INDEX

DIAGNOSIS

CCCS

0000-00

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1. CCCS

Code	Malfunction	Help
0 X 01	Driver door lock knob does not lock	- Check the driver side door actuator - Check the sensor values • Driver side door open switch (STICS sensor value: No. 5) • Door lock switch (STICS sensor value: No. 21) • Driver door lock switch (STICS sensor value: No. 37) • Door lock switches other than the driver side door (STICS sensor value: No. 38) • Door lock (DICS-Main: No. 30) • Key lock (DICS-Main: No. 32) - Check the driver side door wires and connectors
0 X 02	Passenger door lock knob does not lock	- Check the passenger side door actuator - Check the sensor values • Passenger side door open switch (STICS sensor value: No. 6) • Door lock switch (STICS sensor value: No. 21) • Door lock switches other than the driver side door (STICS sensor value: No. 38) • Door lock (DICS-Sub: No. 3) • Key lock (DICS-Sub: No. 5) - Check the passenger side door wires and connectors
0 X 03	Rear door lock knob does not lock	- When one of the two rear seat door knobs is defective - Check the rear seat door actuator - Check the sensor values • Rear door knob switch (STICS sensor value: No. 7) • Rear right door open switch (STICS sensor value: No. 8) • Door lock switch (STICS sensor value: No. 21) • Rear door open switch (STICS sensor value: No. 23) • Door lock switches other than the driver side door (STICS sensor value: No. 38) • Door lock switch (DICS-Main sensor value: No. 32) • Key lock (DICS-Main sensor value: No. 32) • Door lock (DICS-Sub sensor value: No. 3) • Key lock (DICS-Sub sensor value: No. 5) - Check the rear door wires and connectors
0 X 04	Defective tail lamp auto off function (Battery save function)	- Check the tail lamp relay connector - Check the sensor values • Tail lamp switch (STICS sensor value: No. 3) • Tail lamp signal input status (STICS sensor value: No. 20) • Tail lamp relay (STICS sensor value: No. 47) - Check the tail lamp wires and connectors - The defective code of signals coming from ABS/ESP which senses the vehicle speed incorrectly due to the exterior noises - Current vehicle speed (STICS sensor value: No. 58)
0 X 05	Incorrect indication of the vehicle speed (Detects as over 300 km/h)	- Check the speed sensor connector - Check the other units (ABS) that use speed signal - Does not receive the vehicle speed signal from STICS when the ignition switch is turned off

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0 X 06	Vehicle speed indicates over 0 km/h when the ignition switch is turned off	- Current vehicle speed (STICS sensor value: No. 58) - Check the speed sensor connector - Check the other units (ABS) that use speed signal
0 X 07	Tail lamp turns OFF without any signals when the tail lamp switch is turned on	- Check the tail lamp relay connector - Check the sensor values • Tail lamp switch (STICS sensor value: No. 3) • Tail lamp signal input status (STICS sensor value: No. 20) • Tail lamp relay (STICS sensor value: No. 47)
0 X 08	IGN 2 SW is detected as OFF when IGN 1 SW is ON	- Check the tail lamp wires and connectors - Check the sensor values • Key reminder switch (STICS sensor value: No. 13) • Ignition 1 switch (STICS sensor value: No. 17) • Ignition 2 switch (STICS sensor value: No. 18) • Ignition 1 switch (DICS-Main sensor value: No. 60) • Ignition 2 switch (DICS-Main sensor value: No. 59) • Key reminder (DICS-Main sensor value: No. 62)
0 X 09	Driver side door lock knob does not unlock	- Check the driver side door actuator - Check the sensor values • Door open switch (STICS sensor value: No. 5) • Door unlock switch (STICS sensor value: No. 22) • All door unlock switches (STICS sensor value: No. 39) • Key unlock (Main-DICS: No. 31) - Check the driver side door wires and connectors
0 X 0A	Passenger side door lock knob does not unlock	- Check the passenger side door actuator - Check the sensor values • Passenger side door open switch (STICS sensor value: No. 6) • Door unlock switch (STICS sensor value: No.22) • All door unlock switches (STICS sensor value: No. 39) • Key unlock (DICS-Main: No. 31) • Key unlock (Main-DICS: No. 04) - Check the driver side door wires and connectors
0 X 0B	Rear door lock knob does not unlock	- When one of the two rear seat door knobs is defective - Check the rear seat door actuator - Check the sensor values • Rear door knob switch (STICS sensor value: No. 7) • Rear right door open switch (STICS sensor value: No. 8) • Door unlock switch (STICS sensor value: No. 22) • Rear door open switch (STICS sensor value: No. 23) • All door unlock switches (STICS sensor value: No. 39) • Key unlock (DICS-Main sensor value: No. 31) • Key unlock (DICS-Sub sensor value: No. 4) - Check the rear seat door wires and connectors

No.	Input/ Output	Sensor value item	Information				Help
1	Input	Reverse lever detection	Not detected	GND	Detected	12 V	1. Sensor signal detects when the reverse gear signal in A/T equipped vehicle 2. Ground level when not operating 3. Battery level when operating 4. This signal is used when outside rearview mirror in DICS Main/Sub is linked with 5°C. It is linked only when the outside rearview mirror selection switch in DICS Main is not in center position.
2	Input	Driver side seatbelt switch	Unfasten	GND	Fastened	12 V	1. Switch signal checks the driver side seatbelt has been fastened 2. Ground level when unfastened 3. Battery level when fastened
3	Input	Tail lamp switch	OFF	12 V	ON	GND	1. Switch that turns ON or OFF tail lamp switch 2. Battery level when tail lamp switch is OFF 3. Ground level when tail lamp switch is ON
4	Input	Trunk lid open switch	Close	GND	Open	12 V	1. When equipped with PTL, no input data is transmitted from trunk lid open switch to STICS 2. Battery level when open 3. Ground level when close
5	Input	Front left door open switch	Close	12 V	Open	GND	1. Ground level when door is open 2. Battery level when door is close
6	Input	Front right door open switch	Close	12 V	Open	GND	1. Ground level when door is open 2. Battery level when door is close
7	Input	Rear door knob switch	Open	GND	Close	12 V	1. Operating conditions • When the central door lock and unlock function is in operation • When the doors are locked by the driver's door lock knob • When receiving signal from DICS via CAN communication in auto door lock/unlock operation at vehicle speed of 50 km/h. 2. Ground level when rear door knob is open 3. Battery level when rear door knob is close
8	Input	Rear right door open switch	Close	12 V	Open	GND	1. Ground level when door is open 2. Battery level when door is close
9	Input	Parking brake switch	Not operating	12 V	Operating	GND	1. Switch detects the parking brake engagement 2. Ground level when parking brake is engaged 3. Battery level when not operating
10	Input	Auto windshield wiper switch	OFF	12 V	ON	GND	1. Auto windshields wiper switch. No inputs to STICS when the vehicle is equipped with the rain sensor 2. Ground level when ON 3. Battery level when OFF
11	Input	Hood open switch	Close	12 V	Open	GND	1. Hood open detection switch 2. Ground level when open 3. Battery level when close

