

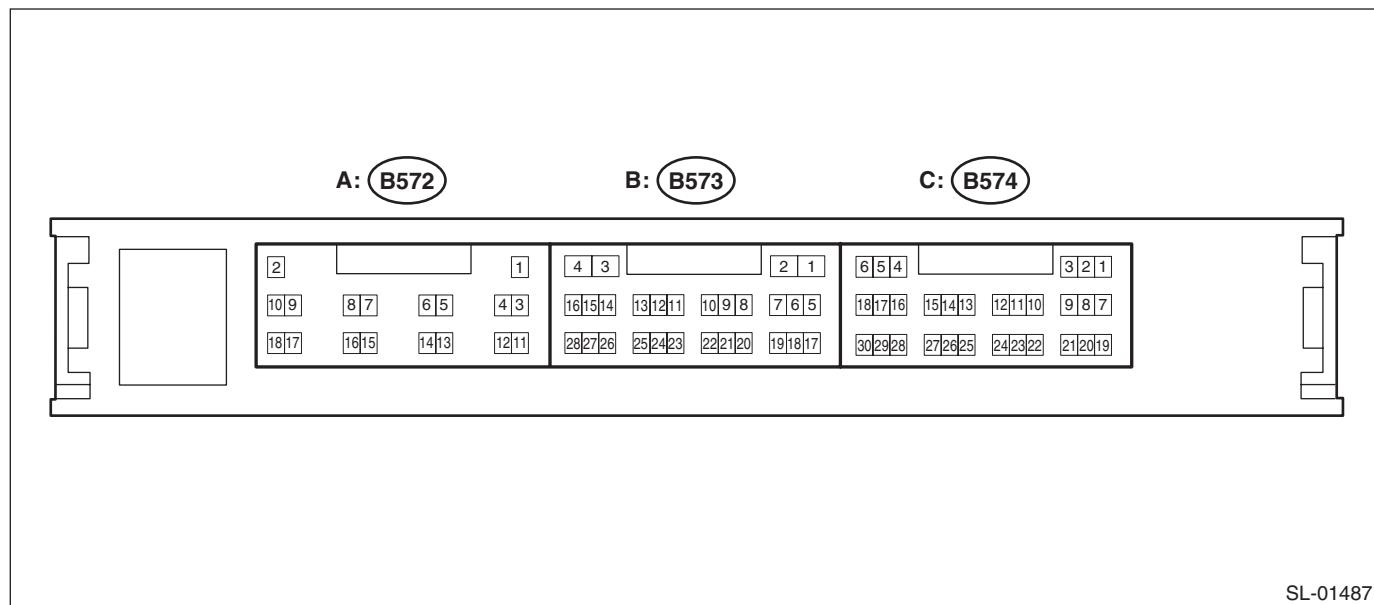
Control Module I/O Signal

KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

1. KEYLESS ACCESS CM



Disconnect the control module connector (B572) before checking the following items.

NOTE:

If the measured value is out of standard, it is possible that the vehicle has a fault.

Terminal No.	Item	Measuring condition	Standard
(B572) No. 2 (+B) \leftrightarrow (B572) No. 11 (E)	Voltage	Always	9.5 — 16 V
(B572) No. 11 (E) \leftrightarrow Chassis ground	Resistance	Always	Less than 1 Ω

Disconnect the control module connectors (B574) and (B572) before checking the following items.

NOTE:

If the measured value is out of standard, it is possible that the vehicle has a fault.

