of light. Through our innovative design, we have tried to ensure that existing practices are maintained, where possible and build upon familiar product platforms for easy recognition and reassurance. Both the RoLP LX Wall and Symphoni LX Wall versions complement all existing RoLP and Symphoni Sounders.

Save up to 66% on installation cost over a Xenon based system**

The EN54-23 standard requires a minimum illumination level of 0.4 lux over the entire area of coverage and therefore current consumption is an important issue. A system using xenon technology will require a large amount of current to meet the required illumination, consequently increasing the number of power supplies required and installation costs. It is important that the overall system cost is considered when choosing the visual alarm devices.

When designing a system consider the following:

1. Each device must state a coverage volume code; this should be the starting point for understanding the number of devices required.

2. A red flash consumes up to 80% more power to deliver the same output as a white flash, therefore more devices will be required.

3. Consider the total cost of an installation, not just the cost of the visual alarm device. If using a xenon solution, additional devices, power supplies and installation costs to meet the light coverage requirements will make it an expensive solution.

// Total Savings of the ZETTLER Solista LX Wall verses a Xenon based product

Device	Coverage	Current consumption @ 1Hz	Number of devices	Total Consumption	Additional Power Supply	Additional Labour Cost
ZETTLER Solista LX Wall	7.5m	7.5m	5	125mA	No	No
Xenon Product	7.5m	7.5m	5	1200mA	Yes	Yes

Implications of EN54-23 for an Installer

// As with sounders and detectors, it is important that the specific placement of a visual alarm device conforms to the design drawings. As part of the mandatory coverage volume code, ZETTLER's LX range states the height at which the device should be installed.

// For further guidance, refer to BS 5839-1* sub clauses 37.1 and 37.2.

ZETTLER's LX range offers a number of switch options to allow the current to be managed as efficiently as possible in each situation. The following should be clarified with the system designer before installation:

a. Has the system been designed for a 1Hz or 0.5Hz flash rate? Setting the product to a 0.5 Hz flash rate reduces the current consumption by half. All devices should be set to the same setting in an area.

b. Are the devices to be used at a coverage of 7.5m or 5m? If two devices are installed in the same area then the coverage setting may, in some cases, be set to the lower option on one device to minimise current consumption, providing the minimum illumination level is achieved throughout the area.

c. Check for which mounting height the devices have been designed.

When installing a system using visual alarm devices consider the following:

- Where possible, site the VADs for direct viewing for all occupants in an area.
- If relying on indirect illumination, the reflecting surfaces should be within the coverage area of the VAD.
- Where an area is to be covered is larger than the coverage area of a single VAD, a sufficient number of extra VADs should be sited appropriately.
- Before selecting a device for a specific area, the ambient light level should be considered.
- Consider the environment and select the correct mounting base with suitable ingress protection for the mounting location.
- For further guidance on installing an EN54-23 compliant system, download our handy EN54-23 pocket guide from the ZETTLER website.

// Compatible RoLP and Symphoni base

All ZETTLER standard RoLP and Symphoni sounders can be fitted to an appropriate LX base. Full details can be found on the instruction leaflets or on the product datasheet, available on our website.

Implications of EN54-23 for a Commissioning Engineer

Commissioning of VADs should be carried out in accordance with the recommendations of Clause 5 of BS 5839-1*

// Commissioning Procedures

The positioning and rating of VAD devices should comply with Clause 4.6.9 of EN54-23 and the system designer's installation drawings

All VADs used for indication of a fire alarm or the evacuation phase of a multi stage alarm should be the same colour throughout the site

VADs should not be confused with any other visual alarm signals used within the building

Where multiple VADs are visible from any single point, they should meet the synchronisation requirements of sub-clauses 4.3.3 (g) and 4.5.5 of EN54-23

// Key Tips

Positioning

Where an area to be covered is larger than that stated by the manufacturer, ensure that a sufficient number of VADs have been installed and sited appropriately.

Where possible, ensure that the VAD is sited for direct line of sight by all occupants in the area. If relying on indirect illumination, all the surfaces of the protected space must be inside the specified coverage volume of the VAD.