No.	Input/ Output	Sensor value item	Information				Help
12	Input	Trunk unlock switch	Not operating	GND	Operating	12 V	1. Switch detects the trunk lid unlock from the glove compartment • With the power trunk: Communication between PTL and CAN • Without the power trunk: Controlled by STICS 2. OFF: GND 3. ON: 12 V
13	Input	Key reminder switch	Not detected	GND	Detected	12 V	1. Key reminder detection switch 2. Battery level when operating 3. Ground level when not operating
14	Input	KEY ACC switch	Not detected	GND	Detected	12 V	1. Key accessory detection switch 2. Battery level when operating 3. Ground level when not operating
15	Input	Alternator switch	Not detected	GND	Detected	12 V	1. Alternator charging detection switch 2. Battery level when operating 3. Ground level when not operating
16	Input	P/N switch	Not detected	GND	Detected	12 V	1. Parking (P) or neutral (N) position of A/T detection switch 2. Battery level when operating 3. Ground level when not operating
17	Input	IGN1 switch	Not detected	GND	Detected	12 V	1. Ignition 1 detection switch 2. Battery level when operating 3. Ground level when not operating
18	Input	IGN2 switch	Not detected	GND	Detected	12 V	1. Ignition 2 detection switch 2. Battery level when operating 3. Ground level when not operating
19	Input	Windshield Wiper position switch	Not detected	12 V	Detected	GND	1. Windshield wiper position switch detects the wiper position when the operation stops. With the rain sensor equipped vehicle, no inputs are transmitted to STICS 2. Ground level when in the original position (operating) 3. Battery level when not operating 4. Cannot detect when equipped with the rain sensor
20	Input	Tail lamp operation signal	No input	12 V	Input	GND	1. Tail lamp operation signal (monitoring) is the function that detects the auto light operation of the tail lamp 2. With signal input 3. Without signal input
21	Input	Central door lock switch	Not detected	12 V	Detected	GND	1. Locking door knob switch (Can be detected when the lock switch is in operation) 2. Battery level during door unlock 3. Ground level during door lock
22	Input	Central door unlock switch	Not detected	12 V	Detected	GND	1. Unlocking door knob switch (Can be detected when the unlock switch is in operation) 2. Battery level during door lock 3. Ground level during door unlock

No.	Input/ Output	Sensor value item	Information				Help
23	Input	Rear left door open switch	Close	12 V	Open	GND	1. Rear left door open switch 2. Ground level when door is open 3. Battery level when door is close
24	Input	Heating grid switch	Not detected	12 V	Detected	GND	1. Heating grid operation switch (Blink once when the switch is operated) 2. Battery level when not operating (OFF) 3. Ground level when operating (ON)
25	-	-	-	-	-	-	-
26	Input	Washer switch	OFF	GND	ON	12 V	1. Windshield washer operating switch When equipped with the rain sensor,no inputs are transmitted to STICS 2. Battery level when operating (ON) 3. Ground level when not operating (OFF)
27	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-
32		Armed mode operation	Operating	GND	Not operating	12 V	1. Informs on armed mode 2. Electrical signals cannot be found 3. Battery level when operating 4. Ground level when not operating
33	Output	Rear left P/WDW UP relay	Not operating	12 V	Operating	GND	1. Relay for raising the rear left power window (The value changes when it operates within DICS-Main) 2. Ground level when operating 3. Battery level when not operating
34	Output	Rear left P/WDW DN relay	Not operating	12 V	Operating	GND	1. Relay for lowering the rear left power window (The value changes when it operates within DICS-Main) 2. Ground level when operating 3. Battery level when not operating
35	Output	Rear right P/WDW UP relay	Not operating	12 V	Operating	GND	1. Relay for raising the rear right power window (The value changes when it operates within DICS-Main) 2. Ground level when operating 3. Battery level when not operating
36	Output	Rear right P/WDW DN relay	Not operating	12 V	Operating	GND	1. Relay for lowering the rear right power window (The value changes when it operates within DICS-Main) 2. Ground level when operating 3. Battery level when not operating
37	Output	Driver side door lock relay	Not operating	12 V	Operating	GND	1. Driver side door knob lock relay (Locks all doors) The value appears only when the relay is connected 2. Ground level when operating 3. Battery level when not operating

No.	Input/ Output	Sensor value item	Information				Help
38	Output	All door lock other than driver side	Not operating	12 V	Operating	GND	1. All door knob lock relays other than the driver side The value appears only when the relay is connected 2. Ground level when operating 3. Battery level during normal
39	Output	Driver side door unlock relay	Not operating	12 V	Operating	GND	1. All door knob unlock relays (Cannot operate with driver side lock knob) The value appears only when the relay is connected 2. Ground level when operating 3. Battery level when not operating
40	Output	Windshield wiper relay	Not operating	GND	Operating	12 V	1. Windshield wiper operation switch When equipped with the rain sensor, no inputs are transmitted to STICS 2. Battery level when operating 3. Ground level when not operating
41	Output	Siren operation	Not operating	12 V	Operating	GND	1. Siren operation signal 2. Ground level when operating 3. Battery level when not operating
42	Output	Parking brake headlamp	Not operating	12 V	Operating	GND	1. Parking brake headlamp 2. Ground level when operating 3. Battery level when not operating
43	Output	Buzzer operation	Not operating	12 V	Operating	GND	1. Buzzer operation 2. Ground level when operating 3. Battery level when not operating
44	Output	Door open headlamp	Not operating	12 V	Operating	GND	1. Door open and driving warning 2. Ground level when operating 3. Battery level when not operating
45	Output	Heating grid relay	Not operating	12 V	Operating	GND	1. Heating grid operation relay drive output 2. Ground level when operating 3. Battery level when not operating
46	Output	Hazard warning relay	Operating	GND	Not operating	12 V	1. Heating grid operation relay drive output (Operates when in armed mode) 2. Ground level when operating 3. Battery level when not operating
47	Output	Tail lamp relay	Not operating	12 V	Operating	GND	1. Tail lamp relay drive output (Blink once when operating the tail lamp switch) 2. Ground level when operating 3. Battery level when not operating
48	-	-	-	-	-	-	-
49	Output	Front left foot lamp	Not operating		Operating		1.Driver side foot lamp (Operating value delays as per dimming time) 2. Pulse signal between the battery and ground when operating. → Refer to operation signal STICS specifications

