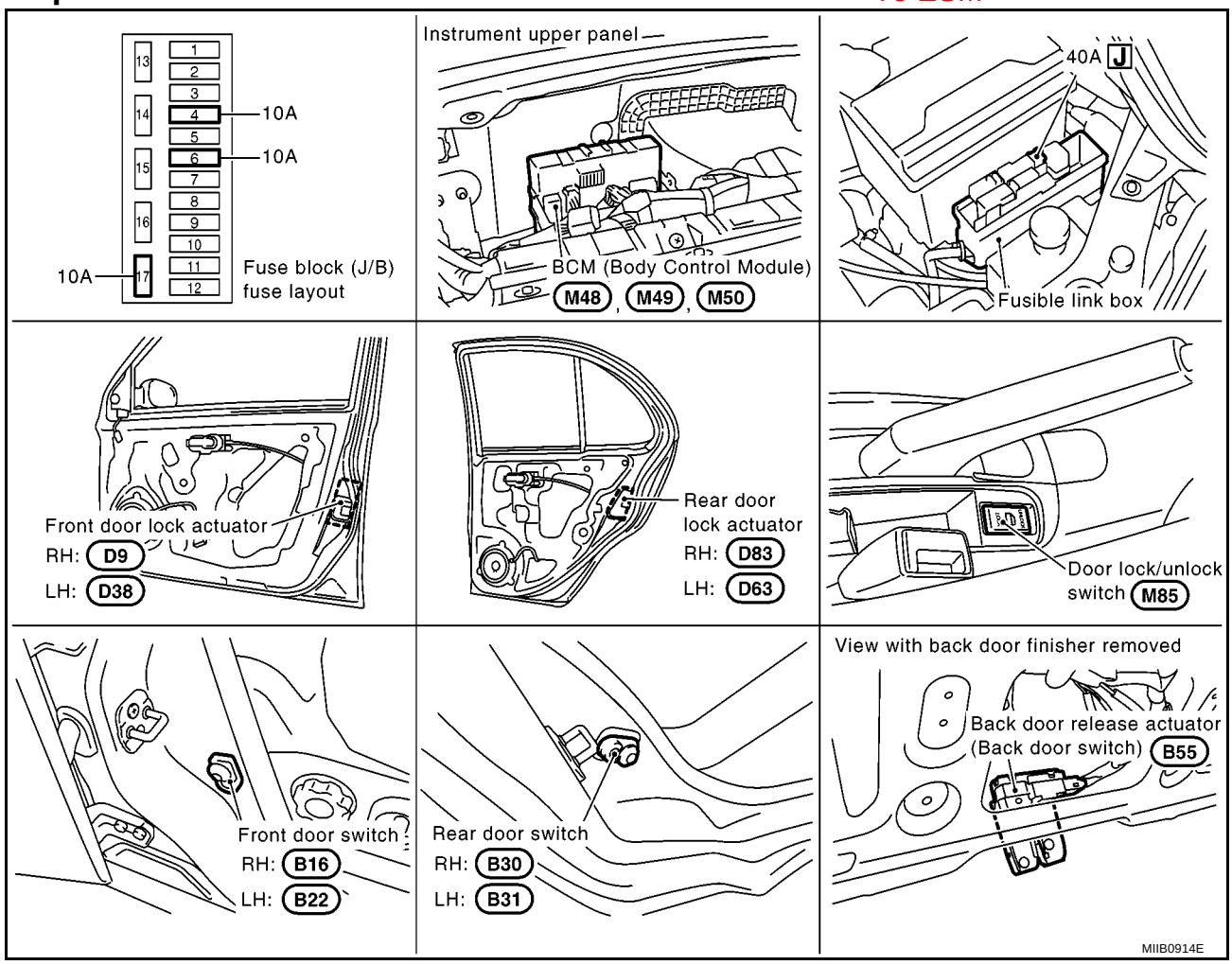
POWER DOOR LOCK SYSTEM

Component Parts and Harness Connector Location

To ESM



System Description

To ESM

OPERATION

Power is supplied at all times

- to BCM terminals 74 and 79
- through 40A fusible link (letter **J**, located in the fusible link box).
- to key switch terminal 1 (Without Intelligent Key system)
- through 10A fuse [No. 6, located in the fuse block (J/B)] (Without Intelligent Key system)
- to key switch and ignition knob switch terminal 3 (With Intelligent Key system)
- through 10A fuse [No. 17, located in the fuse block (J/B)] (With Intelligent Key system).

When the key switch is ON (Ignition key is inserted in ignition key cylinder), power is supplied

- to BCM terminal 3.
- through key switch terminal 2

When the ignition switch is ON or START, power is supplied

- to BCM terminal 24
- through 10A fuse [No. 4, located in the fuse block (J/B)].

Ground is supplied

- to BCM terminals 2 and 70
- through body ground M19 and M20.

When the front door switch LH (LHD Models) or RH (RHD Models) is ON (door is open), ground supplied

- to BCM terminal 29
- through front door switch LH (LHD Models) or RH (RHD Models) terminal 1
- through front door switch LH (LHD Models) or RH (RHD Models) case ground.

When the front door switch RH (LHD Models) or LH (RHD Models) is ON (door is open), ground supplied

- to BCM terminal 30
- through front door switch RH (LHD Models) or LH (RHD Models) terminal 1
- through front door switch RH (LHD Models) or LH (RHD Models) case ground.

When the rear door switch LH is ON (door is open), ground is supplied

- to BCM terminal 59 (5 door models)
- through rear door switch LH terminal 1
- through rear door switch LH case ground.

When the rear door switch RH is ON (door is open), ground is supplied

- to BCM terminal 60 (5 door models)
- through rear door switch RH terminal 1
- through rear door switch RH case ground.

When the back door switch is ON (back door is open), ground is supplied

- to BCM terminal 10
- through back door switch terminals 1 and 2
- through body grounds M19 and M20.

DOOR LOCK AND UNLOCK SWITCH OPERATION

When door lock/unlock switch is in LOCK position, ground is supplied

- through body grounds M19 and M20.
- through door lock/unlock switch terminal 4 and 6
- to BCM (Body Control Module) terminal 6.

With power and ground supplied, doors are locked.
When door lock/unlock switch is in UNLOCK position, ground is supplied

- through body grounds M19 and M20
- through door lock/unlock switch terminal 4 and 5
- to BCM (Body Control Module) terminal 25

With power and ground supplied, all doors are unlocked.
Lock/unlock switch indicated by LED when key in switch is on or on with timer.

KEY REMINDER SYSTEM

- If the ignition key is in the ignition key cylinder and driver door is open, setting door lock/unlock switch, key or remote controller to “LOCK” locks the door once but then immediately unlocks all doors.

UNLOCK LINK FUNCTION

When this function is activated, if the car is door lock/unlock switch locked, opening the drivers repossessing door from the inside handle override will cause the whole car to unlock.

