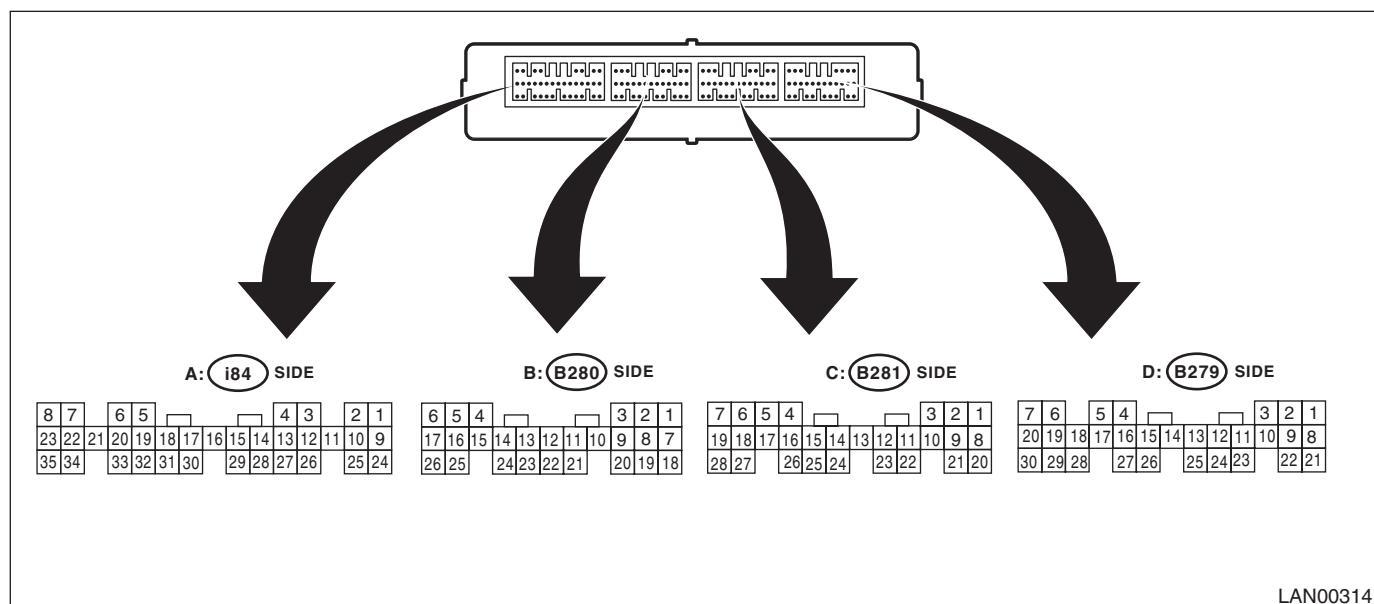


# Control Module I/O Signal

LAN SYSTEM (DIAGNOSTICS)

## 5. Control Module I/O Signal

### A: ELECTRICAL SPECIFICATION



Contents	Terminal No.	Standard	Measuring conditions
BAT (control)	B6 ↔ chassis ground	9 — 16 V	Always
BAT (backup)	C2 ↔ chassis ground	9 — 16 V	Always
BAT (door lock)	A34 ↔ chassis ground	9 — 16 V	Always
BAT (shift lock/key lock)	D22 ↔ chassis ground	9 — 16 V	Always
ACC (rear wiper)	D21 ↔ chassis ground	Less than 1.5 V → 9 — 16 V	ACC OFF → ACC ON
Ground	A28 ↔ chassis ground	Less than 1.5 V	Always
Ground	B17 ↔ chassis ground	Less than 1.5 V	Always
Ground	C20 ↔ chassis ground	Less than 1.5 V	Always
Ground	D27 ↔ chassis ground	Less than 1.5 V	Always
Key warning switch	D2 ↔ chassis ground	Less than 1.5 V → 9 — 16 V	With key removed → inserted
ACC	B7 ↔ chassis ground	Less than 1.5 V → 9 — 16 V	ACC OFF → ACC ON

# Control Module I/O Signal

LAN SYSTEM (DIAGNOSTICS)

