

## Control Module I/O Signal

| Content                           |              | Connector No. | Terminal No. | Signal (V)                                     |                                      | Note   |
|-----------------------------------|--------------|---------------|--------------|--|--------------------------------------|--|
|                                   |              |               |              | Ignition SW                                    | Engine ON (Idling)                   |  |
|                                   |              |               |              | ON (Engine OFF)                                |                                      |  |
| Crankshaft position sensor        | Signal (+)   | B136          | 6            | 0  | ±6                                   | Sensor output waveform                                       |
|                                   | Signal (-)   | B136          | 23           | 0  | 0                                    | —  |
|                                   | Shield       | B136          | 30           | 0  | 0                                    | —  |
| Camshaft position sensor          | Signal (+)   | B136          | 5            | 0  | ±6                                   | Sensor output waveform                                       |
|                                   | Signal (-)   | B136          | 23           | 0  | 0                                    | —  |
|                                   | Shield       | B136          | 30           | 0  | 0                                    | —  |
| Mass air flow sensor              | Signal       | B136          | 1            | 1  | 1.0 — 1.7                            | —  |
|                                   | Shield       | B136          | 30           | 0  | 0                                    | —  |
|                                   | GND          | B136          | 31           | 0  | 0                                    | —  |
| Throttle position sensor          | Signal       | B136          | 20           | Fully closed: 0.5±0.3<br>Fully opened: 4.3±0.3 |                                      | —  |
|                                   | Power supply | B136          | 12           | 5  | 5                                    | —  |
|                                   | GND          | B136          | 24           | 0  | 0                                    | —  |
| Oxygen sensor                     | Signal       | B136          | 21           | 0  | Rich mixture: 0.7<br>Lean mixture: 0 |  |
|                                   | Shield       | B136          | 30           | 0  | 0                                    | —  |
| Engine coolant temperature sensor | Signal       | B136          | 28           | 0.6 — 1.0                                      | 0.6 — 1.0                            | After warm-up  |
|                                   | GND          | B136          | 24           | 0  | 0                                    | —  |
| Intake air temperature sensor     |              | B136          | 19           | 2.5 — 2.3                                      | 1.4 — 1.6                            | After warm-up  |
| Vehicle speed sensor              |              | B135          | 26           | 0 or 5   | 0 or 5                               | "5" and "0" are repeatedly displayed when vehicle is driven. |
| Starter switch                    |              | B135          | 2            | 0  | 0                                    | Cranking: 10 to 14   |
| A/C switch                        |              | B135          | 11           | ON: 10 — 13<br>OFF: 0                          | ON: 13 — 14<br>OFF: 0                | —  |
| Ignition switch                   |              | B136          | 25           | 10 — 13  | 13 — 14                              | —  |
| Neutral position switch (MT)      |              | B135          | 29           | ON: 5<br>OFF: 0                                |                                      | Switch is ON when gear is in neutral position.               |
| Test mode connector               |              | B135          | 22           | 5  | 5                                    | When connected: 0  |
| Read memory connector             |              | B135          | 13           | 5  | 5                                    | When connected: 0  |
| Back-up power supply              |              | B135          | 17           | 10 — 13  | 13 — 14                              | —  |
| Control unit power supply         |              | B136          | 9            | 10 — 13  | 13 — 14                              | —  |
|                                   |              |               | 8            |  |                                      |  |
| Ignition control                  | # 1, # 2     | B134          | 7            | 0  | 3.4, max.                            | —  |
|                                   | # 3, # 4     | B134          | 16           | 0  | 3.4, max.                            | —  |
| Fuel injector                     | # 1          | B134          | 31           | 10 — 13  | 13 — 14                              | Waveform   |
|                                   | # 2          | B134          | 32           | 10 — 13  | 13 — 14                              | Waveform   |
|                                   | # 3          | B134          | 25           | 10 — 13  | 13 — 14                              | Waveform   |
|                                   | # 4          | B134          | 18           | 10 — 13  | 13 — 14                              | Waveform   |

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|   |               |              | Ignition SW           | Engine ON (Idling)    |        |   |
|   |               |              | ON (Engine OFF)       |                       |        |   |
| Idle air control solenoid valve           | Signal 1      | B134         | 14                    | —                     | 1 — 13 | Waveform                                    |
|   | Signal 2      | B134         | 5                     | —                     | 1 — 13 | Waveform                                    |
|   | Signal 3      | B134         | 15                    | —                     | 1 — 13 | Waveform                                    |
|   | Signal 4      | B134         | 6                     | —                     | 1 — 13 | Waveform                                    |
| Fuel pump relay control                   | B134          | 21           | ON: 0<br>OFF: 10 — 13 | 0                     |        | —   |
| A/C relay control                         | B134          | 22           | ON: 0<br>OFF: 10 — 13 | ON: 0<br>OFF: 10 — 14 |        | —   |
| Radiator fan relay 1 control              | B134          | 4            | ON: 0<br>OFF: 10 — 13 | ON: 0<br>OFF: 10 — 14 |        | —   |
| Radiator fan relay 2 control              | B134          | 13           | ON: 0<br>OFF: 10 — 13 | ON: 0<br>OFF: 10 — 14 |        | —   |
| Self-shutoff control                      | B136          | 32           | 10 — 13               | 10 — 14               |        | <i>OV WITH INTC OFF</i>                     |
| Malfunction indicator lamp                | B134          | 28           | —                     | —                     |        | Light "ON": 1, max.<br>Light "OFF": 10 — 14 |
| Engine speed output                       | B135          | 14           | —                     | 0 — 13, min.          |        | Waveform                                    |
| Knock sensor                              | Signal        | B136         | 26                    | 2.8                   | 2.8    | —   |
|   | Shield        | B136         | 29                    | 0                     | 0      | —   |
| Wastegate control                         | B134          | 19           | 10 — 13               | 13 — 14               |        | —   |
| Pressure sources switching solenoid valve | B134          | 26           | 10 — 13               | 13 — 14               |        | —   |
| Purge control solenoid valve              | B135          | 7            | ON: 0<br>OFF: 10 — 13 | ON: 0<br>OFF: 10 — 14 |        | —   |
| GND (sensors)                             | B136          | 24           | 0                     | 0                     |        | —   |
| GND (injectors)                           | B134          | 9            | 0                     | 0                     |        | —   |
| GND (ignition system)                     | B134          | 17           | 0                     | 0                     |        | —   |
| GND (power supply)                        | B134          | 8            | 0                     | 0                     |        | —   |
| GND (control systems)                     | B136          | 18           | 0                     | 0                     |        | —   |
|   | B136          | 21           | 0                     | 0                     |        | —   |
| Select monitor signal                     | B136          | 3            | —                     | —                     |        | —   |
|   |               | 4            | —                     | —                     |        | —   |
| Power steering switch                     | B135          | 1            | ON: 0<br>OFF: 10 — 13 | ON: 0<br>OFF: 10 — 13 |        | —   |
| MT identification                         | B135          | 4            | 0                     | 0                     |        | —   |
| Pressure sensor                           | B136          | 7            | 5                     | 5                     |        | —   |