Selectable Function

	Door Lock/unlock switch
How to change setting	Unlock press for more than 4 seconds
contents	Unlock link activate/deactivate
How to confirm	All should have buzzer sound for 0.2 seconds

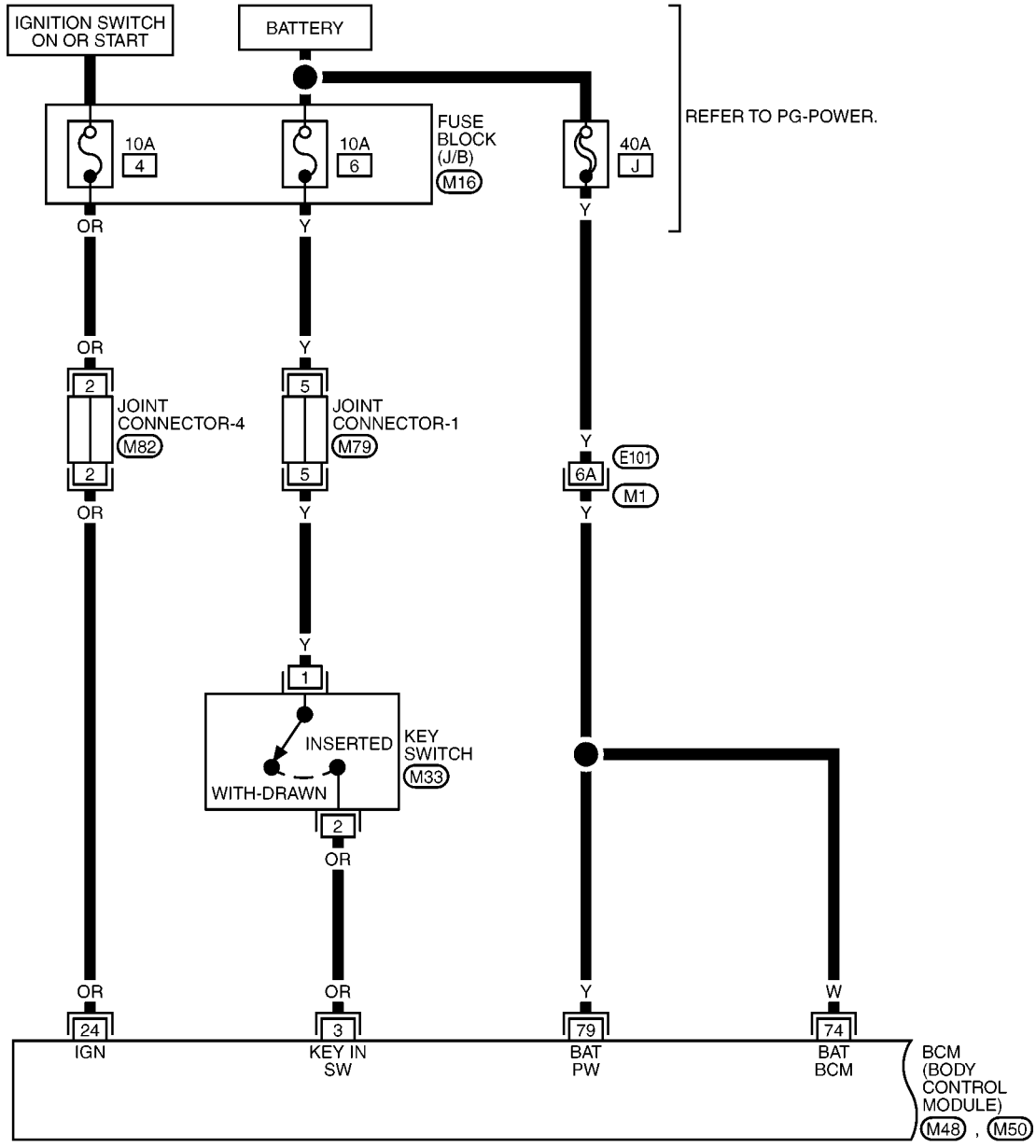
BACK DOOR OPENER OPERTION

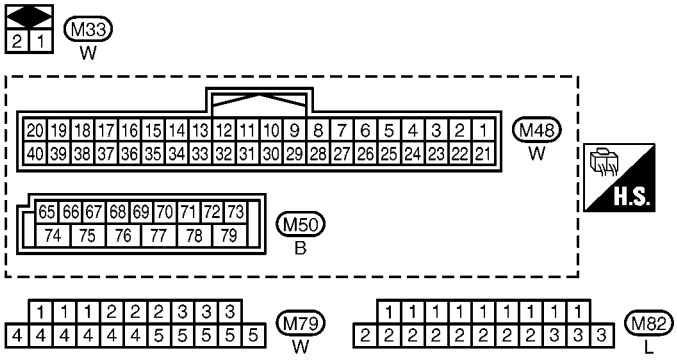
Back door can be opened with back door switch: When all door are unlocked, or When back door request switch pushed (With Intelligent Key system).

Wiring Diagram — D/LOCK — (Without Intelligent Key System)