Contents	Terminal No.	Standard	Measuring conditions
IGN	B1 ↔ chassis ground	Less than 1.5 V → 9 — 16 V	IGN OFF → IGN ON
P range switch	C4 ↔ chassis ground	Less than 1.5 V → 8 V or more	P range → other than P range
Stop light switch	B2 ↔ chassis ground	Less than 1.5 V → 8 V or more	With brake pedal released → depressed
Door switch, driver's seat	A19 ↔ chassis ground	8 V or more → less than 1.5 V	With driver's door closed → opened
Door switch, passenger's seat	A32 ↔ chassis ground	8 V or more → less than 1.5 V	With passenger's door closed → opened
Door switch, rear RH seat	A6 ↔ chassis ground	8 V or more → less than 1.5 V	With rear RH seat door closed → opened
Door switch, rear LH seat	A20 ↔ chassis ground	8 V or more → less than 1.5 V	With rear LH seat door closed → opened
Door switch, trunk/rear gate	A33 ↔ chassis ground	8 V or more → less than 1.5 V	With rear gate closed → opened
Rear gate opener button	C24 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Manual switch (LOCK)	A15 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Manual switch (UNLOCK)	A29 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Delivery (test) mode connector	A17 ↔ chassis ground	8 V or more → less than 1.5 V	When delivery (test) mode connector is connected
Front wiper input RTN	C5 ↔ chassis ground	8 V or more → less than 1.5 V	When front wiper is reversed
Rear wiper switch ON	C18 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Rear wiper switch (INT)	C27 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Rear wiper switch, washer	C28 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Lighting I switch	B11 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
Lighting II switch	C8 ↔ chassis ground	8 V or more → less than 1.5 V	Switch OFF → ON
	D6 ↔ chassis ground	8 V or more → less than 1.5 V	Key warning switch ON and lighting switch OFF → ON

# Control Module I/O Signal

## LAN SYSTEM (DIAGNOSTICS)

Contents	Terminal No.	Standard	Measuring conditions
Dimmer switch, Hi beam	B12 $\leftrightarrow$ chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch OFF $\rightarrow$ ON
Dimmer switch, passing	B22 $\leftrightarrow$ chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch OFF $\rightarrow$ ON
Front fog light switch	B24 $\leftrightarrow$ chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch OFF $\rightarrow$ ON
MT reverse switch	B18 $\leftrightarrow$ chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	Other than reverse $\rightarrow$ reverse
Parking brake switch	C15 $\leftrightarrow$ chassis ground	8 V or more $\rightarrow$ less than 1.5 V	With parking brake not operated $\rightarrow$ operated
Bright switch	A14 $\leftrightarrow$ chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	Switch OFF $\rightarrow$ ON
Illumination (Vi1)	A12 $\leftrightarrow$ chassis ground	Approx. 5 V	Always
Illumination (Vi2)	A3 $\leftrightarrow$ chassis ground	0.5 V — approx. 5 V	Always
Illumination (Vi3)	A26 $\leftrightarrow$ chassis ground	Less than 1.5 V	Always
Fuel level sensor	C7 $\leftrightarrow$ chassis ground	Approx. 2 — 96 $\Omega$	Ignition ON
Wiper deicer & rear defogger switch	A16 $\leftrightarrow$ chassis ground	8 V or more $\rightarrow$ less than 1.5 V	Switch OFF $\rightarrow$ ON
Seat belt switch (driver's seat)	C16 $\leftrightarrow$ chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	With seat belt unbuckled $\rightarrow$ buckled
Seat belt switch (Passenger's seat)	C26 $\leftrightarrow$ chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	With seat belt unbuckled $\rightarrow$ buckled
Impact sensor	B8 $\leftrightarrow$ chassis ground	Less than 1.5 V $\rightarrow$ 8 V or more	When a shock is applied
Key lock solenoid output	D11 $\leftrightarrow$ chassis ground	Less than 1.5 V $\rightarrow$ 6 V or more	While key is inserted in other than P range
Shift lock solenoid output	D12 $\leftrightarrow$ chassis ground	Less than 1 V $\rightarrow$ 9 V or more	When vehicle stopped, IGN ON, other than P range, brake pedal depressed
Rear wiper output ON	D9 $\leftrightarrow$ chassis ground	Less than 1 V $\rightarrow$ 9 V or more	When rear wiper operates
Rear wiper output RTN	D8 $\leftrightarrow$ chassis ground	Less than 1 V $\rightarrow$ 9 V or more	When rear wiper reversed
Door lock output	A7 $\leftrightarrow$ A8	Less than 1 V $\rightarrow$ 9 V or more	During lock output
Door unlock output	A8 $\leftrightarrow$ A7	Less than 1 V $\rightarrow$ 9 V or more	While unlock output