Terminal No.	Item	Measuring condition	Standard
(B574) No. 4 (ACCD) \leftrightarrow Chassis ground	Resistance	Always (20°C)	152.61 — 216.5 Ω
(B572) No. 9 (IG2D) \leftrightarrow Chassis ground	Resistance	Always (20°C)	74.15 — 460.88 Ω
(B574) No. 6 (IG1D) \leftrightarrow Chassis ground	Resistance	Always (20°C)	50.87 — 72.17 Ω
(B572) No. 18 (STP1) \leftrightarrow Chassis ground (AT model only)	Voltage	Brake pedal depressed \rightarrow released	11 — 14 V \rightarrow 1 V or less
(B574) No. 25 (P) \leftrightarrow Chassis ground (AT model only)	Resistance	Except for shift positions P \rightarrow Shift position P	40 k Ω or more \rightarrow 200 Ω or less
(B574) No. 27 (SPD) \leftrightarrow Chassis ground	Resistance	Always	30 k Ω or more
(B574) No. 28 (SSW1) \leftrightarrow Chassis ground	Resistance	Push button ignition switch pressed \rightarrow released	Less than 1 Ω \rightarrow 10 k Ω or more
(B574) No. 29 (SLR+) \leftrightarrow Chassis ground	Resistance	Always	10 k Ω or more
(B574) No. 30 (SSW2) \leftrightarrow Chassis ground	Resistance	Push button ignition switch pressed \rightarrow released	Less than 1 Ω \rightarrow 10 k Ω or more
(B574) No. 17 (LIN) \leftrightarrow Chassis ground	Continuity	Always	Continuity does not exist
(B574) No. 14 (CANH) \leftrightarrow Chassis ground	Pulse	ACC ON or IGN ON or power OFF, and open/close the door	Pulse generation
(B574) No. 15 (CANL) \leftrightarrow Chassis ground	Pulse	ACC ON or IGN ON or power OFF, and open/close the door	Pulse generation

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Connect the control module connector before checking the following items.

NOTE:

If the measured value is out of standard, it is possible that the keyless access CM has a fault.

Terminal No.	Item	Measuring condition	Standard
(B574) No. 1 (VC5) \longleftrightarrow (B574) No. 24 (AGND)	Voltage	30 seconds or more have passed after the door was opened or closed with IG OFF and the brake pedal (AT model) or clutch pedal (MT model) released.	1 V or less
	Waveform	Within 30 seconds after the push button ignition switch is pressed with IG OFF and access key not in the passenger room.	Waveform 1
(B574) No. 2 (CG5B) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, ACC and IG OFF, access key not in passenger room, touch sensor (lock) OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B574) No. 3 (CLG5) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, ACC and IG OFF, access key not in passenger room, touch sensor (lock) OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B574) No. 4 (ACCD) \longleftrightarrow (B572) No. 11 (E)	Voltage	IG OFF \rightarrow ACC ON	1 V or less \rightarrow 9 — 14 V
(B574) No. 6 (IG1D) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC ON \rightarrow IG ON	1 V or less \rightarrow 9 — 14 V
(B574) No. 7 (CODE) \longleftrightarrow (B574) No. 24 (AGND)	Voltage	30 seconds or more have passed after the door was opened or closed with IG OFF and the brake pedal (AT model) or clutch pedal (MT model) released.	1 V or less
	Waveform	Turn the ignition switch to OFF and with the access key near the push button ignition switch, press the push button ignition switch*1	Waveform 2
(B574) No. 9 (TXCT) \longleftrightarrow (B574) No. 24 (AGND)	Voltage	30 seconds or more have passed after the door was opened or closed with IG OFF and the brake pedal (AT model) or clutch pedal (MT model) released.	1 V or less
	Waveform	Turn the ignition switch to OFF and with the access key near the push button ignition switch, press the push button ignition switch*1	Waveform 3
(B574) No. 10 (CG2B) \longleftrightarrow (B572) No. 11 (E)	Pulse	ACC and IG OFF, all doors closed, all doors locked by lock operation with wireless remote control, access key not in passenger room	No pulse output \rightarrow Pulse output detected
(B574) No. 11 (CLG2) \longleftrightarrow (B572) No. 11 (E)	Pulse	ACC and IG OFF, all doors closed, all doors locked by lock operation with wireless remote control, access key not in passenger room	No pulse output \rightarrow Pulse output detected
(B574) No. 12 (CLG1) \longleftrightarrow (B572) No. 11 (E)	Pulse	ACC and IG OFF, all doors closed, all doors locked by lock operation with wireless remote control, access key not in passenger room	No pulse output \rightarrow Pulse output detected
(B574) No. 13 (CG1B) \longleftrightarrow (B572) No. 11 (E)	Pulse	ACC and IG OFF, all doors closed, all doors locked by lock operation with wireless remote control, access key not in passenger room	No pulse output \rightarrow Pulse output detected
(B574) No. 19 (POS1) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF \rightarrow ACC or IG ON	9 — 14 V \rightarrow less than 2V
(B574) No. 21 (POS2) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF \rightarrow ACC or IG ON	9 — 14 V \rightarrow less than 2V
(B574) No. 24 (AGND) \longleftrightarrow Chassis ground	Resistance	Always	Less than 1 Ω
(B574) No. 25 (P) \longleftrightarrow (B572) No. 11 (E) (AT model only)	Voltage	Except for shift positions P \rightarrow Shift position P	9 — 14 V or more \rightarrow 1.5 V or less

