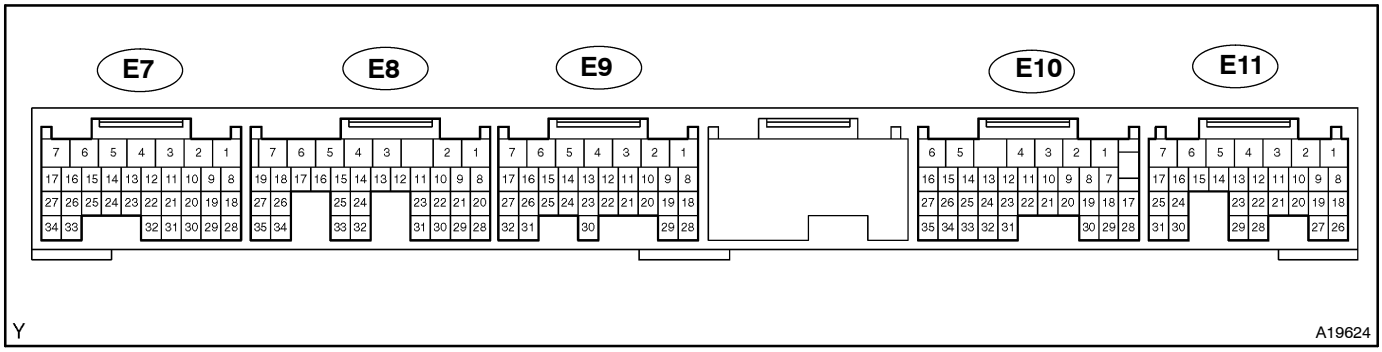
DI1L7–20

TERMINALS OF ECM



Each engine control ECU terminals 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 engine control ECU terminals.

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage
BATT (E11–3) – E1 (E9–1)	B–R – BR	Always	9 to 14 V
+BM (E10–6) – E1 (E9–1)	Y–B – BR		
IGSW (E11–9) – E1 (E9–1)	B–R – BR	IG switch ON	9 to 14 V
+B (E11–1) – E1 (E9–1)	B–Y – BR		
MREL (E11–8) – E1 (E9–1)	B–W – BR	IG switch ON	9 to 14 V
VC (E7–18) – E2 (E7–28)	L–R – BR–W	IG switch ON	4.5 to 5.5 V
VG (E7–30) – E2G (E7–29)	L–Y – G–W	Idling, P or N position, A/C switch OFF	0.5 to 3.0 V
THA (E7–20) – E2 (E7–28)	Y–B – BR–W	Idling, Intake air temp. 20°C (68°F)	0.5 to 3.4 V
THW (E7–19) – E2 (E7–28)	G–B – BR–W	Idling, Engine coolant temp. 80°C (176°F)	0.2 to 1.0 V
VTA1 (E7–21) – E2 (E7–28)	R–Y – BR–W	IG switch ON, Accelerator pedal released	0.5 to 1.2 V
		IG switch ON, Accelerator pedal depressed	3.2 to 4.8 V
VTA2 (E7–31) – E2 (E7–28)	Y–B – BR–W	IG switch ON, Accelerator pedal released	2.0 to 3.1 V
		IG switch ON, Accelerator pedal depressed	4.7 to 5.1 V
VPA (E11–22) – E2 (E7–28)	R – BR–W	IG switch ON, Accelerator pedal released	0.3 to 0.9 V
		IG switch ON, Accelerator pedal depressed	3.2 to 4.8 V
VPA2 (E11–23) – E2 (E7–28)	R–B – BR–W	IG switch ON, Accelerator pedal released	1.8 to 2.7 V
		IG switch ON, Accelerator pedal depressed	4.7 to 5.1 V
VCPA (E11–26) – EPA (E11–28)	L–R – BR–W	IG switch ON	4.5 to 5.5 V
VCP2 (E11–27) – EPA2 (E11–29)	W – W–R	IG switch ON	4.5 to 5.5 V
OX1A (E8–23) – E1 (E9–1) OX1B (E8–29) – E1 (E9–1)	*3 B – BR *3 B – BR	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation (See page DI–172)
OX2A (E8–22) – E1 (E9–1) OX2B (E8–21) – E1 (E9–1)	*3 W – BR *3 W – BR	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation (See page DI–172)
HT1A (E8–4) – E1 (E9–1)	*3 R (*1) W (*2) – BR	Idling	Below 3.0 V
HT1B (E8–5) – E1 (E9–1) HT2A (E8–33) – E1 (E9–1) HT2B (E8–25) – E1 (E9–1)	*3 L – BR *3 Y – BR *3 R – B – BR	IG switch ON	9 to 14 V

