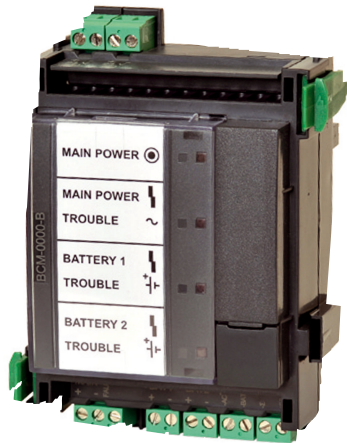




# BCM-0000-B Battery Controller Module



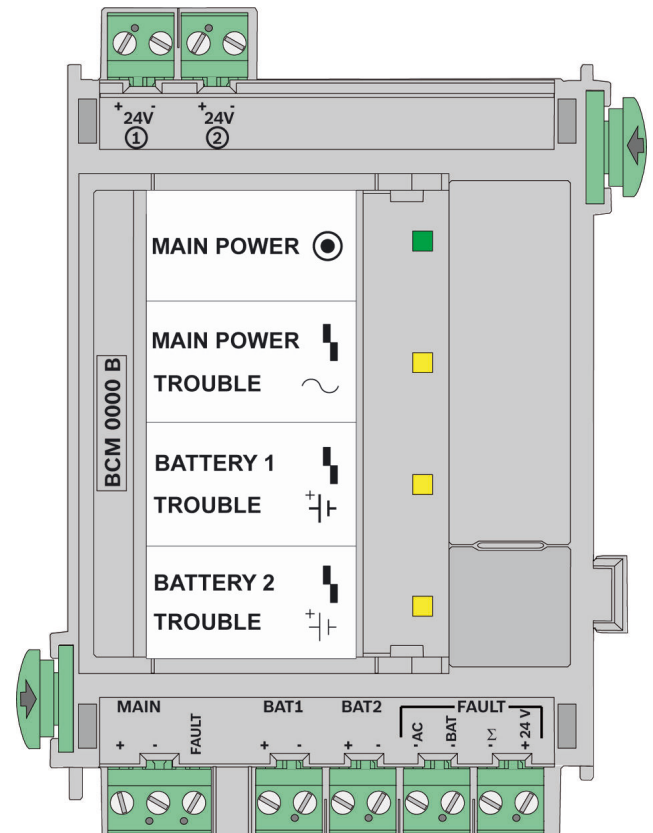
- ▶ Two voltage outputs of 2.8 A at 24 V each
- ▶ Temperature-controlled charging and monitoring of batteries according to EN 54-4:1997/A2:2006
- ▶ Ready to go thanks to plug-and-play technology and pluggable terminal blocks

The BCM-0000-B Battery Controller Module monitors the power supply of the entire control panel. It controls the charging of up to four batteries (12 V/24 Ah to 12 V/26 Ah or 12 V/36 Ah to 12 V/45 Ah). The charging is actuated by temperature and time.

The key has three functions, depending on the state of the battery controller module:

- The LED test of the module is activated by pushing the key.
- The key starts the charging of the batteries if the battery voltage is between 18 V and 21 V. A mains power supply is required.
- The reset of the 24 V outputs. If an error occurs, the output is deactivated.

## System Overview



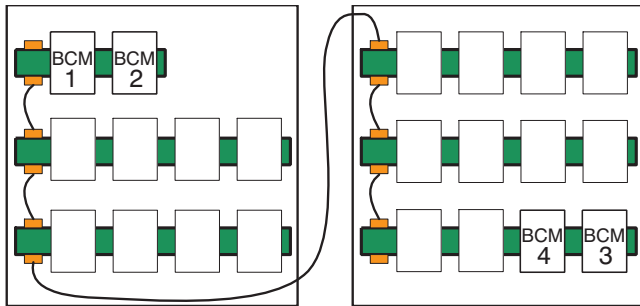
Description	Connector
24V +/-	Output max. 2.8 A (battery buffered)
24V +/-	Output max. 2.8 A (battery buffered)
MAIN +/-	Power supply unit UPS
MAIN FAULT	Input fault, mains
BAT1 +/-	Battery pair 1
BAT2 +/-	Battery pair 2
FAULT AC -	Main power fault signal output
FAULT BAT-	Battery fault signal output
FAULT Σ-	Collective fault signal output
FAULT +	Signal output +

