

PRODUCT NAME: BC-100- WEATHERPROOF BEACON &
LIGHT DOC NO.: EX-TECH SIG-SAS-12-BC100-TM REV03
WEATHER-PROOF BEACON & LIGHT
IP66
BC-100 SERIES

EX-TECH SIGNALLING SAS

BC-100 WEATHER-PROOF BEACON & LIGHT

TECHNICAL MANUAL



Please note that every care has been taken to ensure the accuracy of our technical manual. We do not, however, accept responsibility for damage, loss or expense resulting from any error or omission. We reserve the right to make alterations in line with technical advances and industry standards.

1.0 INTRODUCTION

BC-100 series Weatherproof Beacon & Light is designed according to EN 54 (BS 5879) standard. Enclosure material is composite material of PC (Polycarbonate) and Fiberglass. It applies to indoor industrial conditions. Different flash or rotary rate can adjusted from unique design. Three working

statuses-flash type, rotary type and steady type are available.

There are 2 types of beacon (Xenon type and LED type) available for the customer.

2.0 LABELING

All products have a rating label, which carries the following important information:

Product order no.: e.g. **BC100RX05DCNNNAR**

(Refer to the datasheet for product order selection)

Input voltage: 12-30V DC or 30-60V DC or 100-250V AC

Finish product serial no. (Include date of construction): i.e. BC1000201080001

BC100- Beacon & Light **Day-02 Month-01 Year-08 Product Serial Number-0001**

3.0 TEMPERATURE CLASSIFICATION

The BC100 series products have been certified T4~T6. This means that the units can be installed in locations with the following conditions:

Temperature Range: $-40\text{ }^{\circ}\text{C} < T_a < 70\text{ }^{\circ}\text{C}$

4.0 INSTALLATION

General Requirement

The product must be installed in accordance with the latest issued relevant requirements in the EN 54 (BS 5879) specification. 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.

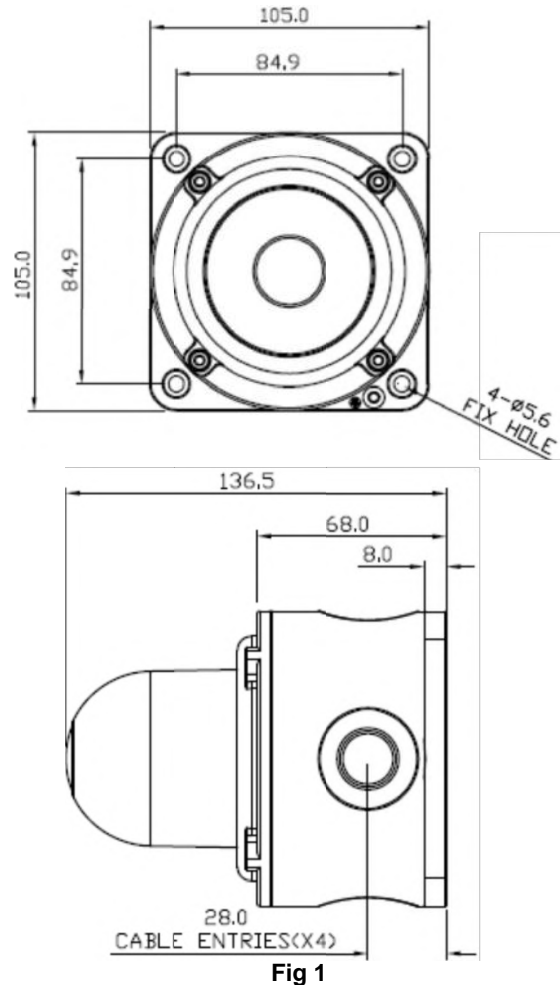
Location

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

Mounting

The product should be mounted on a vertical surface using four (4) fixing holes in the base. The fixing holes are designed to fit M5 Allen Screw only. Use of stainless steel fastener is recommended by EX-TECH SAS. The Beacon can be operated in any attitude. If you need mounting plate, please

contact EX-TECH SAS to ask the installation drawing of the mounting plate. (See Fig 1)



5.0 WIRING

General Requirement

EX-TECH SAS 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

carry the weight of the unit.

Cable Connection

The cable connection is connected with the 8-hole terminal blocks marked T1-T8 located in the flameproof enclosure (See Fig 2). Cable connection should be carried out in accordance with relevant technical requirement.

Remove End Cover

Unscrew the four (4) M5 retained hex socket head screws. 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 similar way, but operate in reverse manner as above

Power Supply

12/24V DC or 30-60V DC or 100-240V AC **PCB Wiring Terminals** (See Fig 3)

recommend SS316L for this application.

