GLOBAL
FIRE EQUIPMENT

GFE-BCM

Battery Charger Monitor

INSTALLATION MANUAL

Version 2.0 - 11/2010

GLOBAL
FIRE EQUIPMENT

Available in 2 colours

GFE-BCM

INSTALLATION MANUAL
Version 2.0 - 12/2010

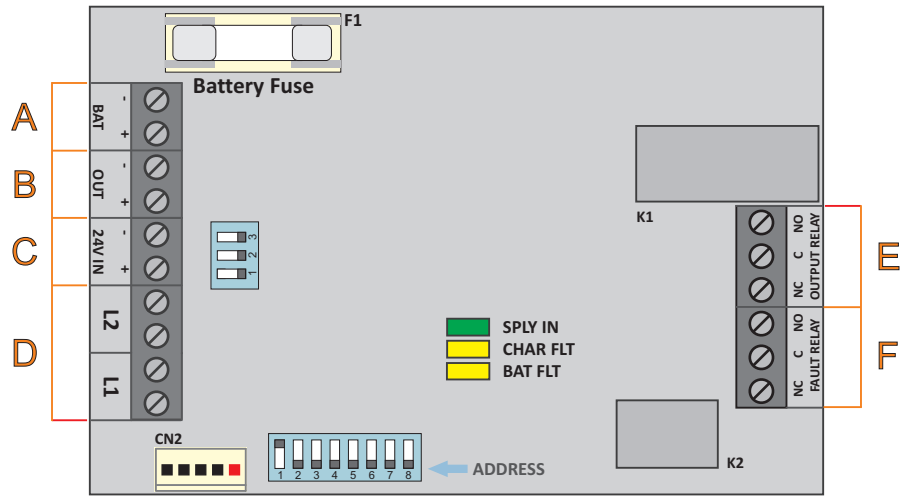
This unit is a fully EN54-4 compliant battery charger which also incorporates, in some models, a loop interface that can be used with all of GFE's addressable panels. It will monitor all fault conditions including: charger fault, charger voltage level, input voltage supply fault and supply removal. It can be supplied as a standalone module or boxed in an ABS plastic enclosure, including a 28V DC @ 1.7 or 2.4 Amp PSU. The standalone unit has 10A current rating and is supplied complete with heat dissipation.

Battery charge is fully monitored and current output controlled and limited to a maximum of 4 Amps. Two auxillirary output relays are provided both equipped with a set of changeover contacts. One is used to signal fault conditions. The Output relay, which is only available for addressable versions, can be used when included in an IO Group.

FEATURES

- Battery Charger Monitored by Addressable Panel
- Fault Relay Output
- Relay O/P Remotely Controlled by Panel
- Low Battery Voltage Shutdown
- Reverse Polarity Protection
- Battery Charger Current Regulated
- LED indicators: Supply Input, Battery & Charger Fault
- Boxed Unit inc. PSU and Battery Compartment
- Fully Compliant with EN54 -4

Addressable Version with IO unit



A - Battery Terminal Connections

Connect batteries as shown on page 6 of this manual. Maximum battery capacity for boxed units is 2 x 12V 7Ah batteries.

B - Supply Output Terminal Connections

This output supplies a nominal voltage value of 28V DC. Current drive capacity depends on module specification.

C - Supply Input Terminal Connections.

D - Loop Connections

Analogue Loop Connections. Device is not polarity conscious.

