Bigmate Syrus 3G Installation Manual

Version Control:

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1. Syrus 3G Installation Instructions

1.1. Hardware Installation

1. Record the IMEI on the Data Record Sheet ready for activation.
2. Mount the Bigmate Syrus 3G in a clean dry position out of direct sunlight. The device should be mounted with the domed side (opposite mounting flanges) facing towards the sky. It is recommended to mount the device in a horizontal position clear of any metal or other conductive obstructions.
3. Make connections to the vehicle wiring and secure wiring harness out of sight. Cable ties and flexible conduit are recommended.

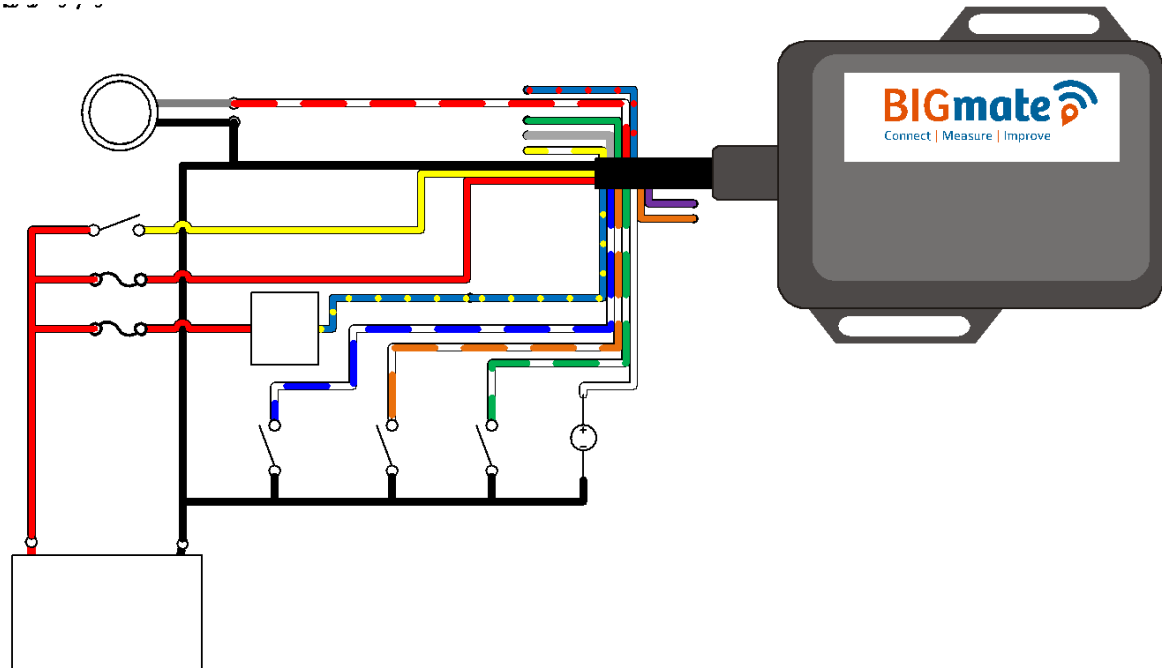
This side towards sky

This side down

CAUTION

Once connected, the internal battery power must be available at all times to retain software and settings. Removal of the internal battery will disable the device and may damage the internal memory causing the device to stop functioning. This damage is NOT covered by warranty. Contact Bigmate before attempting to reopen the Syrus 3G device for any reason after installation.

1.1.1 Wiring Harness Connections



All other wires must be insulated to prevent short circuits

Function	Colour	
Ground	Black	
Ground	Brown	
Main Power Input	Red	
Ignition	Yellow	
Input 1	Blue	White
Input 2	Orange	White
Input 3	Green	White
Analogue Input	White	
Output 1 (Reserved)	Blue	Red
Output 2	Blue	Yellow
1-Wire – Driver ID	Red	White
Serial RX	Purple	
Serial TX	Orange	
Not Connected	Grey	
Not Connected	Yellow	White
Not Connected	Green	

1.1.2. Permanent Power Supply

- RED Wire (Pin 9) – Connect the RED wire to a +24V or +12V always on supply, via a 5 A fast blow fuse. Do not exceed the maximum voltage of +30V.
- BLACK Wire (Pin 1) - Connect the BLACK wire to a suitable chassis ground point or directly to the battery negative.

