

BC-8 Audible Visual Alarm



Patent 2009 2 0068565.8
 Paten 2009 3 0094515.2



Products description and application

Special design for all kinds of engineering machinery (mobile crane, crawler crane, overhead travelling crane, etc.), Port machinery (gantry crane, bridge crane, etc.), Plant (Electronic cabinet), Metallurgies, Chemical industry, Mines and Marine etc.



BC-8

BC-8A

Features

- Die casting aluminum enclosure, providing good appearance, light weight and corrosion resistance.
- Sealed structure design, dustproof and waterproof.
- Super bright LED technology, lifespan up to 100,000 hours.
- Fresnel PC lens provides excellent impact resisting strength, thermal stability and gloss.
- Professional integrated circuit design provides strong anti-EMI capability.
- Various tones/voices and adjustable volume for option

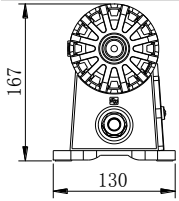
Specifications

| | | | |
|------------------------|--------------------------------------|--------------------------|--|
| Rated voltage | AC36V/DC12~48V/AC110V/AC220V/ AC380V | | |
| AC frequency | 50Hz ~ 60Hz | Rated power consumption | <16W |
| Single tone/Dual tones | 16 kinds of tones/32 kinds of tones | Single voice/Dual voices | 16 kinds of voices/32 kinds of voices |
| Sound level | 116dB (max) | Volume adjustable | Yes |
| Color | Red, Yellow | Alarm mode | Audible visible synchronized / Audible visible separated |
| Operating temperature | -40°C ~ +55°C | IP rate | IP65 |
| Ambient humidity | 10% ~ 95% (non-condensing) | Weight | 3.0Kg |
| Enclosure material | Aluminum alloy | Lens material | PC |

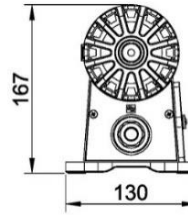
BC-8 Audible Visual Alarm



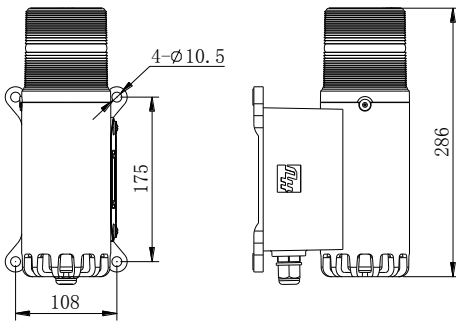
Dimensions (unit : mm)



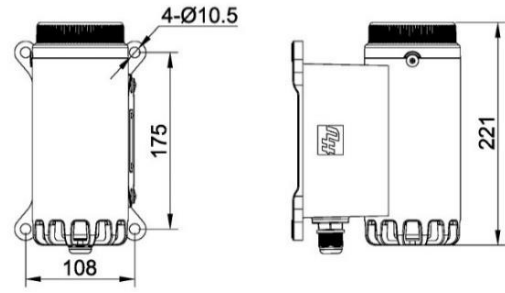
Available cable glands and cable outer diameter requirements:
M20 cable gland: cable outer diameter $\varnothing 7\text{-}\varnothing 12$
M25 cable gland: cable outer diameter $\varnothing 9\text{-}\varnothing 14$
G3/4 cable gland: cable outer diameter $\varnothing 13\text{-}\varnothing 18$



BC-8A has only red color appearance version and is a cropped version of BC-8, it has no visible alarm function, its audible alarm function is the same as that of BC-8, it has single/dual

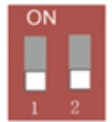
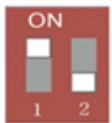
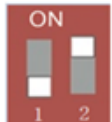
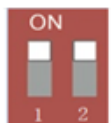


BC-8 Mounting Dimension



BC-8A Mounting Dimension

Wiring diagram

| DIP value | Working mode | Working mode instruction |
|---|--------------|--|
|  | Mode 0 | Single tone or dual tones/Audible visible synchronized, L1 for one kind of tone(tone 1), L2 for one kind of tone(tone 2), audible alarm and visible alarm at the same time after power on. |
|  | Mode 1 | Single tone/Audible visible separated, electrification of L1 is for tone 1, electrification of L2 is for visible alarm. |
|  | Mode 2 | Dual tones/First audible alarm and then audible visible synchronized, electrification of L1 is for tone 1, electrification of L2 is for audible alarm and visible alarm at the same time(tone 2) |
|  | Mode 3 | Single tone 2/First visible alarm and then audible visible synchronized, electrification of L1 is for visible alarm, electrification of L2 is for audible alarm and visible alarm at the same time(tone 2) |