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Terminal No.	Item	Measuring condition	Standard
(B574) No. 26 (SLP) \longleftrightarrow (B572) No. 11 (E)	Voltage	With ignition switch OFF and shift position P, Steering lock \rightarrow Steering unlock	11 — 14 V \rightarrow 1.2 V or less
(B574) No. 27 (SPD) \longleftrightarrow Chassis ground	Pulse	Driving at approx. 5 km/h	Pulse generation according to vehicle speed (approx. 5 km/h: 3.54 Hz)
(B574) No. 28 (SSW1) \longleftrightarrow (B572) No. 11 (E)	Voltage	Push button ignition switch released \rightarrow pressed	11 — 14 V \rightarrow 1 V or less
(B574) No. 29 (SLR+) \longleftrightarrow (B572) No. 11 (E)	Voltage	When the following conditions are met, the doors are closed \rightarrow opened, and steering lock motor is driven <ul style="list-style-type: none"> • Steering lock is unlocked • IG OFF • Shift position P 	11 — 14 V (Steering lock motor is stopped) \rightarrow 1 V or less (Steering lock motor is driven)
(B574) No. 30 (SSW2) \longleftrightarrow (B572) No. 11 (E)	Voltage	Push button ignition switch released \rightarrow pressed	11 — 14 V \rightarrow 1 V or less
(B573) No. 1 (CG8B) \longleftrightarrow (B572) No. 11 (E)	Pulse	ACC and IG OFF, all doors closed, trunk or rear gate opener button OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B573) No. 2 (CLG8) \longleftrightarrow (B572) No. 11 (E)	Pulse	ACC and IG OFF, all doors closed, trunk or rear gate opener button OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B573) No. 5 (RCO) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF, access key is locked or unlock switch OFF \rightarrow ON	1 V or less \rightarrow 4.5 — 5.5 V
(B573) No. 8 (CG7B) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, ACC and IG OFF, access key not in passenger room, touch sensor (lock) OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B573) No. 9 (CLG7) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, ACC and IG OFF, access key not in passenger room, touch sensor (lock) OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B573) No. 19 (RSSI) \longleftrightarrow (B572) No. 11 (E)	Voltage	All doors closed, all doors locked, access key is locked or unlock switch OFF \rightarrow ON	11 — 14 V \rightarrow 2 V or less
(B573) No. 27 (TSW5) \longleftrightarrow (B572) No. 11 (E)	Pulse/voltage	ACC and IG OFF, all doors locked, trunk or rear gate lock button OFF \rightarrow ON	9 V or more \rightarrow less than 2 V
(B572) No. 9 (IG2D) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC ON \rightarrow IG ON	1 V or less \rightarrow 9 — 14 V
(B572) No. 13 (EGIO) \longleftrightarrow (B572) No. 11 (E)	Voltage/pulse	IG ON	11 — 14 V \rightarrow pulse generates temporarily (waveform 4)
(B574) No. 8 (TSW2) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF, all doors closed, all doors locked, access key carried, passenger's seat touch sensor (lock) OFF \rightarrow ON	9 V or more \rightarrow less than 2 V (\rightarrow 9 V or more)
(B574) No. 18 (TSW1) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF, all doors closed, all doors locked, access key carried, driver's seat touch sensor (lock) OFF \rightarrow ON	9 V or more \rightarrow less than 2 V (\rightarrow 9 V or more)
(B574) No. 23 (SEN2) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF, all doors closed, all doors locked, access key carried, passenger's seat touch sensor (unlock) OFF \rightarrow ON	9 V or more \rightarrow less than 2 V (\rightarrow 9 V or more)
(B574) No. 22 (SEN1) \longleftrightarrow (B572) No. 11 (E)	Voltage	ACC and IG OFF, all doors closed, all doors locked, access key carried, driver's seat touch sensor (unlock) OFF \rightarrow ON	9 V or more \rightarrow less than 2 V (\rightarrow 9 V or more)