CAUTION

Do not connect the device ground directly to the vehicle battery when an isolator is fitted to the negative terminal. This will make the device chassis serve as a current path and cause large currents to flow through the device. Use a back-up battery that provides permanent power every time the isolation switch is off.

1.1.3. Ignition Sense

- YELLOW Wire (Pin 10) - Connect the YELLOW IGNITION wire to a signal that has a voltage over +6.1V when the ignition is on or the engine is running. Do not exceed the maximum voltage of +30V on the IGNITION input.

1.1.4 Motion Sense

- When the Ignition Sense input is OFF or not connected an internal sensor will be used to report when the device is in motion.

1.2 Syrus 3G Input / Output Connections

1.2.1 Digital Inputs

Three digital input are available:

- Input 1 = White/Blue Wire
- Input 2 = White/Orange Wire
- Input 3 = White/Green Wire

The three digital inputs are:

- ON (Active) when connected to NEGATIVE or less than 2 Volts applied;
- OFF (Inactive) when OPEN CIRCUIT or 2.5 to 30 Volts applied;
- Impedance = 50 kilo-ohms.

If seatbelt or handbrake monitoring is required the Digital Inputs must always be connected as per the following

- Seatbelt – Connect to Digital Input 1 (Input Active when Seatbelt is ON)
- Handbrake – Connect to Digital Input 2 (Input Active when Handbrake is ON)

1.2.2 Analogue Input

The Syrus 3G has a single analogue input

- Measure Range between 0 and +10 volts DC.
- Input impedance: 148 kilo-ohms.

Connect the Analogue input, (WHITE pin 15) on the Signal Connector, to a relevant signal output from the sensor being monitored. If the signal being monitored is sourced from a sensor that has a differential output (no chassis ground), connect the negative output of the sensor to the BLACK Wire (Ground pin 1) on the Signal Connector Harness.

CAUTION

Voltages greater than 10 volts cannot be directly applied to the analogue input. Damage to the Syrus 3G device will result. If the sensor being monitored provides a voltage greater than 10 volts a voltage divider or other signal conditioning must be installed.

1.2.3 Digital Output

An output of the Syrus 3G can be used to activate a buzzer, lamp or other device.

- ON (Active) = 0 Volts connected to NEGATIVE or GROUND
- OFF (Inactive) = Open Circuit or external pull-up voltage (max 30V)

Install a fuse on the Syrus 3G side of the buzzer or lamp. The MAXIMUM current able to be switched is 1.8 Amps. If greater current is required a suitable relay should be installed.

1.2.4 Driver ID

With the addition of a Driver ID Reader module, the Syrus 3G is capable of identifying drivers through use of Driver ID Keys.

To connect the Driver ID Reader to the Syrus 3G connect:

- WHITE with Red Stripe Wire (Pin 14) to the GREY Wire of the iButton Reader
- BLACK Wire (Pin 16) to the BLACK Wire of the iButton Reader

2. Contacts and Enquiries

For any further details, please contact:

Bigmate Service & Support

Phone: **1300 477 787**
E-mail: support@bigmate.com.au

3. Syrus 3G Data Record Sheet

Please complete the Data Record Sheet for records purposes and call us on 1300 477 787 during business hours to validate the installation.

This can also be submitted by our online forms at https://support.bigmate.com.au or sent by email to support@bigmate.com.au at any time. Please note however, we cannot validate an installation submitted to us in this way and only recommend this method if you have completed several successful installations and are sure the device will work.

Device IMEI Number	
Vehicle Company Name	
Vehicle/Plant No	
Installation Technician	

3.1 Calibrations

Engine Hours	
Odometer	
Date and time readings taken	

3.2 Digital Inputs

Measure the relevant readings and descriptions for the Digital inputs and record the values in the table. Seatbelt (if used) will always be Input 1, Handbrake (if used) will always be Input 2.

Digital Input	**Description**	**Status (ON/OFF)**	
		Closed	**Open**
Input 1			
Input 2			
Input 3			

3.3 Analogue Input

Please record the type of sender connected to the analogue input i.e. temperature, pressure, any values measured as well as any specific values indicated on the gauge.

Sensor Description		
Gauge Position	**Value (PSI, temp etc)**	**Voltage Reading (MAX 10V)**
0		
1/8		
1/4		
1/2		
3/4		
Full Scale		