Xenon Beacon

The Xenon Beacon provides flashing status.

Use **DIP Switch** with 2 binary codes on the **Xenon Beacon PCB** (see picture 3) for frequency adjustment.

Xenon Beacon Flashing Frequency Adjustment

DIP Switch: ON=1, OFF=0, S1/S2: ON=Connect to COM, OFF=Disconnect to COM

DIP Switch/S1/S2		S1=OFF S2=OFF	S1=ON S2=OFF	S1=OFF S2=ON	S1=ON S2=ON	
1st DIP	2nd DIP	Alarm Stage 1	Alarm Stage 2	Alarm Stage 3	Alarm Stage 4	
1	1	OFF	OFF	OFF	OFF	
0	1	OFF	60 times/min	80 times/min	120 times/min	Flash Once a time
1	0	OFF	100 times/min	120 times/min	150 times/min	Twice a time
0	0	OFF	120 times/min	150 times/min	180 times/min	Three times a time

See separate Tone Selection Sheet.

8.0 Cable Gland: The SB150-1 series product has two cable gland entries. Only cable glands approved for EX 'd' applications can be used, which must be suitable for the type of cable being used and also meet the requirements of the Ex 'd' flameproof installation standard EN 60079-14.

SAFETY WARNING: If the SB150-1 is used at high ambient temperatures, ie over $+40^0$C then the cable entry temperature may exceed $+70^0$C and therefore suitable heat resisting cable glands must be used, with a rated service temperature of at least 95^0C.

If a high IP (Ingress Protection) rating is required, a suitable sealing washer must be fitted under the cable gland. When only one cable entry is used, the other one must be closed with an Ex 'd' flameproof blanking plug, which must be suitably approved for the installation requirements.

9.0 End of Line Monitoring: An end of line monitoring diode or an end of line monitoring resistor can be connected across the 24v+ and 0 terminals. If an end of line monitoring resistor is used, it must have a maximum resistance value of 3k ohms and a minimum wattage of 0.5 Watts; or a minimum resistance value of 1.2k ohms and a maximum wattage of 2 Watts.

10.0 Maintenance: Little or no maintenance is required during the normal working life of the product. The 'GRP' enclosure is resistant to most acids, alkalis and chemicals and has been designed to withstand severe weather conditions. However it is suggested that to avoid the possibility of a potential electrostatic charge build up, the exterior of the product is periodically wiped down with a clean damp cloth. At this point a visual inspection is recommended to ensure that the product is in good working order and no damage has been sustained during its normal operation.

SAFETY WARNING: In the case of Anti Static and UV Resistant GRP, the painting of the enclosure surface has been processed specially. To maintain the product to be Anti Static, extra normal painting is not allowed. If any failure occurs but not caused by human factor, the product can be returned to Moflash for free repair or replacement during the warranty.

11.0 Conditions for Safety Use

i)   This apparatus is suitable to be used only in ambient temperature as stated below:

Type	Ambient Temp
SB150-1	-40^0C to $+70^0$C

ii) Other than product manufacturer, painting and surface finishing are not permitted by the third party.

iii) When used in dusty atmosphere, flameproof cable entry devices or stopping plugs have to be selected and installed carefully in order to maintain the IP rating (IP66/67) of the product.

Moflash part code SB150-1-S00523-Issue A

MOFLASH
SIGNALLING

INSTALLATION & TECHNICAL INFORMATION

PLEASE READ PRIOR TO INSTALLATION

SB150-1 Series - (Explosion Proof Sounder/Beacon)

Glass Reinforced Polyester

VISUAL & AUDIBLE COMBINATION SIGNALLING DEVICES

APPROVALS AND CONFORMITIES

RoHS   CE   IECEx   Ex ATEX

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1.0 Introduction: The SB150-1 Explosion Proof sounder/beacon is certified for use and installation in Zone 1 and Zone 2 areas with gases groups of IIA, IIB, IIC and temperature classification of T4~T6. It specially applies to Oil & Gas, Offshore Platform, Chemical, Petrochemical, Refinery and Marine Industries etc. Enclosure material is Stainless Steel. The sounder has 4 stage alarm tones which can be sent out. 64 tones are selectable. Users can record sounds or customize sounds into the sounder by using 5 spare tones. Tone can be present during installation. At the same time 4 stages of alarm light can also be sent out.

