

# SIEMENS

## Control Modules

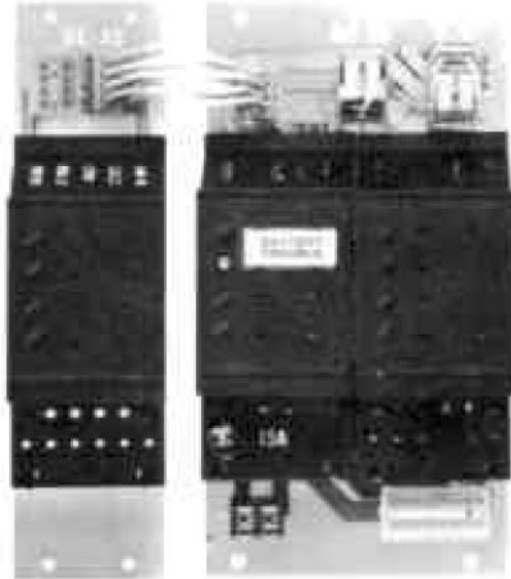
### For System 3 Fire Alarm Panels

Fire Safety

#### ENGINEER AND ARCHITECT SPECIFICATIONS

**MODEL BC-35 Battery Charger/Transfer**  
**MODEL BE-35 Battery Extender**

- Automatic Operation
- LED Trouble Indicator
- For Lead Acid or Sealed Nickel Cadmium Batteries
- Battery Circuit Supervised
- Transfers System to Battery
-  Listed, NYMEA, FM, CSFM and City of Chicago Approved



#### Description

The Battery Charger/Transfer Module, Model BC-35, and the Battery Extender Module, Model BE-35 provide the means of automatically supplying 24 Vdc emergency power to the basic system during main power outages. Both models are of solid state circuitry. The Model BC-35 contains a yellow LED "Trouble" indicator. Under normal conditions, the system is powered directly from the main power supply. When the system is equipped with emergency power, the (calcium grid) lead acid or nickel cadmium batteries are maintained at full charge through the operation of the BC-35 or BC-35/BE-35 combination charging circuit. In the event of an AC power failure, the system is transferred to battery power. The basic Charger/Transfer Module Model BC-35 provide the following circuit function features:

1. Controls charging current and float voltage values to maintain the batteries in optimal condition.
2. Provides accurate AC to battery and battery to AC transfer.
3. Shuts off battery power supply source when discharging battery reaches an unacceptable deep discharge value point.
4. Supervises battery placement along with high and low battery voltage points.

5. Withstands shorted battery terminal connections along with preventing the possibility of reversed battery polarity.
6. Charging path of BC-35, BE-35 and MM-35 modules are supervised for placement.

Following are the battery capacities for this charging system:

Battery Capacity	Modules Used
4.5 to 25 AH	BC-35
26 to 55 AH	BC-35 and one BE-35
56 to 75 AH	BC-35 and two BE-35's
76 to 100AH	BC-35 and three BE-35's

Note: An optional Meter Module (MM-35) may be connected within the BC-35/BE-35 connector loop. When used, this module is placed as the last module in the BC-35/BE-35 connection loop and serves as an end of the line connector for the charging path supervisory function. When the MM-35 is not used, the last module either the BC-35 or BE-35 must use the supervisory connector Model JP-BE in plug P-2.

The MM-35 indicates charging current present along with the battery voltage.

The units are Underwriters Laboratories Inc. listed.

## Engineer & Architects Specifications

Battery charging capability shall be provided by a Siemens Building Technologies, Inc., Fire Safety Battery Charger/Transfer Module, Model BC-35, and when necessary with a Battery Extender Module, Model BE-35. These modules shall be system interconnected by harness assembly and designed for use with 24VDC notification appliances. Capability shall be provided to recharge sealed lead acid or sealed nickel cadmium batteries to their full capacity.

The BC-35/BE-35 combination for proper battery capacity is as follows: (select one)

### Battery Capacity Modules Used

- A 4.5 to 25 AH BC-35
- B 26 to 55 AH BC-35 and one BE-35
- C 56 to 75 AH BC-35 and two BE-35's
- D 76 to 100AH BC-35 and three BE-35's

Loss of main operating power to the system shall automatically cause the system to transfer to battery power. After main power has been restored and the emergency batteries have been fully recharged, the system shall continue to float charge the batteries. The module shall be fitted with a fuse to protect against the battery overcurrent and accidental reversal of polarity.

The battery shall be protected against overcharge and deep discharge. Failure of the charging system shall be identified by an indicator on the primary charging module, BC-35, and also by a system trouble, if AC power is functioning.

The Models BC-35 and BE-35 shall be placement supervised and shall be Underwriters Laboratories, Inc. listed.

## Electrical Information

Normal Operating Current: BC-35, 46 ma  
BE-35, 2 ma

(Excluding charging current)

## Ordering Information

Model Number	Description	Part Number
BC-35	Battery Charger/Transfer Module	500-884853
BE-35	Battery Extender Module	500-884859

## Typical Wiring

When optional MM-35 is not used, last module (BC-35 or BE-35) must use Supervisory Connection Model JP-BE in plug P2.

1  
4  
2  
7

Schematic JP-BE

24 VDC  
10A max

Connection from P2 of CP-35

Up to three BC-35 Modules may be used according to the following schedule, based on a 48 hour recharge period.

Part Number	Battery Size	24 Hour		60 Hour		Maximum Current Avg at 24V	Float Current Average
		Alarm Current	Supv Current	Alarm Current	Supv Current		
175-387141	6 AH	2 A	.015 A	NA	NA	0.8 A	0.1 A
175-387140	10 AH	4 A 10 A	0.31 A 0.28 A	4 A	0.124 A	0.8 A	0.1 A
175-083897	31 AH	10 A	0.75 A	10 A	0.3 A	0.8 A	.01 A
175-083898	55 AH	10 A	1.85 A	10 A	0.74 A	1.8 A	0.11 A

Battery Capacity	Modules Used
4.5 to 25 AH	BC-35
26 to 55 AH	BC-35 and one BE-35

**NOTICE:** The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such void all warranties either expressed or implied with regard to loss, damage, liabilities and/or service problems.