To ESM

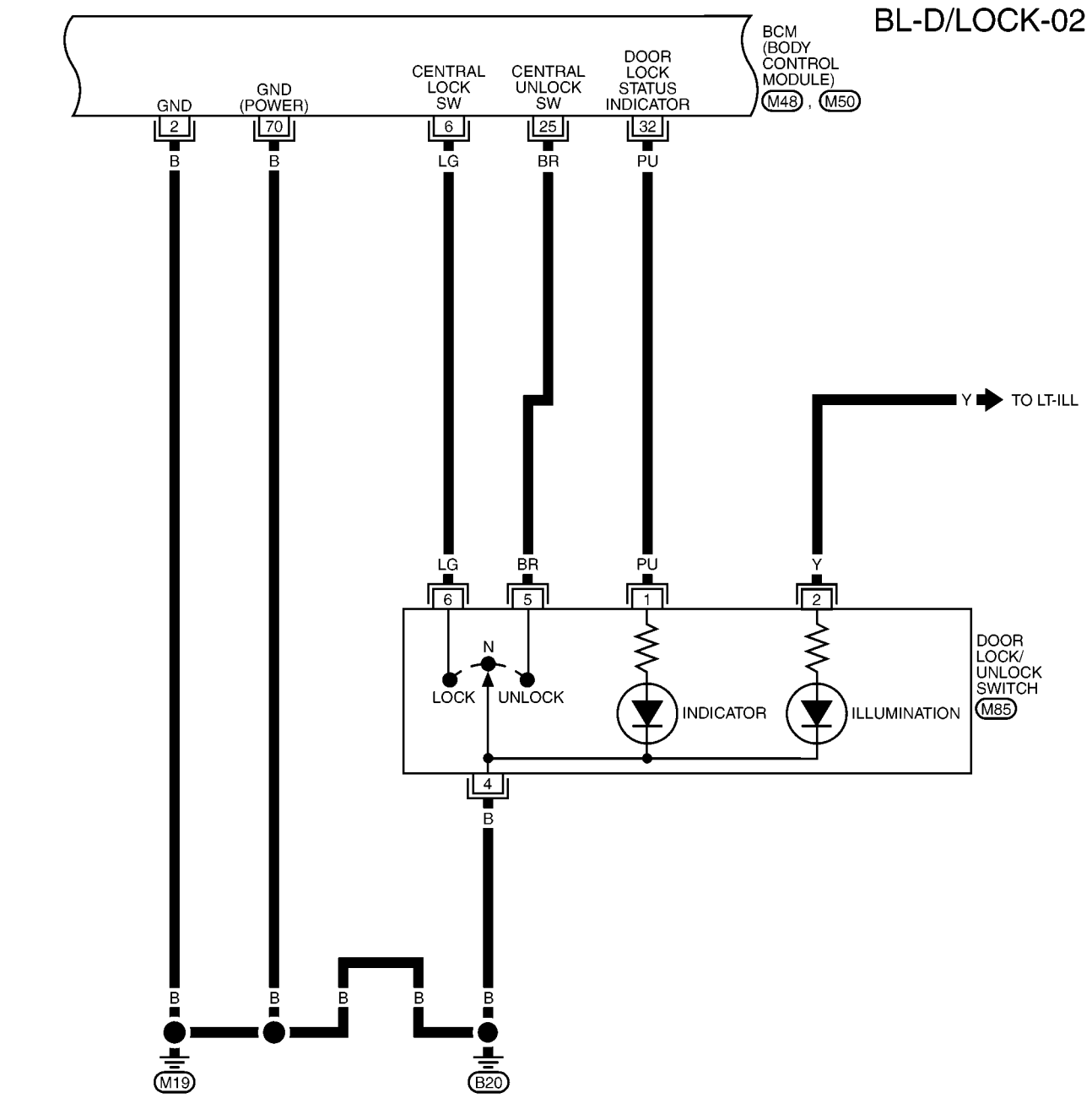
BL-D/LOCK-01

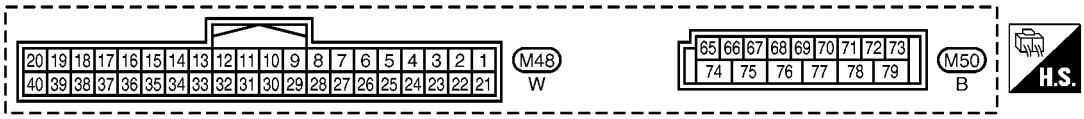


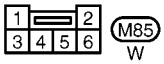


REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA1774E


BL-D/LOCK-02
BCM (BODY CONTROL MODULE)
M48 , M50
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
PU
Y
TO LT-ILL
LG
BR
PU
Y
6
5
1
2
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M85
4
B
B
B
B
B
B
M19
B20

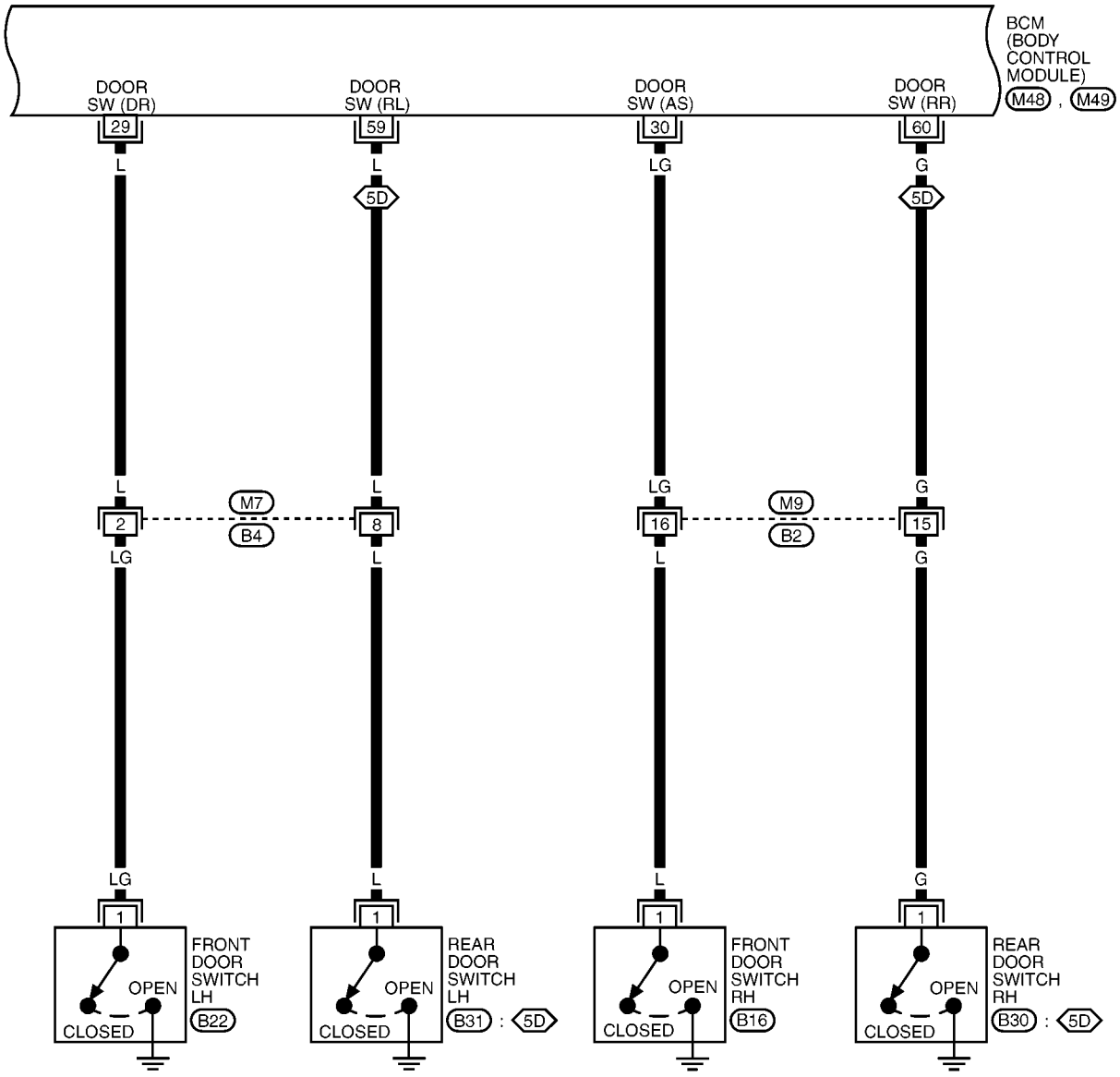

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M48
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M50
B
H.S.