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No.	Input/ Output	Sensor value item	Information				Help
50	Output	Front right foot lamp	Not operating		Operating		1. Passenger side foot lamp (Operating value delays as per dimming time) 2. Pulse signal between the battery and ground when operating. → Refer to operation signal STICS specifications
51	Output	Rear foot lamp	Not operating		Operating		1. Rear door foot lamp (Operating value delays as per dimming time) 2. Pulse signal between the battery and ground when operating. → Refer to operation signal STICS specifications
52	Output	Room lamp	Not operating		Operating		1. Room lamp (Operating value delays as per dimming time) 2. Pulse signal between the battery and ground when operating. → Refer to operation signal STICS specifications
53	Output	Rheostat lamp	Not operating		Operating		1. Brightness changes according to the rheostat volume when the tail lamp is turned on 2. Pulse signal between the battery and ground when operating. Pulse width may change by 20% ~ 100% (based on GND). → Refer to operation signal STICS specifications
54	Output	Fixed rate dimming control	Not operating		Operating		1. Fixed rate dimming light (Operating value changes periodically) 2. Pulse signal between the battery and ground when operating. Pulse width maintains 50% of the duty rate. → Refer to operation signal STICS specifications
55	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-
58	Output	Current vehicle speed	A km/h				
59	Output	Dimming control	A%				Controls the dimming by 20 ~ 100%
60	Output	Windshield wiper operating resistance stages	A kohn				1. Windshield wiper volume value: 0 ~ 10 kΩ → Value between 0 ~ Vcc For the rain sensor equipped vehicle, no inputs are transmitted to STICS
61	Output	Intermittent time	A · 10 ms				1. The unit time of the windshield wiper intermittent intervals For the rain sensor equipped vehicle, no inputs are transmitted to STICS

Code	Malfunction	Help
0 X 21	Power window limiter switch open	- The inputs have more than 30 edge hall pulses under the limiter switch off recognized as the upper position condition during the power window up or down outputs - Check the limiter switch - Check the sensor values • Power window anti-trap (DICS-Main: No. 50) • Power window limiter switch (DICS-Main: No. 56)
0 X 22	Defective power window motor hall sensor	- When the power window motor is under load, the auto-stop orders the power window to disengage auto-up function regardless ON or OFF inputs (no pulse signals) - No inputs of hall pulse exceeding 700 milliseconds during the power window motor down outputs under the limiter switch OFF (the upper position of the window) conditions or no inputs of pulse exceeding 100 milliseconds during the up outputs under the limit switch ON (the lowest position of the window) conditions. - Replace the power window motor
0 X 23	Inactive key door lock actuator	- Check the driver side door actuator - Check the sensor value • Key lock (DICS-Main: No. 32)
0 X 24	Inactive key door unlock actuator	- Check the driver side door actuator • Check the method of the actuator operation - Check the sensor value • Key unlock (DICS-Main: No. 31)
0 X 25	Memory switch input during no mirror UP or DN input	- When the outside rearview mirror has no UP or DOWN sensor values, DICS-Main recognizes and disables the vehicle memory function. However, when the memory input has detected, it means the sensor is open-circuited or has different mirror has been installed. - Check the outside rearview mirror UP or DOWN sensor wires - Measure sensor values and check the accordance position • Internal DOWN switch of the outside rearview mirror (DICS-Main: No. 21) • Internal UP switch of the outside rearview mirror (DICSMain:No. 22) • Internal DOWN motor of the outside rearview mirror (DICS-Main: No. 37) • Internal UP motor of the outside rearview mirror (DICSMain:No. 38) • Internal sensor of the outside rearview mirror (DICS-Main: No. 49) • Internal operation of the outside rearview mirror (DICSMain:No. 53)
0 X 26	Memory switch input during no mirror LT or RT input	- When the outside rearview mirror has no LEFT or RIGHT sensor values, DICS-Main recognizes and disables the vehicle memory function. However, when the memory input has detected, it means the sensor is open-circuited or has different mirror has been installed. - Check the outside rearview mirror LEFT or RIGHT sensor wires. - Measure the sensor values and check the relevant position • Internal RIGHT switch of the outside rearview mirror (DICS-Main: No. 19) • Internal LEFT switch of the outside rearview mirror (DICSMain: No. 20) • Internal RIGHT motor of the outside rearview mirror (DICSMain: No. 35) • nternal LEFT motor of the outside rearview mirror (DICSMain: No. 36) • Internal sensor of the outside rearview mirror (DICS-Main: No. 49) • Internal operation of the outside rearview mirror (DICSMain: No. 53)
0 X 27	Defective auto-stop	- The window does not lower to the certain range when autostop is detected during the driver side window auto-up operation. - Check the power window motor wires - Measure the sensor values and check the relevant position • Power window anti-trap (DICS-Main: No. 50) • Replace the power window motor

No.	Input/ Output	Sensor value item	Information				Help
1	Input	Rear left P/WDW UP S/W	Not operating		Operating		1. Switch the input signal to raise the rear left window 2. Internal input 3. Input signal transmits to STICS through CAN
2	Input	Front right P/WDW DN S/W	Not operating		Operating		1. Switch the input signal to lower the passenger's window 2. Internal input 3. Input signal transmits to DICS-Sub through CAN
3	Input	Front right P/WDW AUTO DN S/W	Not detected		Detected		1. Switch the input signal to lower the passenger's window automatically 2. Internal input 3. Input signal transmits to DICS-Sub through CAN
4	Input	Front right P/WDW UP S/W	Not operating		Operating		1. Switch the input signal to raise the passenger's window 2. Internal input 3. Input signal transmits to DICS-Sub through CAN
5	Input	Front left P/WDW DN S/W	Not operating		Operating		1. Switch the input signal to lower the driver side window 2. Internal input 3. DICS-Main has direct drive circuit
6	Input	Front left P/WDW AUTO DN S/W	Not detected		Detected		1. Switch the input signal to lower the driver side window automatically 2. Internal input 3. MICOM drives based on the signal
7	Input	Front left P/WDW UP S/W	Not operating		Operating		1. Switch input signal to raise the driver side window 2. Internal input 3. DICS-Main has direct drive circuit
8	Input	Front left P/WDW AUTO UP S/W	Not operating		Operating		1. Switch input signal to raise the driver side window automatically (operates only when the engine is running) 2. Internal input 3. MICOM drives based on the signal 4. When the obstruction is found (detects as hall pulse signal), the auto-stop engages the window to be lowered by 150 mm from its position
9	Input	Detecting driver's P/WDW detention	Not detected		Detected		1. Input signal of the motor protection is engaged by cutting the motor output when detects the increasing in currency when the motor is stopped at the lowest position of the driver side's window 2. Internal input
10	Input	Detecting 3 km/h of vehicle speed	Not detected		Detected		1. Input signal coming from STICS 2. Outside rearview mirrors will not fold when the signal comes on while outside rearview mirror is folding.

