ZAB1- M EX BEACON

DS-391 Issue 04

Thank you for your interest in Ziztel - we are a UK based manufacturer of PAGA and Intercom products. Our systems are mainly designed for use in the Marine, Military and Hazardous Oil, Gas/ Petrochemical industries.

The ZAB1-M series is a high performance ATEX IECEx certified flashing beacon which incorporates processor controlled light sources. The solid state design eliminates moving parts and the electro/optic conversion provides high efficiency. The unit incorporates up to four different colour light sources which can each be independently addressed enabling a complete self-contained signaling system.

ZAB1-M MULTI- COLOUR FLASHING BEACON

Totally corrosion proof all stainless steel construction – long through life, minimal maintenance

Optional data controlled colour selection over 1 x pair cable – major cost saving over conventional multi-core based systems

No moving parts - microprocessor controlled

Multiple light sources – Duplicated xenon discharge tube sets for each colour

Zone 1 ATEX and IECEx certified - safe for use in hazardous areas

The Ziztel ZAB1-M series is a rugged explosion proof electronic flashing beacon which employs xenon light sources to selectively produce brilliant pulses of visible coloured light. The unit is specified for safety applications where acoustic alarms are ineffective due to excessive ambient noise and provides effective high performance visual warning annunciation. ZAB1 – M can be specified for use on safety critical applications as part of a PAGA Public Address and Alarm System. ZAB1-M is designed for reliable service on both land based and marine/offshore installations. The ZAB1-M beacon can be equipped with up to four different colour sources within the single housing realising major cost savings over conventional discrete multiple beacon arrays. IMO SOLAS colour set is available i.e. Red, Yellow, Amber, White or Green (note; it is possible to segment two colours e.g. Green/White if required). Colour is assigned by specially designed Fresnel optical lens which provides highly efficient light dispersion. The unit is capable of initiating colour selection by a multi pair control cable which also includes mains power supply or ZAB-M-D can be specified allowing energisation and control over a *single* pair of field cable conductors, called 'Data Controlled'.

The maximum number of devices on a single circuit is dependent on the cross-sectional area of the field cable conductors and maximum volt drop tolerance, we advise no more than fifty units on a single circuit in any case to improve security.

The unit utilises a totally corrosion proof stainless steel construction which minimises routine service and ensures low through life maintenance cycles.

ZAB1-M Colour Code - Colour Suffix

Colour	Suffix
Red	R
Amber	A
Yellow	Y
Green	G
Blue	B
Violet	V
Clear	C

Channel 1 has the highest priority and will be at the top of the stack, and Channel 4 the lowest priority and at the bottom of the stack. Only the initials of the colours should be used, not the whole name of the colour.

Example as shown: ZAB1-1M4-230-RGBA-G

For IMO SOLAS colour preference specify ZAB1-1M4-230-RYAG-G

Power Supply Input Voltage Preference

ZAB1-M 24/48/115/230

A range of AC input voltages are available ensuring compatibility with virtually all mains power supply systems. AC supply input $110V_{AC}/120V_{AC} - 220V_{AC}/230V_{AC}$. DC supply input $24V_{DC} - 48V_{DC}$.

These are indicated in the part number as: "-24", "-48-", "-115-" or "-230-".

Protection Guard

ZAB1-M Wellglass Guard Protection

The ZAB1-M4 employs a toughened well glass lens which is equipped with a stainless steel well glass protection guard, fitted as mandatory on all multi-colour beacons. This is indicated in the part number by the suffix "-G".

Enclosure

ZAB1-1 is the standard 'short' Ex d enclosure.

ZAB1-2 is the 'medium' Ex d enclosure option.

Additional Functionality

The suffix "-T" is for telephone initialisation. Only available on single-colour variants.

The suffix "-A" is for internally generated local alarm provision. Only available on multi-colour variants.

