

SymCom's Model ACBC-120 is a combination alarm controller/battery charger used in wastewater lift station panels equipped with 12VDC backup battery systems. The device's primary alarm controller function becomes active when there is a loss of 120VAC power. When this power loss occurs, input power is switched to the backup battery and, if the panel is equipped, the ACBC-120 activates a 12VDC alarm circuit that consists of an alarm strobe light and/or horn. The horn follows a 2 second on 2 second off pattern and can be manually turned off with a "horn silence" option. An LED indicator on the unit will also signal that the device has entered alarm mode.

The ACBC-120's secondary function is to charge a 12VDC, lead-acid, rechargeable backup battery for the alarm system. When recharging is necessary, the device can source up to 100mA of charging current in fast charge mode. Once fully charged, the ACBC-120 charges in maintenance mode at a current of 14mA to ensure the battery maintains its full charge.

If battery voltage falls below 10.5VDC, the ACBC-120 will signal a low battery condition to notify battery power is not sufficient. The ACBC-120 also has the ability to detect if there is no battery connection present or the battery connection is backwards. If either of these conditions exist, the ACBC-120 will signal a battery error and not charge.

When 120VAC input power is present, the alarm circuit can be tested by pressing the "test" button on the front of the unit or by activating an external switch via the "alarm contact" pin.



Figure 1: Alarm Control Panel
Photo courtesy of Tom Robinson,
Robinson Better Business Ideas

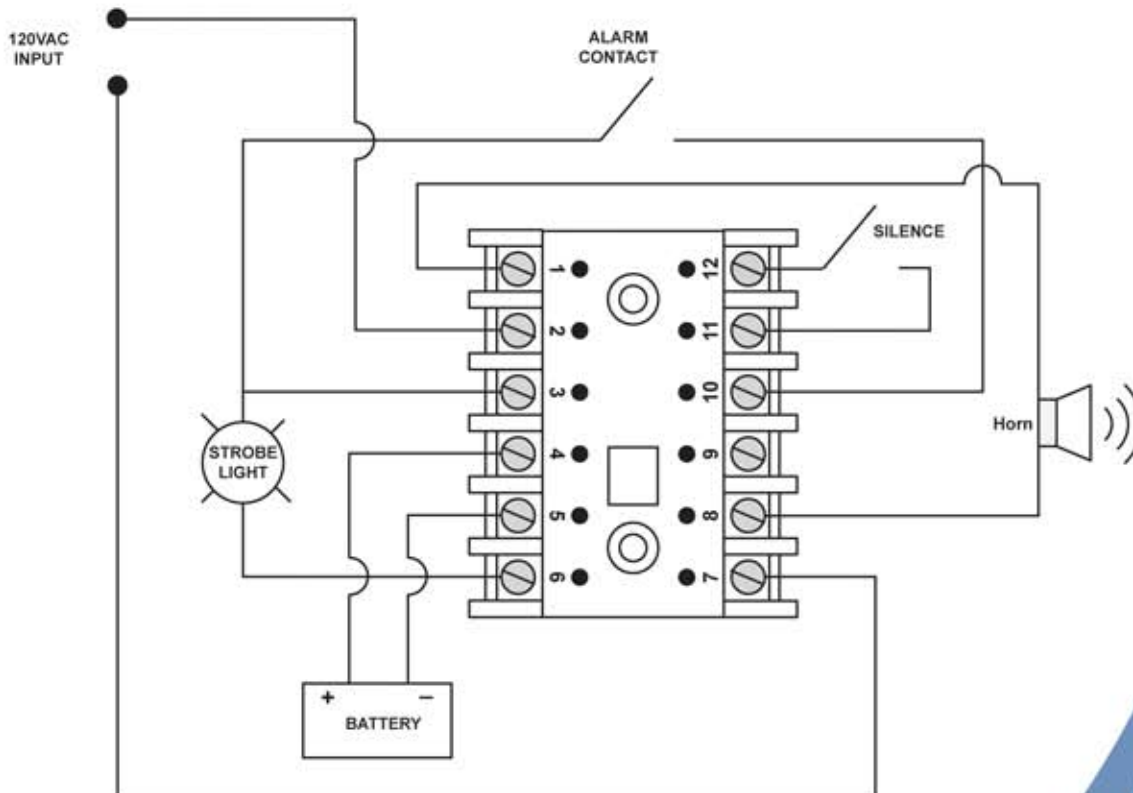


Figure 2: ACBC-120 Box Diagram

When and where should an ACBC-120 be used?

The ACBC-120 can be used in any wastewater lift station panel where it is necessary to notify the user of power loss that affects sewage pump operations. The ACBC-120 can also be used in lift stations to recharge an alarm battery and notify users of a low battery condition. Any wastewater lift station is a potential application for the ACBC-120.

What are the advantages of this unit?



Figure 3: SymCom's Model ACBC-120

AC power loss is a common occurrence that unfortunately cannot be avoided. Equipping lift station panels with an ACBC-120 controlled alarm system notifies users of power loss and ensures a charged back-up battery. Systems not using an alarm controller operate off battery power continuously, resulting in shortened battery life and frequent dead batteries. Lack of battery power results in panels with inoperable alarm system and the inability to notify users of power loss.

The following features of the ACBC-120 are advantages over other means of using/controlling battery powered alarm systems:

- **Ability to detect the following:**
 - o Low battery voltage
 - o Battery error
- **Ability to protect against:**
 - o Reverse polarity
 - o Short circuited battery terminals
- **LED to indicate:**
 - o Maintenance mode
 - o Trip delay timer
 - o Low battery
 - o Fast charge mode
 - o Battery error
 - o Alarm mode
- **Internal circuitry allows for optional horn silencing switch to be connected.**
 - o No separate alarm silence relay is required to turn off the horn/light as a toggle switch can be wired directly to the ACBC-120
- **Smart charging does not overcharge the battery, extending battery life.**
- **Wide operating temperature range: -40° to 60°C**
- **High alarm output current capabilities-up to 1A for the strobe light and horn. This eliminates the need for a separate relay to operate these devices.**

Additionally, the ACBC-120 can be used as an affordable replacement for Uninterruptible Power Supply (UPS) systems which are commonly used on higher end control panels to ensure continuous power to SCADA communications telemetry equipment and local alarms.

The ACBC-120 is the most advanced and competitively priced alarm controlling device available in the lift station market. **Your equipment is critical- call SymCom, the control and protection specialists today.**