



BODY UP ALARM MODULE V2



Part Number: W004-007

Introduction:

The Body Up Module system monitors input from user supplied sensors mounted on the vehicle as well as vehicle road speed. Road speed can be derived from the vehicle's J1939 CANBus data stream (if equipped) or via an additional GPS mouse.

Multi voltage operation allows connection to 12 and 24v vehicle electrical systems. (For reliable operation please ensure a minimum of 12v is maintained at the module power supply input terminals)

Two voltage free relay outputs can be used to switch warning lamps or buzzers (50W max.) providing status feedback to the operator:

Output 1 – active when Input 1 signal is NOT present (i.e. body is up).

Output 2 – active when Input 1 signal is NOT present AND preset road speed has been exceeded.

On board LEDs provide visual indication of power to module, GPS or J1939 road speed status, input and output status.

Input 1 polarity can be selected as either positive or negative sensing. (Please note – we strongly recommend positive input polarity with a negative chassis vehicle)

J1939 vs. GPS

Where available always use J1939 CANBus signal for road speed. J1939 signal will always be more reliable than GPS. This is because GPS signals from the satellites can be attenuated by many factors including tall buildings, bridges, tunnels, foliage, weather etc.

Applications:

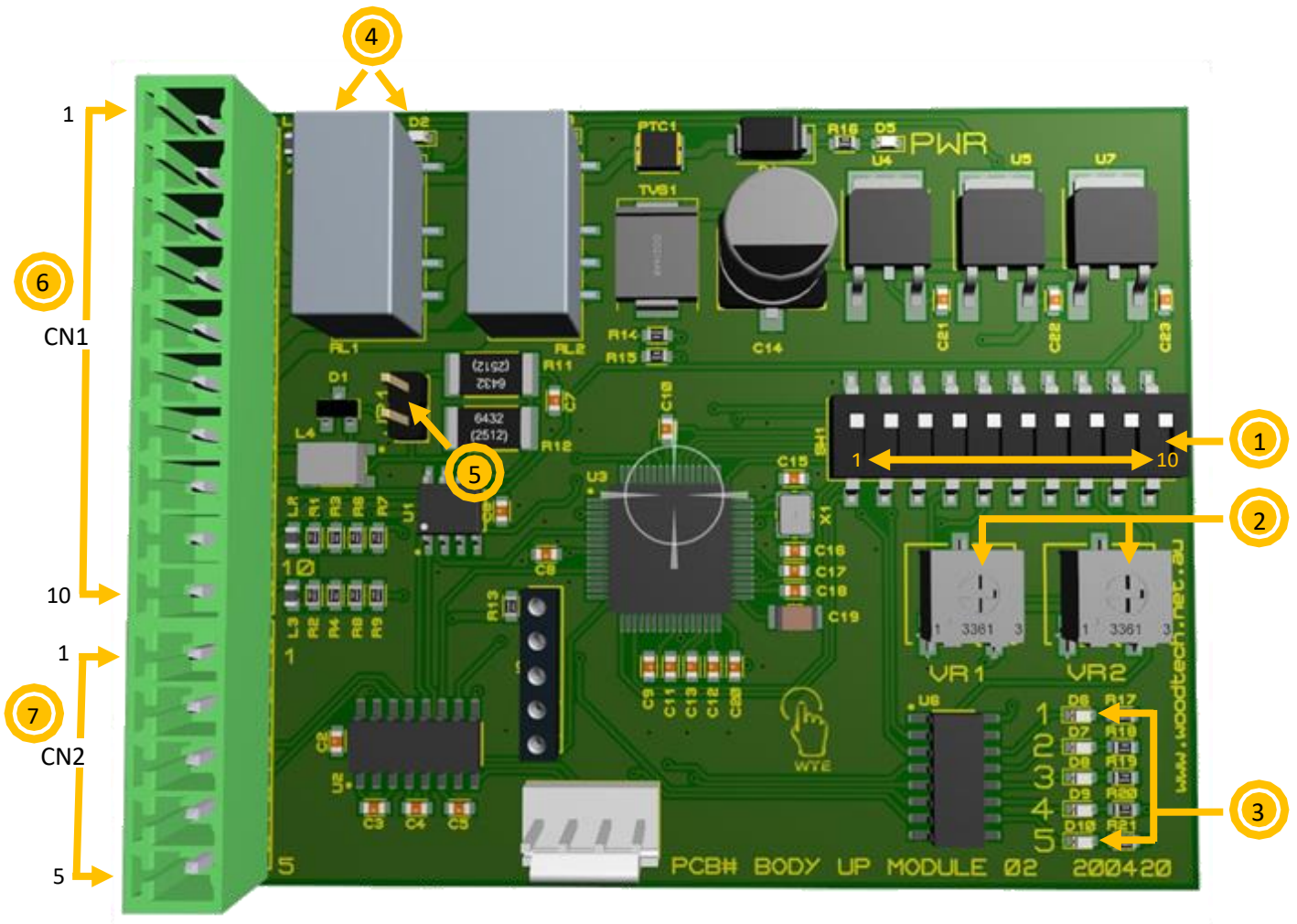
The Body Up Module system is not only for Body Tippers. It can also be used for many other applications including:

Telescopic Crane Booms, Man-Lifts, Excavator Arms, Tray Body Doors, Turn Items on or off when stopped or moving with an alarm and light etc.

Specifications:

- Suitable for 12 or 24v vehicle electrical systems (12 – 30VDC)
- Output 1 and 2 contact rating 50w maximum resistive load
- Input 1 and 2 positive or negative sensing
- Input 1 timer range adjustable 0 to 5 seconds to eliminate false triggering caused by "body bounce".
- Options on PCB for more features if required
- Option for custom programming to suit specific requirements

Body Up Alarm Module 02 - Ver2.0 (12/05/20)



Switch	10 Way Dipper Switch - Programming Mode	
1 to 6	Set speed in Km/h. See table below on page 6	①
7	Input 1 Mode; On=Positive, OFF=Negative	
8	Input 2 Mode; On=Positive, OFF=Negative	
9	Road Speed Input Source; On = CAN, Off = GPS	
10	Not implemented (may be used in the future for additional features)	

VR	Potentiometer Adjustments	
1	Input 1 - Activation time delay (0-5secs)	②
2	Not implemented (may be used in the future for additional features)	

Led's	System - Status	
1	If Dipswitch 9 = CAN Illuminated when valid j1939 messages are being received	③
1	If Dipswitch 9 = GPS Flashing if GPS connected but GPS data is not valid On if GPS connected and data is valid	
	Input 1 active	
3	Input 2 active	
4	Road speed exceeds set speed	
5	Heartbeat; flashing when processor running	

Led's	On Board Output Relay - Status	4
D2	Relay Output 1 active	
D3	Relay Output 2 active	

Jumper	CAN Termination Resistor	5
JP1	120 Ohm termination resistor active (with jumper in place)	

Pins	CN1 - Green 10 Way Connector (Inputs and Outputs)	6
1	10-30v Positive Input Supply	
2	Negative(Ground)	
3	Relay 1 Common	
4	Relay 1 Normally Open	
5	Relay 2 Common	
6	Relay 2 Normally Open	
7	CAN H	
8	CAN L	
9	Switch Input 1	
10	Switch Input 2	

Pins	CN2 - Green 5 Way Connector (External GPS Mouse)	7
1	+5V out for GPS - Red Wire	
2	Negative for GPS - Black Wire	
3	GPS TX data - Green Wire	
4	GPS RX data - White Wire	
5	Not Used	

System Operation

Relay 1 is energized whenever the body is in the up position. The Body Up Module requires a continuous signal on Input 1 whilst the body is down. Signal polarity for Input 1 can be selected as either positive or negative switching using Dipswitch 7. VR2 adjusts the time delay (0 – 5 seconds) for Input 1 activation. This time delay can be useful for eliminating false triggering caused by the body bouncing up and down.

Relay 2 is energized whenever the body is up and road speed exceeds the set speed. The set speed can be adjusted to any value up to 63Km/H in 1 Km/h steps.

Road speed can be obtained from a J1939 CANBus connection to the vehicle or via a connected GPS mouse. Selection of road speed source is via Dipswitch 9.

Please Note: Ensure green plugs are fully seated in mating sockets to prevent intermittent connections

Input 2 is not implemented at this time.

VR2 is not implemented at this time.