# Control Module I/O Signal

LAN SYSTEM (DIAGNOSTICS)

Contents	Terminal No.	Standard	Measuring conditions
Driver's side door unlock output	A23 ↔ A7	Less than 1 V → 9 V or more	While unlock output
Trunk/rear gate UNLOCK output	A22 ↔ chassis ground	Less than 1 V → 9 V or more	4 door: While trunk UNLOCK output 5 door: While rear gate UNLOCK output
Lighting power supply	C1 ↔ chassis ground	Less than 1 V → 9 V or more	"With back-up fuse inserted, ACC ON or IGN ON" or "When key warning switch is ON"
	D1 ↔ chassis ground		
Clearance light relay output	D19 ↔ chassis ground	9 V or more → less than 1 V	Small light ON
Lo beam relay output	C3 ↔ chassis ground	9 V or more → less than 1 V	Headlight switch ON
	D7 ↔ chassis ground	9 V or more → less than 1 V	Headlight switch ON
Hi beam relay output	D20 ↔ chassis ground	9 V or more → less than 1 V	Headlight switch ON and Hi beam ON or Passing switch ON
Front fog light relay output	D17 ↔ chassis ground	9 V or more → less than 1 V	Headlight switch ON, and front fog light switch ON
DRL cancel output	D18 ↔ chassis ground	9 V or more → less than 1 V	When Hi beam 100 % illuminates
Room light output	D5	Pulse control	Illumination is adjusted through PWM control
Key ring illumination output	C23	Pulse control	Illumination is adjusted through PWM control
Illumination output	A2	Pulse control	Illumination is adjusted through PWM control
Map light output (model with sunroof)	D4	Pulse control	Illumination is adjusted through PWM control
Rear defogger relay output	D16 ↔ chassis ground	9 V or more → less than 1 V	While rear defogger output
Wiper deicer relay output	D15 ↔ chassis ground	9 V or more → less than 1 V	While wiper deicer output
Seat belt warning light passenger's seat	A25 ↔ chassis ground	9 V or more → less than 1 V	Indicator go off → illuminate
Answer-back buzzer output	D24 ↔ chassis ground	Less than 1 V → 9 V or more	Door lock → unlock by keyless entry
Turn & hazard output	C22 ↔ chassis ground	9 V or more → less than 1 V	Door lock or unlock with keyless entry system
Horn relay output	D29 ↔ chassis ground	9 V or more → less than 1 V	During security alarm operation

# Control Module I/O Signal

## LAN SYSTEM (DIAGNOSTICS)

Contents	Terminal No.	Standard	Measuring conditions
Security indicator output	A10 $\longleftrightarrow$ chassis ground	9 V or more $\rightarrow$ less than 1 V	While indicator in combination meter blinks
Immobilizer antenna 1	B26 $\longleftrightarrow$ B25	-30 — +30 V	While key secret code is verified
Immobilizer antenna 2	B25 $\longleftrightarrow$ B26		
Immobilizer communication_1	B4	Can not be measured because of digital communication	Serial communication line
Immobilizer communication_2	B15	Can not be measured because of digital communication	Serial communication line
Keyless entry module communication	A24	Can not be measured because of digital communication	Serial communication line
SSM communication (K line)	B20	Can not be measured because of digital communication	Serial communication line
Body system CAN_Hi	A1 $\longleftrightarrow$ chassis ground	Can not be measured because of digital communication	Serial communication line
Body system CAN_Lo	A9 $\longleftrightarrow$ chassis ground	Can not be measured because of digital communication	Serial communication line
Driving system CAN_Hi	B3 $\longleftrightarrow$ chassis ground	Can not be measured because of digital communication	Serial communication line
Driving system CAN_Lo	B9 $\longleftrightarrow$ chassis ground	Can not be measured because of digital communication	Serial communication line

## B: WIRING DIAGRAM

<Ref. to WI-144, WIRING DIAGRAM, CAN Communication System.>