

An overview of the Safety Back-up Alarm



Model:

ES 47

ES 53

ES 55

dip electronic signal safety reversing backup alarm has been designed, by DIP HEAVY MACHINERY; engineered and manufactured in collaboration with ORCHID ELECTRONIC TECHNOLOGY and has passed environmental conformity. It's solid-state audible warning device enclosed in a weatherproof housing is ready to face the daily working environment of heavy machinery. When activated, the back-up alarm produces a tone with a sound intensity of 87 dB, 97 dB, 102 dB, 107 dB at 4 feet(1.2 meters) depending on the model (refer to Table 1). This tone is interrupted at a rate approximately 80 times per minute.

Unpacking the Product

After unpacking the product, inspect it for any damage that may occur in transportation. If any damaged has been detected, do not attempt to install it. File us a claim immediately (normally within 3 working days).

Product Specifications

Operating Voltage	:	12 Vdc to 80 Vdc
System Voltage	:	12 Vdc to 24 Vdc systems
Operation Current	:	See Table 1
Sound Output Level	:	see Table 1
Operating Temperature Range	:	10°C~+60°C
Overall Dimensions	:	102mm (L) × 41mm (W) × 68mm (H)
Net weight	:	200 gram (0.2 Kg)
Housing	:	Steam-cleanable weatherproof glass filled nylon

Table 1

Model	Decibels	Connection Type	Operating Current
ES 47	102 dB	With Wires	0.3 A max.
ES 53	97 dB	With Wires	0.2 A max.
ES 55	107 dB	With Wires	0.5 A max.

The product label on the back-up alarm housing describes the sound output in decibels (dB)

Safety message to installers of dIp signal Back-up Alarms

Installing a back-up alarm involve people live. It is important to read and follow all instructions that come with the box. In addition, some important safety instructions and precautions you should follow are listed below:

- A good understanding of (Bus, Truck, Forklift, Bulldozer or the wishing operating machine) electrical procedures and systems to be able to properly install a back-up alarm.
- Back-up alarms should be used for Back-up WARNING application only. The back-up alarm sound is generally recognized as a warning for reversing vehicles/ mobile equipment.
- All effective back-up alarm alarms produce loud sounds which may cause, in certain situations, permanent hearing loss. You should take appropriate precaution and follow your employer's hearing conservation program and safety guidelines for instructions as to whether you should wear hearing protection.
- When drilling on a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- Location is of utmost importance to allow the back-up alarm to operate safely under all conditions. A proper location to provide protection from impact and while allowing unobstructed sound projection to the target hazard area.
- Ensure that the vehicle's supply voltage is within the voltage rating specified on the back-up alarm.
- A frequent route inspection is important to ensure that it is operating properly and that it is securely attached to the vehicle.
- Test all vehicle functions including horn operation, vehicle safety functions and vehicle light systems, to ensure proper operation. Ensure that installation has not affected vehicle operation or changed any vehicle safety function circuit.
- File these instruction in a safe place and refer to them when maintaining or reinstalling the product.

FAILURE TO FOLLOW ALL SAFETY PRECAUTION AND INSTRUCTION MAY RESULT IN PROPERTY DAMAGE, SERIOUS INJURY, OR DEATH.

Mounting the Back-Up Alarm

▲ WARNING

INSTALLATION PRECAUTIONS – This back-up alarm is design to concentrate its audible alarm to a target hazard area. For proper warning signal coverage, the alarm should be mounted approximately 100 cm above ground level with the sound ports of the back-up alarm facing target hazard area. There should be no obstructions, blocking the sound ports of the alarm.

▲ WARNING

SOUND PORTS MUST BE UPWARD FACE – Do not mount the back-up alarm with sound ports facing upward where it can become buried, submerged or clogged with mud, water and other debris. The alarm will rendered ineffective and will produce little or no sound output. Always target the alarm to the hazard area, and that the alarm is functioning properly before using the vehicle.

▲ CAUTION

DRILLING PRECAUTIONS – Before any drilling attempt, be sure you do not damage vehicle components. All drilled holes should be debarred and all sharp edges should be smoothed. All wire routings should be protected by a grommet or convolute/ split-loom weaving.

Safety Messages For Wiring the Back-up Alarm

- Never wire in parallel with a solenoid or relay coil.
- Never install the alarm or its wiring in proximity to ignition wires.
- Keep the alarm clean, do not spray any coating material, such as paint, undercoating, etc, over any part of the alarm.
- Improper grounding could cause the back-up alarm to function improperly and result in death or serious injury. The ground connection (-) must be attached to a solid metal body or chassis part that will provide a dependable ground path for a long as the device is to be used.
- During operation the voltage differential between the positive voltage of the power source and the positive terminal of the back-up alarm (+) must not exceed 150 mV.
- The back-up alarm is sensitive to polarity and will not operate when it's power and ground connections are reversed. Ensure that the battery voltage is the same as the voltage of the alarm and that correct polarity is observed.
- Do never connect the back-up alarm to high-powered motor-reverse circuitry.

Failure to observe these warnings may damage the back-up alarm or prevent it from operating, potentially causing property damage, serious injury, or death.