External GPS Mouse (Part Number W004-006)



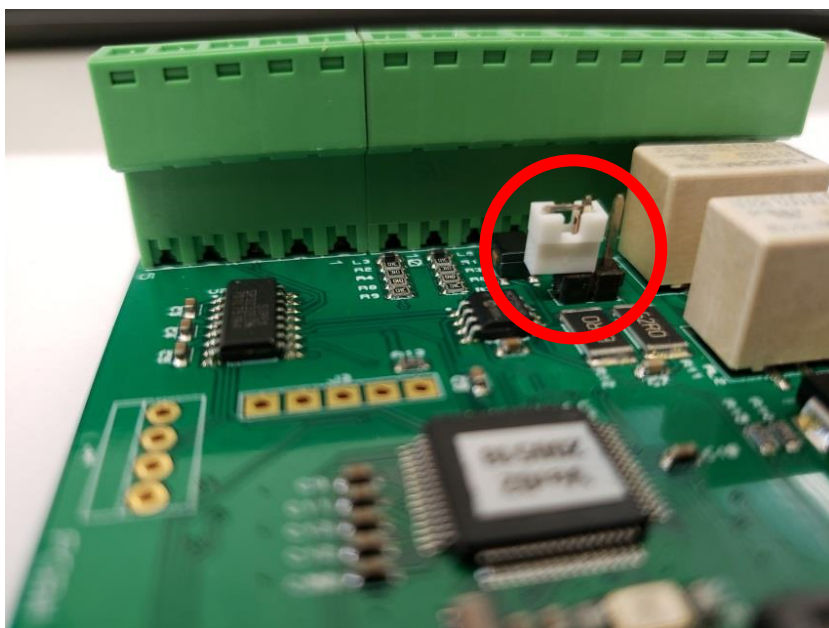
The GPS mouse is a small, lightweight unit with a 6m cable. It is rugged, waterproof (IPx7 rating) and contains a magnet and skid resistant pad on the bottom for mounting on the vehicle. It is industrial quality, has high sensitivity and fast Time-To-First-Fix (TTTF).

Once the GPS mouse has obtained a fix the red led on the mouse will pulse on and off. LED1 on the Body Up Module flashes if the GPS mouse is connected and a satellite fix has not yet been attained (data not valid). LED1 will stop flashing and be on continuously once the GPS mouse has attained a satellite fix (data is valid).

Connect the GPS mouse to Connector CN2 ensuring correct wire positions. Incorrect wiring may damage the GPS mouse. Do not connect the braid / shield wire. Please ensure the braid / shield is trimmed back and insulated so that it does not come into contact with other components within the Body Up Module.

CAN Termination Jumper JP1

In most applications jumper JP1 can be left in the “stored” position – i.e. JP1 not connected



6 Way Dipper Road Speed Setting

Set Speed in Km/h	SW1	SW2	SW3	SW4	SW5	SW6
0	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF
32	OFF	OFF	OFF	OFF	OFF	ON
33	ON	OFF	OFF	OFF	OFF	ON
34	OFF	ON	OFF	OFF	OFF	ON
35	ON	ON	OFF	OFF	OFF	ON
36	OFF	OFF	ON	OFF	OFF	ON
37	ON	OFF	ON	OFF	OFF	ON
38	OFF	ON	ON	OFF	OFF	ON
39	ON	ON	ON	OFF	OFF	ON
40	OFF	OFF	OFF	ON	OFF	ON
41	ON	OFF	OFF	ON	OFF	ON
42	OFF	ON	OFF	ON	OFF	ON
43	ON	ON	OFF	ON	OFF	ON
44	OFF	OFF	ON	ON	OFF	ON
45	ON	OFF	ON	ON	OFF	ON
46	OFF	ON	ON	ON	OFF	ON
47	ON	ON	ON	ON	OFF	ON
48	OFF	OFF	OFF	OFF	ON	ON
49	ON	OFF	OFF	OFF	ON	ON
50	OFF	ON	OFF	OFF	ON	ON
51	ON	ON	OFF	OFF	ON	ON
52	OFF	OFF	ON	OFF	ON	ON
53	ON	OFF	ON	OFF	ON	ON
54	OFF	ON	ON	OFF	ON	ON
55	ON	ON	ON	OFF	ON	ON
56	OFF	OFF	OFF	ON	ON	ON
57	ON	OFF	OFF	ON	ON	ON
58	OFF	ON	OFF	ON	ON	ON
59	ON	ON	OFF	ON	ON	ON
60	OFF	OFF	ON	ON	ON	ON
61	ON	OFF	ON	ON	ON	ON
62	OFF	ON	ON	ON	ON	ON
63	ON	ON	ON	ON	ON	ON

Installation and commissioning must be carried out by suitably trained and qualified personnel.

The Body Up Module system is for indication only. It is not a safety system. The machine operator is ultimately responsible for safe operation which includes diligent supervision of the environment immediately surrounding the machine.

WoodTech Electronics

Osborne Drive, Burpengary, Queensland, 4505, Australia

Sales Email - sales@woodtech.net.au

Support Email - enquiries@woodtech.net.au

Office Number - 07 3888 2998

All other Information visit our website www.woodtech.net.au