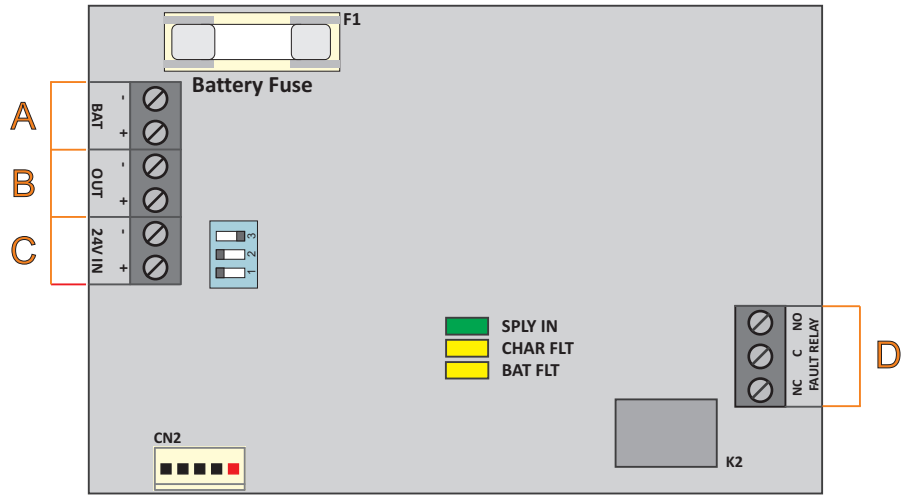
E - Output relay Terminal Connections

A single pole changeover relay is provided. Activation of relay is possible via panel programming using IO group feature. Please refer to panel installation manual for further details.

F - Fault Relay Terminal Connections

A single pole changeover relay is provided. Activation of relay is caused by any fault detected within the monitoring circuitry of the module. When device is in fault condition, the analogue value reported to the panel is 2 and it is indicated by the panel as a supply fault. In these cases both the GENERAL and SUPPLY FAULTS LEDs are ON. Location of the fault is also provided on the LCD screen where both the Loop and ADDRESS of the device generating the fault are indicated on the LCD screen.

Conventional Version



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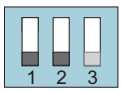
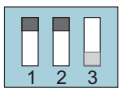
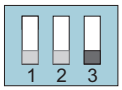


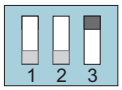
Addressable
SW 1 - OFF
SW 2 - OFF



Conventional
SW 1 - ON
SW 2 - ON



SW 3 - OFF



SW 3 - ON

SW 3 - OFF
When OFF the module will monitor the battery voltage and it will disconnect battery when below 21V DC avoiding deep discharge.

SW 3 - ON
In this case the battery voltage monitoring is disabled.

	SPLY IN	ON when supply input is present.
	CHAR FLT	ON when battery charger is faulty or batteries are not connected or faulty.
	BAT FLT	ON when battery voltage is below 21 V DC.

Addressable IO Unit

Units fitted with a built-in addressable IO unit can be directly connected to a device loop on any of GFE's addressable panels, via the loop connections. These devices will be monitored directly by the panel.

When fitted, these units will be displayed as IO units and its analogue value monitored by the panel. When there are no faults on the BCM unit the analogue value reported by the device to the panel is 16 and when in fault condition is 2.

When the device is showing a fault condition, which is always associated with either a fault in the battery charger or battery voltage as monitored by the module, the panel will also indicate this condition locally by turning ON the GENERAL FAULT and SUPPLY FAULT LEDs. The LCD of the panel will also display the location of module with a clear indication of both Loop and Device Address and its associated text label.

Activation of the relay output is accomplished by including the unit in an IO Group. This group can then be assigned to either a zone or device. Please refer to the Installation Manual of the panel being used for further information regarding cause and effect programming and functions associated with IO units and groups.

Battery Connections

It is recommended that the batteries are fitted at the end of commissioning the system otherwise it can be difficult to remove the power quickly if there is a problem.

The batteries are connected to the GFE-BCM module board. This battery connection not only supplies the module with power if the primary supply should fail, it also provides a charging output to maintain the batteries in a fully charged state.