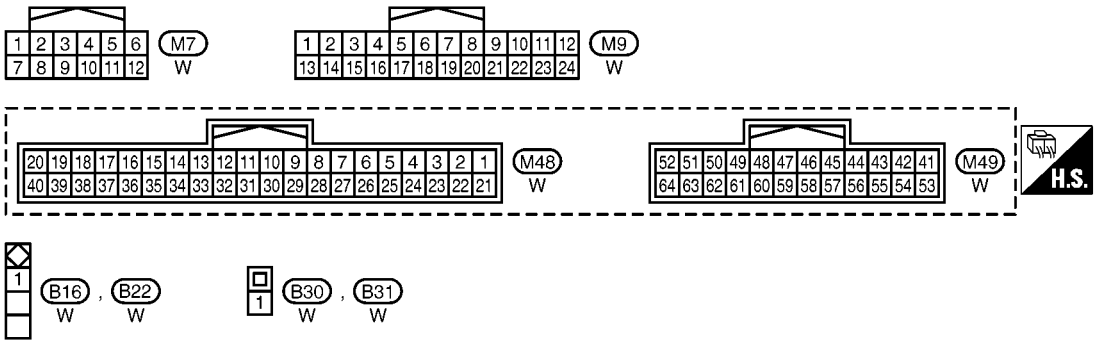

1 2
3 4 5 6
M85
W

MIWA0274E

BL-D/LOCK-03

5D : WITH 5 DOORS

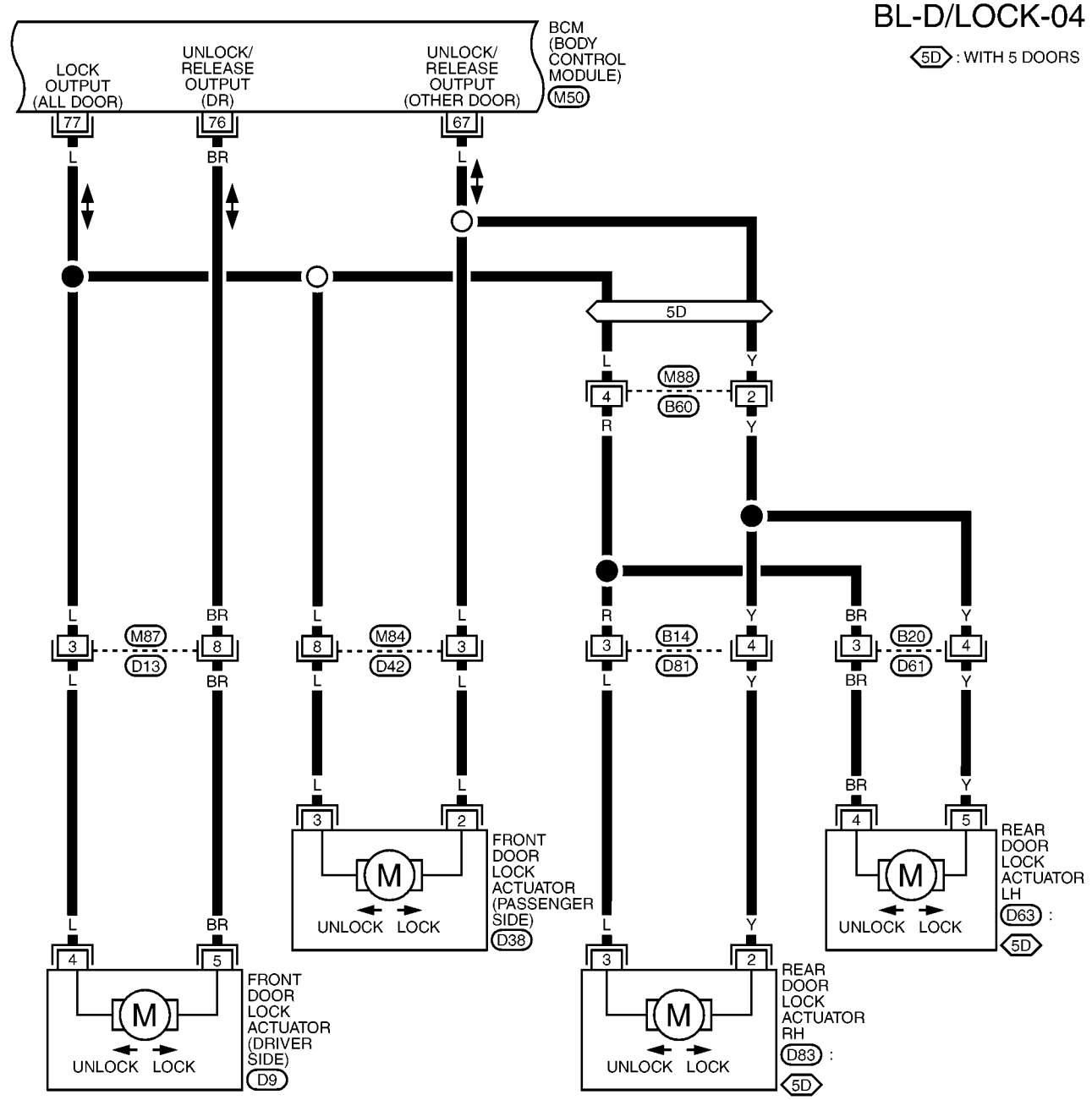


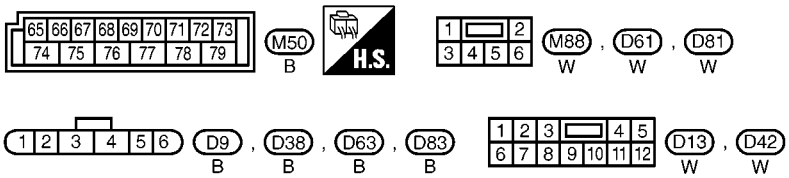


MKWA0865E

BL-D/LOCK-04

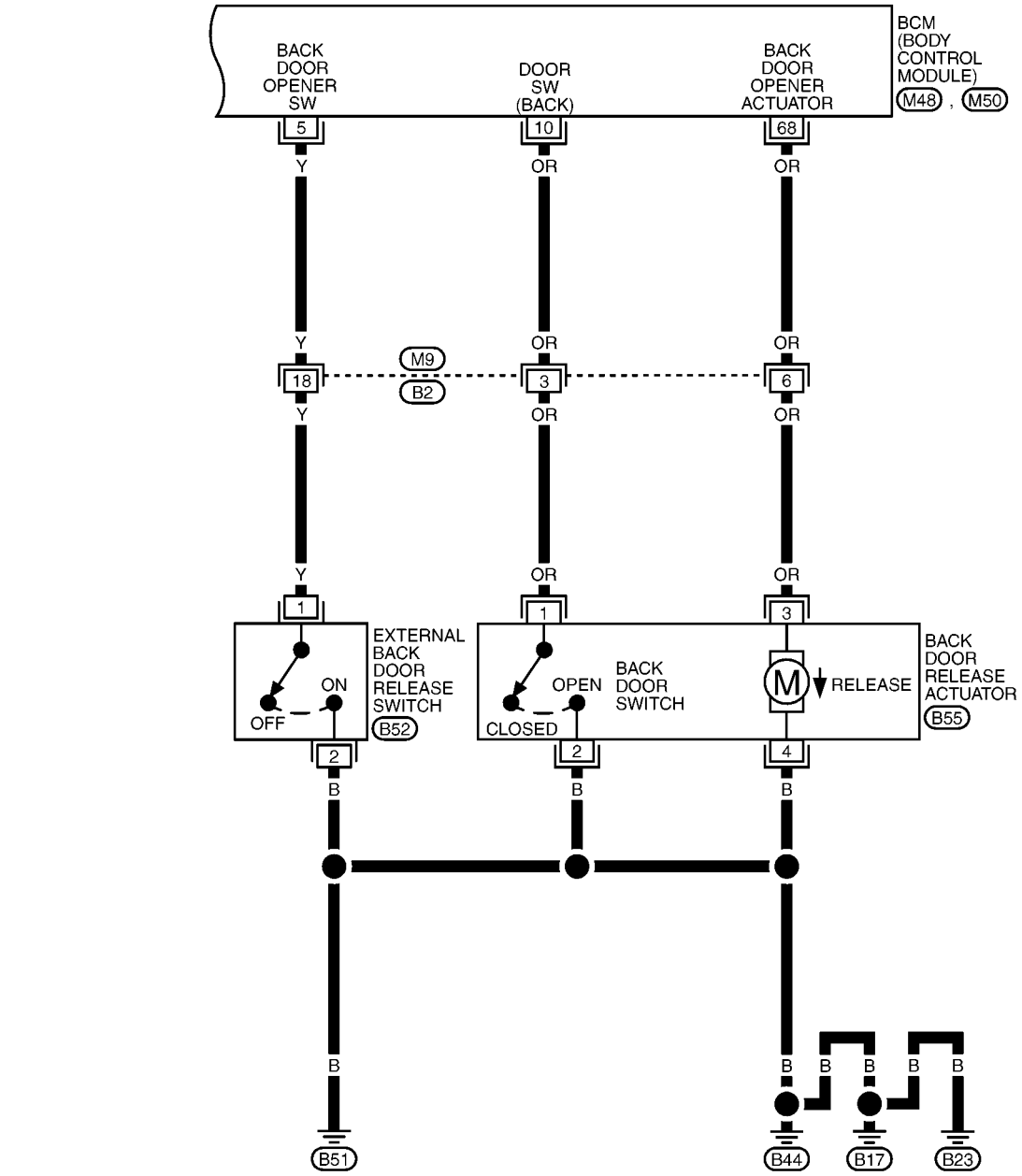
5D : WITH 5 DOORS

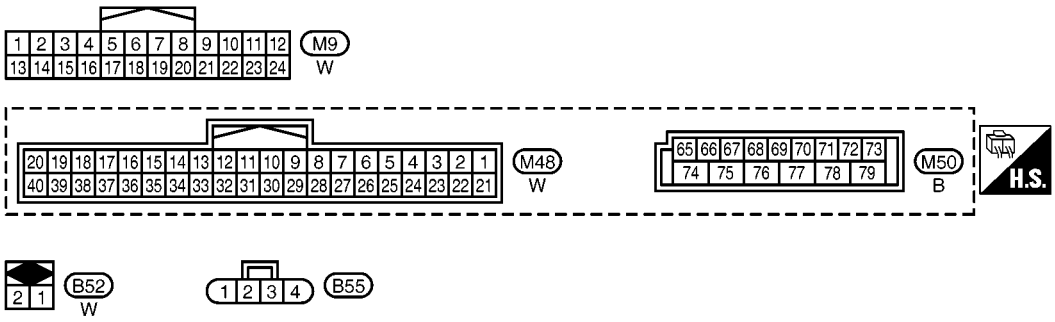