No.	Input/ Output	Sensor value item	Information				Help
11	Input	The driver side window status (limit switch)	Closed		Open		1. A signal that informs when the driver side window is opened. 2. When the window is at upper position, it is OFF (close) and when it's not in upper position by lowering, it is ON (open). 3. VCC 5 V level when window is opened: Operating 4. Ground level when window is closed: Not operating
12	Input	Easy access switch	Not operating		Operating		1. The steering column and electrical seat moves automatically during riding ON or OFF when this signal is ON. 2. Internal input 3. Input signal transmits to ESIMS and MSDOS through CAN
13	Input	P/WDW lock switch	Not operating		Operating		1. Only the driver side window is operational when this signal is ON. 2. Internal input 3. Input signal transmits to STICS and DICS Sub through CAN
14	Input	Rear right P/WDW DN S/W	Not operating		Operating		1. Switch input signal to lower the rear right window 2. Internal input 3. Input signal transmits to STICS through CAN
15	Input	Rear right P/WDW UP S/W	Not operating		Operating		1. Switch input signal to raise the rear right window 2. Internal input 3. Input signal transmits to STICS through CAN
16	Input	Rear left P/WDW DN S/W	Not operating		Operating		1. Switch input signal to lower the rear left window 2. Internal input 3. Input signal transmits to STICS through CAN
17	Input	Passenger side outside rearview mirror selection switch	Not detected		Detected		1. Signal that operates the driver side mirror, passenger side mirror and inside rearview mirror has selected the passenger side outside rearview mirror 2. Internal input 3. The signal transmits to DICS SUB and ESIMS through CAN
18	Input	Driver side outside rearview mirror selection switch	Not detected		Detected		1. Signal that operates the driver side mirror, passenger side mirror and inside rearview mirror has selected the passenger side outside rearview mirror 2. Internal input 3. When both left and right mirror selection signals are OFF, the signal selects inside rearview mirror and then ESIMS controls the inside rearview mirror 4. The signal transmits to DICS SUB and ESIMS through CAN

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No.	Input/ Output	Sensor value item	Information				Help
19	Input	Driver side outside rearview mirror right-turn switch	Not operating		Operating		1. Switch input to raise the mirror toward right 2. Internal input 3. This signal transmits to DICS SUB and ESIMS through CAN
20	Input	Driver side outside rearview mirror left-turn switch	Not operating		Operating		1. Switch input to move the mirror toward left 2. Internal input 3. This signal transmits to DICS SUB and ESIMS through CAN
21	Input	Driver side outside rearview mirror down switch	Not operating		Operating		1. Switch input to lower the mirror 2. Internal input 3. This signal transmits to DICS SUB through CAN
22	Input	Driver side outside rearview mirror up switch	Not operating		Operating		1. Switch input to raise the mirror upward 2. Internal input 3. This signal transmits to DICS SUB through CAN
23	Input	Driver side outside rearview mirror unfolding switch	Not operating		Operating		1. Switch input to unfold the mirror 2. Internal input 3. This signal transmits to DICS SUB through CAN
24	Input	Driver side outside rearview mirror folding switch	Not operating		Operating		1. Switch input to fold the mirror 2. Internal input 3. This signal transmits to DICS SUB through CAN
25	Input	Memory switch 3	Not detected		Detected		1. Signal that selects No. 3 memory position 2. When the memory switch is pressed for more than 2 seconds under P/N signal ON condition, MSDOS receives memorized position of the mirror through CAN and then moves the mirror to memorized position. 3. When the memory position switch is pressed after memory set switch input under the P/N signal ON condition, the current position value of the mirror (sensor value) transmits to MSDOS 4. Analog input when operating (about 3.8V) 5. VCC 5V when not operating
26	Input	Memory switch 2	Not detected		Detected		1. Signal that selects number 2 memory position 2. Analog input when operating (about 2.4V) 3. VCC 5V level when not operating
27	Input	Memory switch 1	Not detected		Detected		1. Signal that selects number 1 memory position 2. Analog input when operating (about 1.3V) 3. VCC 5 V level when not operating
28	Input	Memory stop switch	Not detected		Detected		1. Switch signal to stop the memory return 2. Ground level when operating 3. VCC 5 V level when not operating
29	Input	Memory SET switch	Not detected		Detected		1. Switch input to store the positions of the memory related mechanisms. When one of the memory switch among 3 is pressed after this signal, position value of the outside rearview mirrors will be transmitted to MSDOS through CAN 2. Analog input when operating (about 0V) 3. VCC 5 V level when not operating

No.	Input/ Output	Sensor value item	Information				Help
31	Input	Driver side door key unlock	Not operating		Operating		1. ON when the driver side door key fob is unlocked 2. Ground level when operating 3. VCC 5 V level when not operating
32	Input	Driver side door key lock	Not operating		Operating		1. ON when the driver side door key fob is locked 2. Ground level when operating 3. VCC 5 V level when not operating
33	Output	Driver side outside rearview mirror unfolding motor	Not operating		Operating		1. Unfolding operation of the driver side outside rearview mirror mottor 2. Battery level when operating 3. Ground level when not operating
34	Output	Driver side outside rearview mirror folding motor	Not operating		Operating		1. Folding operation of the driver side outside rearview mirror motor 2. Battery level when operating 3. Ground level when not operating
35	Output	Driver side outside rearview mirror right-turn motor	Not operating		Operating		Operates the driver side outside rearview mirror motor toward right
36	Output	Driver side outside rearview mirror left-turn motor	Not operating		Operating		Operates the driver side outside rearview mirror motor toward left
37	Output	Driver side outside rearview mirror down motor	Not operating		Operating		Operates the driver side outside rearview mirror motor down
38	Output	Driver side outside rearview mirror up motor	Not operating		Operating		Operates the driver side outside rearview mirror motor up
39	Output	Driver side P/WDW DN MTR	Not operating		Operating		1. Driver side power window motor down 2. Battery level when operating 3. Ground level when not operating
40	Output	Driver side P/WDW UP MTR	Not operating		Operating		1. Driver side power window motor up 2. Battery level when operating 3. Ground level when not operating
41	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-
43	Output	Memory LED	Not operating		Operating		1. Indicates when the LED lamp blinks during the memory set or when the return operation is ON 2. 2 V level when operating 3. Ground level when not operating
44	Output	Output power (5V)	Not operating		Operating		1. 5 V of power supplies each of the power window switch, outside rearview mirror sensor and power window motor hall sensor 2. 5 V level when operating 3. Ground level when not operating
45	Output	Driver side outside rearview mirror operating power	Not operating		Operating		1. Supplying power for the mirror LED lamp 2. 5 V level when operating 3. Ground level when not operating
46	Output	Easy access LED	Not operating		Operating		1. LED lamp turns on when easy access switch is pressed and turns off when pressed again.