#1 (E7–1) – E01 (E7–7) #2 (E7–2) – E01 (E7–7) #3 (E7–3) – E01 (E7–7) #4 (E7–4) – E01 (E7–7) #5 (E7–5) – E01 (E7–7) #6 (E8–3) – E01 (E7–7) #7 (E9–6) – E01 (E7–7) #8 (E9–5) – E01 (E7–7)	Y – W–B B – W–B L – W–B R – W–B G – W–B R–L – W–B W – W–B B–W – W–B	IG switch ON	9 to 14 V
		Idling	Pulse generation (See page DI–130)
KNK1 (E8–1) – E1 (E9–1)	B – BR	Maintain engine speed at 4,000 rpm after warming up	Pulse generation (See page DI–148)
KNK2 (E8–2) – E1 (E9–1)	W – BR		
G2+ (E9–27) – G2– (E9–32)	R – G	Idling	Pulse generation (See page DI–152)
NE+ (E9–25) – NE– (E9–24)	L – G		
PRG (E7–34) – E1 (E9–1)	L–B – BR	IG switch ON	9 to 14 V
SPD (E10–17) – E1 (E9–1)	V – BR	IG switch ON, Rotate driving wheel slowly	Pulse generation (See page DI–182)
M+ (E9–3) – E1 (E9–1) M– (E9–2) – E1 (E9–1)	R – BR W – BR	Idling	Pulse generation (See page DI–206)
FPR (E7–33) – E1 (E9–1)	G–W – BR	IG switch ON	0 to 3.0 V
FC (E11–10) – E1 (E9–1)	B–W – BR	IG switch ON	9 to 14 V
IGT1 (E7–9) – E1 (E9–1) IGT2 (E7–8) – E1 (E9–1) IGT3 (E7–25) – E1 (E9–1) IGT4 (E7–11) – E1 (E9–1) IGT5 (E7–12) – E1 (E9–1) IGT6 (E7–26) – E1 (E9–1) IGT7 (E7–13) – E1 (E9–1) IGT8 (E7–10) – E1 (E9–1)	B – BR R – BR L – BR G – BR Y – BR B–Y – BR B–L – BR L–B – BR	Idling	Pulse generation (See page DI–161)
IGF1 (E7–24) – E1 (E9–1) IGF2 (E7–23) – E1 (E9–1)	B–W – BR B–R – BR	IG switch ON	4.5 to 5.5 V
		Idling	Pulse generation (See page DI–161)
STP (E10–19) – E1 (E9–1)	G–W – BR	Brake pedal is depressed	7.5 to 14 V
		Brake pedal is released	Below 1.5 V
ST1– (E10–12) – E1 (E9–1)	R–G – BR	Brake pedal is depressed	Below 1.5 V
		Brake pedal is released	7.5 to 14 V
STA (E7–17) – E1 (E9–1)	B–R – BR	Shift lever range P or N, Ignition switch START	6.0 V or more
STSW (E9–12) – E1 (E9–1)	B–W – BR	Shift lever range P or N, ignition switch START	6.0 V or more
ACCR (E7–15) – E1 (E9–1)	R–G – BR	Shift lever range P or N, ignition switch START	9 to 14 V
STAR (E8–9) – E1 (E9–1)	B–W – BR	Shift lever range P or N, ignition switch START	9 to 14 V
NSW (E7–16) – E1 (E9–1)	B–W – BR	IG switch ON, Other shift position in P, N	9 to 14 V
		IG switch ON, Shift position in P, N	0 to 3.0 V
W (E11–11) – E1 (E9–1)	W – BR	Idling	9 to 14 V
		IG switch ON	Below 3.0 V
SIL (E11–18) – E1 (E9–1)	V–W – BR	During transmission	Pulse generation
TACH (E11–5) – E1 (E9–1)	B – BR	Idling	Pulse generation

*1: LHD
*2: RHD
*3: LHD Europe, Saudi Arabia, Peru
RHD Europe, Australia