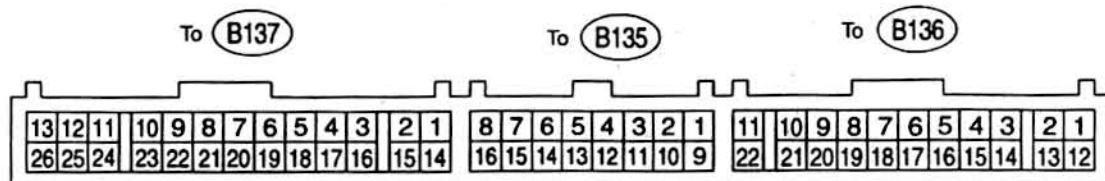


## 5. Control Module I/O Signal



B2M0219F

Content	Connector No.	Terminal No.	Signal (V)		Note	
			Ignition SW	Engine ON (Idling)		
			ON (Engine OFF)			
Crankshaft position sensor	Signal (+)	B136	*1	0	±6	Sensor output waveform
	Signal (-)	B136	9	0	0	—
	Shield	B136	13	0	0	—
Camshaft position sensor	Signal (+)	B136	*2	0	±6	Sensor output waveform
	Signal (-)	B136	9	0	0	—
	Shield	B136	13	0	0	—
Mass air flow sensor	Signal	B136	6	0 — 0.3	0.8 — 1.2	—
	Shield	B136	13	0	0	—
	GND	B136	7	0	0	—
Throttle position sensor	Signal	B136	16	Fully closed: 0.5 ± 0.3 Fully opened: 4.3 ± 0.3		—
	Power supply	B136	14	5	5	—
	GND	B136	13	0	0	—
Oxygen sensor	Signal	B136	5	0	Rich mixture: 0.7 Lean mixture: 0	—
	Shield	B136	13	0	0	—
Engine coolant temperature sensor	Signal	B136	3	0.6 — 1.0	0.6 — 1.0	After warm-up
	GND	B136	13	0	0	—
Vehicle speed sensor 2	B135	3		0 or 5	0 or 5	"5" and "0" are repeatedly displayed when vehicle is driven.
Starter switch	B135	2		0	0	Cranking: 10 to 14
A/C switch	B135	10		ON: 10 — 13 OFF: 0	ON: 13 — 14 OFF: 0	—
Ignition switch	B136	11		10 — 13	13 — 14	—
Neutral position switch (MT)	B135	9		ON: 5 OFF: 0		Switch is ON when gear is in neutral position.
Park/Neutral position switch (AT)	B135	9		ON: 0 OFF: 5		Switch is ON when shift lever is in "P" or "N" position.
Test mode connector	B136	21		5	5	When connected: 0

\*1: With immobiliser: 8  
Without immobiliser: 10

\*2: With immobiliser: 10  
Without immobiliser: 8

Content	Connector No.	Terminal No.	Signal (V)		Note	
			Ignition SW	Engine ON (Idling)		
			ON (Engine OFF)			
Read memory connector	B136	20	5	5	When connected: 0	
Back-up power supply	B137	15	10 — 13	13 — 14	—	
Control unit power supply	B136	1	10 — 13	13 — 14	—	
		2				
Ignition control	# 1, # 2	B137	10	0	3.4, max.	—
	# 3, # 4	B137	9	0	3.4, max.	—
Fuel injector	# 1	B137	26	10 — 13	13 — 14	Waveform
	# 2	B137	13	10 — 13	13 — 14	Waveform
	# 3	B137	12	10 — 13	13 — 14	Waveform
	# 4	B137	11	10 — 13	13 — 14	Waveform
Idle air control solenoid valve	OPEN end	B137	2	—	1, max. — 13, min.	Waveform
	CLOSE end	B137	1	—	13, min. — 1, max.	Waveform
Torque control signal*4	B135	11	0	5	—	
Fuel pump relay control	B137	*3	ON: 0 OFF: 10 — 13	0	—	
A/C relay control	B137	21	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—	
Radiator fan relay 1 control	B135	8	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—	
Radiator fan relay 2 control	B135	16	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—	
Self-shutoff control	B136	22	10 — 13	13 — 14	—	
Malfunction indicator lamp	B137	8	—	—	Light "ON": 1, max. Light "OFF": 10 — 14	
Engine speed output	B135	14	—	0 — 13, min.	Waveform	
Knock sensor	Signal	B136	4	2.8	2.8	—
	Shield	B136	13	0	0	—
Wastegate control	B137	3	10 — 13	13 — 14	—	
Pressure sources switching solenoid valve	B137	6	10 — 13	13 — 14	—	
Purge control solenoid valve	B135	15	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—	
GND (sensors)	B136	13	0	0	—	
GND (injectors)	B137	25	0	0	—	
GND (ignition system)	B137	24	0	0	—	
GND (power supply)	B137	14	0	0	—	
GND (control systems)	B136	12	0	0	—	
Select monitor signal	B135	4	—	—	—	
		5	—	—	—	

\*3: With immobiliser: 17  
Without immobiliser: 7

\*4: AT model only