DI8VI–01

Door closer position switch circuit

CIRCUIT DESCRIPTION

The closer position switch is built in the door lock assembly and detects the position of the closer.

The condition of the HALF/FULL POLE switches and the door for each case is as follows.

1.　CONDITIONS FOR STARTING DOOR CLOSER OPERATION
- Door closer detection switch: original position
- Full latch switch ON
- Half latch switch ON

After detecting the conditions mentioned above, if the following conditions continue for 300msec, the door closer motor starts rotating in the regular direction.
- Door closer detection switch: original position
- Full latch switch ON
- Half latch switch OFF
- Pole switch: ON

2.　CONDITIONS FOR CANCELING DOOR CLOSER OPERATION

If the following conditions are detected during the door closer motor's regular rotation, the door closer operation is stopped. After 100msec, the door closer motor starts rotating the reverse direction to move to the original position.
- Door closer detection switch: reverse rotation range
- Half latch switch ON
- The motor receive voltage for 3 sec. or more
- Door unlock detection switch: LOCK

3.　CONDITIONS FOR FINISHING DOOR CLOSER OPERATION

If the following conditions are detected during the door closer motor's regular rotation, the door closer operation is stopped. After 100msec, it makes reverse rotation to move the door closer 150 ± 20 msec.
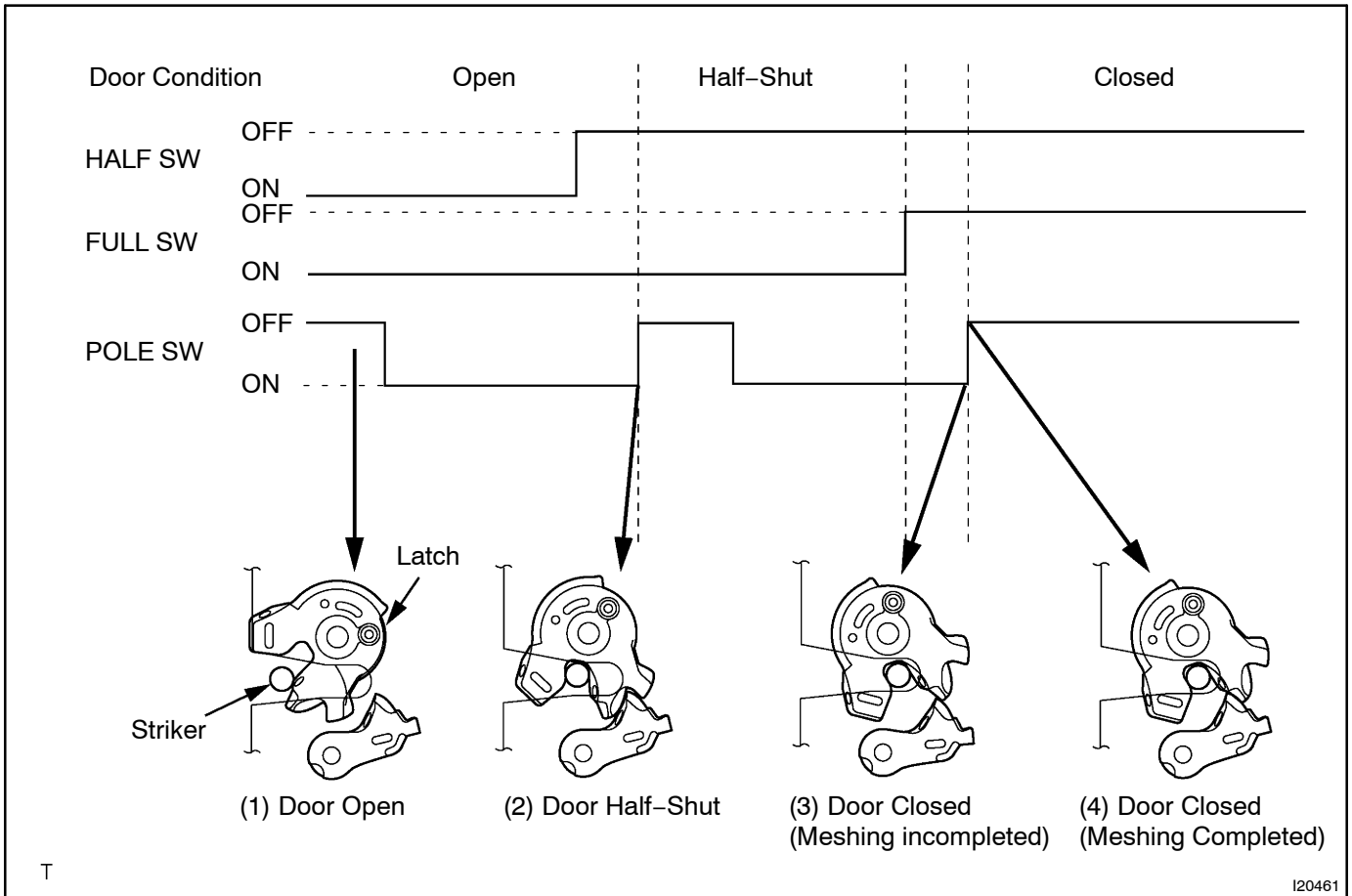- Full latch switch OFF
- Half latch switch OFF
- Pole switch: OFF