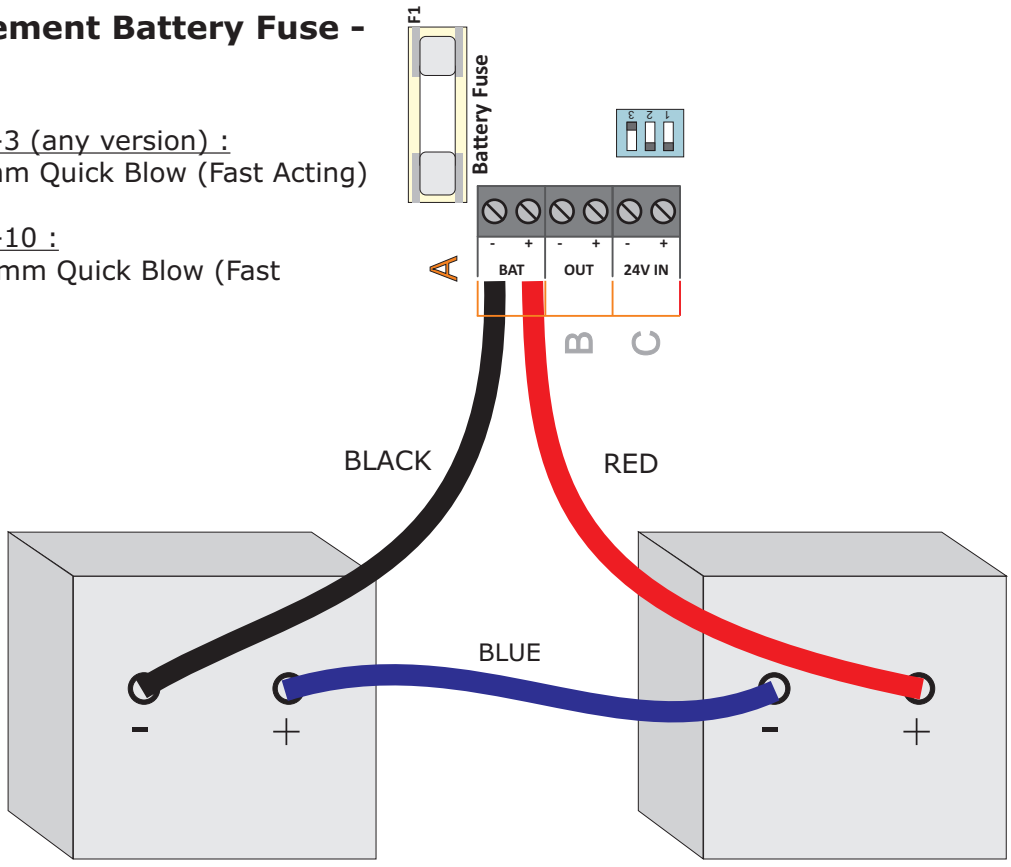
Before connecting the batteries check the voltage across the battery connection terminals. It should be 28.0V +/- 0.5V.

Note - arcing and fire risk. Never short circuit the battery terminals. Always connect the blue wire between the batteries last.