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No.	Input/ Output	Sensor value item	Information				Help
47	Output	Driver side P/WDW S/W LED					1. LED lamp for power window switch illumination
48	Output	Driver side P/WDW LOCK S/W LED					1. LED lamp turns on when the window lock button is pressed and turns off when pressed again.
49	Status	Yes or No of the driver side outside rearview mirror sensor					1. ON when the driver side outside rearview mirror has no sensor detected or sensor is open-circuited
50	Status	Anti-trap operation status					1. Anti-trap activates when the obstruction is found during auto-up operation of the driver side power window with ignition ON.
51	Status	Side rearview mirror time lag					1. Indicates the outside rearview mirror can be controlled for a certain period of time after ignition key has been removed.
52	Status	Power window time lag					1. Indicates the power window can be controlled for a certain period of time after ignition key has been removed.
53	Status	Possibility of the side rearview mirror operation					1. Indicates the mirror can be controlled when ignition key is in ACC or IGN 1 or when mirror is in time lag
54	Status	Possibility of the power window operation					1. Indicates the power windows can be controlled when ignition key is in IGN 1 or when power windows is in time lag
55	Status	Hall sensor malfunction					1. When the signal coming from a hall sensor in the power window is abnormal
56	Status	Limit switch malfunction					1. When the signal coming from a limit switch in the power window regulator is abnormal
57	Input (CAN)	Armed mode operation state					1. Receives the signal from STICS when the vehicle enters the armed mode by REKES by locking the door. REKES linked power window and outside rearview mirror operation is possible only under the armed status.
58	Input (CAN)	Key ACC power					1. Ignition key ACC status receives from STICS
59	Input (CAN))	IGN 2 power					1. Ignition key IGN 2 status receives from STICS
60	Input	IGN 1 power					1. Ignition key IGN 1 status receives from STICS or DICS receives directly
61	Input (CAN)	Alternator operation status					1. Status of the engine under starting receives from STICS
62	Input (CAN)	Key reminder switch					1. Receives from STICS and indicates when the ignition key is inserted
63	Input (CAN)	Input status of the P/N signals					1. Receives from STICS and indicates the P/N status of transmission
64	Input (CAN)	Input status of the reverse signal					1. Receives from STICS and indicates the reverse status of transmission
65	Input	Lateral sensor value of the driver side outside rearview mirror (HI)	Sensor value (increase or decrease by 1)				1. Vertical sensor upper value of the outside rearview mirror 2. Sensor value when turned right: Increase 3. Sensor value when turned left: Decrease

No.	Input/ Output	Sensor value item	Information	Help
66	Input	Lateral sensor value of the driver side outside rearview mirror (LOW)	Sensor value [value changes within 8 bit (1~255)]	1. Vertical sensor upper value of the outside rearview mirror 2. Sensor value when turned right: Increase 3. Sensor value when turned left: Decrease * HI value increases or decreases by 1 if exceeded 8 bit (1~255)
67	Input	Vertical sensor value of the driver side outside rearview mirror (HI)	Sensor value (increase or decrease by 1)	1. Lateral sensor upper value of the outside rearview mirror 2. Sensor value when moved up: Increase 3. Sensor value when moved down: Decrease
68	Input	Vertical sensor value of the driver side outside rearview mirror (LOW)	Sensor value [value changes within 8 bit (1~255)]	1. Lateral sensor upper value of the outside rearview mirror 2. Sensor value when moved up: Increase 3. Sensor value when moved down: Decrease * HI value increases or decreases by 1 when exceeds 8 bit (1~255)
69	Input	Software version		Indicates current software version

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Code	Malfunction	Help
0 X 07	Operates when power window is locked	- When the power window is locked, the window can be operated from the passenger side. (Passenger switch input during the control by DICS-Main while power window is locking) - Defective CAN communication
0 X 08	Door lock key actuator does not operate	- Check the passenger side door actuator • Check the method of actuator operation status - Check the sensor value • Key lock (DICS-Sub: No. 5)
0 X 09	Door unlock key actuator does not operate	- Check the passenger side door actuator • Checking the method of actuator operation status - Check the sensor value • Key unlock (DICS-Sub: No. 4)
0 X 0A	No mirror UP or DN inputs correspondence to the memory switch inputs	- When the outside rearview mirror has no UP or DOWN sensor values, DICS-Main recognizes and disables the vehicle memory function. However, when the memory input has detected, it means the sensor is open-circuited or has different mirror has been installed. - Check the outside rearview mirror UP or DOWN sensor wires - Measure the sensor values and check the relevant position • Internal DOWN motor of the outside rearview mirror (DICS-Sub: No. 13) • Internal UP motor of the outside rearview mirror (DICSSub: No. 14) • Internal sensor of the outside rearview mirror (DICS-Sub: No. 44)
0 X 0B	No mirror LEFT or RIGHT inputs correspondence to the memory switch inputs	- When the outside rearview mirror has no LEFT or RIGHT sensor values, DICS-Main recognizes and disables the vehicle memory function. However, when the memory input has detected, it means the sensor is open-circuited or has different mirror has been installed. - Check the outside rearview mirror LEFT or RIGHT sensor wires - Measure the sensor values and check the relevant position • Internal RIGHT motor of the outside rearview mirror (DICSSub: No. 11) • Internal LEFT motor of the outside rearview mirror (DICSSub: No. 12) • Internal sensor of the outside rearview mirror (DICS-Sub: No. 17)