2.0 Explosion Proof Labelling: All products have a rating label with the following important information:
Product order no: eg SB1501RX05DCNNNAR (Refer to the datasheet for product order selection)

Input voltage: $\leq$48v DC or 100-240v AC (50/60 Hz), Beacon: $\leq$25W, Sounder: $\leq$20W
Code: Ex d IIC T4~ T6 Gb, Ex tb IIIC T135^{0}C~T85^{0}C IP66
Nemko ATEX Certificate No: Nemko 13ATEX 1566X
ATEX Mark: ⟨Ex⟩
IECEx Certificate: IECEx-NEM 13.0036X
Gas Group and Category: II 2GD
CE Mark: Mark No: 0470
Warning: **DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT**
Finished product serial no (Include date of construction): ie. SB1500201080001
SB150-GRP Sounder & Beacon, **Day**-02, **Month**-01, **Year**-08, **Product Serial Number**-0001

3.0 Type Approval Standard: The SB150-1 series products have an EC Type Examination Certificate issued by **Nemko** and have been approved to the following standards:
EN 60079-0:2012 (IEC 60079-0:2011),
EN-60079-1:2007 (IEC 60079-1:2007) and EN 60079-31:2009 (IEC 60079-31:2008)

4.0 Zones, Gas Group, Category and Temperature Classification
The SB150-1 series products have been certified Ex d IIC T4~T6. This means that the units can be installed in locations with the following conditions:
Area Classification:
Zone 1: Explosive gas air mixture likely to occur in normal operation.
Zone 2: Explosive gas air mixture not likely to occur, and if it does, it will only exist for a short time.
Gas Groupings:
Group IIA Propane Group, IIB Ethylene Group and IIC Hydrogen and Acetylene
Equipment Category: 2Gd   **Temperature Range:** -40^{0}C < Ta <70^{0}C

Picture 1

5.0 Installation
General Requirement: The product must be installed in accordance with the latest issued relevant requirements in the EN60079-0 and EN60079-1 specification or the equivalent IEC specification- Selection, Installation and Maintenance of electrical apparatus for use in potentially explosive atmosphere. Product installation must be carried out in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer.

Location: The location of the unit should be made with due regard to the area over which the beacon warning signal must be visible. The unit should only be fixed to services that can carry the weight of the unit.

Mounting (Single Unit): The single unit only comes with one beacon and can be mounted via a 'U' shaped stainless steel bracket. It can be done using one 12mm diameter and two 8.5mm diameter bolt holes in the center of the bracket (see picture 1). The alignment and positions can be adjusted by loosening the two M8 screws, which fastened the stainless steel bracket to the sounder. The sounder should be positioned such that dust, debris or water cannot enter into the horn opening.
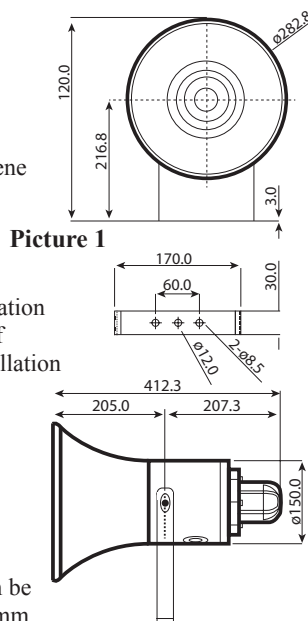
6.0 Wiring
General Requirement: Moflash recommends that all cables and cores should be fully identified (suggest using cable from 2.0 to 2.5 mm²). Ensure that all nuts, bolts and screws are secured. Ensure that only the right and certified cable glands are used and earthed correctly. Ensure that only the right and certified stopping plugs are used to blank off unused gland entry points. In order to maintain the IP rating of the product, we recommend SS316 for this application.