The suffix "-D" is for data control. To note; these require a special LTD022 beacon port to function. Only available on multicolour variants.
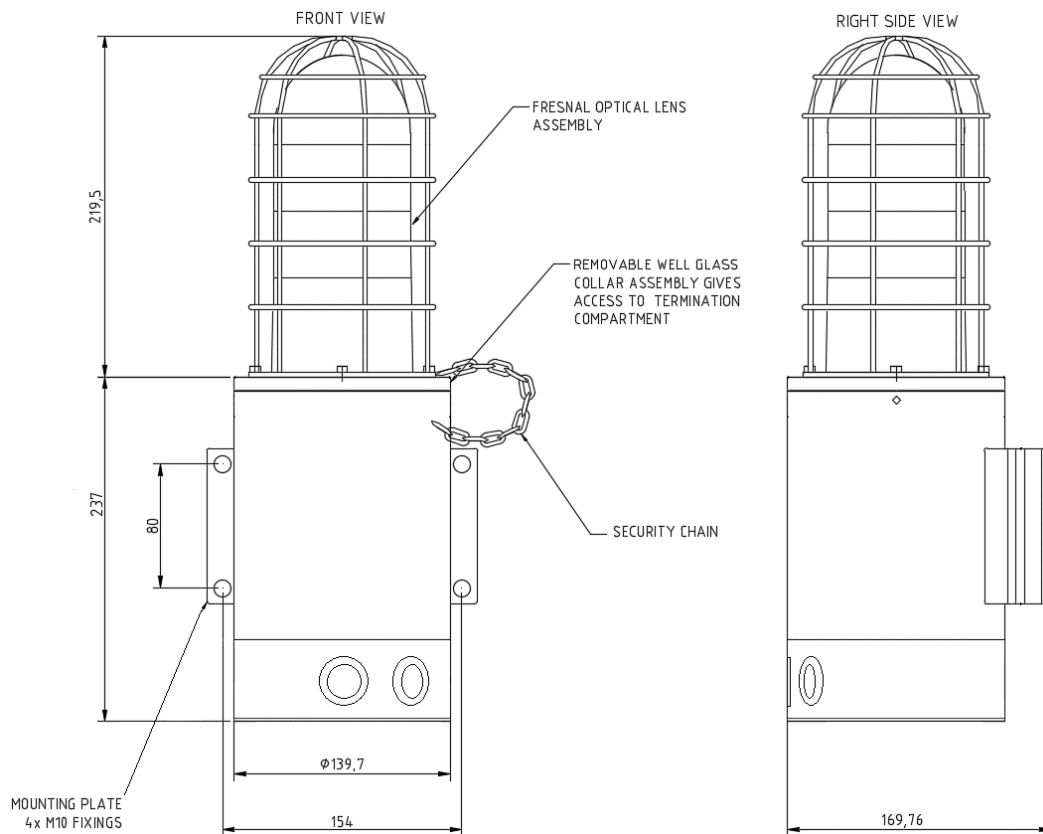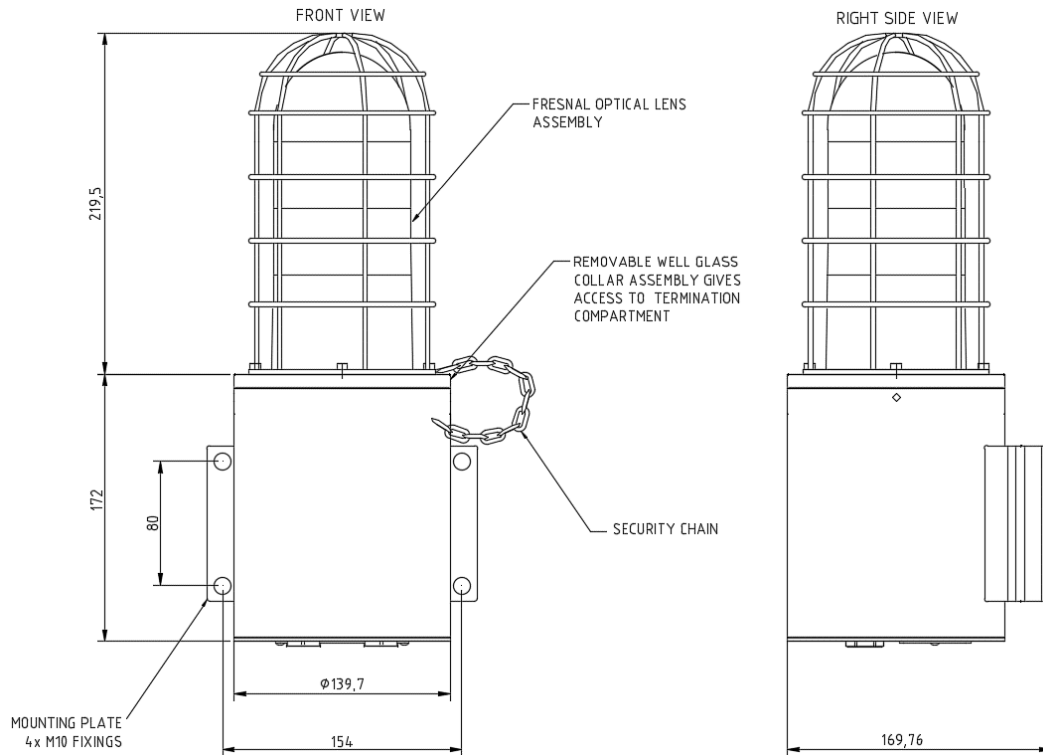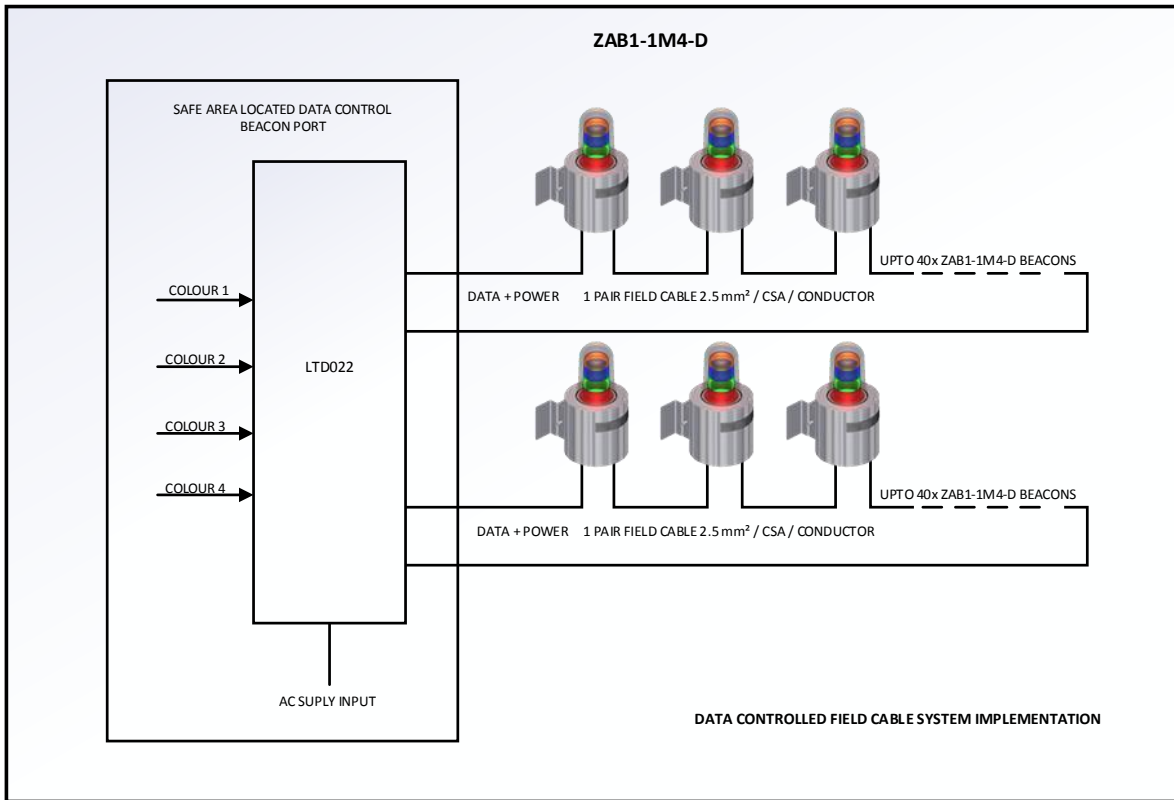