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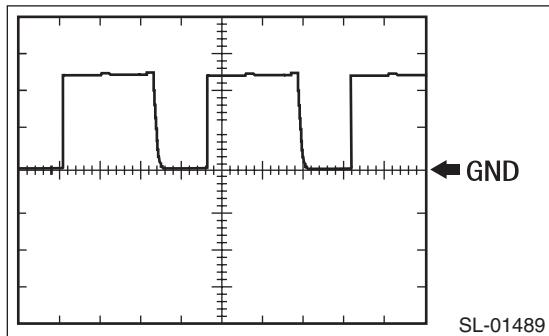
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Terminal No.	Item	Measuring condition	Standard
(B574) No. 16 (SWIL) \longleftrightarrow (B572) No. 11 (E)	Voltage	When illumination of start switch goes off, the headlight is OFF \rightarrow ON, after setting the illumination control to MAX	Less than 2 V \rightarrow 9 V or more
(B574) No. 17 (TACH) \longleftrightarrow Chassis ground	Waveform	While engine idling	Pulse generation (waveform 5)
(B573) No. 28 (ACCR) \longleftrightarrow (B572) No. 11 (E)	Voltage	When brake pedal (AT model) or clutch pedal (MT model) depressed, push button ignition switch pressed (while cranking) \rightarrow Except when cranking	Less than 2 V \rightarrow 9 V or more
(B572) No. 5 (N-SW) \longleftrightarrow (B572) No. 11 (E) (AT model only)	Voltage	Shift position N \rightarrow other than P or N	Less than 2 V \rightarrow 9 V or more
(B573) No. 10 (CG6B) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, ACC and IG OFF, access key not in passenger room, touch sensor (lock) OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B573) No. 11 (CLG6) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, ACC and IG OFF, access key not in passenger room, touch sensor (lock) OFF \rightarrow ON	No pulse output \rightarrow Pulse output detected
(B572) No. 17 (RDA) \longleftrightarrow (B572) No. 11 (E)	Pulse	All doors closed, all doors locked, access key is locked or unlock switch OFF \rightarrow ON	2 V or less \rightarrow 11 — 14 V \rightarrow 2 V or less
(B572) No. 7 (STSW) \longleftrightarrow (B572) No. 11 (E)	Voltage	Shift lever is in position P or position N and access key is in passenger room. While depressing the brake pedal (AT model) or clutch pedal (MT model), press the push button ignition switch. (Engine start)	Less than 2 V \rightarrow 9 V or more
(B572) No. 3 (INDS) \longleftrightarrow (B572) No. 11 (E)	Voltage	Depress the brake pedal (AT model) or clutch pedal (MT model).	9 V or more
(B574) No. 18 (INDW) \longleftrightarrow (B572) No. 11 (E)	Voltage	With ACC ON or IG ON, brake pedal (AT model) or clutch pedal (MT model) not depressed	9 V or more

NOTE:

*1: Remove the access key battery before checking.