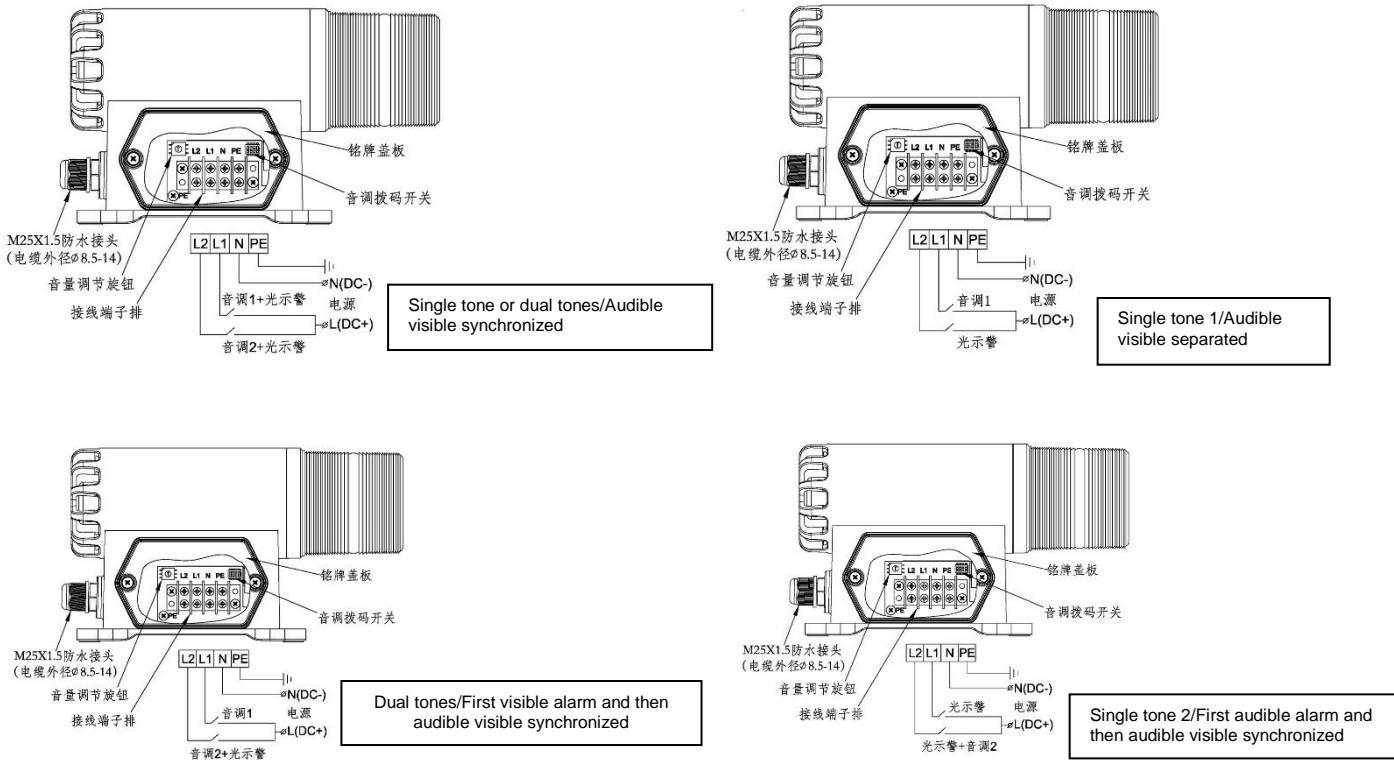
Note 1: The priority of L2 is greater than L1, and simultaneous electrification of L1 and L2 is not recommended. In case of simultaneous electrification of L1 and L2, the electrification of L2 shall prevail.

Note 2: In single tone, audible visible synchronized mode, it is recommended to connect only L1, L2 is not connected.

Note 3: The working mode is customized from the factory. It is not recommended for customers to open the cover and modify by themselves.

Note 4: In case of wide voltage supply, dual tone function of mode 1/ mode 2/ mode 3 and mode 0 is not supported, only single tone function is supported.

