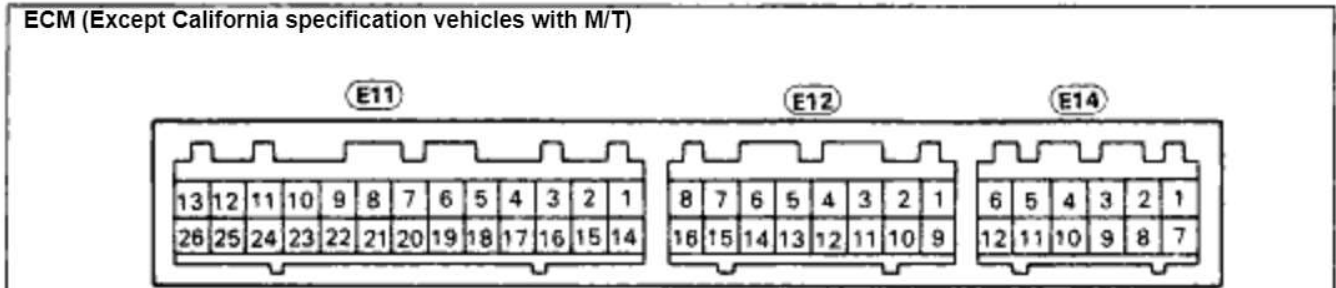


## EG1-318

## 5S-FE ENGINE - TERMINALS OF ECM

## TERMINALS OF ECM

When measuring the voltage or resistance of the connector part of the ECM, always insert the test probe into the connector from the wire harness side.



P01821

Terminal No.	Symbol	Connection	Terminal No.	Symbol	Connection
E11- 1	ISCV	VSV for A/C Idle up	E11-11	-	_____
- 2	STA	Starter relay	-12	#10	Injectors (No.1 and No.3)
- 3	IGF	Igniter	-13	E01	Power ground
- 4	NE⊕	Distributor	-14	-	_____
- 5	G⊕	Distributor	-15	-	_____
- 6	-	_____	-16	-	_____
- 7	-	_____	-17	NE⊖	Distributor
- 8	-	_____	-18	G⊖	Distributor
- 9	ISCC	IAC valve	-19	-	_____
-10	ISCO	IAC valve	-20	-	_____

## 5S-FE ENGINE - TERMINALS OF ECM

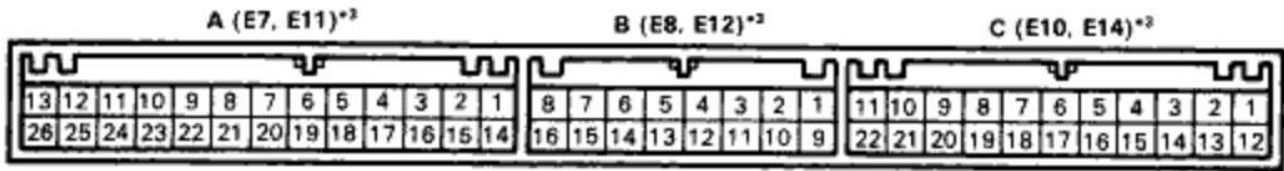
Terminal No.	Symbol	Connection	Terminal No.	Symbol	Connection
E11-21	-	-----	E12-12	IDL	Throttle position sensor
-22	IGT	Igniter	-13	THG	EG R gas temp. sensor
-23	EGR	VSV for EG R	-14	-	-----
-24	E1	ECM ground	-15	TE1	Data link connector 1 and 2
-25	#20	Injectors (No.2 and No.4)	-16	E21	Sensor ground
-26	E02	Power ground	E14- 1	+B1	EFI main relay
E12- 1	OX2	Sub oxygen sensor	- 2	BATT	Battery
- 2	PIM	Manifold absolute pressure sensor	- 3	ACA	A/C amplifier
- 3	THA	Intake air temp. sensor	- 4	FC	Circuit opening relay
- 4	THW	Engine coolant temp. sensor	- 5	-	-----
- 5	KNK	Knock sensor	- 6	ACT	A/C amplifier
- 6	OX1	Main oxygen sensor	- 7	+B	EFI main relay
- 7	TE2	Data link connector 1 and 2	- 8	W	Malfunction indicator lamp
- 8	VF	Data link connector 1	- 9	-	-----
- 9	E2	Sensor ground	-10	-	-----
-10	VTA	Throttle position sensor	-11	SPD	No.1 vehicle speed sensor
-11	VC	<ul style="list-style-type: none"> <li>• Manifold absolute pressure sensor</li> <li>• Throttle position sensor</li> </ul>	-12	ELS	<ul style="list-style-type: none"> <li>• Defogger relay</li> <li>• Taillight relay</li> </ul>

