



BG3K - Wire by Wire Installation Explanation

Inhibit

This Inhibit wire will prevent the BG 3000 actioning any manual or automatic disconnects. There are 4 option modes that can be selected:

1. Positive ON
2. Negative ON
3. Positive OFF
4. Negative OFF

The default setting is configured for Positive ON. This wire normally gets connected to a fused Ignition +ve or Alt F+ dependant on customer inhibit mode requirement.

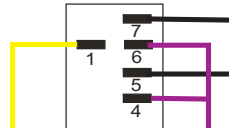
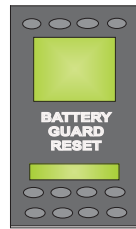
Aux Input

This Aux Input wire will allow many functions to be forced or performed within BG3000. There are 7 option modes that can be selected:

1. Disabled - No action
2. Alarm 1
3. Alarm 2
4. Disconnect
5. Mute Buzzer
6. Split Charge Positive Sense
7. Force Threshold

The input can be configured for positive or negative polarity via the software. For BG3000 default settings it is configured to mute buzzer when a positive signal is applied to the blue wire.

Carling V Series Reset Switch



24v Batteryguard 3000 Default settings - Config No H791 V5NQ5 B510

File: 58-01013-1 20/240 GUI

BATTERY GUARD 3000

Part No: 00-01013-120 | 00-01013-240

Read Configuration | Send Configuration | Print Configuration Number

Project Title: BG3000 Default setting
Configuration Number: H791 V5NQ5 B510

COM Setup: COM 1 (selected), COM 2, COM 3, COM 4

Alarm 1: Alarm 1 Delay: 5 min, Allowable Delay Range: 0 to 8 min, ALM1 Probe Buzzer Freq: 2Hz, Alarm 1 Setting: Continuous, Alarm 1 Contact Normally Closed, Alarm 1 Output Enabled During Alarm 2

Alarm 2: Alarm 2 Delay: 5 min, Allowable Delay Range: 0 to 8 min, ALM2 Probe Buzzer Freq: 4Hz, Alarm 2 Setting: Continuous, Alarm 2 Contact Normally Closed

BG Relay Feedback Polarity: Positive LOP, Low Voltage Threshold Buzzer Frequency: 1Hz

Inhibit Disconnect Setting: Positive On, Inhibit Disconnect Delay: 30 sec, Inhibit Disconnect Polarity: Positive On

Disconnect Threshold: 24.1 V, Allowable Range: 22.0 to 24.5 V, Reconnect Threshold: 26.6 V, Allowable Range: 24.8 to 26.6 V

Documents: Automatic Disconnects: 0, Failed Disconnects: 0, Manual Disconnects: 0, Read Disconnect Count, Reset Automatic Disconnect Count, Reset Failed Disconnect Count, Reset Manual Disconnect Count

Aux Input Polarity: (Checked) = Positive Enable, Manual Disconnect: (Checked) = Positive Enable, External LED: (Checked) = Positive Buzzer Frequency, Automatic Reconnect: (Checked) = Enable, 50% Buzzer Intensity: (Checked) = Enable, Low Voltage Buzzer Mute: (Checked) = Mute with Inhibit

Rev D - 05/02/2008

Aux 5A B+ Supply

This wire is intended for supplying electrical circuits a perm B+ rated less than 5A continuous that need to be kept permanent live. E.g. Tachograph or radiomemory feeds etc.

If this wire sees an overload or short circuit it will automatically shut down and recover when short circuit has been removed.

Aux 5A Self Protected B+ Output

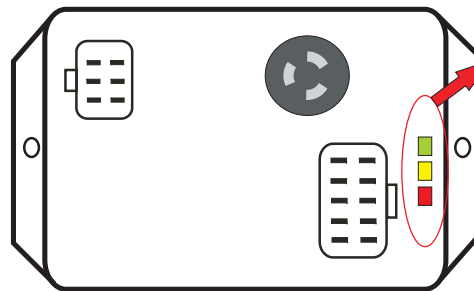
Alarm Common

This wire controls the polarity of the switching of Alarm 1 and Alarm 2. This wire should be connected to a fused positive or negative connection. The fuse rating of this should not exceed 15A max.

The default setting requires this to be connected to a fused Battery +ve signal. If Aux O/P is not used and the total current consumption < 5A the Aux O/P wire could be used and connected Red / White joined to Slate.