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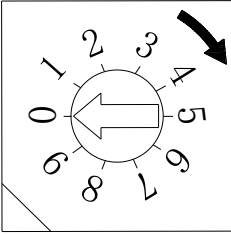


Installation and operation

- Speaker faces downward and install the product vertically, fix product to mount face by using four nos. M8 screws(not provided), ensure mount face is flat and has enough mechanical strength.
- Loosen two screws from nameplate, remove the nameplate, then you can see terminal blocks.
- Insert the cable through product cable gland, correctly connect power line and control line to terminals according to the indication tags on wires.
- Ensure that the input voltage is correct, and ensure cable connection is correct before power on.
- See tone/voice selection table and adjust the DIP switch to select different tones/voices.
- Lens material is polycarbonate, not allowed to direct or indirect contact with industrial spirit, banana oil, isopropanol, carbon tetrachloride, cyclohexanone, etc. organic solvent.

Volume adjustment

- Clockwise turn volume adjustable potentiometer to increase product volume (diagram is provide on the right), minimum volume at "position 0", maximum volume at "position 7/8/9", total 8 levels of volume adjustment.






Tone selection table 1:

| DIP value | L1 tone table | | L2 tone table (Dual tone function must be selected before it works.) | |
|-----------|---|--|---|-------------------------------|
| | 16 kinds of tones L1 | Sound wave(L1) | 16 kinds of tones L2 | Sound wave(L2) |
| | Tone A: Alternating tone, UK BS5839-1 (fire alarm) | 1000Hz 0.5s 800Hz 0.5s | Slow whoop, evacuation alarm Netherlands NEN 2575 | 1200Hz 3.5s 800Hz 0.5s |
| | Tone B: Interrupted tone, PFEER (general alarm), UK BS5839-1 (back-up alarm) | 1200Hz 0.25s 500Hz 0.25s | Alternating tone, France NFS 32-001 (fire alarm) | 554Hz 0.1s 440Hz 0.4s |
| | Tone E: Continuous tone | 1200Hz 3s 500Hz 3s | Alternating tone, UK BS5839-1 (fire alarm, railway crossing) | 1000Hz 0.25s 800Hz 0.25s |
| | Tone D: Intermittent tone PFEER (General Alarm) British BS5839-1 (Standby Alarm) | 1000Hz 0.5s 0.5s | Interrupted tone, industrial alarm Germany | 680Hz 0.875s 0.875s |
| | Tone Y: Continuous tone | 800Hz | Siren, industrial alarm Germany | 1000Hz 40s 150Hz 10s 10s |
| | Siren: Continuous tone | 700Hz | Continuous tone: EN54-3 | 825Hz |
| | Engineering sound: Intermittent tone | 800Hz 0.25s 0.25s | Interrupted tone, Australia AS2220, AS1610, AS1670 | 420Hz 0.625s 0.625s |
| | Long PI after 7 short PI: Intermittent tone | 1100Hz 0.5s 0.5s 6times 0.5s 2.5s 0.5s | Interrupted tone, Germany KTA3901 (evacuation alarm) | 500Hz 0.25s 0.75s |
| | Doorbell: Alternating tone | 1250Hz 0.3s 1000Hz 0.88s 1s | Sweeping, general alarm Finland | 1500Hz 7s 500Hz 7s |
| | Ship fire alarm: Fire alarm tone | 600Hz 5s 200Hz 5s | Continuous tone | 1200Hz |
| | Telephone ring: Alternating tone | 1200Hz 70ms 1000Hz 70ms | Alternating tone, UK BS5839-1 (fire alarm, increased urgency – railway crossing) | 1000Hz 0.125s 800Hz 0.125s |
| | European alarm: Fire alarm tone | 1000Hz 0.26s 800Hz 0.26s | Interrupted tone, Sweden SS031711 (emergency signal) | 660Hz 0.15s 0.15s |
| | Sawtooth, DIN tone 33404-3 Germany (emergency signal), PFEER PTAP | 1200Hz 1s 500Hz | Interrupted tone, Sweden SS031711 (air raid warning) | 660Hz 1.8s 1.8s |
| | Slow whoop, fire alarm, UK BS5839-1 | 970Hz 1s 800Hz | Slow whoop, NFPA | 775Hz 0.85s 422Hz 1s |
| | Sweeping (medium), UK BS5839-1 | 1000Hz 0.5s 800Hz 0.5s | Sweeping (fast), UK BS5839-1 | 1000Hz 70ms 800Hz 70ms |
| | Tone L: Fire alarm tone | 2500Hz 3.5ms 1300Hz 3.5ms | Continuous tone, Germany KTA3901 (all-clear signal) | 500Hz |