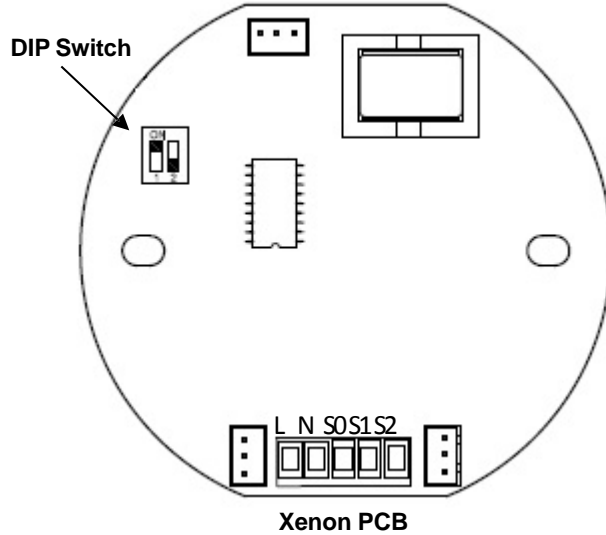


Fig 3

PCB Wiring Terminals (See Fig 3)

Apply power supply to 12V/24V/36V/48V DC 100-250V 'L' & 'N' (See Fig 3)

7.0 STATUS CHOSEN AND FLASHING FREQUENCY ADJUSTMENT

LED Beacon

The LED beacon provides flashing and rotary status to be selected

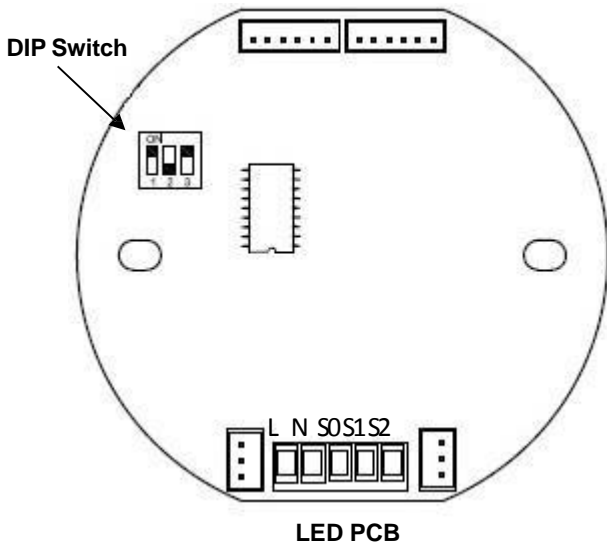
Use **DIP Switch** with 3 binary codes on the **LED Beacon PCB** to select flashing or rotary status (including steady status), the 3rd binary code is for high and low frequency chosen.

LED Status Selection Switch

1st & 2nd DIP Switch: ON=1, OFF=0;

3rd DIP Switch: HIGH= 1, LOW= 0

S1/S2: ON= Connect with 0/COM, OFF= Disconnect with 0/COM



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

Xenon Beacon

The Xenon Beacon provides flashing status

Use **DIP Switch** with 2 binary codes on the **Xenon Beacon PCB** (see Fig 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

S1/S2 DIP Switch		S1 = OFF S2 = OFF				S1 = ON S2 = OFF				S1 = OFF S2 = ON				S1 = ON S2 = ON			
		Alarm Stage 1		Alarm Stage 2		Alarm Stage 3		Alarm Stage 4		Alarm Stage 1		Alarm Stage 2		Alarm Stage 3		Alarm Stage 4	
1	2																
1	1	OFF	60 times/min (1)	90 times/min (1)	120 times/min (1)												
0	1	OFF	60 times/min (2)	60 times/min (3)	60 times/min (4)												
1	0	OFF	60 times/min (3)	60 times/min (4)	60 times/min (5)												
0	0	OFF	60 times/min (4)	60 times/min (5)	60 times/min (6)												

All the value in () are the number of flash by time

6.0 CABLE GLAND

The BC100series product has one to four cable gland entries.

SAFETY WARNING: If the BC100 is used at high ambient temperatures, i.e. over +40°C, then the cable entry temperature may exceed +70°C and therefore suitable heat resisting cable glands must be used, with a rated service temperature of at least 95°C.

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 a blanking plug, which must be suitably approved for the installation requirements.

7.0 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.

8.0 MAINTENANCE

During working life of the product, little or no maintenance is required due to the robust maintenance-free surface. Composite material of PC (Polycarbonate) is abrasion and corrosion resistant therefore the products are able to use in both indoor and outdoor industrial condition/ under harsh environment.

It can also be applied in areas with high impact loads without additional protective constructions due to very good mechanical properties.

If abnormal or unusual environmental conditions occur due to accident etc., visual inspection is recommended.