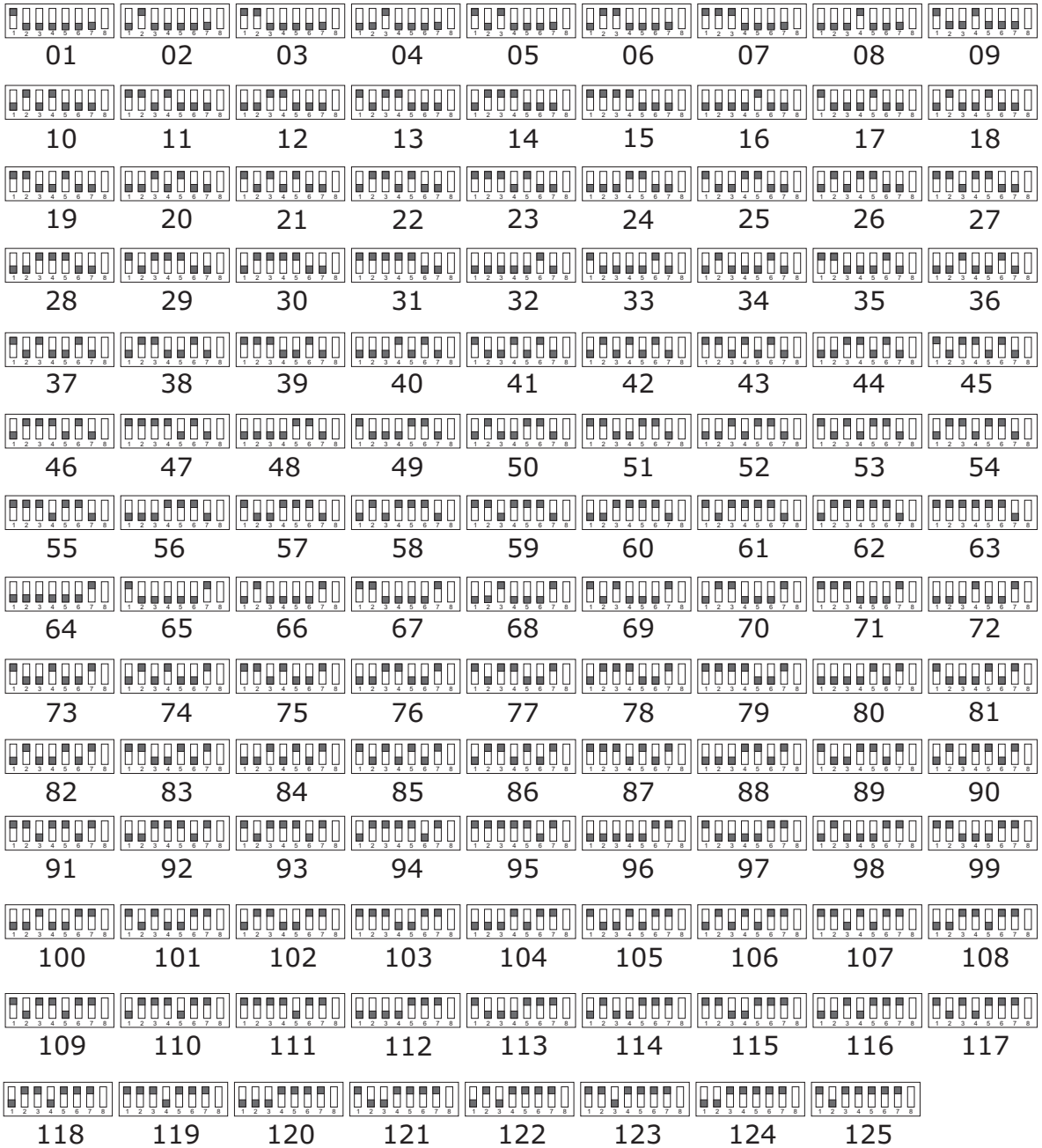
Replacement Battery Fuse - F1

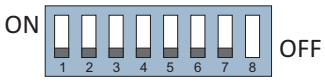
GFE-BCM-3 (any version) :
3A 5x20mm Quick Blow (Fast Acting)

GFE-BCM-10 :
10A 5x20mm Quick Blow (Fast Acting)



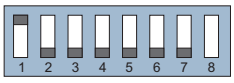
Address Settings





Switches 1-7
used to configure the module's address

Switch 8
Not used



Address Switches binary weights

1 on =1	4 on =8	7 on = 64
2 on =2	5 on =16	
3 on =4	6 on =32	

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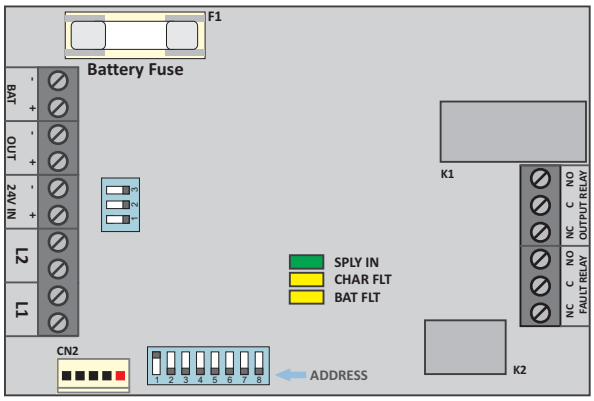
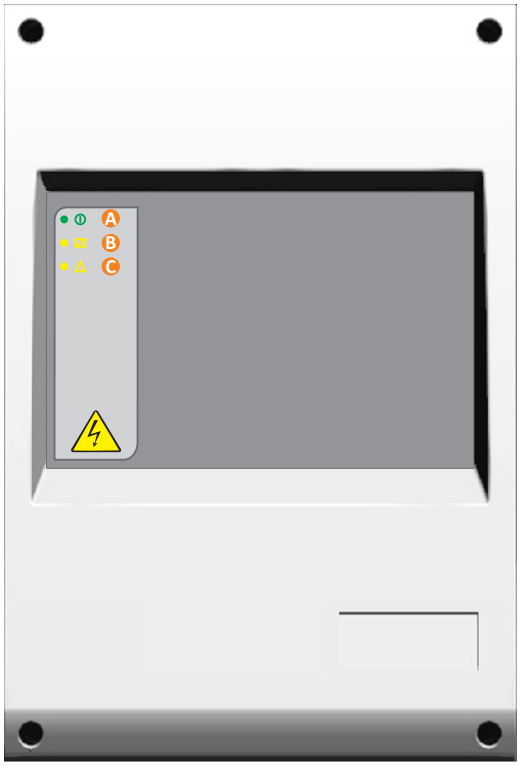
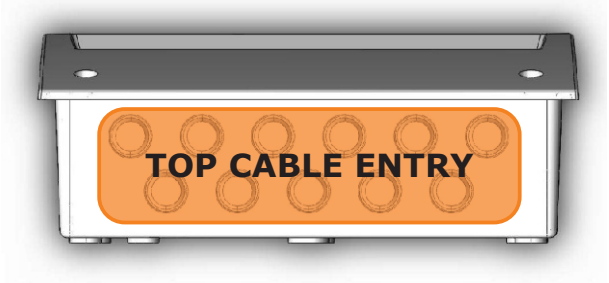
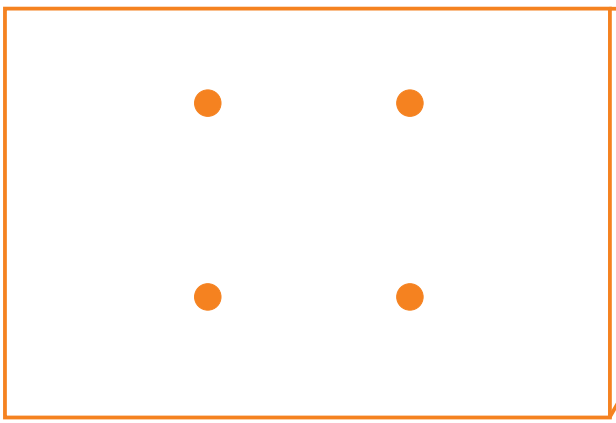