EG1-320

5S-FE ENGINE - TERMINALS OF ECM

TERMINAL OF ECM (Cont'd)

ECM (California specification vehicles and except California specification vehicles with A/T)



F12796

Terminal No.*	Symbol	Connection	Terminal No.*	Symbol	Connection
A- 1	SL	A/T SL solenoid	A-17	G ⊖	Distributor
- 2	S1	A/T No.1 solenoid	-18	G1*1	Distributor
				G ⊕*2	
- 3	IGF	Igniter	-19	-	_____
- 4	NE*1	Distributor	-20	IGT	Igniter
	NE ⊕*2				
- 5	G2*1	Distributor	-21	-	_____
	NE ⊖*2				
- 6	-	_____	-22	-	_____
- 7	ISCV	VSV for A/C Idle up	-23	EGR	VSV for EG R
- 8	FPU*1	VSV for fuel pressure control	-24	#4*1	No.4 injector
- 9	ISCC	IAC valve	-25	#3*1	No.3 injector
-10	ISCO	IAC valve	-26	E02	Power ground
-11	#2*1	No.2 injector	B- 1	VC	<ul style="list-style-type: none"> <li>Manifold absolute pressure sensor</li> <li>Throttle position sensor</li> </ul>
	#20*2	No.2 and No.4 injectors			
-12	#1*1	No.1 injector	- 2	PIM	Manifold absolute pressure sensor
	#20*2	No.1 and No.3 injectors			
-13	E01	Power ground	- 3	THA	Intake air temp. sensor
-14	E1	ECM ground	- 4	THW	Engine coolant temp. sensor
-15	S2	A/T No,2 solenoid	- 5	OX2	Sub oxygen sensor
-16	-	_____	- 6	OX1	Main oxygen sensor

\*1: Only for California specification vehicles.

\*4: Except California specification vehicles with A/T.

\*3:

Connector Mark	A	B	C
ECM for A/T	E7	E8	E10
ECM for M/T	E11	E12	E14

## 5S-FE ENGINE - TERMINALS OF ECM

Terminal No.	Symbol	Connection	Terminal No.	Symbol	Connection
B- 7	TT	Data link connector 2	C- 7	OD2	O/D main switch
- 8	VF	Data link connector 1	- 8	-	—————
- 9	E2	Sensor ground	- 9	SPD	No.1 vehicle speed sensor
-10	THG	EGR gas temp. sensor	-10	ACA	A/C amplifier
-11	VTA	Throttle position sensor	-11	STA	Starter relay
-12	IDL	Throttle position sensor	-12	+B	EFI main relay
-13	KNK	Knock sensor	-13	+B1	EFI main relay
-14	TE2	Data link connector 1 and 2	-14	FC	Circuit opening relay
-15	TE1	Data link connector 1 and 2	-15	-	—————
-16	E21*2	Sensor ground	-16	-	—————
C- 1	BATT	Battery	-17	-	—————
- 2	ELS	<ul style="list-style-type: none"> <li>• Defogger relay</li> <li>• Taillight relay</li> </ul>	-18	2	Park/neutral position switch
- 3	-	—————	-19	L	Park/neutral position switch
- 4	B/K	<ul style="list-style-type: none"> <li>• Stoplight switch</li> <li>• Stoplight</li> </ul>	-20	OD1	Cruise control ECU
- 5	W	Malfunction indicator lamp	-21	ACT	A/C amplifier
- 6	P	<ul style="list-style-type: none"> <li>• Park/neutral position switch</li> </ul>	-22	NSW	Park/neutral position switch

\*1: Only for California specification vehicles.