Mounting Height and Orientation

The mounting height of the VAD is pre-determined by the manufacturer, based on its optimal output to give illuminance of 0.4 lux. ZETTLER LX Wall Solista, RoLP LX Wall and Symphoni LX Wall are all suitable for wall application at a maximum mounting height of 2.4m. It is also essential that the visual element is orientated as indicated by the installation instructions.

Flash Rate Switch

ZETTLER's LX range has a switch feature, allowing the user to reduce the flash rate from 1Hz to 0.5Hz to reduce current consumption. Ensure that all other VADs are set to the same flash rate setting.

EN54-23 Certified Devices

Does the device have EN54-23 certification from a notified body available?

* Relevant to UK only. Please refer to your regional or local requirements if outside the UK.

part one | guide to design of fire systems

about this manual

Purpose

The Code of Practice for fire detection and alarm systems for buildings (BS 5839- 1: 2002) is a detailed and comprehensive document which requires careful reading to fully understand its' requirements and latest approach to ensuring the safety of buildings and their occupants from the ever present threat of fire.

The purpose of this manual is to provide a step–by–step approach to the necessary guidelines described in BS 5839-1:2002, so that users can achieve maximum benefit from the recommendations. This should assist in the task of choosing the best options, help in preparing the specification of the fire protection system and assist architects, designers and electrical engineers in providing the most cost effective system solution that meets the needs of the user.

This manual is a consultants guide to the contents and usage of the British Standard Code for the design, installation and maintenance of fire detection and alarm systems for buildings (BS 5839-1: 2002). Throughout the manual, where it was necessary to reference this long title, we will simply refer to it as 'the Code'.

The Code is divided into seven sections. The first section is intended to be of general interest to all users, the second is intended to be of interest to the system designer, architect or electrical engineer. The third section attempts to address one of the major problems plaguing fire detection systems in Britain today, that of false and unwanted alarms. This section offers advice and best practices for the successful management of false alarms. The fourth section is for the installer with a link to section five which covers commissioning and

guide to design of fire systems | part one

Part two

Specification for a digital addressable fire system

A Consultant's Guide to EN54-23

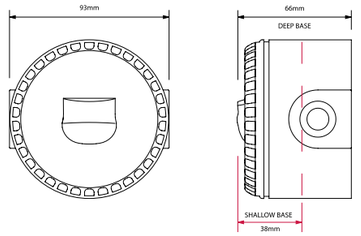
Ensure you choose the correct products for your system

// The purpose of the Consultant's Guide is to provide a step–by–step approach to the necessary guidelines, so that users can achieve maximum benefit from the recommendations. This should assist in the task of choosing the best options, help in preparing the specification of the fire protection system and assist architects, designers and electrical engineers in providing the most cost effective system solution that meets the needs of the user.

LX
Product Range

Solista
LX Wall

// The new Solista LX Wall product takes its slim line design queues from the popular Solista Maxi. Available in a red or white body colour and with a shallow, deep base or U base, the Solista LX Wall is suitable for a variety of applications.



EN54-23 coverage reference W-2.4-7.5
Minimum current consumption 12mA

// Features

Conforms with EN54-23.
LED technology.
Unique optics for light management.
Up to 7.5m coverage (135m2).
Coverage switch.
Flash rate switch.
Wide input voltage range.
Soft start up.
Locking Bases.

// Benefits

Meets the required illumination 0.4 lux over entire area.
Long service life and low current consumption.
Lens design that optimises light dispersal, minimising power wastage.
Reduces the number of devices required to cover an area.
For smaller areas switch down from 7.5m to 5m. Reducing power consumption by up to 50%.
1Hz or 0.5Hz setting, reducing power consumption by up to 50%
Flexibility in system design.
Reduced current peak at start up, reducing circuit loading.
Prevents easy removal of device.