1. Waveform 1

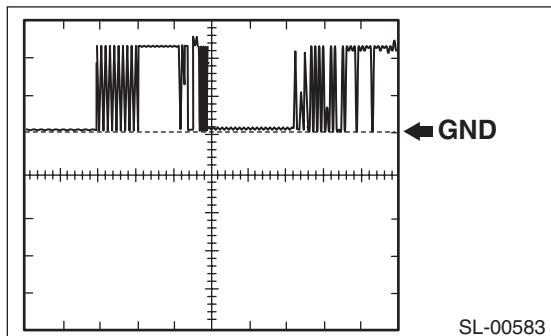


Item	Content
Measured terminal	(B574) No. 1 (VC5) \longleftrightarrow (B574) No. 24 (AGND)
Equipment setting	2 V/DIV, 200 ms/DIV
Measuring condition	Within 30 seconds after the push button ignition switch is pressed with IG OFF and access key not in the passenger room.

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2. Waveform 2

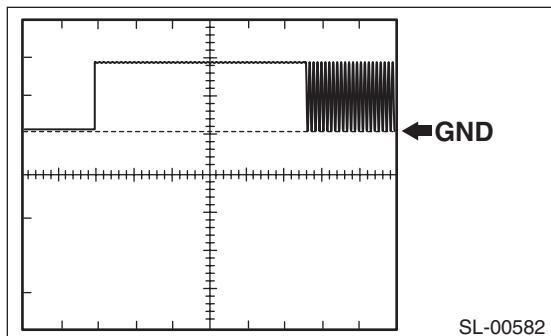


Item	Content
Measured terminal	(B574) No. 7 (CODE) ↔ (B574) No. 24 (AGND)
Equipment setting	2 V/DIV, 20 ms/DIV
Measuring condition	Turn the ignition switch to OFF and with the access key near the push button ignition switch, press the push button ignition switch. *1

NOTE:

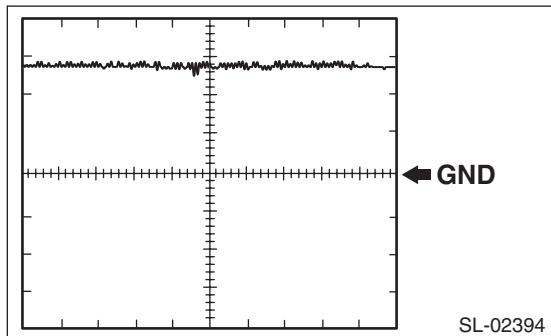
*1: Remove the access key battery before checking.

3. Waveform 3



Item	Content
Measured terminal	(B574) No. 9 (TXCT) ↔ (B574) No. 24 (AGND)
Equipment setting	2 V/DIV, 20 ms/DIV
Measuring condition	Within 30 seconds after the push button ignition switch is pressed with IG OFF and access key not in the passenger room.

4. Waveform 4

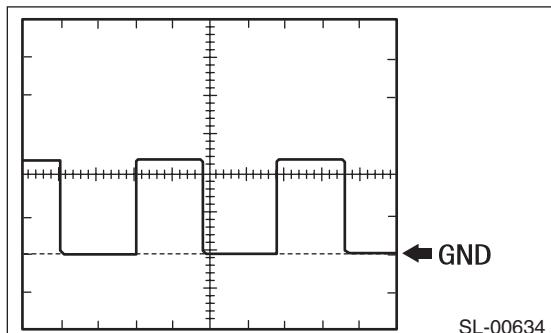


Item	Content
Measured terminal	(B572) No. 13 (EGIO) ↔ (B572) No. 11 (E)
Equipment setting	5 V/DIV, 100 ms/DIV
Measuring condition	IG ON