MIWA0275E

BL-D/LOCK-05



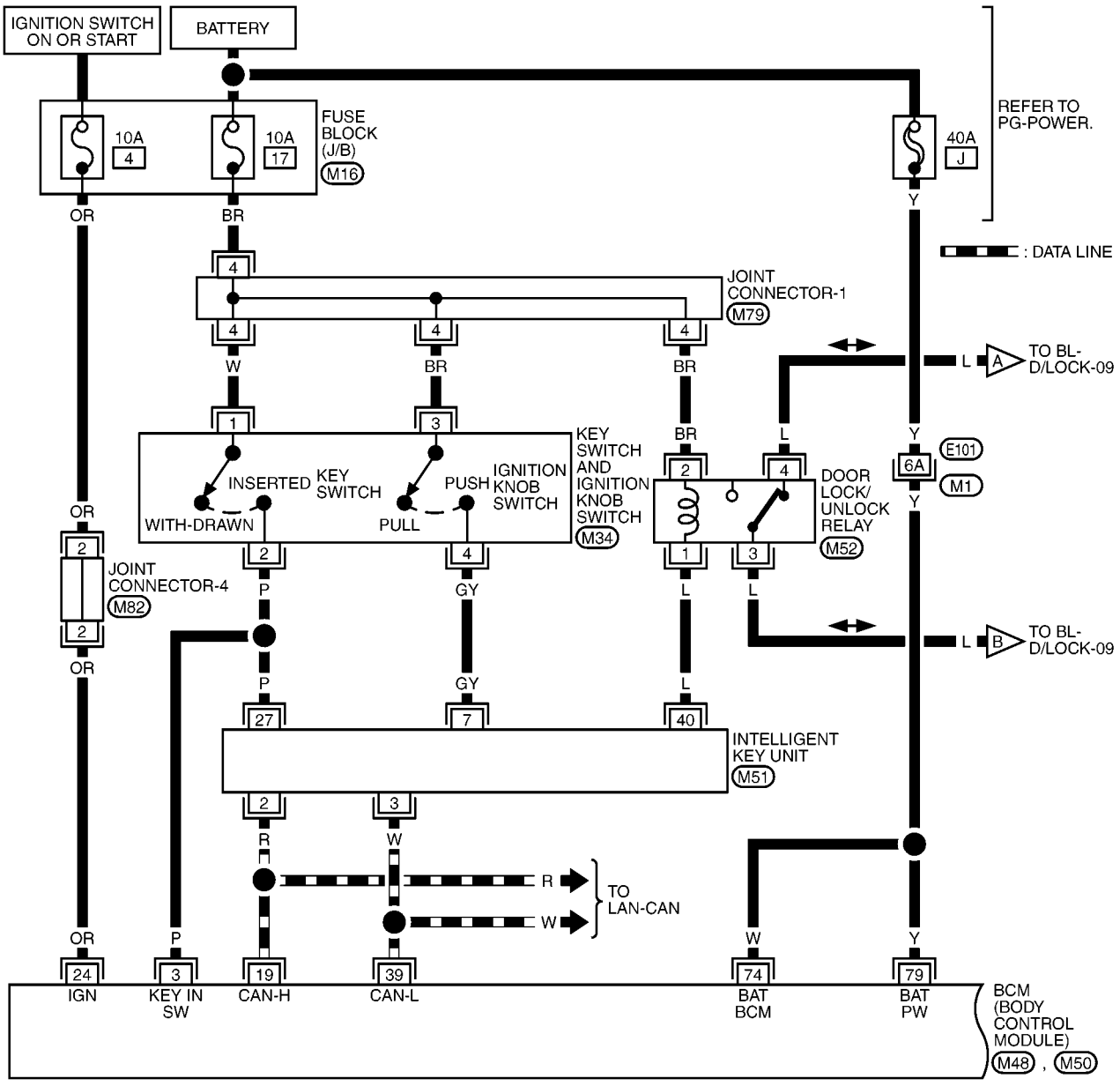


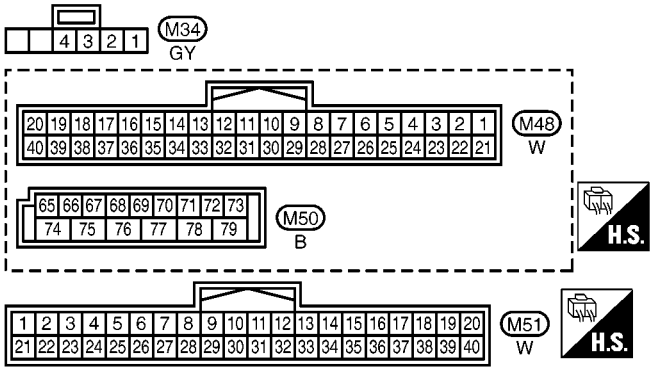
MKWA0867E

Wiring Diagram — D/LOCK — (With Intelligent Key System)

To ESM

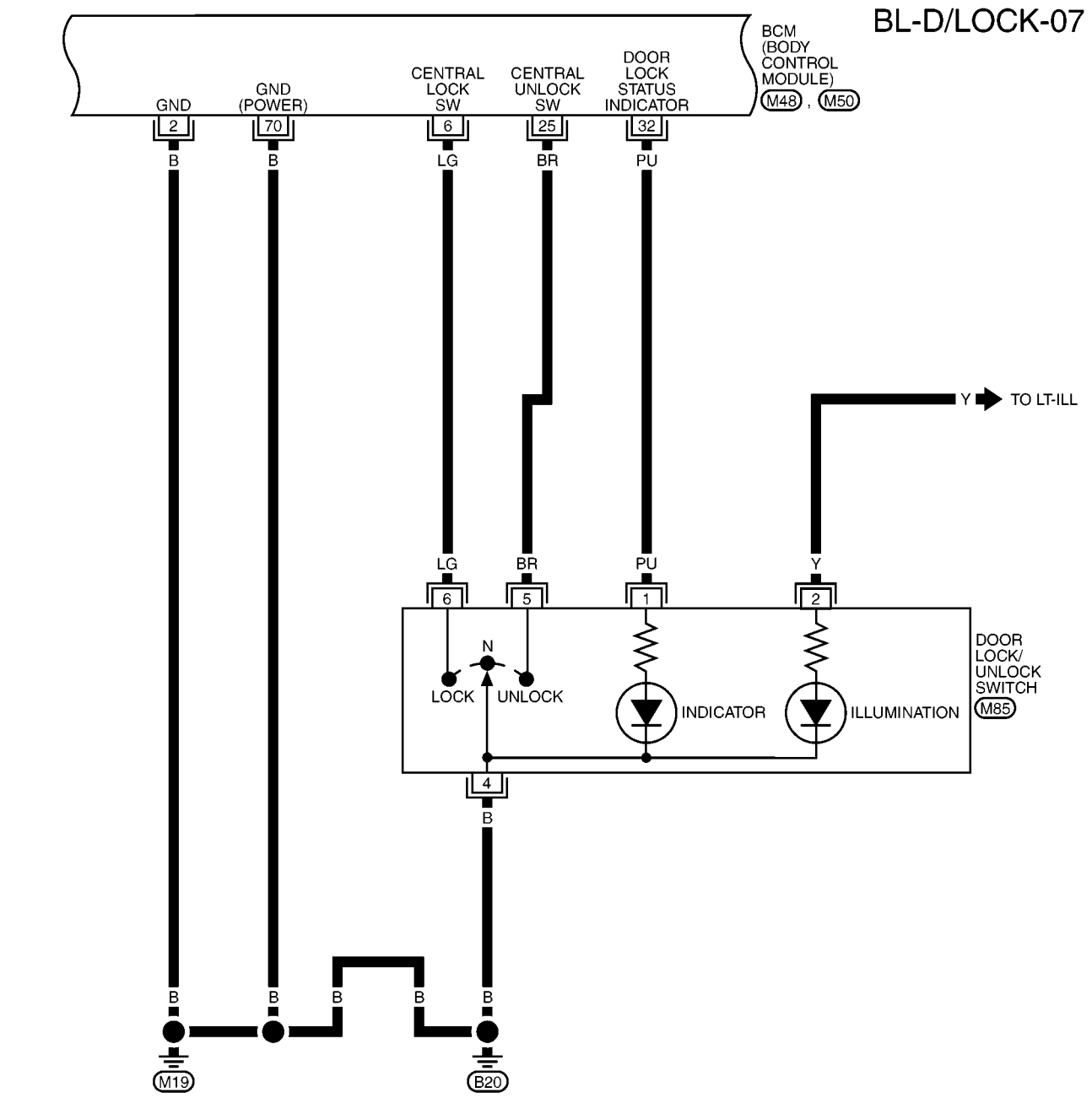
BL-D/LOCK-06

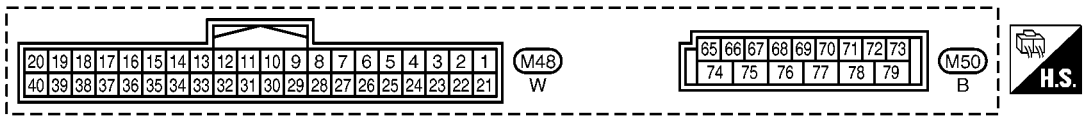


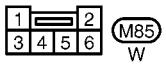


REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)
M79 , M82 -JOINT CONNECTOR (J/C)

MKWA1778E


BL-D/LOCK-07
BCM (BODY CONTROL MODULE)
M48 , M50
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
PU
Y
TO LT-ILL
LG
BR
PU
Y
6
5
1
2
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M85
4
B
B
B
B
B
B
M19
B20