To avoid electrostatic charge build-up, only exterior of the product can be cleaned with a damp cloth.

If spare parts are required, these can be supplied by

EX-TECH SAS Company.

If any failure occurs but not caused by human factor, the product can be returned to EX-TECH SAS for free repair or replacement during warranty period.

CAUTION: Not suitable to be used under circumstance which exposed or near to the source of concentrated acids, aromatic hydrocarbons, Halogens and Ketones.

9.0 CONDITIONS FOR SAFETY USE

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

Type	Ambient Temp.
BC-100	-40 to +70 °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.

EX-TECH SAS.

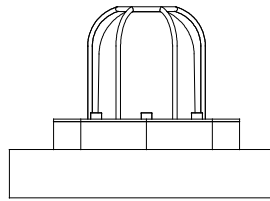
ZA Les Montagnes – 355 rue de la Génoise – 16430 CHAMPNIERS (FRANCE)

Tel: +33 5 45 61 81 68

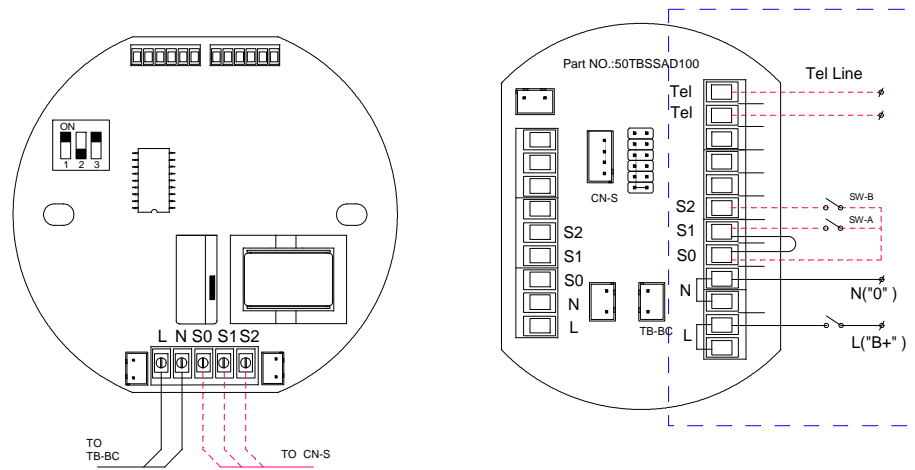
Fax: +33 5 45 23 29 46

Website: www.ex-tech.no

E-mail: info@ex-tech.no



BEACON



Wiring For Customer

Wiring Method

Connect power supply line to terminals "L" and "N". If power supply is DC. "L" presents "+", "N" presents "0".

supply control method:

Turn on the SW-BC to start BEACON(Short S0 to S1);

No power supply control method:

Turn on the SW-A to start BEACON.

If you want to add resistor, please connect the resistor to the "L" & "N".

Telephone Initiated PCB Function

1. Connect the telephone line to the "Tel" terminals.
2. The unit will flash when telephone rings.
3. The unit will stop flashing when the telephone handset is picked up.

Please refer to our product technical manual for more details.

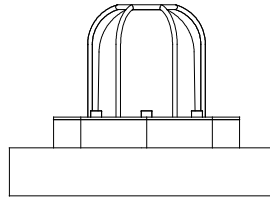
Cable Selection

Please select suitable size cable according to the distance between control room & the terminals and the quantity of equipments used.

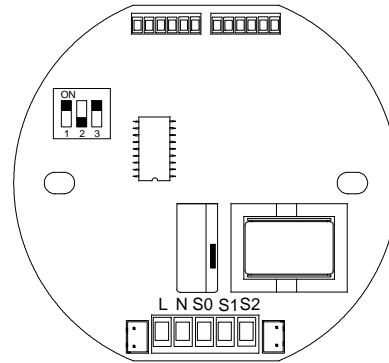
Normal size for AC power supply cable L & N is 1.5mm². Normal size for DC power supply cable L & N is 2.5mm².

Please select the quantity of control cables (0 to 3) according to the actual requirement. Normal size for control cable is 1mm².

00 - 21/10/2015	Creation				
Revision - date	Reason				
Material				Size : A3	
Treatment				Ex-tech Signalling	
Specifications				Dossier	
Drawing part		Scale: 1 : 1	Project / N° PO		
WIRING DIAGRAM BC100_125_150		Drawn by: P. TRAUMAT	-		
		Date: 01/10/2015	N° Drawing BC100_125_150		Index Folio
			01		1/1



BEACON



Wiring For Customer

Wiring Method

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If you want to add resistor, please connect the resistor to the "L" & "N".

Please refer to our product technical manual for more details.

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WIRING DIAGRAM BC100_125_150		Drawn by: P. TRAUMAT	-		-
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