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5. Waveform 5

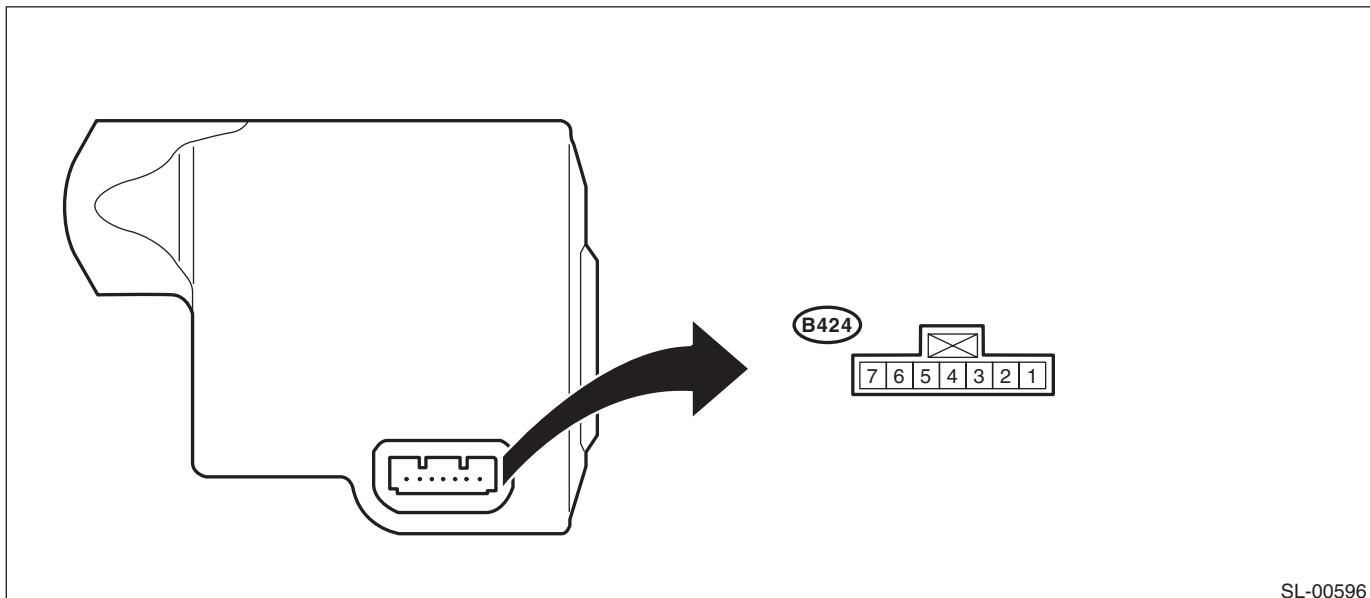


Item	Content
Equipment setting	5 V/DIV, 100 ms/DIV

2. BODY INTEGRATED UNIT

Refer to the BODY CONTROL SYSTEM (DIAGNOSTICS) for the I/O Signal of the body integrated unit. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

3. STEERING LOCK CM



NOTE:

Perform the following check from the back side of the connector, with the connector of the control module connected.

If the measured value is out of standard, it is possible that the vehicle has a fault.

Terminal No.	Standard	Measuring condition	Item
1 (GND) \leftrightarrow Chassis ground	Continuity exists	Always	Continuity
—	—	—	—
3 (SLR+) \leftrightarrow Chassis ground	10 — 14 V \rightarrow 1 V or less	Motor not operating \rightarrow Motor operating	Voltage
4 (SLP) \leftrightarrow Chassis ground	10 — 14 V \rightarrow 1 V or less	Lock \rightarrow Unlock	Voltage
5 (LIN)	Input/output signal	—	—
6 (IG2) \leftrightarrow Chassis ground	10 — 14 V	Ignition ON	Voltage
7 (B) \leftrightarrow Chassis ground	10 — 14 V	Always	Voltage

B: WIRING DIAGRAM

<Ref. to WI-279, WIRING DIAGRAM, Keyless Access System.>