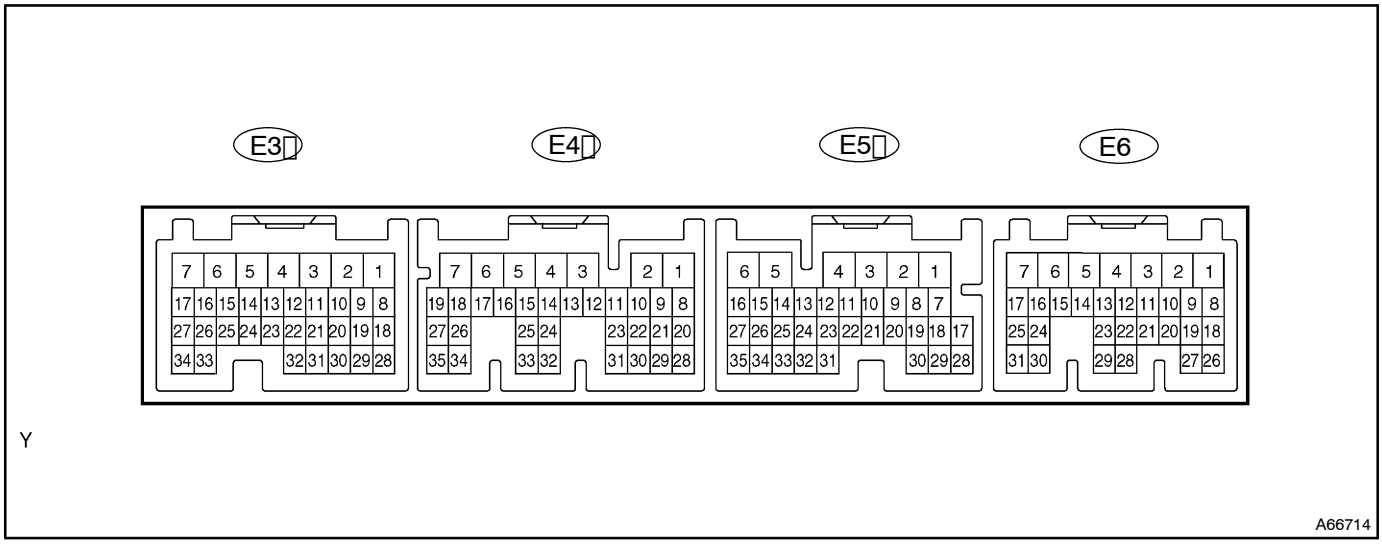
# TERMINALS OF ECM

054KK–11




Each ECM terminal's standard voltage is shown in the table below. In the table, first follow the information under "Condition". Look under "Symbols (Terminals No.)" for the terminals to be inspected. The standard voltage between the terminals is shown under "STD Voltage". Use the illustration above as a reference for the ECM terminals.

| Symbols (Terminals No.) | Wiring Color | Terminal Description | Condition | STD Voltage (V) |
|---|---|---|---|---|
| BATT (E5–6) – E1 (E4–28) | R – BR | Battery | Always | 9 to 14 |
| +B (E5–4) – E1 (E4–28) | B – BR | Power source of ECM | Power switch ON (IG) | 9 to 14 |
| +BM (E5–5) – E1 (E4–28) | GR – BR | Power source of ETCS | Always | 9 to 14 |
| IGSW (E6–9) – E1 (E4–28) | O – BR | Power switch signal | Power switch ON (IG) | 9 to 14 |
| MREL (E5–7) – E1 (E4–28) | G – BR | Main relay control signal | Power switch ON (IG) | 9 to 14 |
| VC (E3–18) – E2 (E3–28) | R – BR | Power source of sensor (a specific voltage) | Power switch ON (IG) | 4.5 to 5.5 |
| NE+ (E3–33) – NE– (E3–34) | R – G | Crankshaft position sensor | Idling (during inspection mode) | Pulse generation |
| G2 (E3–26) – NE– (E3–34) | R – G | Camshaft position sensor | Idling (during inspection mode) | Pulse generation |
| VTA1 (E3–32) – E2 (E3–28) | P – BR | Throttle position sensor | Power switch ON (IG), Throttle valve fully closed | 0.5 to 1.2 |
| VTA1 (E3–32) – E2 (E3–28) | P – BR | Throttle position sensor | HV system ON, During active test to open throttle valve (see page 05–31) | 3.2 to 4.8 |
| VTA2 (E3–31) – E2 (E3–28) | L – BR | Throttle position sensor | Power switch ON (IG), Accelerator pedal released | 2.0 to 2.9 |
| VTA2 (E3–31) – E2 (E3–28) | L – BR | Throttle position sensor | HV system ON, During active test to open throttle valve (see page 05–31) | 4.6 to 5.5 |
| VG (E4–33) – EVG (E4–32) | G – R | Mass air flow meter | Idling (during inspection mode), A/C switch OFF | 1.0 to 1.5 |
| THA (E3–20) – E2 (E3–28) | W – BR | Intake air temperature sensor | Idling (during inspection mode), Intake air temperature at 20°C | 0.5 to 3.4 |
| THW (E3–19) – E2 (E3–28) | W – BR | Engine coolant temperature sensor | Idling (during inspection mode), Engine coolant temperature at 80°C | 0.2 to 1.0 |
| #10 (E3–2) – E01 (E3–7) | Y – BR | Injector | Power switch ON (IG) | 9 to 14 |
| #20 (E3–3) – E01 (E3–7) | B – BR | Injector | Power switch ON (IG) | 9 to 14 |
| #30 (E3–4) – E01 (E3–7) | L – BR | Injector | Power switch ON (IG) | 9 to 14 |
| #40 (E3–5) – E01 (E3–7) | R – BR | Injector | Power switch ON (IG) | 9 to 14 |

