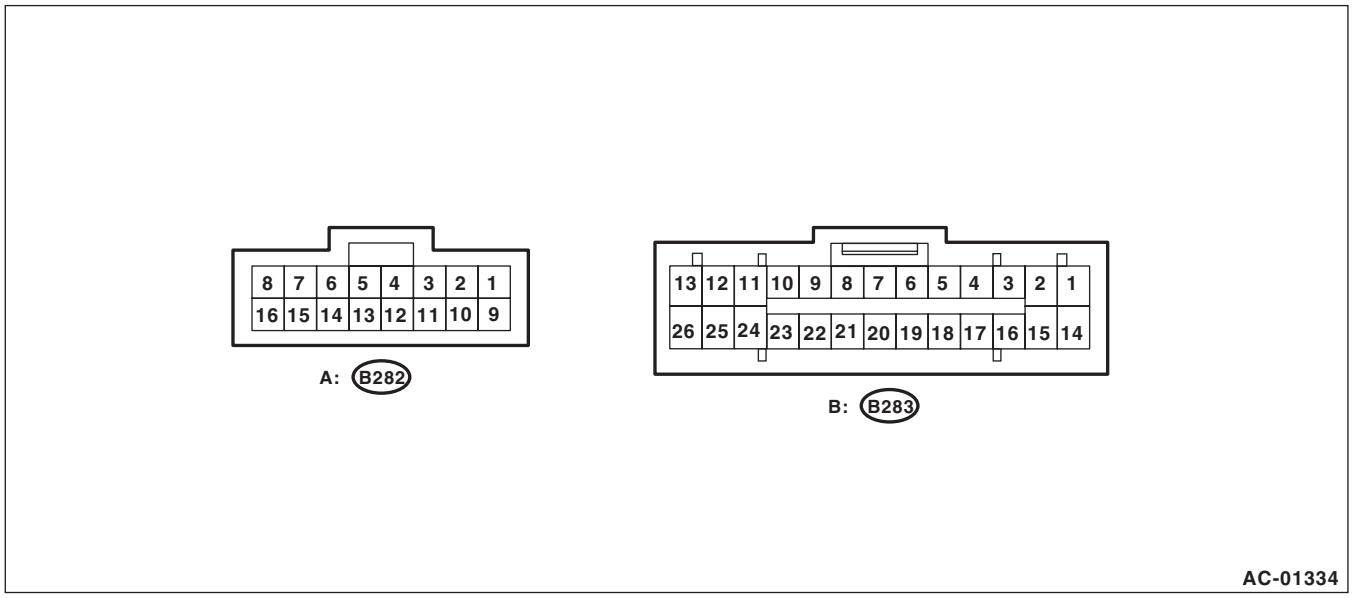
4. Auto A/C Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



Terminal No.	Description	Measuring condition	Specification
A1	Battery power supply	Ignition switch: OFF	Battery voltage
A2	ACC power supply	Ignition switch: ACC	Battery voltage
A3	Mode door actuator position signal	Mode door: FACE position	4 V
		Mode door: DEF position	1 V
A4	Passenger's side air mix door actuator position signal	Air mix door: Maximum cool position	4 V
		Air mix door: Maximum hot position	1 V
A5	In-vehicle sensor	Ignition switch: ON	Less than 5 V
A6	Sunload sensor	Ignition switch: ON, With Sunload (No sunload: 0.8 V)	3 V
A7	Driver's seat heater temperature sensor	Ignition switch: ON	Less than 5 V
A8	Sensor power supply	Ignition switch: ON	5 V
A9	Ignition power supply	Ignition switch: ON	Battery voltage
A10	A/C cut signal	Ignition switch: ON	Battery voltage
		When pressure SW is operating	0 V
A12	Driver's side air mix door actuator position signal	Air mix door: Maximum cool position	4 V
		Air mix door: Maximum hot position	1 V
A13	Evaporator sensor	Ignition switch: ON	Less than 5 V
A14	Passenger's seat heater temperature sensor	Ignition switch: ON	Less than 5 V
A15	Sensor ground	Continuity to chassis ground	0 Ω
A16	Ground	Continuity to chassis ground	0 Ω
B1	CAN communication (HI side)	Ignition switch: ON	Pulse signal *1
B2	Blower motor voltage feedback signal	Blower level: Manual Lo	7.6 V
		Blower level: Manual M3	3.7 V
		Blower level: Manual Hi	Less than 1 V
B3	Blower motor power MOS gate control signal	Ignition switch : ON, Blower switch : ON	1 V — battery voltage
B6	Magnet clutch signal	Temperature setting: Maximum COOL, MODE: Manual DEF, A/C: ON	Battery voltage