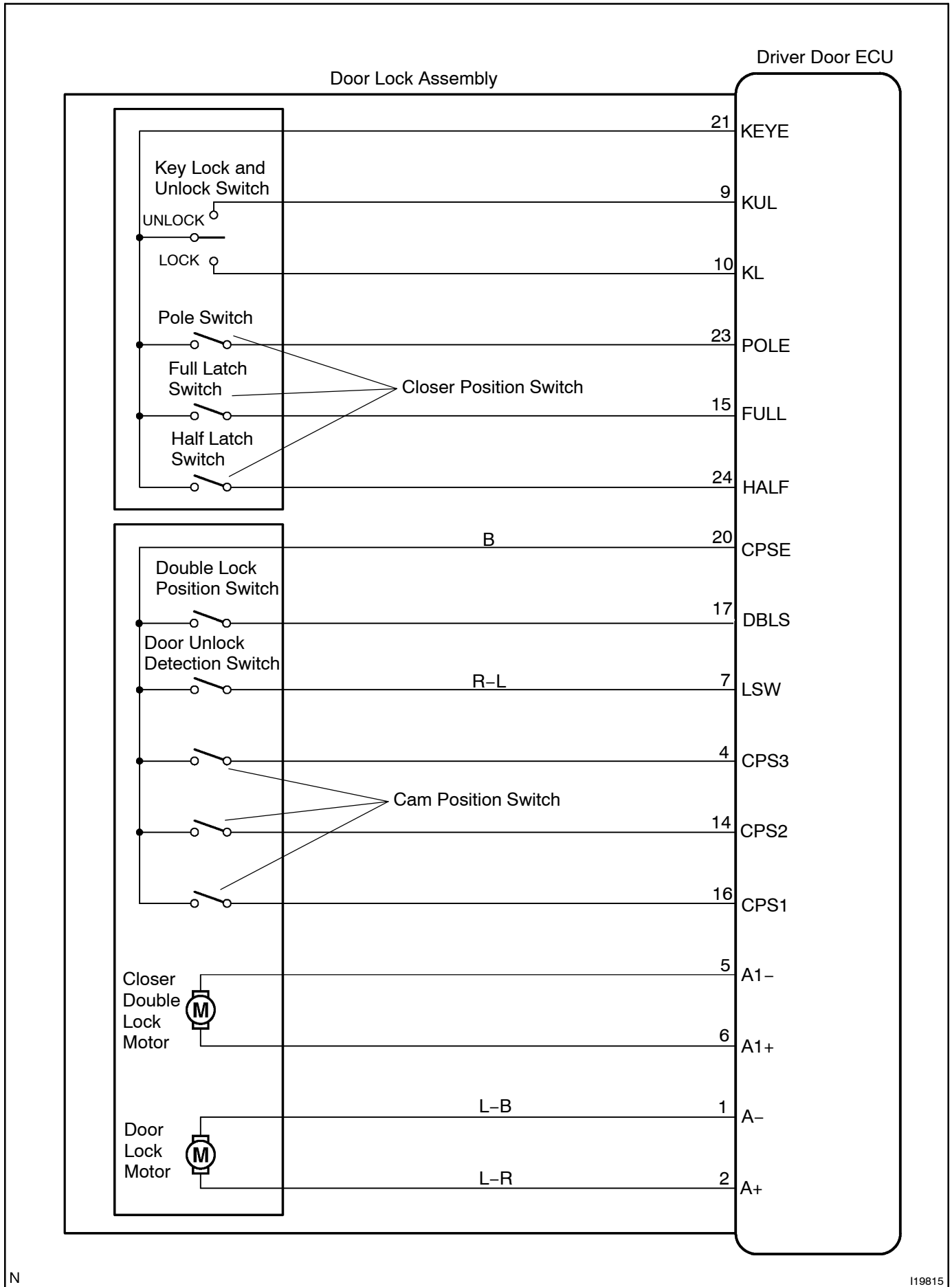**4.　CONDITIONS FOR CANCELING DOOR CLOSER REVERSE ROTATION**

If the following conditions are detected during the door closer motor's regular rotation, the door closer operation is moved to the original position.
- Full latch switch ON
- Half latch switch ON
- Double locking operation command

5. DOOR CONDITION AND CLOSER OPERATION TIMING CHART

Door Condition | Open | Half−Shut | Closed

HALF SW — OFF / ON

FULL SW — OFF / ON

POLE SW — OFF / ON

Latch

Striker

(1) Door Open

(2) Door Half−Shut

(3) Door Closed (Meshing incompleted)

(4) Door Closed (Meshing Completed)

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WIRING DIAGRAM

Door Lock Assembly

Driver Door ECU

Key Lock and Unlock Switch

UNLOCK

LOCK

21 KEYE

9 KUL

10 KL

Pole Switch

Full Latch Switch

Half Latch Switch

Closer Position Switch

23 POLE

15 FULL

24 HALF

Double Lock Position Switch

Door Unlock Detection Switch

B

20 CPSE

17 DBLS

R−L

7 LSW

Cam Position Switch

4 CPS3

14 CPS2

16 CPS1

Closer Double Lock Motor

M

5 A1−

6 A1+

Door Lock Motor

M

L−B

1 A−

L−R

2 A+

N

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INSPECTION PROCEDURE

HINT:

In case of using the LEXUS hand–held tester, start the inspection from step 1 and in case of not using the LEXUS hand–held tester, start from step 2.

1	Check door closer position (POLE/FULL/HALF) switch using LEXUS hand–held tester.

PREPARATION:

Connect the LEXUS hand–held tester to DLC 3.

CHECK:

Check the door closer position (POLE/FULL/HALF) switch using DATA LIST.

> OK → Proceed to next circuit inspection shown on problem symptoms table (See page DI–1197).

NG ↓

2	Check door closer position switch (See page BE–170).

> NG → Replace door lock assembly.

OK ↓

3	Check wire harness and connector between door closer position switch and driver door ECU (See page IN–35).

> NG → Repair or replace wire harness or connector.

OK ↓

Proceed to next circuit inspection shown on problem symptoms table
(See page DI–1197).