| Symbols (Terminals No.) | Wiring Color | Terminal Description | Condition | STD Voltage (V) |
|---|---|---|---|---|
| IGT1 (E3–8) – E1 (E4–28) | Y – BR | Ignition coil No. 1 (#1) (Ignition signal) | Idling (during inspection mode) | Pulse generation (See page 05–131) |
| IGT2 (E3–9) – E1 (E4–28) | W – BR | Ignition coil No. 1 (#2) (Ignition signal) | Idling (during inspection mode) | Pulse generation (See page 05–131) |
| IGT3 (E3–10) – E1 (E4–28) | G – BR | Ignition coil No. 1 (#3) (Ignition signal) | Idling (during inspection mode) | Pulse generation (See page 05–131) |
| IGT4 (E3–11) – E1 (E4–28) | Y – BR | Ignition coil No. 1 (#4) (Ignition signal) | Idling (during inspection mode) | Pulse generation (See page 05–131) |
| KNK1 (E4–1) – EKNK (E4–2) | B – W | Knock sensor | Idling (during inspection mode) | Pulse generation (See page 05–120) |
| IGF (E3–23) – E1 (E4–28) | B – BR | Ignition confirmation signal | Idling (during inspection mode) | Pulse generation (See page 05–131) |
| A1A+ (E4–23) – E1 (E4–28) | G – BR | A/F sensor | Power switch ON (IG) | 3.0 to 3.6 |
| A1A– (E4–22) – E1 (E4–28) | R – BR | A/F sensor | Power switch ON (IG) | 2.7 to 3.3 |
| OX1B (E6–22) – E2 (E3–28) | Y – BR | Heated oxygen sensor | Maintain engine speed at 2,500 rpm for 2 minutes after warming up | Pulse generation |
| HA1A (E4–7) – E04 (E3–1) | Y – BR | A/F sensor heater | Idling (during inspection mode) | Below 3.0 |
| HA1A (E4–7) – E04 (E3–1) | Y – BR | A/F sensor heater | Power switch ON (IG) | 9 to 14 |
| HT1B (E6–6) – E03 (E6–7) | G – BR | Heated oxygen sensor heater | Idling (during inspection mode) | Below 3.0 |
| HT1B (E6–6) – E03 (E6–7) | G – BR | Heated oxygen sensor heater | Power switch ON (IG) | 9 to 14 |
| EVP1 (E4–14) – E1 (E4–28) | R – BR | EVAP VSV | Power switch ON (IG) | 9 to 14 |
| M+ (E4–6) – E1 (E4–28) | L – BR | Throttle actuator control motor | Idling (during inspection mode) | Pulse generation |
| M– (E4–5) – E1 (E4–28) | P – BR | Throttle actuator control motor | Idling (during inspection mode) | Pulse generation |
| OCV+ (E3–15) – OCV– (E3–14) | Y – W | Camshaft timing oil control | Power switch ON (IG) | Pulse generation (See page 05–45) |
| TAM (E5–21) – E2 (E3–28) | W – BR | Outside air temperature sensor | Ambient air temperature –40°C to 140°C (–40 to 284°F) | 0.8 to 1.3 |
| MOPS (E4–15) – E1 (E4–28) | Y – BR | Engine oil pressure | Power switch ON (IG), Not engine running | 9 to 14 |
| FAN (E5–8) – E1 (E4–28) | LG – BR | Cooling fan relay | Power switch ON (IG), Engine coolant Temp. less than 94.5°C | 9 to 14 |
| W (E6–18) – E1 (E4–28) | LG – BR | CHK ENG | Idling (during inspection mode) | 9 to 14 |
| W (E6–18) – E1 (E4–28) | LG – BR | CHK ENG | Power switch ON (IG) | Below 3.0 |
| FC (E6–10) – E1 (E4–28) | G – BR | Fuel pump control | Power switch ON (IG) | 9 to 14 |
| FC (E6–10) – E1 (E4–28) | G – BR | Fuel pump control | Idling (during inspection mode) | Below 3.0 |
| TC (E6–14) – E1 (E4–28) | P – BR | Terminal TC of DLC3 | Power switch ON (IG) | 9 to 14 |
| NEO (E5–1) – E1 (E4–28) | LG – BR | Revolution signal | Idling (during inspection mode) | Pulse generation |
| GO (E5–2) – E1 (E4–28) | Y – BR | Revolution signal | Idling (during inspection mode) | Pulse generation |
| CANH (E6–31) – E1 (E4–28) | B – BR | CAN communication line | Power switch ON (IG) | Pulse generation |
| CANL (E6–30) – E1 (E4–28) | W – BR | CAN communication line | Power switch ON (IG) | Pulse generation |