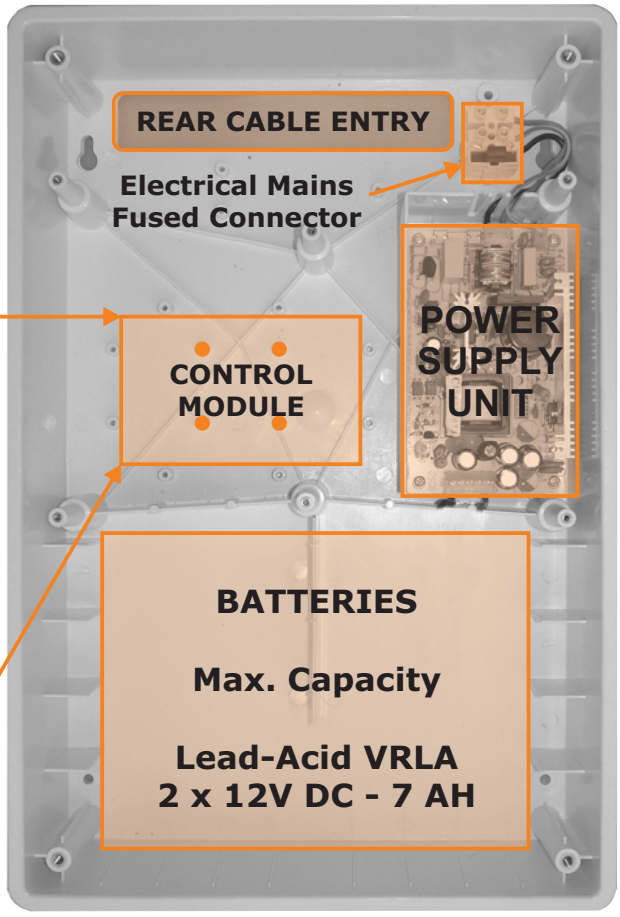
- **A** SUPPLY IN INDICATOR (GREEN)
- **B** BATTERY CHARGER FAULT INDICATOR - YELLOW
- **C** BATTERY VOLTAGE FAULT INDICATOR - YELLOW