**Installation/Configuration Notes**

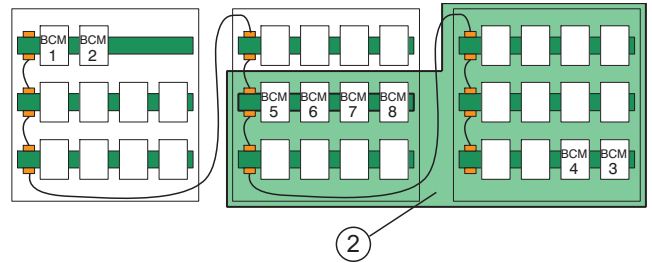
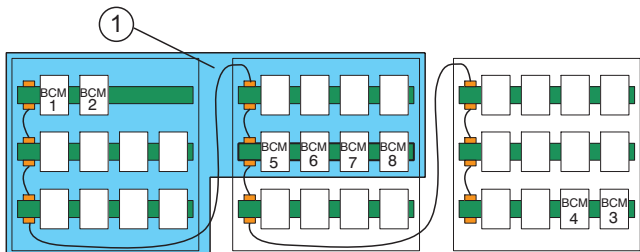
- Do not use the 24V outputs in parallel wiring.
- For FPA-5000 systems with the MPC xxxx A Panel Controller, the BCM 0000 A Battery Controller Module must be employed.

**Configuration specifications for Battery Controller Modules**

- With 1 to 4 BCM modules:
  - max. 2 modules at the start of the first panel rail
  - max. 2 modules at the end of the last panel rail



- With 5 to 8 BCM modules:
  - 2 modules at the start of the first panel rail (BCM 1 and 2)
  - 2 modules at the end of the last panel rail (BCM 3 and 4)
  - additional BCM modules as shown



**Pos. Description**

- | Pos. | Description |
|------|-------------|
| 1    | Area 1      |
| 2    | Area 2      |
- Current consumption of the BCM modules must not exceed 10 A in Area 1.
  - Current consumption of the BCM modules must not exceed 10 A in Area 2.
  - This only applies to the current consumption for consumer loads of the outputs (1) 24 V and (2) 24 V.

**Calculation of the standby current according to EN 54-4**

$$(1) I_{max, Standby} = \frac{C_{Batt} \cdot I_{Alarm} \times 0,5h}{t_{Standby}} \quad (2) I_{max, A} = 6A - \frac{C_{Batt}}{18h}$$

$$(3) I_{nom} = \min[I_{max, Standby}, I_{max, A}]$$

Formula (1) gives the maximum panel current required to provide a specific buffering time ( $I_{max, Standby}$ ).

Formula (2) gives the maximum panel current with simultaneous consideration of the battery charge ( $I_{max, A}$ ).

According to formula (3), the required standby current of the panel ( $I_{nom}$ ) is based on the smaller value of the two maximum current values of the panel.

Parameter:

- $t_{Standby}$  = buffering time in hour
- $I_{Alarm}$  = maximum alarm current ( $I_{max, B}$ )
- $C_{Batt}$  = battery capacity in Ah

The following capacities are feasible:

- 24 – 26 Ah and 36 – 45 Ah for 2 batteries
- 48 – 52 Ah and 72 – 90 Ah for 4 batteries

**Parts Included**

**Qty. Components**

- |   |   |
|---|---|
| 1 | BCM-0000-B Battery Controller Module  |
| 1 | Cable set with 2 connection cables: BCM/battery (90 cm) and battery/battery (17 cm) |

**Note** If the batteries are placed in a power supply housing, the cable set CBB 0000 A is required (cable length for BCM/battery 180 cm).

## Technical Specifications

### Electrical

Input voltage	20,4 V DC to 30 V DC
Current consumption	
• Standby	25 mA
• Fault	40 mA
Voltage outputs	
• 2 outputs, switchable	+24 V (20.4 - 30 V) 2,8 A battery-buffered (programmable)
Capacity of the outputs BAT FAULT, AC FAULT and col- lective FAULT	0 V / 0 to 20 mA
Maximum current of the module	Max. 6 A
• to the panel rails (PRS 0002 A/ PRD 0004 A)	Max. 6 A
• of the outputs	Max. 5.6 A (2 x 2.8 A, not in parallel wiring)
Maximum battery resistance (fault threshold)	430 mΩ
Permitted battery capacity	
• with 2 batteries	24 – 26 Ah 36 – 45 Ah
• with 4 batteries	48 – 52 Ah 72 – 90 Ah

### Mechanics

Operating/display elements	
• 1 green LED	Power ON
• 3 yellow LEDs	Trouble mains/batt. 1/batt. 2
• 1 key	Batteries charge at $V < 21$ V and cen- tral units start with battery current
Housing material	ABS plastic, Polylac PA-766 (UL94 V-0)
Housing color	Satin finish, anthracite, RAL 7016
Dimensions	Approx. 127 x 96 x 60 mm (5.0 x 3.8 x 2.4 in.)
Weight	
• Without packaging	Approx. 195 g (6.9 ounces)
• With packaging	Approx. 340 g (12 ounces)

### Environmental conditions

Permitted operating temperature	-5°C to 50°C (23°F to 122°F)
Permitted storage temperature	-20°C to 85°C (-13°F to 185°F)
Permitted relative humidity	95%, non-condensing
Protection class as per IEC 60529	IP 30

## Ordering Information

**BCM-0000-B Battery Controller Module**  
monitors the power supply of the fire panel  
and the charging of the batteries

**BCM-0000-B**

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