Terminal No.	Description	Measuring condition	Specification
B7	Mode door actuator power supply (FACE)	When switching mode door from DEF → FACE	Battery voltage — 2.5 V or more *2
		When switching mode door from FACE → DEF	Less than 1 V *2
B8	Passenger's side air mix door actuator power supply (COOL side)	When switching air mix door from HOT → COOL	Battery voltage — 2.5 V or more *2
		When switching air mix door from COOL → HOT	Less than 1 V *2
B9	Driver's side air mix door actuator power supply (COOL side)	When switching air mix door from HOT → COOL	Battery voltage — 2.5 V or more *2
		When switching air mix door from COOL → HOT	Less than 1 V *2
B10	Inlet opening motor (FRESH side)	FRESH	Less than 1 V
		RECIRC	Battery voltage
B11	Driver's seat heater	Driver's seat heater: ON (3 stages)	Less than 1 V *3
B13	Passengers seat heater	Passenger's seat heater: ON (3 stages)	Less than 1 V *3
B14	CAN communication (Lo side)	Ignition switch: ON	Pulse signal *1
B16	Blower motor relay	Blower motor: Stopped	Battery voltage
		Blower motor: Operated	Less than 1 V
B18	Panel communication (transmitter side)	Ignition switch: ON	Pulse signal *1
B19	Panel communication (receiver side)	Ignition switch: ON	Pulse signal *1
B20	Mode door (DEF) side	Mode: DEF ⇒ FACE	Less than 1 V
		Mode: FACE ⇒ DEF	Battery voltage — 2.5 V or more
B21	Passenger's side air mix door	Air mix: Maximum HOT ⇒ maximum COOL	Less than 1 V
		Air mix: Maximum COOL ⇒ maximum HOT	Battery voltage — 2.5 V or more
B22	Driver's side air mix door	Air mix: Maximum HOT ⇒ maximum COOL	Less than 1 V
		Air mix: Maximum COOL ⇒ maximum HOT	Battery voltage — 2.5 V or more
B23	Inlet opening motor (RECIRC side)	RECIRC	Less than 1 V
		FRESH	Battery voltage
B24	Driver's seat heater ground	Continuity to chassis ground	0 Ω
B26	Passenger's seat heater ground	Continuity to chassis ground	0 Ω

*1: Unable to measure the voltage for digital signal.
*2: Voltage immediately after switching FACE ⇔ DEF or maximum COOL ⇔ maximum HOT (when the damper door is operating.) for mode door and air mix door
*3: Voltage immediately after the operation for the seat heater (Always measure the voltage immediately after turning the seat heater to ON because once reached to the target value, it switches to ON/OFF action.)

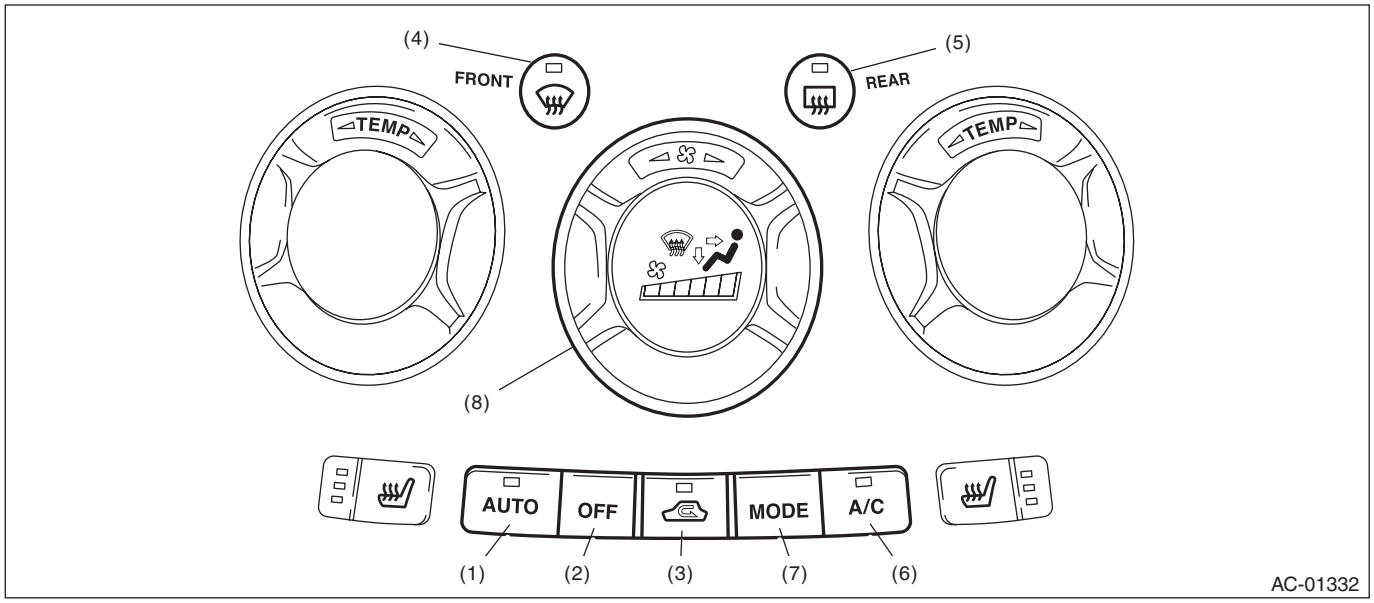
B: WIRING DIAGRAM

1. AIR CONDITIONER AUTO A/C MODEL

<Ref. to WI-64, WIRING DIAGRAM, Air Conditioning System.>

5. Diagnostic Chart for Self-diagnosis

A: OPERATION



(1) AUTO switch
(2) OFF switch
(3) FRESH/RECIRC switch
(4) Defroster switch
(5) Rear window defogger switch
(6) A/C switch
(7) Air flow control switch
(8) FAN switch

NOTE:
For A/C system self-diagnosis, there is one that checks the control panel, and the other that checks the whole control system (sensor, actuator, blower motor, etc.). Perform the self-diagnosis for control panel first, and then perform the self-diagnosis for control system.