Cable Connection: The cable connection is connected with the terminal blocks on the electronic **PCB/ Terminal Blocks** assembly located in the flameproof enclosure of the **Beacon Component** (see picture 2). Cable connection should be carried out in accordance with relevant technical requirement.

Remove Top Cover (Beacon Component)
Unscrew the six (6) M5 retained hex socket head screws of the **Beacon Component** (see picture two). This will release the cover from the base and allow the cover to hang on the retaining wire strap. Before replacing the cover, check that the flameproof joints are clean and not damaged, the gasket is still retained in its groove.
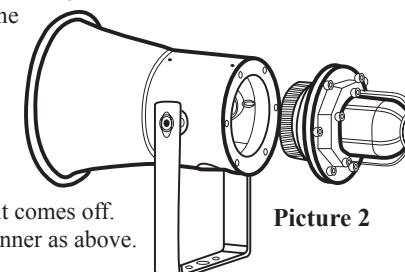
CAUTION: Before removing the cover, ensure the power to beacon is isolated. Remove the four pieces of M5 socket screws to open the cover. Twist the cover gently clockwise and anti-clockwise, whilst pulling away from the base, until it comes off. Replace the cover in a similar way, but operate in reverse manner as above.
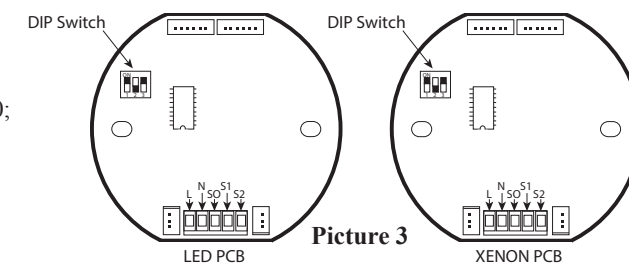

Picture 2

Power Supply $\leq$48v DC or 100-240v AC (50/60 Hz) **PCB Wiring Terminals** (see picture 3).
Apply power supply to 12v/24v/36v/48v DC, 100-240v AC (50/60Hz) 'L' & 'N' (see picture 3).

7.0 Status Chosen and Flashing Frequency Adjustment
LED Beacon: The LED beacon provides flashing and rotary status to be selected. Use **DIP Switch** with 3 binary codes on the **LED Beacon PCB** to select flashing or rotary status (including steady status), the 3rd binary code is for high and low frequency chosen.

LED Status Selection Switch:
1st & 2nd DIP Switch: ON=1, OFF=0;
3rd DIP Switch: HIGH=1, LOW=0,
S1/S2: ON=Connect with O/COM,
OFF=Disconnect with O/COM

Picture 3

DIP Switch / S1/S2			S1=OFF S2=OFF	S1=ON S2=OFF	S1=OFF S2=ON	S1=ON S2=ON
1st DIP	**2nd DIP**	**3rd DIP**	**Alarm Stage 1**	**Alarm Stage 2**	**Alarm Stage 3**	**Alarm Stage 4**
1	1	0(1)	OFF	Flash 60 (75) times/min	Flash 75 (90) times/min	Steady light
0	1	0(1)	OFF	Rotary 60 (75) times/min	Rotary 75 (90) times/min	Steady light
1	0	0(1)	OFF	Double Flash 60 (75) times/min	Double Flash 75 (90) times/min	Double Flash 100 (120) times/min
0	0	0(1)	OFF	Flash & Rotary 60 (75) times/min	Flash & Rotary 75 (90) times/min	Flash & Rotary 100 (120) times/min