Voice selection table 1:

| DIP value | L1 voice table | | L2 voice table (Dual tone function must be selected before it works.) | |
|---|-----------------------|-------------------------------|---|-------------------------------|
| | 16 kinds of voices L1 | Voice content (female voice) | 16 kinds of voices L2 | Voice content (female voice) |
|  | 1 | 大车行走, 请注意避让 | 1 | 大车转场, 请注意避让 |
|  | 2 | 有人进入禁区, 请注意 | 2 | 有人进入机房, 请注意 |
|  | 3 | 您已进入禁区, 请立即离开 | 3 | 您已进入机房重地, 请注意安全 |
|  | 4 | 天车运行中, 请注意安全 | 4 | 火车来了, 请注意安全 |
|  | 5 | 您已进入作业区域, 请注意安全 | 5 | 设备启动, 请注意安全 |
|  | 6 | 限制区域, 禁止进入 | 6 | 正在吊装, 请注意 |
|  | 7 | 皮带启动, 请注意安全 | 7 | 船舶漂移, 请注意 |
|  | 8 | 请注意大风报警, 停止工作 | 8 | Hatch cover is shifting |
|  | 9 | 上下大机, 踏稳扶牢, 请远离转动部位 | 9 | Belt starting, Caution please |
|  | 10 | 正在装卸, 严禁动车 | 10 | 臂架伸缩, 请注意 |
|  | 11 | 左转弯 | 11 | 右转弯 |
|  | 12 | 请注意, 车辆转弯 | 12 | 请注意, 倒车 |
|  | 13 | 请注意, 钢包台车运行 | 13 | 请注意, 钢包回转台运行 |
|  | 14 | Truck walking, Caution please | 14 | Warning moving is on |
|  | 15 | 特殊作业, 注意避让 | 15 | 对位完成, 司机下车 |
|  | 16 | 向前走 | 16 | 向后走 |












Tone and voice combinations selection table 1:

| DIP value | L1 tone table | | L2 voice table (Dual tone function must be selected before it works.) | |
|-----------|---|-----------------------------------|---|-------------------------------|
| | 16 kinds of tones L1 | Sound wave (L1) | 16 kinds of voices L2 | Voice content (female voice) |
| | Tone A: Alternating tone, UK BS5839-1 (fire alarm) | 1000Hz 0.5s 800Hz 0.5s | 1 | 大车行走, 请注意避让 |
| | Tone B: Interrupted tone, PFEER (general alarm), UK BS5839-1 (back-up alarm) | 1200Hz 0.25s 500Hz 0.25s | 2 | 有人进入禁区, 请注意 |
| | Tone E: Continuous tone | 1200Hz 3s 500Hz 3s | 3 | 您已进入禁区, 请立即离开 |
| | Tone D: Intermittent tone PFEER (General Alarm) British BS5839-1 (Standby Alarm) | 1000Hz 0.5s 0.5s | 4 | 天车运行中, 请注意安全 |
| | Tone Y: Continuous tone | 800Hz | 5 | 您已进入作业区域, 请注意安全 |
| | Siren: Continuous tone | 700Hz | 6 | 限制区域, 禁止进入 |
| | Engineering sound: Intermittent tone | 800Hz 0.25s 0.25s | 7 | 皮带启动, 请注意安全 |
| | Long PI after 7 short PI: Intermittent tone | 1100Hz 0.5s 6times 0.5s 2.5s 0.5s | 8 | 请注意大风报警, 停止工作 |
| | Doorbell: Alternating tone | 1250Hz 0.3s 1000Hz 0.88s 1s | 9 | 上下大机, 踏稳扶牢, 请远离转动部位 |
| | Ship fire alarm: Fire alarm tone | 600Hz 5s 200Hz 5s | 10 | 正在装卸, 严禁动车 |
| | Telephone ring: Alternating tone | 1200Hz 70ms 1000Hz 70ms | 11 | 设备启动, 请注意安全 |
| | European alarm: Fire alarm tone | 1000Hz 0.26s 800Hz 0.26s | 12 | 请注意, 车辆转弯 |
| | Sawtooth, DIN tone 33404-3 Germany (emergency signal), PFEER PTAP | 1200Hz 1s 500Hz | 13 | 请注意, 钢包台车运行 |
| | Slow whoop, fire alarm, UK BS5839-1 | 970Hz 1s 800Hz | 14 | Truck walking, Caution please |
| | Sweeping (medium), UK BS5839-1 | 1000Hz 0.5s 800Hz 0.5s | 15 | 特殊作业, 注意避让 |
| | Tone L: Fire alarm tone | 2500Hz 3.5ms 1300Hz 3.5ms | 16 | 正在吊装, 请注意 |



