Heimdall installation 'Quick Reference' Guide for a Traffic Data Detector

Electrical Connections

Important Notes:

a) **When connecting this detector to a 24V AC source, please ensure that the 24V AC source is derived from an earthed secondary transformer (as used in standard traffic installations).**

b) **Particular attention should be paid to the correct termination of the power supply wires. The RED wire should be used for the 24V AC/DC supply feed and the Black wire for the EARTHED supply return.**

c) **When using a 24V AC supply, only use battery powered interface equipment (e.g. laptop, PDA). Do not connect mains powered/connected equipment to the Heimdall series of detectors, as this will cause the detectors to fail.**

All Heimdall detectors are equipped with a captive lead and a standard 9 pin 'Buccaneer' connector. The pin out for this connector is as specified in the Highways Agency Specifications: TR2505, TR2506 & TR2507. The Heimdall series of detectors provide additional facilities, to that specified in the HA documents, using the spare connections within the 9 way connector.
The wires from this connector should be terminated in accordance with the details shown in the table below.

Output Cable (Standard)

Output Cable (Standard) configuration – for variants: 667/1/31900**/xx0 & /xx2**.

Connector Pin No.	Comment	Colour Code
1	Detector Supply (24V AC/DC)	Red
2	Detector Supply Common (0v)	Black
3	Screen	Green
4	Detector O/P #1&2 (Common)	White
5	Detector O/P #1 (Normally Open)*****	Yellow
6	Detector O/P #1 (Normally Closed)*****	Blue
7	Not Used	Violet
8	Not Used	Orange
9	Not Used	Brown

Note: * This signal condition refers to the state when the detector is un-powered (detect state).

For pinout and wiring details of the output cable for either the SiTOS or 2nd output detector options, please refer to **section 2.1.3 & 2.1.4** of this installation guide.

DIP Switch Settings

All Heimdall detectors are equipped with switches that enable the unit to be installed, for the majority of applications, without the need for any special terminal (handset) equipment.
Access to these switches is gained by removal of the side cover. Before removal, note the cover's orientation and ensure it is replaced the same way round.
The switches on the first PCB (Digital Processor) control the basic functions of this detector and are as listed in the following table:

DIP Switch Number (PCB 1) – Digital Processor							
1	2	3	4	5	6	7	8
SW 1,2: **Detector Height** **0, 0** = Height #1 – 5m **0, 1** = Height #2 – 6m **1, 0** = Height #3 – 7m **1, 1** = Height #1		**SW 3:** Not Used	**SW 4:** Not Used	**SW 5:** Not Used	**SW 6:** Not Used	**SW 7:** **DFM** **0** =Default monitor time (20hours inactive) **1** = 'fault monitor time' is set by the Engineer's Terminal	**SW 8:** **Remote Configuration** **0** = Disabled **1** = Enabled

Key:

0	OFF
1	ON
*****	Unidirectional detection
******	Bidirectional detection

Note: The switches provided on PCB 2 (Special Serial Interface card) control the operation of the Siemens Serial Interface (SiTOS), details of the switch settings for this PCB are shown in ***Section 2.3*** of this installation guide.

Detector Mounting Methods

This detector is typically mounted on a gantry. When mounting make sure that it is positioned such that it provides good coverage of the lane being assessed. Do ensure that it is mounted at an angle of 45° to the road surface for optimum speed and traffic classification accuracy.

Detector Alignment

When aligning the detector always ensure the following:

1. The detector is mounted at an angle of 45° to the road surface. This angle will provide optimum speed and traffic classification accuracy.
2. The detector is mounted at a suitable location on a gantry ensuring good coverage of the lane being assessed.
3. The detector is 'aimed' at a position as shown in the diagram below.