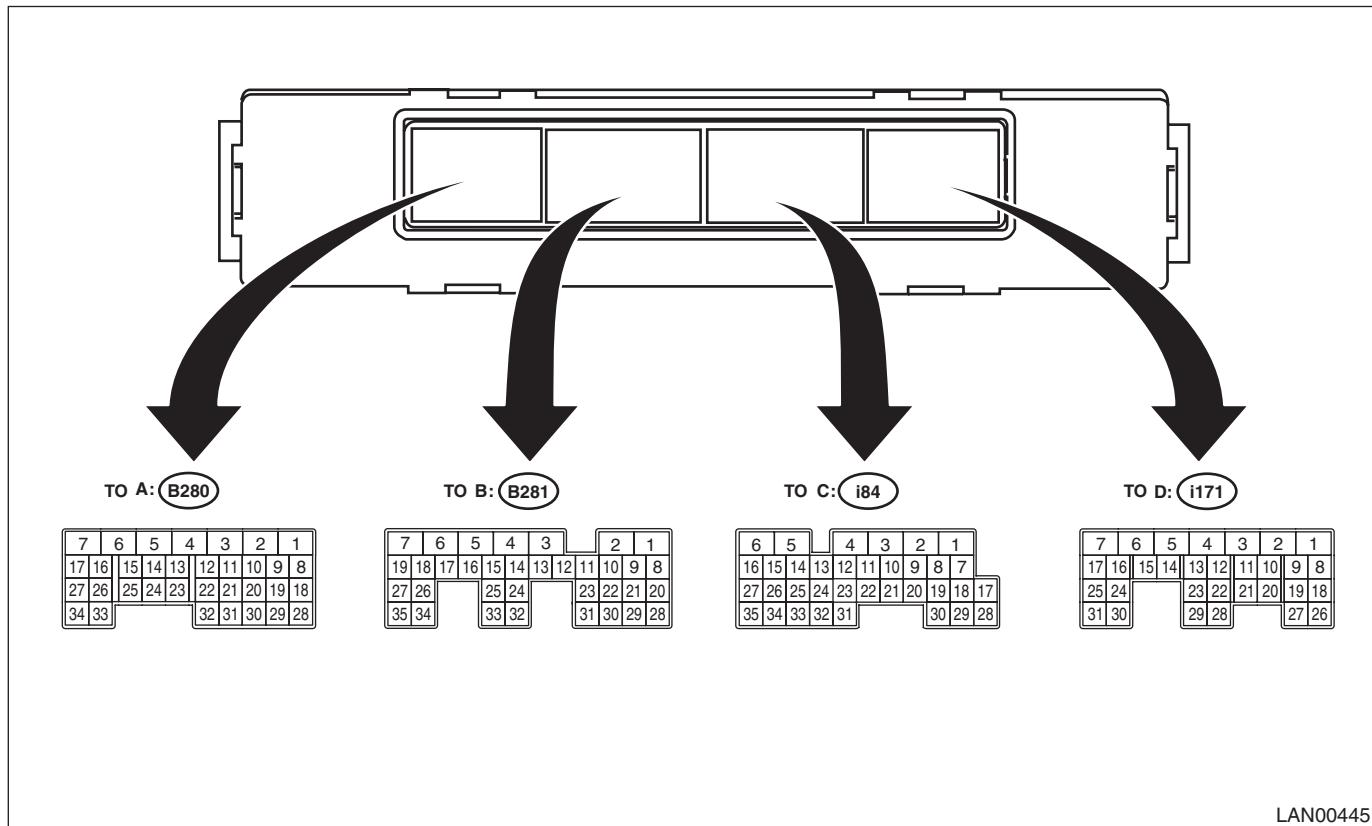


5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



LAN00445

Description	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Ignition power supply (rear wiper)	A5 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 10 — 13 V	Ignition switch OFF \rightarrow ON
Battery power supply (shift lock/ key lock)	B6 \longleftrightarrow chassis ground	10 — 13 V	Always
Battery power supply (door lock)	D1 \longleftrightarrow chassis ground	10 — 13 V	Always
Battery power supply (control)	C6 \longleftrightarrow chassis ground	10 — 13 V	Always
Ground	A1 \longleftrightarrow chassis ground	Less than 1.5 V	Always
	B31 \longleftrightarrow chassis ground		
	C1 \longleftrightarrow chassis ground		
	D29 \longleftrightarrow chassis ground		
Battery power supply (back-up)	B7 \longleftrightarrow chassis ground	10 — 13 V	Always
Ignition power supply	D17 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 10 — 13 V	Ignition switch OFF \rightarrow ON
ACC power supply	D25 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 10 — 13 V	Ignition switch OFF \rightarrow Accessory ON
Key-in switch	A4 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 10 — 13 V	Key inserted (models without keyless access)
ACC input			ACC ON (model with keyless access)
P range SW	B21 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	P range to other than P range
Stop light SW	A10 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 8 V or more	Stop light switch OFF \rightarrow ON
Door SW (driver's)	C14 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Front right door closed \rightarrow open
Door SW (passenger's)	C13 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Front left door closed \rightarrow open
Door SW (rear right)	C25 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Rear right door closed \rightarrow open

Control Module I/O Signal

BODY CONTROL SYSTEM (DIAGNOSTICS)

Description	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Door SW (rear left)	C24 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Rear left door closed \rightarrow open
Accessory connector	B30 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Rear gate/trunk closed \rightarrow open
Rear gate SW/trunk SW	C33 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Rear gate/trunk closed \rightarrow open
Opener SW (trunk/rear gate)	C10 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Rear gate/trunk opener switch ON
Manual switch (LOCK)	C9 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Door lock switch ON
Manual switch (UNLOCK)	C20 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Door unlock switch ON
Door lock status switch (driver's)	C12	Less than 1 Ω	Door in UNLOCK status
Door lock status switch (passenger's)	C23	Less than 1 Ω	Door in UNLOCK status
