BC1000G2 CONNECTOR SPECIFICATION

V8 engine

BoostCommander-box, Microfit24
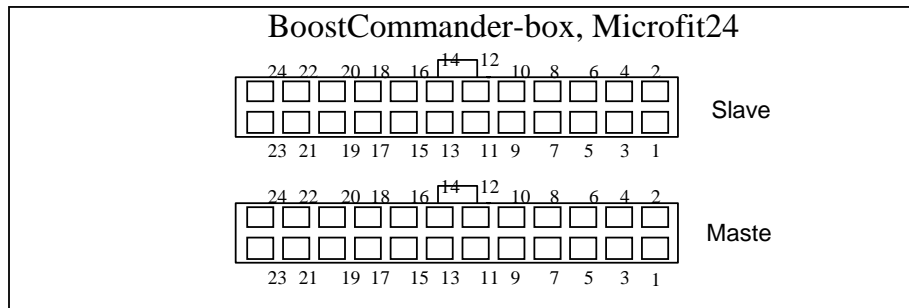
BCpin			Colour	Name	From BC conn	Connect to
Master						
1			black / white	signal GND	Master Microfit	Gnd
2			grey	5v out	Master Microfit	+5V to sensor supply
4			green	analog 4 in	Master Microfit	IAT sensor
5			violette	PWM out	Master Microfit	Boost control valve
6			blue	analog 3 in MPX	Master Microfit	Internal MAP sensor signal
7			yellow	analog 2 out MAF	Master Microfit	MAF signal to ECU
8			red / green	analog 2 in MAF	Master Microfit	MAF sensor
9			yellow / green	analog 1 out	Master Microfit	MAP signal to ECU
10			red / yellow	analog 1 in	Master Microfit	MAP sensor
11			black / green	camshaft out	Master Microfit	Cam signal to ECU
12			red / white	camshaft in	Master Microfit	Cam signal
13			blue / red	crankshaft out	Master Microfit	Crank signal to ECU
14			blue / white	crankshaft in	Master Microfit	Crank signal
15			green / white	FI_D_OUT	Master Microfit	Fuel injector 7
16			white	FI_D_IN	Master Microfit	ECU output Fuel 7
17			brown / black	FI_C_OUT	Master Microfit	Fuel injector 5
18			brown / red	FI_C_IN	Master Microfit	ECU output Fuel 5
19			brown / blue	FI_B_OUT	Master Microfit	Fuel injector 3
20			brown / grey	FI_B_IN	Master Microfit	ECU output Fuel 3
21			brown / yellow	FI_A_OUT	Master Microfit	Fuel injector 1
22			brown / green	FI_A_IN	Master Microfit	ECU output Fuel 1
23			black	Power GND	Master Microfit	Gnd
24			red	12 V Power	Master Microfit	+12V, Key switched
Slave						
1			black / white	signal GND	Slave Microfit	Gnd
4			green	analog 4 in	Slave Microfit	IAT sensor
6			blue	analog 3 in MPX	Slave Microfit	Internal MAP sensor signal
8			red / green	analog 2 in MAF	Slave Microfit	MAF sensor
10			red / yellow	analog 1 in	Slave Microfit	MAP sensor
15			green / white	FI_H_OUT	Slave Microfit	Fuel injector 8
16			white	FI_H_IN	Slave Microfit	ECU output Fuel 8
17			brown / black	FI_G_OUT	Slave Microfit	Fuel injector 6
18			brown / red	FI_G_IN	Slave Microfit	ECU output Fuel 6
19			brown / blue	FI_F_OUT	Slave Microfit	Fuel injector 4
20			brown / grey	FI_F_IN	Slave Microfit	ECU output Fuel 4
21			brown / yellow	FI_E_OUT	Slave Microfit	Fuel injector 2
22			brown / green	FI_E_IN	Slave Microfit	ECU output Fuel 2
23			black	Power GND	Slave Microfit	Gnd

Power connections: Pin 1, 2, 23, 24:

1, 23	Grounding. It's very important to achieve a good solid grounding. Use shortest possible wires and always use both wires.
24	+12V power. Connect this to a 12V power source which is switched by the ignition. The current consumption of the BC-system is less than 0.5 Amps.
2	5V output to power auxiliary sensors, max 50mA.

Fuel injectors: Pins 15, 16, 17, 18, 19, 20, 21, 22:

The BC1000G2 can connect up to 5 injectors (cylinders A-E). You will connect the BC between the ECU and the injector. The in/outputs must be connected in pairs according to: A(22-21), B(20-19), C(18-17), D(16-15), E(12-11).

(12), 16, 18, 20, 22	Fuel signal inputs to the BC-box from the ECU. The fuel signal shall be connected to the BC-box instead of the injector. Pin 11,12 FI_E_IN/OUT is only used on 5cylinder engines (instead of IgnitionB).
(11), 15, 17, 19, 21	Injector driver output from the BC-box. The injectors are connected here instead of to the ECU.

Ignition : Pin 11, 12, 13, 14:

It's possible to control 2 ignition modules at the same time, IGNITION_A and IGNITION_B with their in- and outputs. If only one ignition channel is required, then IGNITION_B can be used for other purposes such as: a 5th fuel channel or control of the boost valve.

In many cases there is no need to tune the ignition, in such cases it's sufficient to only sense the rpm. This signal can be from the ignition system, the cam sensor or the crank sensor. Depending on the used signal you may have to connect an amplifier to achieve the correct voltage level.

12, 14	Ignition signal inputs to the BC-box from the ECU. The ignition signal shall be connected to the BC-box instead of the ignition module.
11, 13	Ignition outputs from the BC-box to the ignition modules (The BC-box cannot drive ignition coils directly without an ignition module). The ignition modules are connected here instead of to the ECU.

Analog signals: pins 6, 8, 10, 7, 9:

10, 8, 6, 4	0-5V analog signals Analog1-4. Normally used for measuring Manifold absolute pressure, Mass airflow, knock sensor, throttle position or temperature. The BC-box can use all these signals to tune fuel, boost, ignition etc. in the BCLab software.
9	Analog1-output, an analogue output signal which can be voltage limited. It can be used to hide the high MAP or Mass airflow value from the ECU. The output voltage is the same as the input voltage at pin8(analog1) up to a certain maximum value. Any input above this maximum value will only produce that maximum output value. The maximum value is selected in BCLab at page Analog out-Analog1 out.
7	Analog2-output. This output can be controlled in three ways:

The output can be a function of the Analog2 input value. For every input there will be a certain output according to how you have tuned this function in BCLab. The output can be voltage limited in the same manner as analog1. When controlling the boost via PWM_IN/OUT (pins 11,12) this signal can be voltage limited in a smarter way called limit trim.

Driver outputs: pins 5, 11:

The boost valve is controlled by a PWM output. Which pin you use for this is selected in the BCLab-Configurations. The PWM output can also be used to control other devices compatible with the PWM-type output (lamps, valves, motors etc.) The outputs can handle 3 Amps.

11   PWM output. Normally used to control the boost valve when the ECU boost control signal is connected to the PWM_IN BC-box input.

5   PWM output. Can be used to control the boost valve.

PWM input: pin 12:

12   PWM input. Can be used to connect the ECU boost control signal to the BC-box. This is used for logging purposes or when you wish to use the Analog2-out "limit trim" function.