NOTE

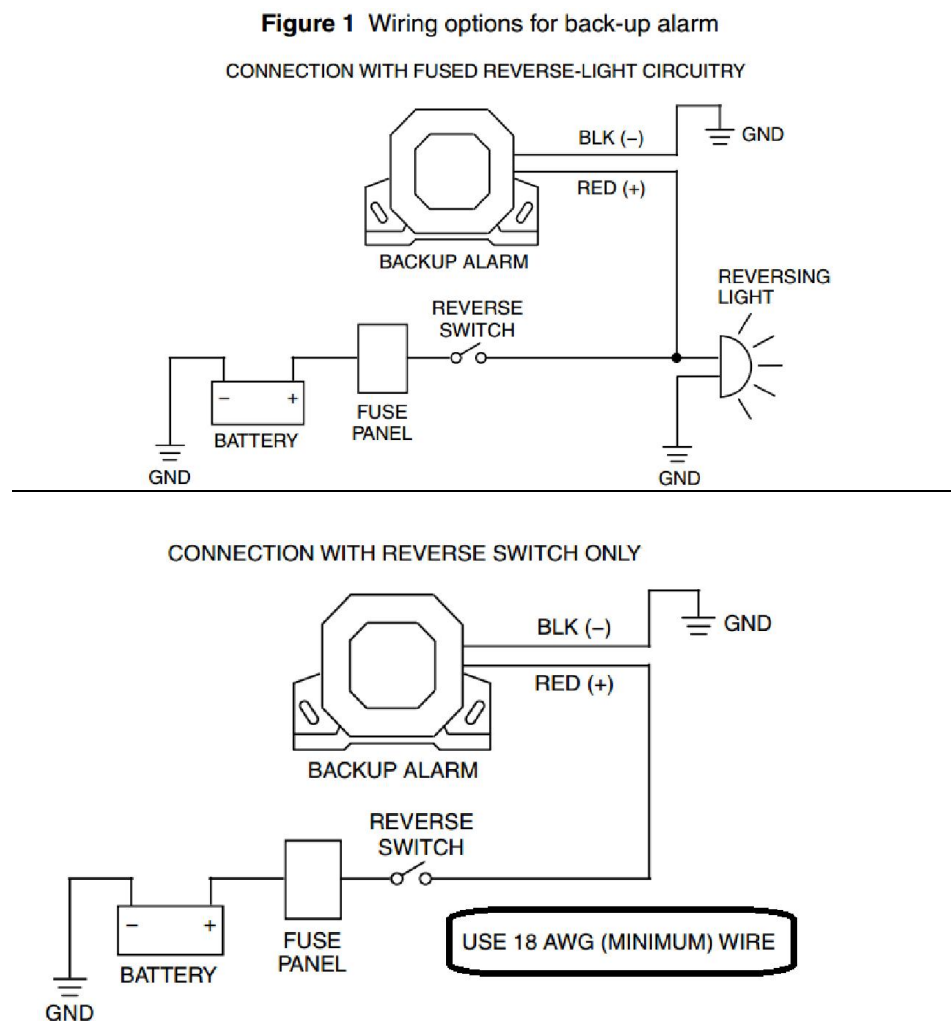
This product is a safety device. To assure its continued operation, it must be connected to the fused back-up circuit of the vehicle or to its own separate fused power point.

REFER TO FIGURE 1

Wire the back-up alarm to the vehicle electrical system:

1. Make connections with 18 AWG (minimum) wiring according to appropriate diagram as shown in figure 1.

The positive (+) and the negative (-) connections are marked on the housing.



2. Test the back-up alarm for proper operation, if back-up alarm does not sound, refer to the warnings and precautions at the beginning of this section. Do not operate the vehicle if the back-up alarm is not functioning properly.
3. After confirming proper operation, affix provided warning label to the dashboard of the vehicle in plain view of the operator.

4. Test all vehicle functions, including horn, safety functions, lighting systems to ensure proper operation. Ensure that the installation has not affected the vehicle operation or changed any vehicle safety functions or circuits. Do not test the vehicle while driving.

Safety Message to Operate dip Safety Back-up Alarm

People lives depend on the safe operation of the back-up alarm. It is important to read and follow all instructions in this section. Listed below are some other important safety instructions and precautions you should follow:

- It is important that you understand how to safely operate this warning system before use
- If back-up alarm does not sound, do not operate the vehicle, it could jeopardize the safety or live of those who depend on the back-up alarm signal for personal safety.
- Your hearing and the hearing of others, in or close to your vehicle, could be damaged by loud sounds. This can occur from short exposures to very loud sounds, or from longer exposures to moderately loud sounds. For hearing conservation guideline, refer to local recommendations, OSHA standard 1910.95 offers guidance on “Permissible Noise Protection)
- Although your warning system is operating properly, it may not alert everyone. People may not hear, see, or heed your warning signal. You must recognize this fact and continue to operate your vehicle cautiously.
- Testing the back-up alarm should be a daily routine operation, and should be listed on the daily maintenance report.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

Getting Technical Support and Service

The back-up alarm has no field-service parts. Opening it will **VOID WARRANTY**. Dip heavy machinery limited can and will service your back-up alarm. If you are expecting problem with it, please contact:

Dip Heavy Machinery Limited
Support department
Phone : 230 58 63 8500
Email : support@dipparts.com



dip Genuine safety back-up alarm come with 18 months Warrantee from the date of purchase.