Door lock status switch (driver's)	C12 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Door in UNLOCK status
Door lock status switch (passenger's)	C23 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Door in UNLOCK status
Lighting AUTO	B16 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at AUTO position
Lighting II	A34 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at II position
	B34 \longleftrightarrow chassis ground		
Lighting I	B17 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at I position
Dimmer passing	B25 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at passing position
Dimmer Hi beam	B15 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at Hi beam position
Front fog light SW	B26 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Front fog light switch ON
TPMS	C34	Less than 1 Ω	At answer-back of transmitter registration
Illumination sensor power supply	A9 \longleftrightarrow A29	Less than 1.5 V \rightarrow 8 V or more	Ignition switch OFF \rightarrow ON
Illumination sensor signal	A19	47 — 1,200 Hz	When AUTO
Ground (illumination sensor)	A29 \longleftrightarrow chassis ground	Less than 1.5 V	Always
Rear wiper SW ON	A12 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at ON position
Rear wiper SW INT	A22 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at INT position
Rear washer SW	A32 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at ON position
Illumination SW (Vi1)	D12 \longleftrightarrow chassis ground	Approx. 5 V	While clearance light illuminates
Illumination SW (Vi2)	D22 \longleftrightarrow chassis ground	0.3 — 4.5 V	
Illumination SW (Vi3)	D28 \longleftrightarrow chassis ground	Less than 1.5 V	
Bright SW	C21 \longleftrightarrow chassis ground	8 V or more \rightarrow less than 1.5 V	Switch at ON position
Reverse SW (MT)	B22 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 8 V or more	Reverse SW ON
Fuel level sensor	C17 \longleftrightarrow chassis ground	15.4 — 416 Ω	Always
Seat belt SW (driver's)	C30 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 8 V or more	Buckle removal \rightarrow insert
Seat belt SW (passenger's)	C29 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 8 V or more	Buckle removal \rightarrow insert
Impact sensor	C28 \longleftrightarrow chassis ground	Less than 1.5 V \rightarrow 8 V or more	Apply an impact
Hi-speed CAN communication circuit 1 (Hi)	B20	Serial communication	Except for sleep status*1
Hi-speed CAN communication circuit 1 (Lo)	B28		
Hi-speed CAN communication circuit 2 (Hi)	C27	Serial communication	Except for sleep status*1
Hi-speed CAN communication circuit 2 (Lo)	C35		
KAC CAN circuit (Hi)	A11	Serial communication	Except for sleep status*1
KAC CAN circuit (Lo)	A21		
K-line	B9	Serial communication	Select Monitor communication in progress
Audio/Navigation communication circuit	D21	Serial communication	