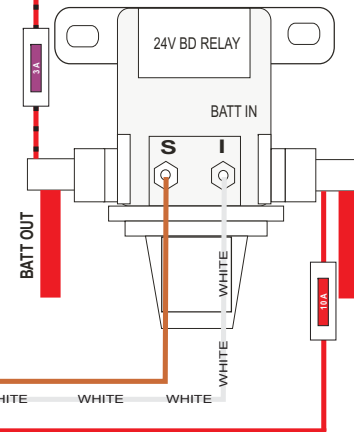
Alarm Common

24v Batteryguard 3000 ECU



Diagnostic LEDs
See Service Manual for operation

24v Battery Disconnect Relay



Vehicle Negative

Alarm 2 Relay

This wire gives a 10A output - polarity based on Alarm Common connection polarity. This feature can be programmed to ON or OFF after a time period upon low voltage threshold level being reached. The relay can be selected for:

1. Continuous ON
2. Flashing
3. One Shot
5. Flash 5 times

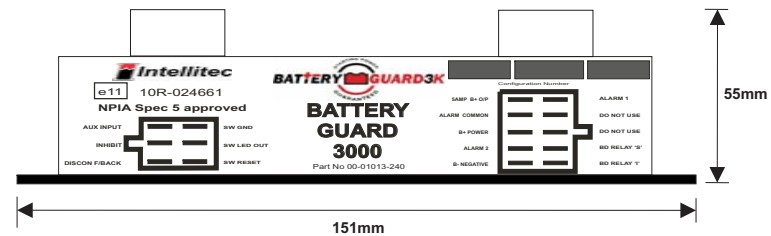
The default setting gives a positive output 3 minutes after the B+ < 24.1. The output will remain on for a period of 1 minute until disconnect occurs.

Alarm 1 Relay

This wire gives a 10A output - polarity based on Alarm Common connection polarity. This feature can be programmed to ON or OFF after a time period upon low voltage threshold level being reached. The relay can be selected for:

1. Continuous ON
2. Flashing
3. One Shot
5. Flash 5 times

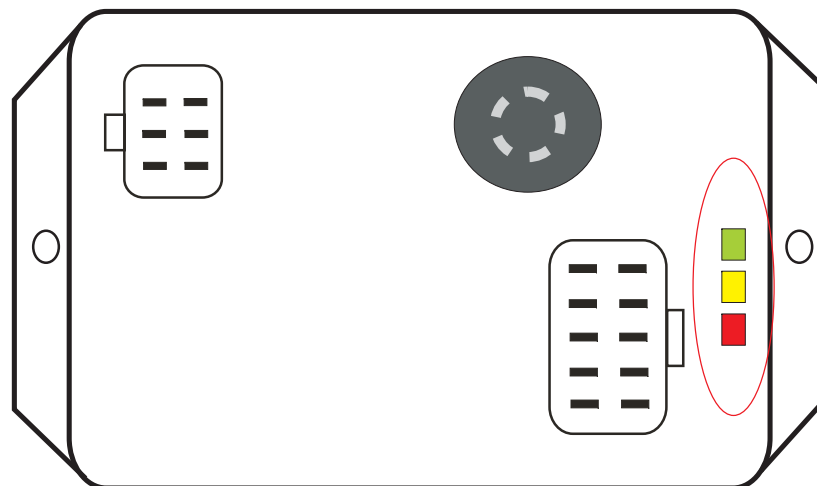
The default setting gives a positive output 2 minutes after the B+ < 24.1. The output will remain on for a period of 1 minute until Alarm 2 becomes active.



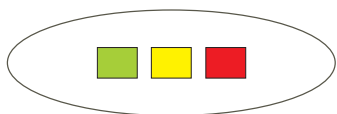
Reason for Issue Change:

Draw number : BMS-00-1013-0004A	Drawn : Paul Smith	Revised: PWS 060608 Issue Level: A	Check : T.H. ☐ S.S. ☐	Date : 140508	Scale : NTS	Filepath : W/BMS/BG3000
Intellitec Technical Services Speciality Vehicle Electronics Division			Technical Helpline 0800		Title : Batteryguard 3000 Default Setting Schematic	





Diagnostic LEDs



Red Diagnostic LED

Constant - This will indicate that the BG3K is in inhibit mode.