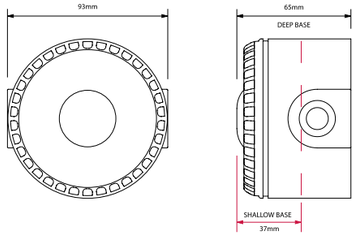
// Technical Specification

Mounting Type	Wall
Voltage	9 – 60VDC
Current	12 - 25mA dependent on setting* (White flash)
Coverage (y)	7.5m (Switchable to 5m)
Mounting Height (x)	2.4m (max)
Coverage Volume Code	W-2.4-7.5
Coverage Volume	135 m3 (60m3)
Flash Rate	1Hz (Switchable to 0.5Hz)
Operating Temperature	-25°C - + 70°C
Monitoring	Reverse Polarity
Protection	IP21C Shallow Base IP65 Deep and U Base
Weight	100g
Body Colour	White or Red

*Nominal results. Please see the ZETTLER website for the latest update.

Solista
LX Ceiling

// The Solista LX Ceiling has a unique lens design that distributes the light in a cylindrical shape, achieving the required illumination of EN54-23. Designed for installation at a height of 3m and with a discrete appearance, the device is ideal for a variety of applications.



EN54-23 coverage reference C-3-7.5
Minimum current consumption 12mA

// Features

Conforms with EN54-23.
LED technology.
Unique optics for light management.
Up to 7.5m coverage volume.
Coverage switch.
Flash rate switch.
Wide input voltage range.
Soft start up.
New connection layout.
Locking Bases.

// Benefits

Meets the required illumination 0.4 lux over entire area.
Long service life and low current consumption.
Unique lens design maximises light dispersal, minimising power wastage.
Reduces the number of devices required to cover an area.
For smaller areas switch down from 7.5m to 5m. Reducing power consumption by up to 50%.
0.5Hz or 1Hz setting, reducing power consumption by up to 50%.
Flexibility in system design.
Reduced current peak at start up, reducing circuit loading.
Easier wiring and connection on installation.
Prevents easy removal of device.

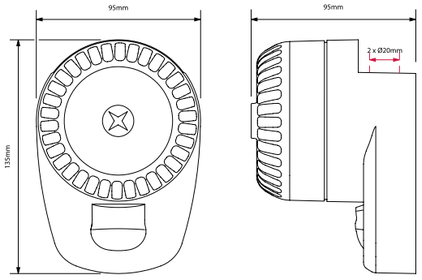
// Technical Specification

Mounting Type	Wall
Voltage	9 – 60VDC
Current	12 – 25mA dependent on setting* (White Flash)
Coverage (y)	7.5m (Switchable to 5m)
Mounting Height (x)	3m (max)
Coverage Volume Code	C-3-7.5
Coverage Volume	168m3 (75m3)
Flash Rate	1Hz (Switchable to 0.5Hz)
Operating Temperature	-25ºC - + 70ºC
Monitoring	Reverse Polarity
Protection	IP21C Shallow Base IP65 Deep and U Base
Weight	100g
Body Colour	White or Red
Flash Colour	White, Red or ChromaPlus™

*Nominal results. Please see the ZETTLER website for the latest update.

RoLP
LX Wall

// The RoLP LX Wall base is ideal for dual use applications where a visual alarm device is required in addition to an audible alarm. Recommended for wall use and requiring just one installation point, the RoLP LX Wall is available to use with any standard RoLP sounder, including the high output RoLP Maxi sounder.



EN54-23 coverage reference W-2.4-7.5
Minimum current consumption 28mA

// Features

Conforms with EN54-23.
LED technology.
Unique optics for light management.
Up to 7.5m coverage volume.
Coverage switch.
Flash rate switch.
Wide input voltage range.
Soft start up.
Locking Bases.

// Benefits

Meets the required illumination 0.4 lux over entire area.
Long service life and low current consumption.
Unique lens design maximises light dispersal, minimising power wastage.
Reduces the number of devices required to cover an area.
For smaller areas switch down from 7.5m to 5m. Reducing power consumption by up to 50%.
0,5Hz or 1Hz setting, reducing power consumption by up to 50%.
Flexibility in system design.
Reduced current peak at start up, reducing circuit loading.
Prevents easy removal of device.