No.	Input/ Output	Sensor value item	Information				Help
1	Input	Detecting passenger side P/WDW detention	Not operating		Operating		1. Input signal for the motor protection is transmitted. The motor output detects increasing current when the motor is stopped at the lowest position of the passenger side window. 2. Internal input
2	-	-	-	-	-	-	-
3	Input	Passenger side door lock knob	Not operating		Operating		1. Status of the door lock actuator monitors ring switch on(passenger side) door trim 2. Ground level when the lock is detected 3. VCC 5V level when the unlock is detected
4	Input	Passenger side door key unlock	Not operating		Operating		1. ON when the passenger side door key fob is unlocked 2. Ground level when operating (unlock) 3. VCC 5V level when not operating (lock)
5	Input	Passenger side door key lock	Not operating		Operating		1. ON when the passenger side door key fob is locked 2. Ground level when operating 3. VCC 5V level when not operating
6	Input	Front left P/WDW DN S/W	Not detected		Detected		1. Switch input signal to lower the passenger side window 2. DICS SUB drives directly with the circuit
7	Input	Front right P/WDW auto DN S/W	Not detected		Detected		1. Switch input signal to lower the passenger side window automatically 2. MICOM drives directly according to the above signal
8	Input	Front right P/WDW UP S/W	Not detected		Detected		1. Switch input signal to raise the passenger side window 2. DICS SUB drives directly with the circuit
9	Output	Passenger side outside rearview mirror unfolding MTR	Not detected		Detected		1. Motor operates the passenger side's outside rearview mirror to unfold
10	Output	Passenger side outside rearview mirror folding MTR	Close		Open		1. Motor operates the passenger side's outside rearview mirror to fold
11	Output	Passenger side outside rearview mirror left-turn MTR	Not operating		Operating		1. Motor operates the passenger side's outside rearview mirror towards right
12	Output	Passenger side outside rearview mirror right-turn MTR	Not operating		Operating		1. Motor operates the passenger side's outside rearview mirror towards left
13	Output	Passenger side outside rearview mirror down MTR	Not operating		Operating		1. Motor operates the passenger side's outside rearview mirror down
14	Output	Passenger side outside rearview mirror up MTR	Not operating		Operating		1. Motor operates the passenger side's outside rearview mirror up
15	Output	Passenger side P/WDW down MTR	Not operating		Operating		1. Passenger side's power window motor down 2. Battery level when operating 3. Ground level when not operating

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No.	Input/ Output	Sensor value item	Information				Help
16	Output	Passenger side P/ WDW up MTR	Not operating		Operating		1. Passenger side's power window motor up 2. Battery level when operating 3. Ground level when not operating
17	State	Yes or No of the passenger side outside rearview mirror sensor	Yes		No		1. ON when the passenger side's outside rearview mirror has no sensor or sensor is open-circuited
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	Output	Output power (5V) VDD	Not operating		Operating		1. 5 V is supplied to the power window switch and outside rearview mirror sensor 2. 5 V of level when operating 3. Ground level when not operating
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	Output	Passenger side P/ WDW SW LED Lamp	Not operating		Operating		1. LED lamp for the power window switch illumination (Value changes when the window is locked)
24	-	-	-	-	-	-	-
25	Input	Lateral sensor value of the driver side outside rearview mirror (HI)	Sensor value (increase or decrease by 1)				1. Lateral sensor upper value of the outside rearview mirror Sensor value when moves up: Increase Sensor value when moves down: Decrease
26	Input	Lateral sensor value of the driver side outside rearview mirror (LOW)	Sensor value [value changes within 8 bit (1~255)]				1. Lateral sensor lowers value of the outside rearview mirror Sensor value when moves up: Increase Sensor value when moves down: Decrease
27	Input	Vertical sensor value of the driver side outside rearview mirror (HI)	Sensor value (increase or decrease by 1)				1. Vertical sensor raises value of the outside rearview mirror Sensor value when turns right: Increase Sensor value when turns left: Decrease
28	Input	Vertical sensor value of the driver side outside rearview mirror (LOW)	Sensor value [value changes within 8 bit (1~255)]				1. Vertical sensor raises value of the outside rearview mirror Sensor value when turns right: Increase Sensor value when turns left: Decrease
29	Input	Software version					Indicates the current software version

Code	Malfunction	Help
0 X 61	Defective driver side seat sliding	• MSDOS continuously monitors the sensor values when the driver operates the seat sliding switch or when the memory return is in action. When the seat sliding operation is engaged but the sensor value remains unchanged, the seat motor sensor may be malfunction. • Measure the sensor values and check the relevant position Driver side seat slides-backward (MSDOS sensor value: No. 7) Driver side seat slides-forward (MSDOS sensor value: No. 8) Driver side seat backward slide motor (MSDOS sensor value: No. 15) Driver side seat forward slide motor (MSDOS sensor value: No. 16)
0 X 62	Defective driver side seat tilting	• MSDOS continuously monitors the sensor values when the driver operates the seat tilting or the memory return is in motion. When the seat tilting operation is engaged but the sensor value remains unchanged, the seat motor sensor may be malfunction. • Measure the sensor values and check the relevant position Driver side seat tilt-down (MSDOS sensor value: No. 5) Driver side seat tilt-up (MSDOS sensor value: No. 6) Driver side seat tilt-down motor (MSDOS sensor value: No. 13) Driver side seat tilt-up motor (MSDOS sensor value: No. 14)
0 X 63	Defective driver side seat height adjustment	• MSDOS continuously monitors the sensor values when the driver operates the seat height adjustment or the memory return is in motion. When the seat height adjustment operation is engaged but the sensor value remains unchanged, the seat motor sensor may be malfunction. • Measure the sensor values and check the relevant position Driver side seat height-lowers (MSDOS sensor value: No. 3) Driver side seat height-raises (MSDOS sensor value: No. 4) Driver side seat height-lowering motor (MSDOS sensor value: No. 11) Driver side seat height-raising motor (MSDOS sensor value: No. 12)