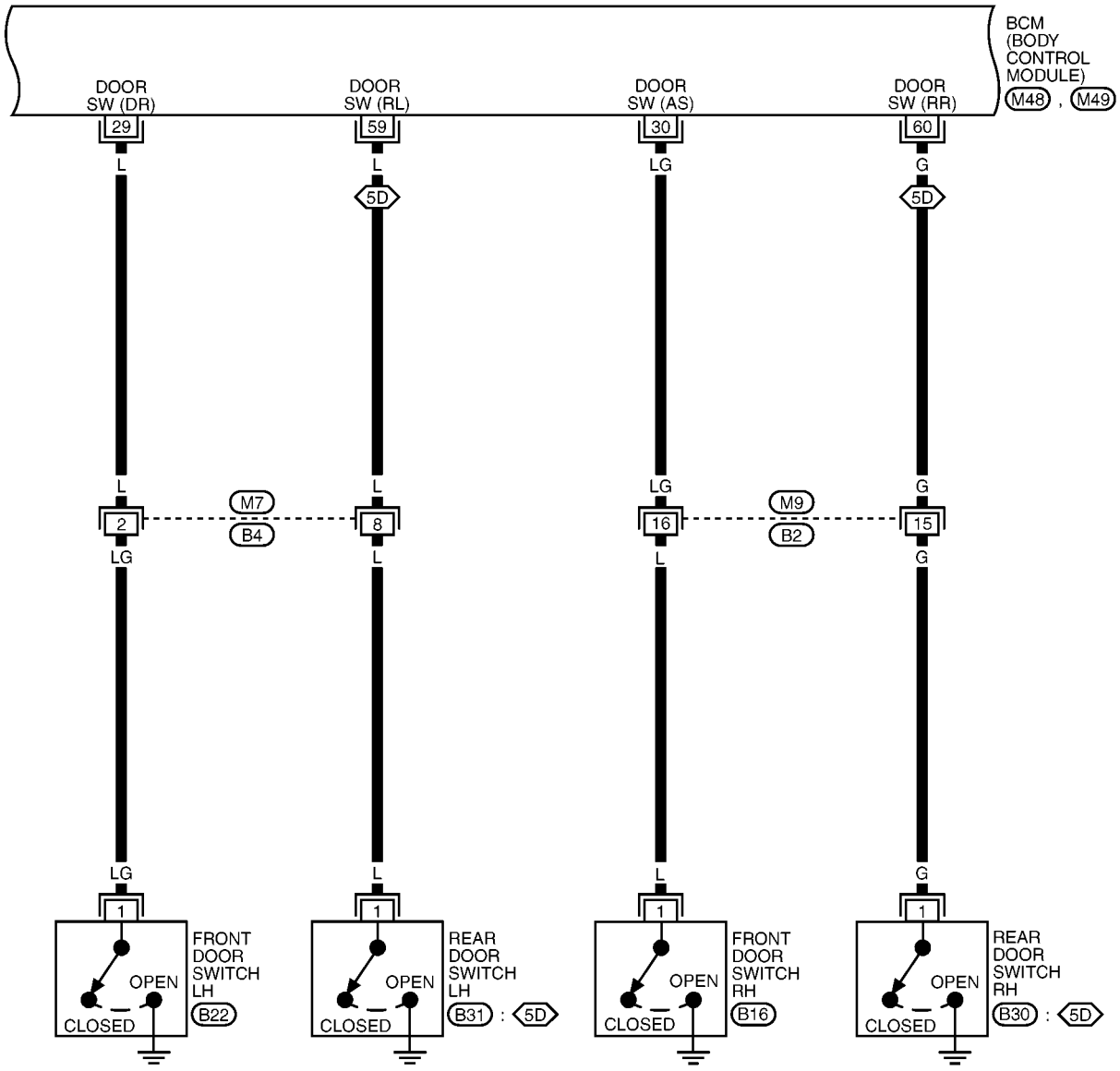

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M48
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M50
B
H.S.