// Technical Specification

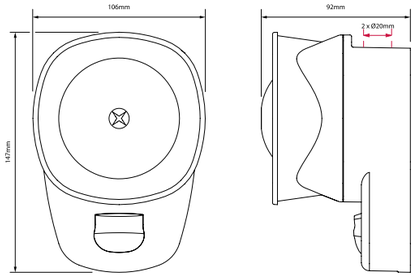
Mounting Type	Wall
Voltage	9 – 60VDC
Current	12 - 25mA dependent on setting* (White flash)
Coverage (y)	7.5m (Switchable to 5m)
Mounting Height (x)	2.4m (max)
Coverage Volume Code	W-2.4-7.5
Coverage Volume	135 m3 (60m3)
Flash Rate	1Hz (Switchable to 0.5Hz)
Operating Temperature	-25ºC - + 70ºC
Monitoring	Reverse Polarity
Protection	IP21C Shallow Base IP65 Deep and U Base
Weight	100g

Mounting Type	Wall
Body Colour	White or Red
Flash Colour	White, Red or ChromaPlus™
Sound Output	102dB(A) (Typical tone 3 – RoLP)

*Nominal results. Please see the ZETTLER website for the latest update.

Symphoni
LX Wall

// The Symphoni LX Wall base can be used in combination with any standard Symphoni sounder. Its durable design ensures reliability and its high sound output makes it suitable for open areas or where there is higher than normal background noise.



EN54-23 coverage reference W-2.4-7.5
Minimum current consumption 17mA

// Features

Conforms with EN54-23.
LED technology.
Unique optics for light management.
Up to 7.5m coverage volume.
Coverage switch.
Flash rate switch.
Wide input voltage range.
Soft start up.
New connection layout.
Locking Bases.

// Benefits

Meets the required illumination 0.4 lux over entire area.
Long service life and low current consumption.
Lens design that optimises light dispersal, minimising power wastage.
Reduces the number of devices required to cover an area.
For smaller areas switch down from 7.5m to 5m. Reducing power consumption by up to 50%.
1Hz or 0.5Hz setting, reducing power consumption by up to 50%.
Flexibility in system design.
Reduced current peak at start up, reducing circuit loading.
Connects to a Symphoni sounder or Symphoni High Output Sounder.
Prevents easy removal of device.

// Technical Specification

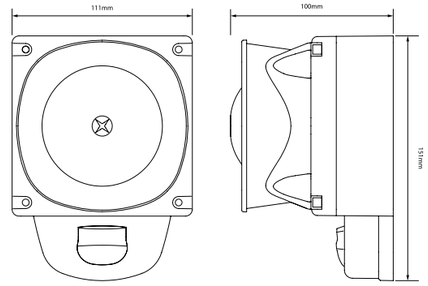
Mounting Type	Wall
Voltage	18 – 28VDC (Fire Use) 12 - 28 VDC (Non Fire Use)
Current	17 – 30mA dependent on setting* (White Flash. Sounder and beacon; tone 3)
Coverage (y)	7.5m (Switchable to 5m)
Mounting Height (x)	2.4m (max)
Coverage Volume Code	W-2.4-7.5
Coverage Volume	135 m3 (60m3)
Flash Rate	1Hz (Switchable to 0.5Hz)
Operating Temperature	-10ºC - + 55ºC
Monitoring	Reverse Polarity

Mounting Type	Wall
Protection	IP21C
Weight	200g
Body Colour	White or Red
Flash Colour	White, Red or ChromaPlus™
Sound Output	100dB(A) (Typical tone 3 – Symphoni)
Flash Colour	White, Red or ChromaPlus™

*Nominal results. Please see the ZETTLER website for the latest update.

Symphoni
LX WP Wall

// The Symphoni LX WP Wall device offers a weatherproof alternative to the Symphoni LX Wall device. With an ingress protection rating of IP66, it is suited for wet and outdoor environments.