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Code	Malfunction	Help
0 X 64	Defective driver side seatback angle adjustment	• MSDOS continuously monitors the sensor values when the driver operates the seat reclining or the memory return is in motion. When the seat recline operation is engaged but the sensor value remains unchanged, the seat motor sensor may be malfunction. • Measure the sensor values and check the relevant position Driver side seatback angle-declination (MSDOS sensor value: No. 1) Driver side seatback angle-inclination (MSDOS sensor value: No. 2) Driver side seatback angle-declination motor (MSDOS sensor value: No. 10) Driver side seatback angle-inclination motor (MSDOS sensor value: No. 11)
0 X 65	No position data input from DICSMain	• When MSDOS sends memory setting order, all DICS_MAIN, DICS-SUB and ESIMS send the position data to MSDOS. If no position data has received from DICS_MAIN, then it will be recognized as an error. • Input data from a respective unit when resetting the memory switch • Check CAN communication between DICS_MAIN and MSDOS
0 X 66	No position data input from DICSSub	• When MSDOS sends memory setting order, all DICS_MAIN, DICS-SUB and ESIMS send the position data to MSDOS. If no position data has received from DICS_MAIN, then it will be recognized as an error. • Input data from a respective unit when resetting the memory switch • Check CAN communication between DICS_SUB and MSDOS
0 X 67	No position data input from ESIMS	• When MSDOS sends memory setting order, all DICS_MAIN, DICS-SUB and ESIMS send the position data to MSDOS. If no position data has received from DICS_MAIN, then it will be recognized as an error. • Input data from a respective unit when resetting the memory switch • Check CAN communication between ESIMS and MSDOS
0 X 68	No return data input from DICS-Main	• During the memory return, DICS_MAIN, DICS-SUB and ESIMS send the memory return operation signals continuously through CAN communication. MSDOS recognizes malfunction and then determines as an error when no data has been received from DICS_MAIN during the memory return. • Input data from a respective unit when operating the memory switch • Check CAN communication between DICS_MAIN and MSDOS • During the memory return, DICS_MAIN, DICS-SUB and ESIMS send the memory return operation signals continuously through CAN communication. MSDOS recognizes malfunction and then determines as an error when no data has been received from DICS_MAIN during the memory return.
0 X 69	No return data input from DICS-Sub	• Input data from a respective unit when operating the memory switch • Check CAN communication between DICS_SUB and MSDOS • During the memory return, DICS_MAIN, DICS-SUB and ESIMS send the memory return operation signals continuously through CAN communication. MSDOS recognizes malfunction and then determines as an error when no data has been received from ESIMS during the memory return.
0 X 70	No return data input from ESIMS	• Input data from a respective unit when operating the memory switch • Check CAN communication between ESIMS and MSDOS

No.	Input/ Output	Sensor value item	Information				Help
1	Input	Driver side seatback reverse switch	Not operating	Vcc	Operating	GND	• A driver operates the seat recliner (seatback angle adjustment) switch backward • Ground level when operating • Vcc level when not operating
2	Input	Driver side seatback forward switch	Not operating	Vcc	Operating	GND	• A driver operates the seat recliner (seatback angle adjustment) switch forward • Ground level when operating • Vcc level when not operating
3	Input	Driver side seat height down switch	Not operating	Vcc	Operating	GND	• A driver operates the seat height (rear part of the seat bottom) adjustment switch downward • Ground level when operating • Vcc level when not operating
4	Input	Driver side seat height up switch	Not operating	Vcc	Operating	GND	• A driver operates the seat height (rear part of the seat bottom) adjustment switch upward • Ground level when operating • Vcc level when not operating
5	Input	Driver side seat tilt-down switch	Not operating	Vcc	Operating	GND	• A driver operates the seat tilting (front part of the seat bottom) switch downward • Ground level when operating • Vcc level when not operating
6	Input	Driver side seat tilt-up switch	Not operating	Vcc	Operating	GND	• A driver operates the seat tilting (front part of the seat bottom) switch upward • Ground level when operating • Vcc level when not operating
7	Input	Driver side seat slide-backward switch	Not operating	Vcc	Operating	GND	• A driver operates the seat slide switch backward • Ground level when operating • Vcc level when not operating
8	Input	Driver side seat slide-forward switch	Not operating	Vcc	Operating	GND	• A driver operates the seat slide switch forward • Ground level when operating • Vcc level when not operating
9	Input	Driver side seatback declining MTR	Not operating	GND	Operating	12 V	• When the recliner (seatback) is moving backward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.

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No.	Input/ Output	Sensor value item	Information				Help
10	Output	Driver side seatback inclining MTR	Not operating	GND	Operating	12 V	• When the recliner (seatback) is moving forward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.
11	Output	Driver side seat height down MTR	Not operating	GND	Operating	12 V	• When the seat height adjustment (rear part of the seat bottom) is moving downward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.
12	Output	Driver side seat height up MTR	Not operating	GND	Operating	12 V	• When the seat height adjustment (rear part of the seat bottom) is moving upward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.
13	Output	Driver side seat tilt-down MTR	Not operating	GND	Operating	12 V	• When the seat tilts (front part of the seat bottom) downward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.

No.	Input/ Output	Sensor value item	Information				Help
14	Output	Driver side seat tilt-up MTR	Not operating	GND	Operating	12 V	• When the seat tilts (front part of the seat bottom)upward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.
15	Output	Driver side seat slide-backward MTR	Not operating	GND	Operating	12 V	• When the seat (forward/backward movement of seat) slides backward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.
16	Output	Driver side seat slide-forward MTR	Not operating	GND	Operating	12 V	• When the seat (forward/backward movement of seat) slides forward • Battery level when operating • Ground level when not operating However, when the recliner motor is operated by the driver side switch operation, this information does not appear on the ECU. It is because the switch drives the motor directly. For more information, go to "Easy access and memory switch operation" where ECU internal software drives the motor directly.
17	Output	Driver side seat slide sensor value	Sensor value				• Sensor value when seat slides (forward or backward movement of the seat) is moving • Sensor value when moving forward: Increase • Sensor value when moving backward: Decrease
18	Input	Driver side seat tilting sensor value	Sensor value				• Sensor value when seat tilting (front part of the seat bottom) is moving • Sensor value when moving upward: Increase • Sensor value when moving downward: Decrease
19	Input	Driver side seat height sensor value	Sensor value				• Sensor value when seat height (rear part of the seat bottom) is moving • Sensor value when moving upward: Increase • Sensor value when moving downward: Decrease
20	Input	Driver side seatback sensor value	Sensor value				• Sensor value when seat recliner (seatback) is moving • Sensor value when moving forward: Increase • Sensor value when moving backward: Decrease