\*4: Except California specification vehicles with A/T.

\*3:

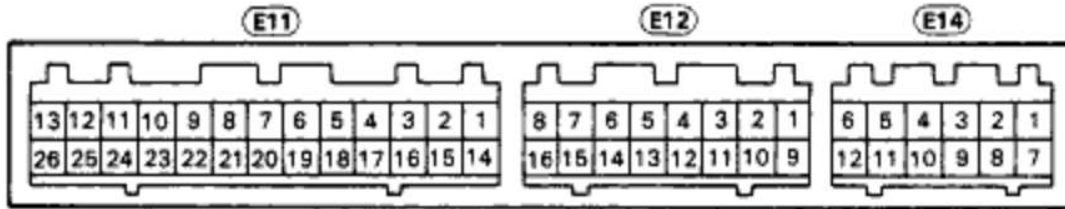
Connector Mark	A	B	C
ECM for A/T	E7	E8	E10
ECM for M/T	E11	E12	E14

## EG1-322

## 5S-FE ENGINE - STANDARD VALUE OF ECM TERMINALS

## STANDARD VALUE OF ECM TERMINALS

ECM (Except California specification vehicles with M/T)



PG1E21

Symbols (Terminals No.)	Wiring Color	STD Voltage (V)	Condition
BATT (E14-2) - E1 (E11-24)	W-L ↔ BR	9 ~ 14	Always
+B (E14-7) +B1 (E14-1) - E1 (E11-24)	B-O B-O ↔ BR	9 ~ 14	IG switch ON
VC (E12-11) - E2 (E12-9)	R ↔ BR	4.5 ~ 5.5	IG switch ON
IDL (E12 - 12) - E2 (E12-9)	L ↔ BR	0 ~ 3.0	IG switch ON and apply vacuum to the throttle opener. Throttle valve fully closed.
		9 ~ 14	IG switch ON Throttle valve fully open
VTA (E12 - 10) - E2 (E12-9)	B ↔ BR	0.3 ~ 0.8	IG switch 0 N Throttle valve fully closed
		3.2 ~ 4.9	IG switch ON Throttle valve fully open
PIN (E12-2) - E2 (E12-9)	B-Y ↔ BR	3.3 ~ 3.9	IG switch ON
		2.5 ~ 3.1	Idling
THA (E12-3) - E2 (E12-9)	L-B ↔ BR	0.5 ~ 3.4	Idling, Intake air temp. 20°C (68°F)
THW (E12-4) - E2 (E12-9)	LG ↔ BR	0.2 ~ 1.0	Idling, Engine coolant temp, 80°C (176°F)
#10 (E11-12) - E01 (E11-13) #20 (E11-25) - E02 (E11-26)	W ↔ W-B Y ↔ W-B	9 ~ 14	IG switch ON
		Pulse generation	Idling
IGT (E11-22) - E1 (E11-24)	W ↔ BR	Pulse generation (See page EG1-347)	Idling
IGF (E11-3) - E1 (E11-24)	W-R ↔ BR	Below 2.0	IG switch ON
		Pulse generation (See page EG1-347)	Idling
G ⊕ (E11-5) - G ⊖ (E11-18)	Y ↔ B	Pulse generation (See page EG1-336)	Idling
NE ⊕ (E11-4) - NE ⊖ (E11-17)	R ↔ L	Pulse generation (See page EG1-336)	Idling