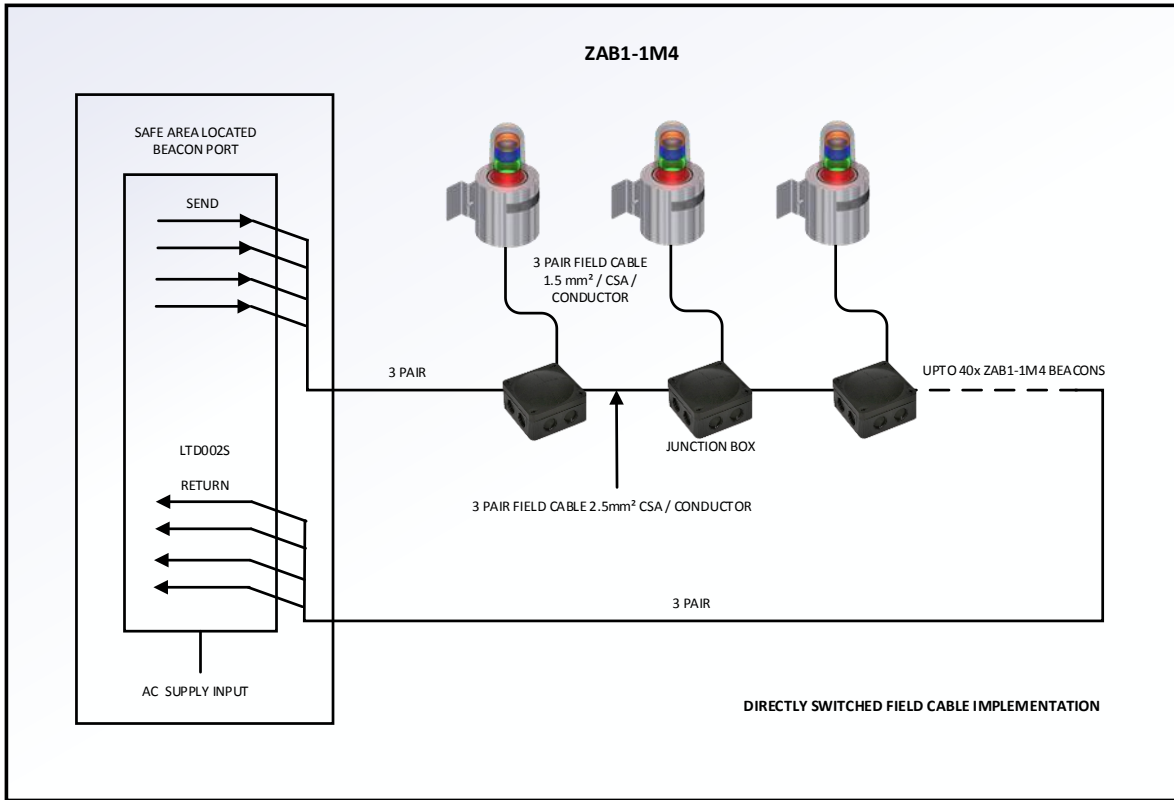
General assembly ZAB1-1M4 Ex d version shown top;
Ex de version (with added Ex e junction box) shown bottom:

FRONT VIEW

RIGHT SIDE VIEW

FRESNAL OPTICAL LENS
ASSEMBLY

219,5

REMOVABLE WELL GLASS
COLLAR ASSEMBLY GIVES
ACCESS TO TERMINATION
COMPARTMENT

172

80

SECURITY CHAIN

Ø139,7

MOUNTING PLATE
4x M10 FIXINGS

154

169,76

FRONT VIEW

RIGHT SIDE VIEW

FRESNAL OPTICAL LENS
ASSEMBLY

219,5

REMOVABLE WELL GLASS
COLLAR ASSEMBLY GIVES
ACCESS TO TERMINATION
COMPARTMENT

237

80

SECURITY CHAIN

Ø139,7

MOUNTING PLATE
4x M10 FIXINGS

154

169,76

ZAB1-1M4

SAFE AREA LOCATED
BEACON PORT

SEND

3 PAIR FIELD CABLE
1.5 mm² / CSA /
CONDUCTOR

3 PAIR

LTD002S

RETURN

3 PAIR FIELD CABLE 2.5mm² CSA / CONDUCTOR

JUNCTION BOX

UPTO 40x ZAB1-1M4 BEACONS

3 PAIR

AC SUPPLY INPUT

DIRECTLY SWITCHED FIELD CABLE IMPLEMENTATION

ZAB1-1M4-D

SAFE AREA LOCATED DATA CONTROL
BEACON PORT

COLOUR 1

DATA + POWER   1 PAIR FIELD CABLE 2.5 mm² / CSA / CONDUCTOR

UPTO 40x ZAB1-1M4-D BEACONS

COLOUR 2

LTD022

COLOUR 3

COLOUR 4

DATA + POWER   1 PAIR FIELD CABLE 2.5 mm² / CSA / CONDUCTOR

UPTO 40x ZAB1-1M4-D BEACONS

AC SUPLY INPUT

DATA CONTROLLED FIELD CABLE SYSTEM IMPLEMENTATION

Ordering Requirements:

Ex d / Exe Enclosure		No of Channels	Supply Voltage	Ch 1 Colour	Ch 2 Colour	Ch 3 Colour	Ch 4 Colour	Additional Functionality
	M		-	-				-

| ZAB1-1 ZAB1-2 | 2 3 4 | 24 48 115 230 | R (Red) A (Amber) Y (Yellow) G (Green) B (Blue) V (Violet) C (Clear) N (None) | T A D G |

Example:

Addressable – Ex d Termination Chamber – 24 Volts - With Well Guard – Colour Blue – Colour Green – Colour Yellow – Colour Red

Order code = ZAB1-1M4-24-BGYR-TD

Technical Specification	
Light Source	High intensity Xenon tube
Security	Twin tubes for each colour – total eight xenon discharge tubes for four colour option
Supply Voltage Options	110/120V_{AC} to 220/240V_{AC} (50/60Hz) / 270V_{AC} (50/60Hz)
	12V_{DC} to 24V_{DC}
Tolerance	+10% / -15%
Consumption	30Watts/VA (60Watts/VA peak)
Initiation	5 x field conductors (three pair cable)
Initiation suffix 'A' type	2 x field conductors (single pair cable)
Duty cycle	Continuous
Flash energy	21 Joules / colour set
Temperature Range	-60˚C - +70˚C
IP Rating	IP66
Weight	4.5Kg Ex d, 6Kg Ex de
Dimensions Exd variant	170mm wide x 337mm high
Dimensions Exe variant	170mm wide x 405mm high
Gland entry	2 x M20 threaded isometric cable gland entries
Mounting attitude	Vertical well glass up, vertical well glass down or horizontal
Enclosure material	Corrosion proof 316l stainless steel
Enclosure colour	Natural
Colour selection - maximum 4 colours (except IMO SOLAS possible 5 colours)	Red, Amber, Yellow, Green, Blue, Violet, White, Clear, Split Clear/Green
Maximum cable termination cross sectional area	4.00mm CSA conductor
Location	Hazardous area Zone 1 IIC T4
Certification	IECEx and ATEX certified, Bahamas certified