Control Module I/O Signal

BODY CONTROL SYSTEM (DIAGNOSTICS)

Description	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Keyless entry communication line	D11	Serial communication	
Immobilizer antenna	B1 \leftrightarrow chassis ground	-20 — 20 V	Communication with ignition key in progress
	B2 \leftrightarrow chassis ground	0 — 5 V	
Shift lock solenoid	B5 \leftrightarrow chassis ground	Less than 1.5 V \rightarrow 8 V or more	When shift lock is operating (AT models)
Key lock solenoid (LOCK)	B4 \leftrightarrow B3	Less than 1.5 V \rightarrow 8 V or more	LOCK status ON (AT models without keyless access)*2
Key lock solenoid (UNLOCK)	B3 \leftrightarrow B4		UNLOCK status ON (AT models without keyless access)*2
Rear wiper ON output	A7 \leftrightarrow chassis ground	Less than 0.5 V \rightarrow 8 V or more	Rear wiper operation in progress
Rear wiper return output	A6 \leftrightarrow chassis ground	Less than 0.5 V \rightarrow 8 V or more	Wiper reversed operation in progress
Door LOCK output	D2 \leftrightarrow chassis ground	Less than 0.5 V \rightarrow 8 V or more	When LOCK signal is output
Door UNLOCK output	D3 \leftrightarrow chassis ground	Less than 0.5 V \rightarrow 8 V or more	When UNLOCK signal is output
Rear gate/trunk UNLOCK output	D7 \leftrightarrow chassis ground	Less than 0.5 V \rightarrow 8 V or more	When UNLOCK signal is output
Lighting relay power supply	A3 \leftrightarrow chassis ground	10 — 13 V	ACC or key-in SW ON
	B19 \leftrightarrow chassis ground	10 — 13 V	ACC or key-in SW ON
Lighting relay Hi output	A17 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Dimmer SW at Hi position
Lighting relay Lo output	B35 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Dimmer SW at Lo position
Lighting Lo relay output 2	A27 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Lighting II SW at ON position
Lighting relay I output	A16 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Lighting I SW at ON position
Front fog light output	A15 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Front fog light SW at ON position
DRL cancel output	D19 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Headlight switch ON or Hi beam ON, passing switch ON
Illumination output	B8	Pulse output	Illumination ON
	C16	Pulse output	Illumination ON
Key ring illumination	A25	Pulse output	Illumination ON
Room light output	C4	Pulse output	Room light ON (doors interlocked)
Map light output	D8	Pulse output	Map light ON (keyless answer-back, etc.)
Luggage/trunk light output	C3	Pulse output	Luggage/trunk at open state
Rear defogger relay output	A26 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Rear defogger SW ON
Wiper deicer relay output	D9 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	Wiper deicer SW ON
Turn/hazard output	D18 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	When answer-back is output
Security horn output	A24 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	When security is operating
Security light	D26	Pulse control	When security light is illuminating
Answer-back buzzer output	A20 \leftrightarrow chassis ground	8 V or more \rightarrow less than 1.0 V	When answer-back operates
Immobilizer communication	A31	Serial communication	(Model without keyless access)

*1: For CAN sleep state, hold on for approx. one minute with ignition OFF and the doors, trunk, and rear gate all closed.

*2: Use an oscilloscope for measurement due to short output time.