Flashing - This indicates that the Battery voltage is below the programmed threshold level set in the GUI

Yellow Diagnostic LED

This will indicate the status of ALARM 1 condition

Green Diagnostic LED

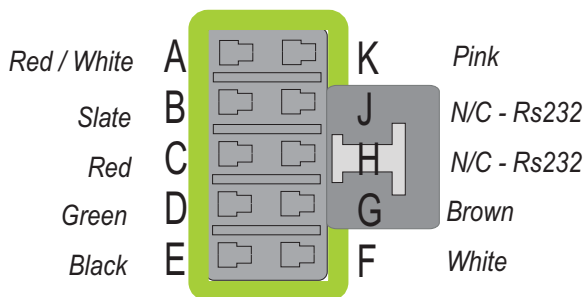
This will indicate the status of ALARM 2 condition

Red / Yellow / Green LED

Will blink 3 times after a successful disconnect has occurred

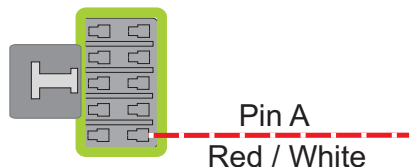
Yellow / Green LED

Will blink indefinitely after an unsuccessful disconnect has occurred



Viewed from Cable Entry

AUX B+ SELF PROTECT O/P



This wire gives a B+ Output for circuits that require to be kept live. The maximum current capacity is 5 Amps. This circuit is self protected and will automatically shutdown in the event of an overload, when the overload is removed it will self reset. The output will only be present on this pin if a B+ input is present on 10 way Pin C - B+ Input.

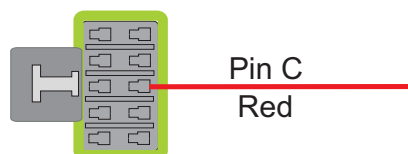
ALARM COMMON



This wire allows the installer the option for polarity of how Alarm 1 and Alarm 2 is switched. The maximum current capacity is 10A on this wire which can be split between Alarm 1 and Alarm 2.

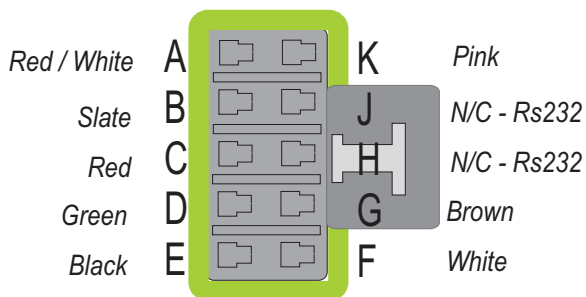
Installation tip : If the Alarm outputs are required to be positive and total current is < 5A and the Aux B+ output is not used. The Red / White can be joined and insulated to the Slate wire to give the Alarm Common a 5 Amp protected power source.

BATTERY +VE : V SENSE



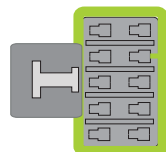
This wire is the main B+ power source that provides power and gives the voltage sensing for the ECU. This wire should be connected to a permanent B+ feed greater than 10A. This wire requires the installer to fuse.

Installation tip : This wire should be as cut as short as possible to eliminate any volt drop in the cable. It should be connected as close as possible to the Battery B+ terminal to provide accurate voltage sensing.



Viewed from Cable Entry

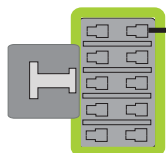
ALARM 2 OUTPUT



Pin D
Green

This wire gives an output up to 10A capability. This can be configured within BG3K GUI software for different functionality at certain timing criteria. This Alarm 2 output is operated via an internal relay to Alarm Common connection. The output can be set for continuous, flashing, one shot or can flash five times.

BATTERY -VE : V SENSE

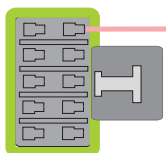


Pin E
Black

This wire is the main negative power source that provides power and gives the voltage sensing for the ECU. This wire should be connected to a good vehicle negative connection or direct to Battery post negative.

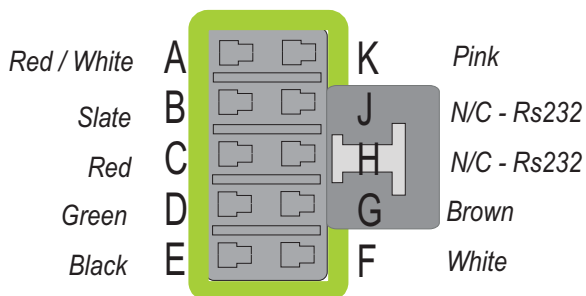
Installation tip : This wire should be as cut as short as possible to eliminate any volt drop in the cable. It should be connected as close as possible to the Battery Neg terminal to provide accurate voltage sensing.

ALARM 1 OUTPUT



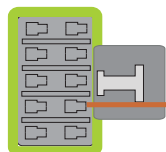
Pin K
Pink

This wire gives an output up to 10A capability. This can be configured within BG3K GUI software for different functionality at certain timing criteria. This Alarm 1 output is operated via an internal relay to Alarm Common connection. The output can be set for continuous, flashing, one shot or can flash five times.