## 5S-FE ENGINE - STANDARD VALUE OF ECM TERMINALS

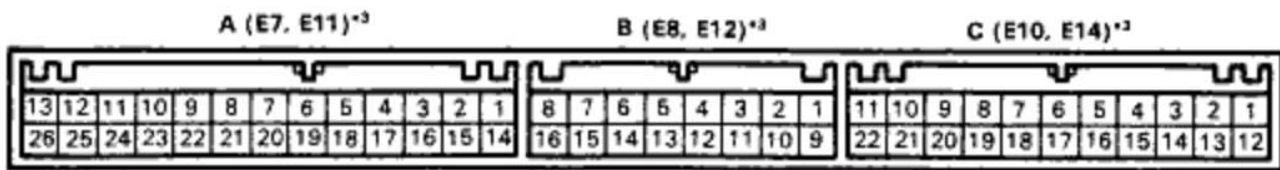
Symbols (Terminals No.)	Wiring Color	STD Voltage (V)	Condition
ISCC (E11-9) - E01 (E11-3) ISCO (E11-10)	G-R ↔ W-B G-Y ↔ W-B	9 ~ 14	IG switch ON
VF (E12-8) - E1 (E11-24)	R-W ↔ BR	1.8 ~ 3.2	Maintain engine speed at 2,500 rpm for 2 minutes after warming up then return to idling
OX1 (E12-6) - E1 (E11-24)	W ↔ BR	Pulse generation (See page EG1-355)	Maintain engine speed at 2,500 rpm for 2 minutes after warming up
EGR (E11-23) - E01 (E11-13)	G ↔ W-B	9 ~ 14	IG switch ON
KNK (E12-5) - E1 (E11-24)	W ↔ BR	Pulse generation (See page EG1-389)	Idling
SPD (E14-11) - E1 (E11-24)	V-Y ↔ BR	Pulse generation (See page EG1-380)	IG switch ON Rotate driving wheel slowly
TE1 (E12-15) - E1 (E11-24)	GR ↔ BR	9 ~ 14	IG switch ON
TE2 (E12-7) - E1 (E11-24)	G-W ↔ BR	9 ~ 14	IG switch ON
W (E14-8) - E1 (E11-24)	G-R ↔ BR	9 ~ 14	Idling
		Below 3.0	IG switch ON
ACA (E14-3) - E1 (E11-24)	B-Y ↔ BR	Below 1.5	A/C switch ON (at idling)
		9 ~ 14	A/C switch OFF
ISCV (E11-1) - E01 (E11-13)	LG ↔ W-B	Below 2.0	Idling, A/C switch ON
		9 ~ 14	Idling, A/C switch OFF

## EG1-324

5S-FE ENGINE - STANDARD VALUE OF ECM TERMINALS

## STANDARD VALUE OF ECM TERMINALS (Cont'd)

ECM (California specification vehicles and except California specification vehicles with A/T)



P12796

Symbols (Terminals No.)*3	Wiring Color	STD Voltage (V)	Condition
BATT (C-1) - E1 (A-14)	W-L ↔ BR	9 ~ 14	Always
+B (C-12) - E1 (A-14) +B1 (C-13)	B-O ↔ BR B-O	9 ~ 14	IG switch ON
VC (B-1) - E2 (B-9)	R ↔ BR	4.5 ~ 5.5	IG switch ON
IDL (B-12) - E2 (B-9)	L ↔ BR	0 ~ 3.0	IG switch ON and apply vacuum to the throttle opener. Throttle valve fully closed.
		9 ~ 14	IG switch ON Throttle valve fully open
VTA (B-11) - E2 (B-9)	B ↔ BR	0.3 ~ 0.8	IG switch ON Throttle valve fully closed
		3.2 ~ 4.9	IG switch ON Throttle valve fully open
PIM (B-2) - E2 (B-9)	B-Y ↔ BR	3.3 ~ 3.9	IG switch ON
		2.5 ~ 3.1	Idling
THA (B-3) - E2 (B-9)	L-B ↔ BR	0.5 ~ 3.4	Idling, Intake air temp. 20°C (68°F)
THW (B-4) - E2 (B-9)	LG ↔ BR	0.2 ~ 1.0	Idling, Engine coolant temp. 80°C (176°F)
#10 (#1*) (A-12) - E01 (A-13) #20 (#2*) (A-11) - E01 (A-13) #3* (A-25) - E01 (A-13) #4* (A-24) - E01 (A-13)	W ↔ W-B Y ↔ W-B R-L ↔ W-B R-B ↔ W-B	9 ~ 14	IG switch ON
		Pulse generation (See page EG1-410)	Idling
		Pulse generation (See page EG1-347)	Idling
		Below 2.0	IG switch ON
IGF (A-3) - E1 (A-14)	W-R ↔ BR	Pulse generation (See page EG1-347)	Idling
		Pulse generation (See page EG1-341)	Idling
G1 (A-18), G2 (A-5) - G⊖(A-17)*1	Y, L ↔ B	Pulse generation (See page EG1-341)	Idling
NE (A-4) - G⊖(A-17)*1	R ↔ B	Pulse generation (See page EG1-341)	Idling
G⊕(A-18) - G⊖(A-17)*2	Y ↔ B	Pulse generation (See page EG1-336)	Idling
NE⊕(A-4) - NE⊖(A-5)*2	R ↔ L	Pulse generation (See page EG1-336)	Idling