GFE-BCM-3 Electronic Module

● Fixing Holes



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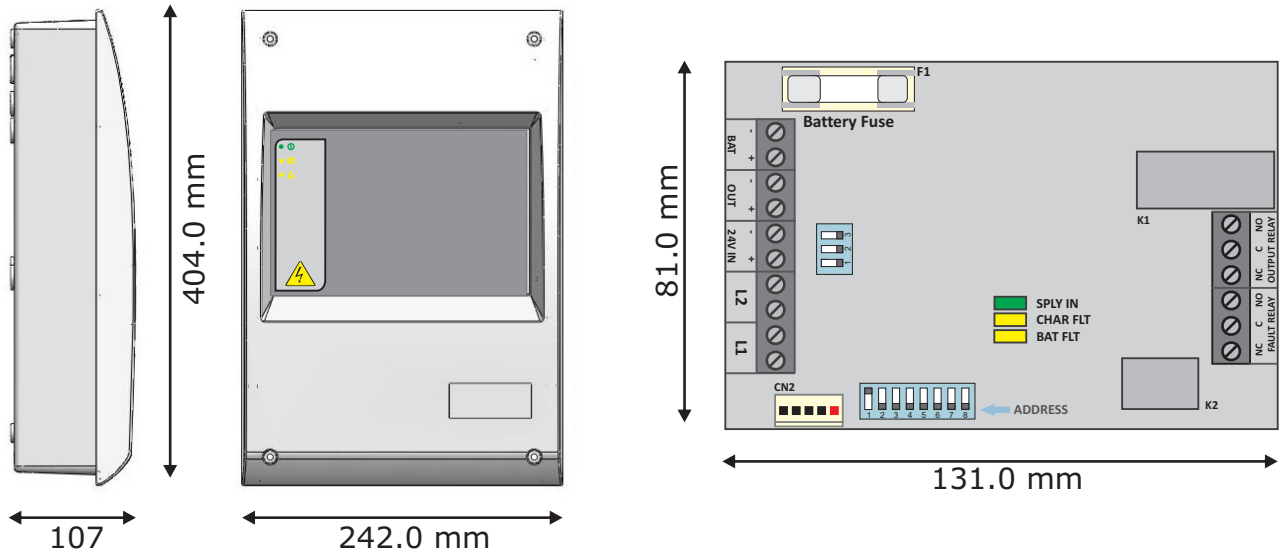

Technical Specifications	GFE-BCM-3	GFE-BCM-10
Supply Input	85-265 V AC - Monitored	28.5 V DC - Monitored
Supply Output	28 V DC	28V DC
Current Output	1.7A OR 2.4A @ 28 V DC nominal	10A max. @ 28V DC nominal
Battery Charger - Current O/P	1A max.	4A max.
Battery	Max. 2 x 12V 7 AH - Lead Acid VRLA	N/A
Battery Charger Monitored	YES	YES
Battery Fuse	3A	10A
I/O Unit - Loop Current	1.7mA Quiescent - 2.4mA Fault	1.7mA Quiescent - 2.4mA Fault
Address Range	1-125	1-125
Fault Relay	Changeover-30V DC 1A Resistive	Changeover-30V DC 1A Resistive
Supply Relay	Changeover-240V AC 10A Resistive	Changeover-240V AC 10A Resistive
Dimensions	242(W) x 404(H) x 107(D) mm	131(W) x 81(W) x 41(H) mm
Weight	1.7 Kg - 7 Kg inc. 2 x 7AH Bat.	225 g
Operating Temperature	0ºC to +40ºC	0ºC to +40ºC
Storage Temperature	-10 to +50ºC	-10 to +50ºC
Humidity/ Protection	max 85% no condensation - IP21	N/A
Order Code		
GFE-BCM-10	BATTERY CHARGER MODULE - INCLUDING CHASSIS	
GFE-BCM-3-I/O (1.7A)	BATTERY CHARGER MODULE - I/O INC. - 28V DC 1.7A PSU - BOXED	
GFE-BCM-3-I/O (2.4A)	BATTERY CHARGER MODULE - I/O INC. - 28V DC 2.4A PSU - BOXED	
GFE-BCM-3 (1.7A)	BATTERY CHARGER MODULE - 28V DC 1.7A PSU - BOXED	
GFE-BCM-3 (2.4A)	BATTERY CHARGER MODULE - 28V DC 2.4A PSU - BOXED	

Global Fire Equipment S.A.
MARF - Armazens F3 e F4, Sítio do Guelhim, Estoi, 8009-021 FARO, PORTUGAL
Tel: + 351 289 896 560 Fax: + 351 289 865 587
Sales marketing@globalfire.pt **Technical Support** techs@globalfire.pt