Tone selection table 2 (compatible with old BC-8 dual tone customization, not recommended) :

| DIP value | Dual tones combinations | | |
|---|-------------------------|-------------------|---------|
| | Tones combinations | L1 tone | L2 tone |
|  | 1 | Tone B | Tone A |
|  | 2 | Tone E | Tone A |
|  | 3 | Tone D | Tone A |
|  | 4 | Tone E | Tone B |
|  | 5 | Tone D | Tone B |
|  | 6 | Tone Y | Tone D |
|  | 7 | Tone E | Tone D |
|  | 8 | Tone Y | Tone A |
|  | 9 | Tone Y | Tone B |
|  | 10 | Tone Y | Tone E |
|  | 11 | Electric flute | Tone A |
|  | 12 | Electric flute | Tone D |
|  | 13 | Electric flute | Tone E |
|  | 14 | Engineering sound | Tone A |
|  | 15 | Engineering sound | Tone D |
|  | 16 | Engineering sound | Tone E |

BC-8 Audible Visual Alarm



How to Order

| No. | Configuration item | Option content | Option | Constraint relation (exclusive) | Tick |
|----------------------|---------------------|--|--------|---------------------------------|------|
| 1 | Voltage | DC12-48V/AC9V-36V(Single tone/voice) | L01 | L52 L54 L202 L203 L204 | |
| | | AC100V-AC240V(Single tone/voice) | L02 | L52 L54 L202 L203 L204 | |
| | | AC110V(Single tone/voice) | L03 | L52 L54 L202 L203 L204 | |
| | | AC220V(Single tone/voice) | L04 | L52 L54 L202 L203 L204 | |
| | | AC380V(Single tone/voice) | L05 | L52 L54 L202 L203 L204 | |
| | | DC12V(Dual tone/voice) | L06 | | |
| | | DC24V(Dual tone/voice) | L07 | | |
| | | AC110V(Dual tone/voice) | L08 | | |
| | | AC220V(Dual tone/voice) | L09 | | |
| 2 | Tone/voice | 16 kinds of tones(Single tone)/32 kinds of tones(Dual tones) | L51 | | |
| | | 16 combinations of dual tones(Not recommended) | L52 | L01 L02 L03 L04 L05 | |
| | | 16 kinds of voices(Single voice)/32 kinds of voices(Dual voices) | L53 | | |
| | | 16 kinds of tones +16 kinds of voices(mixed) | L54 | L01 L02 L03 L04 L05 | |
| 3 | Visible alarm color | Yellow | L101 | | |
| | | Red | L104 | | |
| | | Without visible alarm (BC-8A) | L107 | L202 L203 L204 | |
| 4 | Working mode | Single tone or dual tones(voices)/Audible visible synchronized | L201 | | |
| | | Single tone(voice)/Audible visible separated | L202 | L01 L02 L03 L04 L05 L107 | |
| | | Dual tones(voices)/First visible alarm and then audible visible synchronized | L203 | L01 L02 L03 L04 L05 L107 | |
| | | Single tone(voice)/First audible alarm and then audible visible synchronized | L204 | L01 L02 L03 L04 L05 L107 | |
| 5 | Wiring method | Metal cable gland M20(Ø7-Ø12) | L251 | | |
| | | Metal cable gland M25(Ø9-Ø14) | L252 | | |
| | | Metal cable gland G3/4(Ø13-Ø18) | L253 | | |
| | | Nylon cable gland M20(Ø7-Ø12) | L254 | | |
| | | Nylon cable gland M25(Ø9-Ø14) | L255 | | |
| | | Nylon cable gland G3/4(Ø13-Ø18) | L256 | | |
| | | Nylon plug head M20 | L257 | | |
| | | Nylon plug head M25 | L258 | | |
| Nylon plug head G3/4 | L259 | | | | |

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