EN54-23 coverage reference W-2.4-7.5
Minimum current consumption 17mA

// Features

Conforms with EN54-23.
LED technology.
Unique optics for light management.
Up to 7.5m coverage volume.
Coverage switch.
Flash rate switch.
Wide input voltage range.
Soft start up.
New connection layout.
Locking Bases.
IP66.

// Benefits

Meets the required illumination 0.4 lux over entire area.
Long service life and low current consumption.
Lens design that optimises light dispersal, minimising power wastage.
Reduces the number of devices required to cover an area.
For smaller areas switch down from 7.5m to 5m. Reducing power consumption by up to 50%.
1Hz or 0.5Hz setting, reducing power consumption by up to 50%.
Flexibility in system design.
Reduced current peak at start up, reducing circuit loading.
Easier wiring and connection on installation.
Prevents easy removal of device.
External use in areas of high humidity.

// Technical Specification

Mounting Type	Wall
Voltage	18 – 28VDC (Fire Use) 12 - 28 VDC (Non Fire Use)
Current	17 – 30mA dependent on setting* (White Flash. Sounder and beacon; tone 3)
Coverage (y)	7.5m (Switchable to 5m)
Mounting Height (x)	2.4m (max)
Coverage Volume Code	W-2.4-7.5
Coverage Volume	135 m3 (60m3)
Flash Rate	1Hz (Switchable to 0.5Hz)
Operating Temperature	-25ºC - + 70ºC
Monitoring	Reverse Polarity

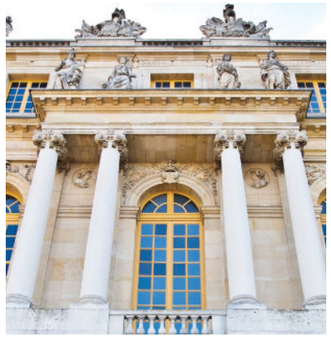
Mounting Type	Wall
Protection	IP66
Weight	200g
Body Colour	White or Red
Flash Colour	White, Red or ChromaPlus™
Sound Output	100dB(A) (Typical tone 3 – Symphoni)

*Nominal results. Please see the ZETTLER website for the latest update.

ZETTLER Website

// Go to www.zettlerfire.com to learn more about the ZETTLER fire detection product range. Detailed information on the different products can be found there and also how the products are used in different applications like hotels or stadiums. The resource center offers a variety of brochures, data sheets, catalogues, approvals and videos.

Product Solutions from ZETTLER



// Public Sector

Schools, Universities, Government Buildings and Prisons usually comprise of many separate buildings that require flexible and networkable systems. Alarm systems in these buildings also need to be easy to use and to clearly indicate where a problem is occurring. Our TXG system provides a graphical display making it fast and simple to pin-point a potential fire.

Prisons present a special problem as evacuation is not always feasible. To alleviate this, sabotage resistant detectors can be installed in each cell, or a VESDA aspirating smoke detector. This can help to address any accidental unwanted alarms also.

// Energy and Utilities

Nuclear, fossil fuel, renewable power generation, petrochemical, oil and gas production and storage all fall into this category of hazardous environments, where potential fire risk are extremely high due to the large amounts of combustible materials around. Whilst in the case of nuclear power the risk of a radiation leak cannot be ignored.

ZETTLER has a wide range of products and systems to protect these industries. We have special intrinsically safe detectors and cabling that is heat resistant and won't create a spark. Our detectors can indicate the presence of flames, smoke, heat and carbon monoxide (which is responsible for a large number of fire related deaths).

// Leisure

All leisure facilities such as Hotels, Cinema, Sports Venues, Auditorium, Stadia and even swimming pools run the risk of fire.

These facilities particularly hotels are prone to unwanted alarms. These are usually caused by some unusual occurrence close to a sensor, eg someone smoking a cigarette under a sensor.

Early detection is required especially in places where people who are sleeping. Our 3oTec, triple sense detector will sound the alarm before flames begin to spread. Most fire victims are killed by carbon monoxide and the 3oTec alerts people at the earliest stages of a fire, hence providing valuable time to evacuate.

Global Strength. Local Expertise.
At your service.

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