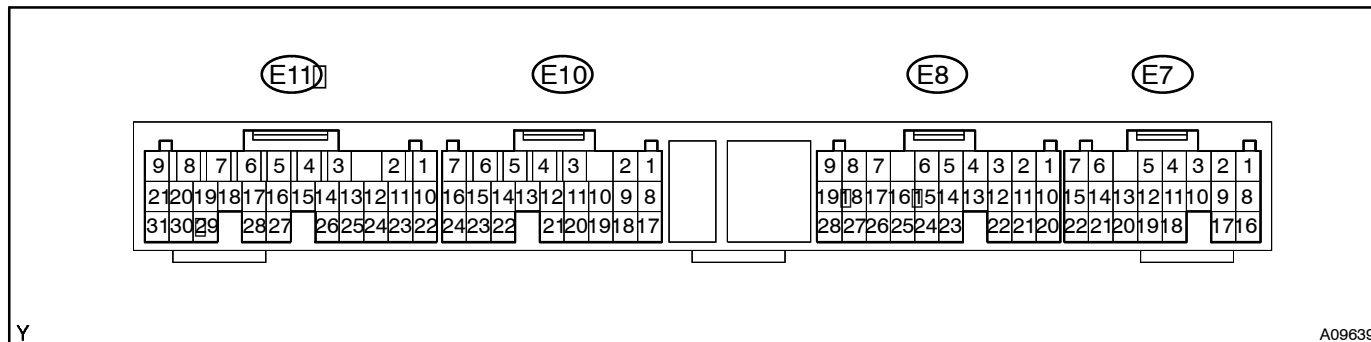


TERMINALS OF ECM



HINT:

Each ECM terminal's standard normal 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 normal 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 (E7-2) – E1 (E11-22)	B-Y – BR	Battery (for measuring the battery voltage and for the ECM memory)	Always	9 to 14
+B (E7-1) – E1 (E11-22)	B – BR*1 B-W – BR*2	Power source of ECM	Ignition switch ON	9 to 14
VC (E10-21) – E2 (E10-20)	R – BR	Power source of sensor (a specific voltage)	Ignition switch ON	4.5 to 5.5
VCC (E8-8) – E2C (E8-27)	G-B – BR	Power source of accelerator pedal position sensor (for VPA1)	Ignition switch ON	4.5 to 5.5
VCC2 (E8-13) – E2C2 (E8-24)	G – Y	Power source of accelerator pedal position sensor (for VPA2)	Ignition switch ON	4.5 to 5.5
VPA (E8-19) – E2C (E8-27)	B-R – BR	Accelerator pedal position sensor (for engine control)	Accelerator pedal fully depressed	0.5 to 1.1
VPA (E8-19) – E2C (E8-27)	B-R – BR		Accelerator pedal fully released	2.6 to 4.5
VPA2 (E8-28) – E2C2 (E8-24)	L-W – BR	Accelerator pedal position sensor (for sensor malfunction detection)	Accelerator pedal fully depressed	1.2 to 2.0
VPA2 (E8-28) – E2C2 (E8-24)	L-W – BR		Accelerator pedal fully released	3.4 to 5.3
PCR (E10-23) – E2 (E10-20)	R-L – BR	Fuel pressure sensor	Ignition switch ON	1.0 to 4.0
THAF (E10-13) – E2 (E10-20)	B-Y – BR	Intake air temperature sensor	Atmospheric air temperature	0.5 to 3.8
PIM (E10-13) – E2 (E10-20)	GR – BR	Turbo pressure sensor	Apply vacuum 40 kPa (300 mmHg, 11.8 in. Hg)	1.0 to 1.8
PIM (E10-13) – E2 (E10-20)	GR – BR		Apply vacuum 135 kPa (1,000 mmHg, 39.4 in. Hg)	2.3 to 3.2
THA (E10-22) – E2 (E10-20)	G-Y – BR	Intake air temperature sensor	Idling, Air intake temperature 0°C (32°F) to 60°C (140°F)	0.2 to 3.8
THW (E10-14) – E2 (E10-20)	G – BR	Engine coolant temperature sensor	Idling, Engine coolant temperature 60°C (140°F) to 120°C (248°F)	0.1 to 1.5
THF (E10-24) – E2 (E10-20)	V – BR	Fuel temperature sensor	Ignition switch ON (when engine cold)	0.5 to 3.8
VG (E10-19) – EVG (E10-11)	G-W – Y-G	Mass air flow meter	Idling, A/C switch OFF	0.5 to 3.0
IGSW (E7-9) – E1 (E11-22)	B-O – BR*1 G – BR*2	Ignition switch	Ignition switch ON	9 to 14
STA (E7-15) – E1 (E11-22)	R-W – BR	Starter signal	Cranking	6.0 or more
NE+ (E11-17) – NE- (E11-28)	O – W	Crankshaft position sensor	Idling	Pulse generation (See page 05-512)