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Code	Malfunction	Help
0 X 81	Defective steering column tilt	- ESIMS continuously monitors the sensor values when the driver operates the steering column or the steering column is in motion. When the teering wheel column operation is engaged but the sensor value remains unchanged, the motor or the sensor may be malfunction. - Measure the sensor values and check the relevant position • Steering column tilt-up (ESIMS sensor value: No. 1) • Steering column tilt-down (ESIMS sensor value: No. 2) • Steering column tilt-up motor (ESIMS sensor value: No. 13) • Steering column tilt-down motor (ESIMS sensor value: No. 14)
0 X 82	Defective steering column telescope	- ESIMS continuously monitors the sensor values when the driver operates the steering column or the steering column is in motion. When the steering wheel column operation is engaged but the sensor value remains unchanged, the motor or the sensor may be malfunction. - Measure the sensor values and check the relevant position • Steering column tilt-up (ESIMS sensor value: No. 3) • Steering column tilt-down (ESIMS sensor value: No. 4) • Steering column tilt-up motor (ESIMS sensor value: No. 15) • Steering column tilt-down motor (ESIMS sensor value: No. 16)
0 X 83	Defective inside rearview mirror left or right movement	- ESIMS continuously monitors the sensor values when the driver adjusts the inside rearview mirror horizontally or the inside rearview mirror is in motion. When the inside rearview mirror horizontal operation is engaged but the sensor value remains unchanged, the motor or the sensor may be malfunction. - Measure the sensor values and check the relevant position • Inside rearview mirror moves right (ESIMS sensor value: No. 5) • Inside rearview mirror moves left (ESIMS sensor value: No. 6) • Inside rearview mirror left movement motor (ESIMS sensor value: No. 11) • Inside rearview mirror right movement motor (ESIMS sensor value: No. 12)
0 X 84	Defective inside rearview mirror up or down functions	- ESIMS continuously monitors the sensor values when the driver adjusts the inside rearview mirror vertically or the inside rearview mirror is in motion. When the inside rearview mirror vertical operation is engaged but the sensor value remains unchanged, the motor or the sensor may be malfunction. - Measure the sensor values and check the relevant position • Inside rearview mirror moves down (ESIMS sensor value: No. 7) • Inside rearview mirror moves up (ESIMS sensor value: No. 8) • Inside rearview mirror down movement motor (ESIMS sensor value: No. 10) • Inside rearview mirror up movement motor (ESIMS sensor value: No. 9)

No.	Input/ Output	Sensor value item	Information				Help
1	Input	Steering wheel tilt-up switch	Not operating	Vcc	Operating	GND	1. A driver operates the tilt switch at the steering column upward 2. Ground level when operating 3. Vcc level when not operating
2	Input	Steering wheel tilt-down switch	Not operating	Vcc	Operating	GND	1. A driver operates the tilt switch at the steering column downward 2. Ground level when operating 3. Vcc level when not operating
3	Input	Steering wheel telescope up switch	Not operating	Vcc	Detected	GND	1. A driver operates the telescopic switch on the steering column toward extract 2. Ground level when operating 3. Vcc level when not operating
4	Input	Steering wheel telescope down switch	Not operating	Vcc	Operating	GND	1. A driver operates the telescopic switch on the steering column toward retract 2. Ground level when operating 3. Vcc level when not operating
5	Input	Inside rearview mirror right moving switch	Not operating	Vcc	Operating	GND	1. A driver presses the right side of the mirror operation switch when the mirror selector switch is in the neutral position (center) (at this moment, the mirror can be adjusted) 2. Ground level when operating 3. Vcc level when not operating 4. When this switch is detected, the mirror moves right (*Note: The mirror operates when the ignition switch is in ACC or other position) 5. Receives CAN data from DICS-Main
6	Input	Inside rearview mirror left moving switch	Not operating	Vcc	Detected	GND	1. A driver presses the left part of the mirror operation switch when the mirror selector switch is in center position (at this moment, the mirror can be adjusted) 2. Ground level when operating 3. Vcc level when not operating 4. When this switch is detected, the mirror moves left (*Note: The mirror operates when the ignition switch is in ACC or other position) 5. Receives CAN data from DICS-Main
7	Input	Inside rearview mirror down moving switch	Not operating	Vcc	Operating	GND	1. A driver presses the lower part of the mirror operation switch when the mirror selector switch is in center position (at this moment, the mirror can be adjusted) 2. Ground level when operating 3. Vcc level when not operating 4. When this switch is detected, the mirror tilts down (*Note: The mirror operates if ignition switch is in ACC or more) 5. Receives CAN data from DICS-Main
8	Input	Inside rearview mirror up moving switch	Not operating	Vcc	Operating	GND	1. A driver presses the upper part of the mirror operation switch when the mirror selector switch is in center position (at this moment, the mirror can be adjusted) 2. Ground level when operating 3. Vcc level when not operating 4. When this switch is detected, the mirror tilts up (*Note: The mirror operates if ignition switch is in ACC or more) 5. Receives CAN data from DICS-Main

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No.	Input/ Output	Sensor value item	Information				Help
9	Output	Inside rearview mirror up motor	Not operating	GND	Operating	12 V	1. When the mirror (motor for vertical movement) is moving upward 2. Battery level when operating 3. Ground level when not operating
10	Output	Inside rearview mirror down motor	Not operating	GND	Operating	12 V	1. When the mirror (motor for vertical movement) is moving downward 2. Battery level when operating 3. Ground level when not operating
11	Output	Inside rearview mirror left moving motor	Not operating	GND	Operating	12 V	1. When the mirror (motor for vertical movement) is moving downward 2. Battery level when operating 3. Ground level when not operating
12	Output	Inside rearview mirror right moving motor	Not operating	GND	Operating	12 V	1. When the mirror (motor for horizontal movement) is moving right side 2. Battery level when operating 3. Ground level when not operating
13	Output	Steering wheel tilt-up motor	Not operating	GND	Operating	12 V	1. When the tilt motor on the steering column is moving upward 2. Battery level when operating 3. Ground level when not operating
14	Output	Steering wheel tilt-down motor	Not operating	GND	Operating	12 V	1. When the tilt motor on the steering column is moving downward 2. Battery level when operating 3. Ground level when not operating
15	Output	Steering wheel telescope up MTR	Not operating	GND	Operating	12 V	1. When the telescopic motor on the steering column is moving towards the driver 2. Battery level when operating 3. Ground level when not operating
16	Output	Steering wheel telescope down MTR	Not operating	GND	Operating	12 V	1. When the telescopic motor on the steering column is moving away from the driver 2. Battery level when operating 3. Ground level when not operating
17	Input	Steering wheel column tilting sensor	Sensor value				1. Sensor value when the tilt motor on the steering column is moving up/down 2. Sensor value when moving up: Decrease 3. Sensor value when moving down: Increase
18	Input	Steering wheel column telescope sensor	Sensor value				1. Sensor value when the telescopic motor on the steering column is moving up/down 2. Sensor value when moving long extraction : Decrease 3. Sensor value when moving short retraction : Increase
19	Input	Inside rearview mirror left and right movement sensor	Sensor value				1. Sensor value when the longitudinal motor in the mirror moves left or right 2. Sensor value when moving toward right: Increase 3. Sensor value when moving toward left: Decrease
20	Input	Inside rearview mirror up and down movement sensor	Sensor value				1. Sensor value when the vertical motor in the mirror moves up or down 2. Sensor value when moving upward: Increase 3. Sensor value when moving downward: Decrease

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