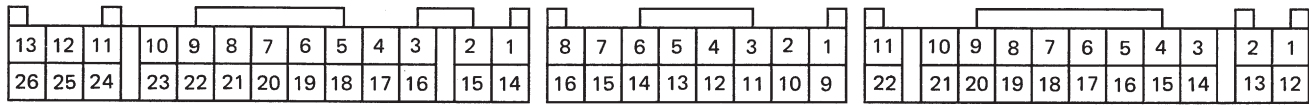


6. Control Module I/O Signal



To (E29)

To (E31)

To (E30)

G2M0446

Content	Connector No.	Terminal No.	Signal (V)			Note	
			Ig SW		Engine ON (Idling)		
			OFF	ON (Engine OFF)			
Crankshaft position sensor	Signal (+)	E30	6	—	0	±6	Sensor output waveform
	Signal (-)	E30	7	—	0	0	
	Shield	E30	11	—	0	0	
Camshaft position sensor	Signal (+)	E30	8	—	0	±2.7	Sensor output waveform
	Signal (-)	E30	9	—	0	0	
	Shield	E30	11	—	0	0	
Mass air flow sensor	Signal	E30	5	—	0 — 0.3	0.8 — 1.2	—
	GND	E31	1	—	0	0	—
	Shield	E30	11	—	0	0	—
Throttle position sensor	Signal	E30	4	—	Fully closed: 0.2 — 1.0 Fully opened: 4.2 — 4.5		—
	Power supply	E30	15	—	5	5	—
	GND	E30	11	—	0	0	—
Oxygen sensor	Signal	E30	10	—	0	Rich mixture: 0.7 Lean mixture: 0	
	Shield	E30	11	—	0	0	—
Engine coolant temperature sensor	E30	3	0	—	0.7 — 1.0	0.7 — 1.0	After warm-up
Vehicle speed sensor 2	E29	4	—	—	0 or 5	0 or 5	"5" and "0" are repeatedly displayed when vehicle is driven.
49 states and Canada/California identification	E31	7	—	—	0	0	—
Starter switch	E29	12	—	—	0	0	Cranking: 10 to 14
A/C switch	E29	11	—	—	ON: 10 — 13 OFF: 0	ON: 13 — 14 OFF: 0	—
Ignition switch	E29	10	0	—	10 — 13	13 — 14	—
Neutral position switch (MT)	E29	16	—	—	ON: 0 OFF: 10 — 13		● On MT model; switch is ON when gear is in neutral position. ● On AT model; switch is ON when shift is in "P" or "N" position.
Park/Neutral position switch (AT)							
Test mode connector	E29	2	—	—	5	5	When connected: 0

Content		Connector No.	Terminal No.	Signal (V)			Note
				lg SW		Engine ON (Idling)	
				OFF	ON (Engine OFF)		
Read memory connector		E29	19	—	5	5	When connected: 0
AT/MT identification		E29	17	—	(AT) 5 (MT) 0	(AT) 5 (MT) 0	When measuring voltage between ECM and body.
Back-up power supply		E29	26	10 — 13	10 — 13	13 — 14	—
Control unit power supply		E29	13	0	10 — 13	13 — 14	—
Ignition control	# 1, # 2	E30	21	—	0	3.4, max.	—
	# 3, # 4	E30	20	—	0	3.4, max.	—
Fuel injector	# 1	E30	2	10 — 13	10 — 13	13 — 14	Waveform
	# 2	E30	1	10 — 13	10 — 13	13 — 14	Waveform
	# 3	E30	13	10 — 13	10 — 13	13 — 14	Waveform
	# 4	E30	12	10 — 13	10 — 13	13 — 14	Waveform
Idle air control solenoid valve	OPEN end	E29	2	—	—	1, max. — 13, min.	Waveform
	CLOSE end	E29	1	—	—	13, min. — 1, max.	Waveform
Fuel pump relay control		E29	8	—	ON: 0 OFF: 10 — 13	0	—
A/C relay control		E29	9	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Radiator fan relay 1 control		E29	23	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Radiator fan relay 2 control		E29	7	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Self-shutoff control		E29	18	—	10 — 13	13 — 14	—
Malfunction indicator lamp		E29	22	—	—	—	Light "ON": 1, max. Light "OFF": 10 — 14
Engine speed output		E29	3	—	—	0 — 13, min.	Waveform
EGR solenoid valve		E30	18	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Air suction solenoid valve		E31	3	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
FICD solenoid valve		E29	24	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	A/C equipped model
Purge control solenoid valve		E30	19	—	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
GND (sensors)		E30	11	—	0	0	—
GND (injectors)		E29	15	—	0	0	—
GND (ignition system)		E29	14	—	0	0	—
GND (power supply)		E29	25	—	0	0	—
GND (control systems)		E30	22	—	0	0	—
Select Monitor Signal		E29	6	—	—	—	—
		E29	5	—	—	—	—