

BCM-0000-B Battery controller module



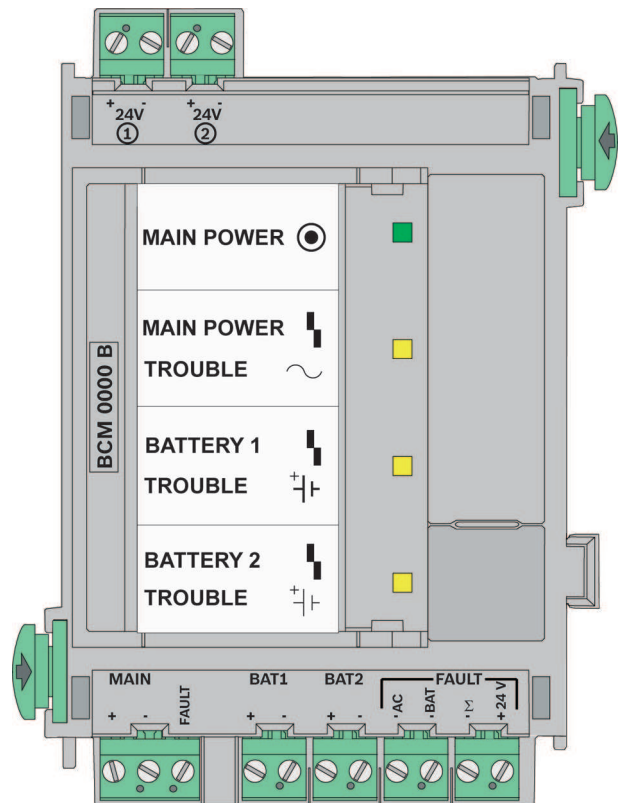
- ▶ Two voltage outputs of 2.8 A at 24 V each
- ▶ Temperature-controlled charging and monitoring of batteries according to EN 54-4:1997/A2:2006
- ▶ Plug-and-play technology and pluggable terminal blocks

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

24V +/-

Connector

Output max. 2.8 A (battery buffered)

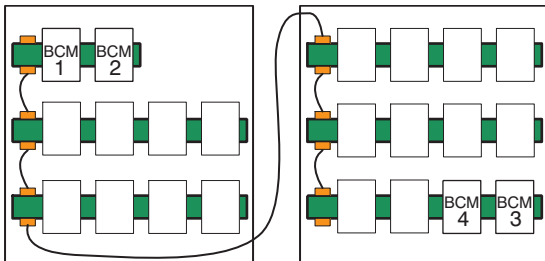
24V +/-	Output max. 2.8 A (battery buffered)
MAIN +/-	Power supply unit UPS
MAIN FAULT	Input fault, mains
BAT1 +/-	Battery pair 1
BAT2 +/-	Battery pair 2
FAULT AC -	Main power fault signal output
FAULT BAT-	Battery fault signal output
FAULT Σ-	Collective fault signal output
FAULT +	Signal output +

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.

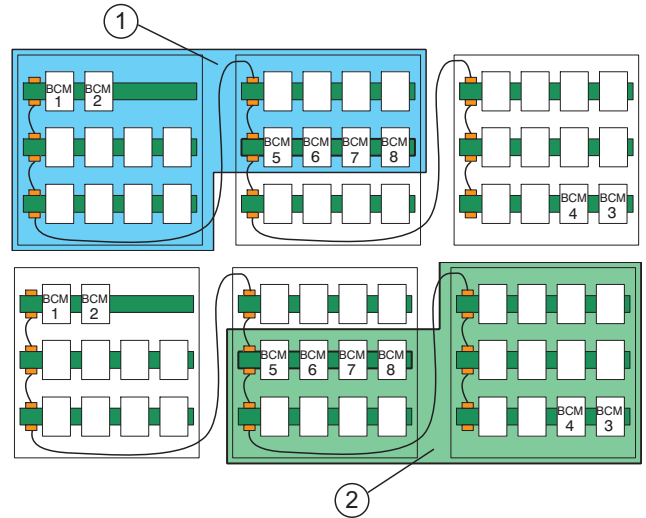
Configuration specifications for Battery Controller Modules

- 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

- 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

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

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

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

Quantity	Component
1	BCM-0000-B Battery Controller Module

Quantity	Component
1	Cable set with 2 connection cables: BCM-0000-B / battery (90 cm) and battery / battery (17 cm)

i Notice

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 collective FAULT	0 V / 0 to 20 mA
Maximum current of the module	Max. 6 A
• to the panel rails (PRS 0002 C/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

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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 central units start with battery current
Housing material	ABS plastic, Polyac 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
Order number **BCM-0000-B | F.01U.081.384**