\*1: Only for California specification vehicles.

\*2: Except California specification vehicles with A/T.

\*3:

Connector Mark	A	B	C
ECM for A/T	E7	E8	E10
ECM for M/T	E11	E12	E14

## 5S-FE ENGINE - STANDARD VALUE OF ECM TERMINALS

Symbols (Terminals No.)*3	Wiring Color	STD Voltage (V)	Condition
ISCC (A-9) - E01 (A-13) ISCO (A-10)	G-R ↔ W-B G-Y ↔ W-B	9 ~ 14	IG switch ON
VF (B-8) - E1 (A-14)	R-W ↔ BR	1.8 ~ 3.2	Maintain engine speed at 2,500 rpm for 2 minutes after warming up then return to idling
OX1 (B-6) - E1 (A-14)	W ↔ BR	Pulse generation (See page EG1-355)	Maintain engine speed at 2,500 rpm for 2 minutes after warming up
EGR (A-23) - E01 (A-13)	G ↔ W-B	9 ~ 14	IG switch ON
KNK (B-13) - E1 (A-14)	W ↔ BR	Pulse generation (See page EG1-389)	Idling
NSW (C-22) - E1 (A-14)	B-W ↔ BR	9 ~ 14	IG switch ON Other shift position in "P", "N" position
		0 ~ 3.0	IG switch ON Shift position in "P", "N" position
SPD (C-9) - E1 (A-14)	V-Y ↔ BR	Pulse generation (See page EG1-380)	IG switch ON Rotate driving wheel slowly
TE1 (B-15) - E1 (A-14)	GR ↔ BR	9 ~ 14	IG switch ON
TE2 (B-14) - E1 (A-14)	G-W ↔ BR	9 ~ 14	IG switch ON
W (C-5) - E1 (A-14)	G-R ↔ BR	9 ~ 14	Idling
		Below 3.0	IG switch ON
OD1 (C-20) - E1 (A-14)	Y-B ↔ BR	9 ~ 14	IG switch ON
OD2 (C-7) - E01 (A-13)	G-O ↔ W-B	9 ~ 14	IG switch ON O/D main switch pushed in
		Below 1.0	IG switch ON O/D main switch pushed out
ACA (C-8) - E1 (A-14)	B-Y ↔ BR	Below 1.5	A/C switch ON (At idling)
		9 ~ 14	A/C switch OFF
ISCV (A-7) - E01 (A-13)	LG ↔ W-B	Below 2.0	Idling, A/C switch ON
		9 ~ 14	Idling, A/C switch OFF
FPU (A-8) - E01 (A-13)*1	B-R ↔ W-B	9 ~ 14	IG switch ON
		Below 2.0	Restarting at high engine coolant temp.

\*1: Only for California specification vehicles.

\*3:

Connector Mark	A	B	C
ECM for A/T	E7	E8	E10
ECM for M/T	E11	E12	E14