Viewed from Cable Entry

BD RELAY 'S' TERMINAL



Pin G
Brown

This wire drives the BD Relay 'S' terminal at a positive potential for a short period of time to perform a disconnect. This wire is internally connected to negative when it is OFF. This negative provides the return current path for when BD Relay 'I' is energised to perform a reconnect.

Installation tip : Both Brown and White wires should be disconnected when performing a hardwired manual test on the BD relay.

BD RELAY 'I' TERMINAL

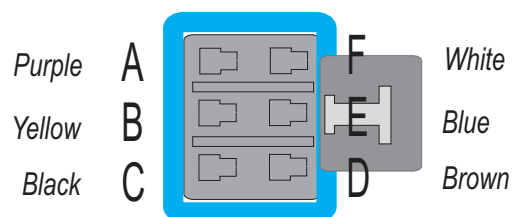


Pin F
White

This wire drives the BD Relay 'I' terminal at a positive potential for a short period of time to perform a disconnect. This wire is internally connected to negative when it is OFF. This negative provides the return current path for when BD Relay 'S' is energised to perform a reconnect.

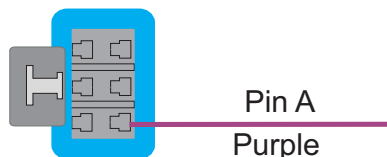
Installation tip : Both Brown and White wires should be disconnected when performing a hardwired manual test on the BD relay.

* 10 Way Plug Pins J and H are not used for product installation. They are used for Rs232 communications for RX and TX when connected to Intellitec P/N Rs232 Programming Adaptor 00-00849-000



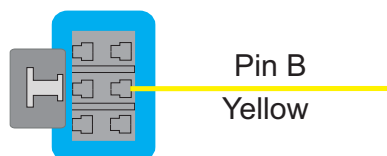
Viewed from Cable Entry

SWITCH RETURN NEG



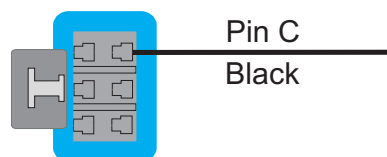
This wire is the negative return from the BG3K switch. It should be open circuit when the switch is not being activated.

SWITCH LED OUTPUT

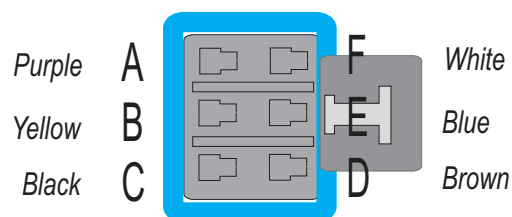


This wire provides a pulsing 5V output from the BG3K ECU to the LED in the BG3K reset switch. The frequency of the pulse can be configured by changing the configuration within the GUI.

SWITCH COMMON NEGATIVE

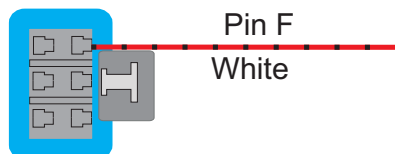


This wire provides a common negative from the BG3K ECU to the switch. It provides a negative for the LED cathode and also a negative for one of the switch contacts. This negative is internally linked within the BG3K ECU from 10 way plug pin E



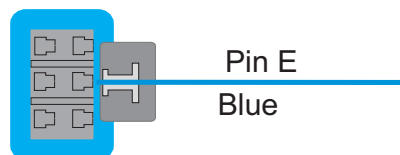
Viewed from Cable Entry

BD RELAY DISCONNECT FEEDBACK



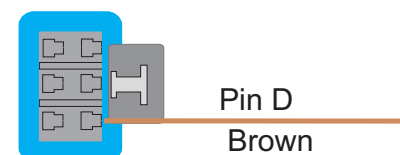
This wire is connected between the BG3K ECU and the BATT OUT terminal of the BD Relay. Its purpose is to monitor the BD Relay contacts to ensure an expected disconnect has actually occurred. This wire provides error detection and will record the number of successful and failed disconnects. The polarity of the BD Relay contact switching needs to match the GUI setting within the BG3K software.

BATTERYGUARD INHIBIT



This wire provides the inhibit function within the BG3K. This inhibit can be connected to either positive or negative polarity. Within the BG3K GUI settings the inhibit can be set for when positive is on, positive is OFF, negative is ON or negative is OFF.

AUXILLARY INPUT



This wire provides a number of useful options that the wire can perform. Its polarity can be selected for either positive or negative. It can operate Alarm 1, operate Alarm 2, perform a disconnect, mute the audible buzzer, force the BG3K into thinking it is below threshold setting regardless of actual battery voltage. It can also be configured to act as a programmable split charging system. (Default positive polarity)



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