DIAGNOSTICS - ECD SYSTEM (1CD-FTV)

Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	STD Voltage (V)
G+ (E11-16) - (G- (E11-27)	L - BR-W	Camshaft position sensor	Idling	Pulse generation (See page 05-515)
SP1 (E8-22) - (E1 (E11-22)	W - BR*1 W-R - BR*2	Speed signal from combination meter	Ignition switch ON, Rotate driving wheel slowly	Pulse generation (See page 05-536)
PA (E10-17) - (E01 (E11-21)	W-R - BR	VSV for turbo pressure sensor	VSV for turbo pressure sensor OFF	9 to 14
PA (E10-17) - (E01 (E11-21)	W-R - BR		VSV for turbo pressure sensor ON	0 to 3
STP (E8-14) - (E2 (E10-20)	G-W - BR*1 L-B - BR*2	Stop lamp switch	Ignition switch ON, Brake pedal depressed	7.5 to 14
			Ignition switch ON, Brake pedal released	Below 1.5
ST1 (E8-23) - (E2 (E10-20)	L-O - BR*1 B-R - BR*2	Stop lamp switch (opposite to STP)	Ignition switch ON, Brake pedal depressed	Below 1.5
			Ignition switch ON, Brake pedal released	7.5 to 14
#1 (E11-15) - (E01 (E11-21)	V - BR	Injector	Idling	Pulse generation (See page 05-499)
#2 (E11-14) - (E01 (E11-21)	Y-B - BR			
#3 (E11-13) - (E01 (E11-21)	L-W - BR			
#4 (E11-12) - (E01 (E11-21)	G-W - BR			
INJF (E11-18) - (E01 (E11-21)	R-L - BR	EDU		
MREL (E7-7) - (E01 (E11-21)	P-B - BR	EDU relay	Ignition switch ON	9 to 14
TAC (E8-10) - (E1 (E11-22)	W-L - BR	Engine speed	Idling	9 to 14
SREL (E7-18) - (E01 (E11-21)	G-Y - BR	Glow plug	Cranking	9 to 14
			Idling	0 to 1.5
DF (E10-1) - (E1 (E11-22)	L - BR	Generator (alternator) duty signal	Idling	Pulse generation
W (E7-12) - (E01 (E11-21)	L - BR*1 R-B - BR*2	MIL	MIL ON	0 to 3
			MIL OFF	9 to 14
GIND (E7-3) - (E01 (E11-21)	L-O - BR*1 L-Y - BR*2	Ground	Glow indicator lamp ON	0 to 3
			Glow indicator lamp OFF	9 to 14
LU+A (E11-20) - (E01 (E11-21)	B-O - BR	Intake shutter	Ignition switch ON	Pulse generation (See page 05-530)
LU-A (E11-30) - (E01 (E11-21)	R-Y - BR			
LU+B (E11-19) - (E01 (E11-21)	G-Y - BR			
LU-B (E11-29) - (E01 (E11-21)	L-B - BR			
TC (E7-18) - (E1 (E11-22)	P-B - BR*1 P-L - BR*2	Terminal TC of DLC3	Ignition switch ON	9 to 14
THOP (E11-11) - (E1 (E11-22)	L-R - BR	Intake shutter fully opened switch	Idling	9 to 14
			Ignition switch ON	0 to 3
RINJ1 (E11-26) - (E1 (E11-22)	G-B - BR	Injector correction resistance	Idling	0.5 to 4.5
RINJ2 (E11-25) - (E1 (E11-22)	R-W - BR		Idling	0.5 to 4.5
RINJ3 (E11-24) - (E1 (E11-22)	R-B - BR		Idling	0.5 to 4.5
RINJ4 (E11-23) - (E1 (E11-22)	G-R - BR		Idling	0.5 to 4.5
PCV1 (E11-9) - (E01 (E11-21)	G - BR	Suction control valve No. 1	Idling	Pulse generation (See page 05-550)
PCV2 (E11-8) - (E01 (E11-21)	B - BR	Suction control valve No. 2		
VN (E11-2) - (E01 (E11-21)	W-R - BR	E-VRV for EGR	Ignition switch ON, EGR ON	Pulse generation (See page 05-507)
STA (E7-15) - (E1 (E11-22)	R-W - BR	Starter signal	Cranking	6.0 or more

Symbols (Terminals No.)	Wiring Color	Terminal Description	Condition	STD Voltage (V)
EGR+A (E11-8) - F1 (E11-22)	R	EGR	Idling	Pulse generation (See page 5-507)
EGR-A (E11-9) - F1 (E11-22)	Y-G			
EGR+B (E11-4) - F1 (E11-22)	L-O			
EGR-B (E11-7) - F1 (E11-22)	B-Y			

*1: LHD
*2: RHD