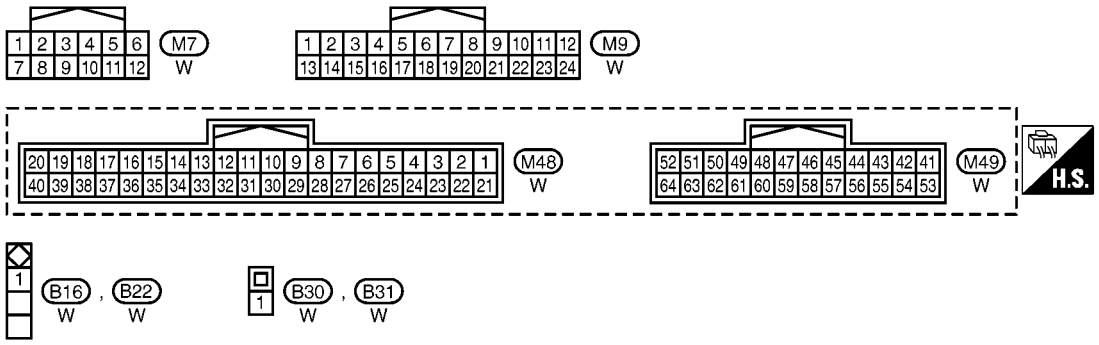

1 2
3 4 5 6
M85
W

MIWA0276E

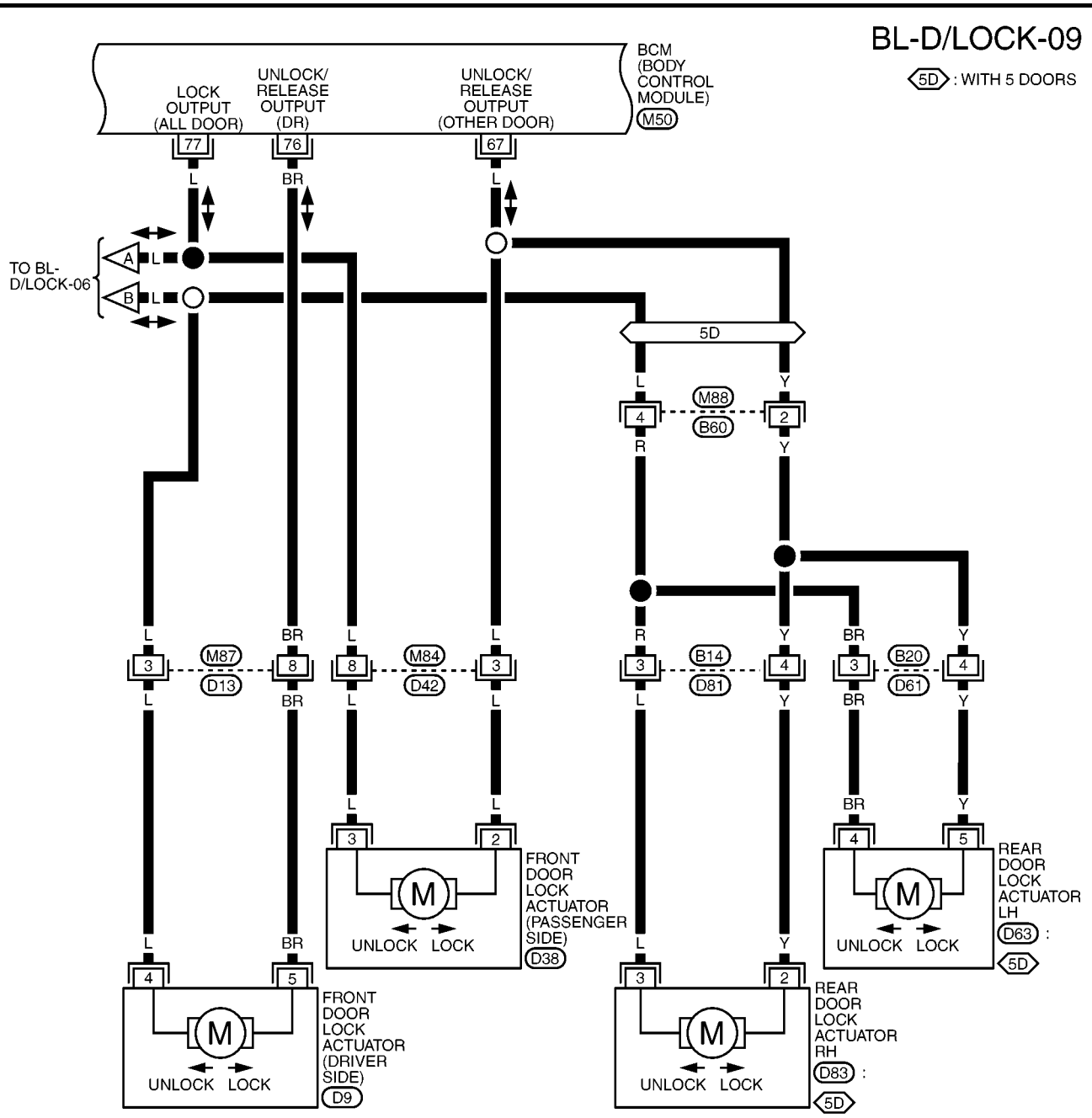
BL-D/LOCK-08

5D : WITH 5 DOORS



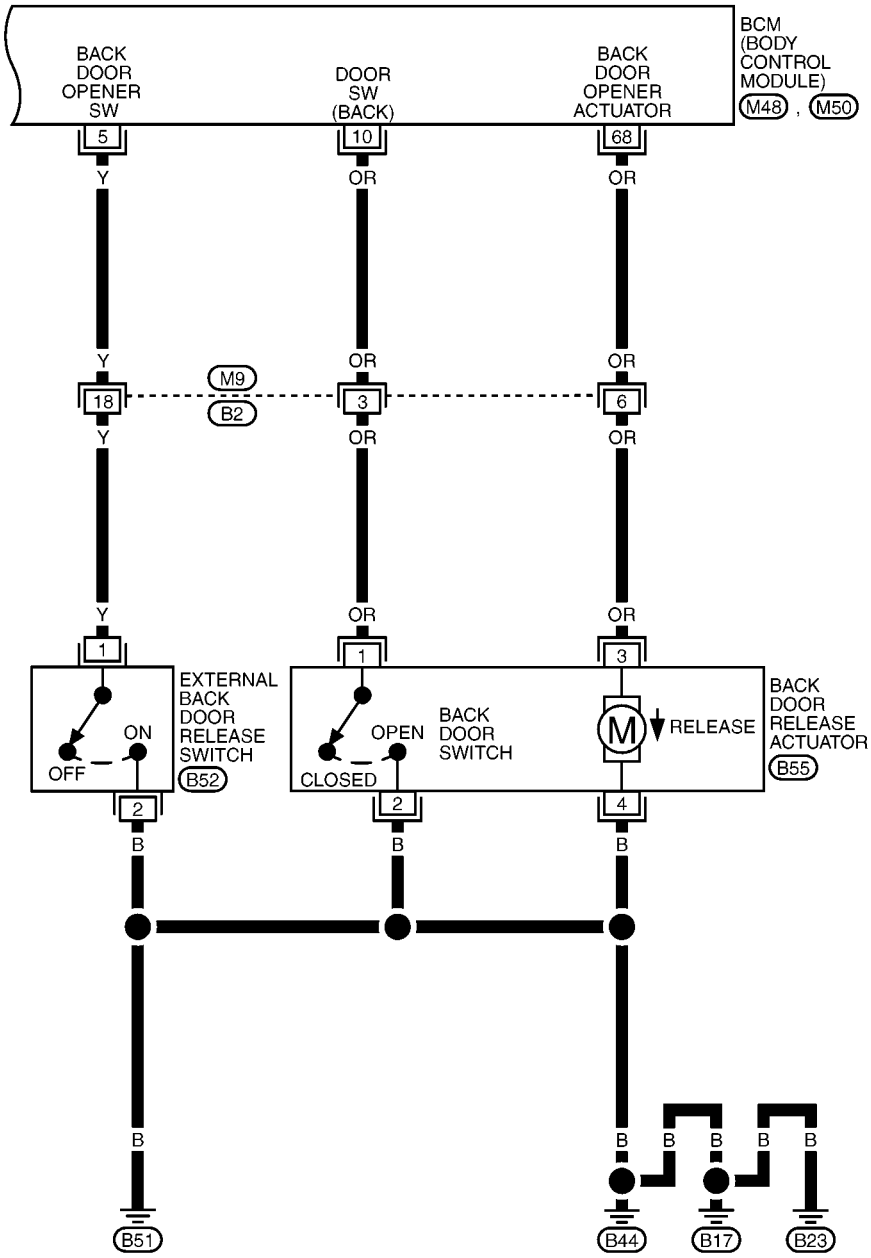


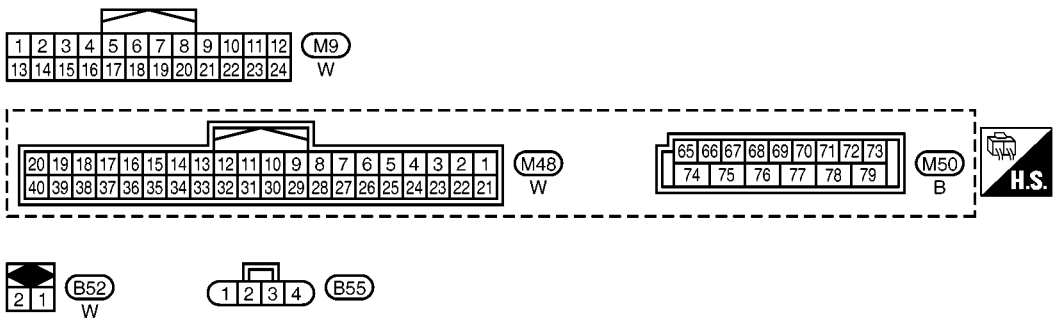
MKWA0871E


BL-D/LOCK-09
5D : WITH 5 DOORS
BCM (BODY CONTROL MODULE) M50
LOCK OUTPUT (ALL DOOR)
UNLOCK/ RELEASE OUTPUT (DR)
UNLOCK/ RELEASE OUTPUT (OTHER DOOR)
77
76
67
TO BL-D/LOCK-06
A
B
5D
M88
B60
M87
D13
M84
D42
B14
D81
B20
D61
FRONT DOOR LOCK ACTUATOR (PASSENGER SIDE) D38
FRONT DOOR LOCK ACTUATOR (DRIVER SIDE) D9
REAR DOOR LOCK ACTUATOR RH D83 : 5D
REAR DOOR LOCK ACTUATOR LH D63 : 5D
UNLOCK LOCK
M
M50 B
H.S.
M88 W , D61 W , D81 W
D9 B , D38 B , D63 B , D83 B
D13 W , D12 W

MIWA0277E

BL-D/LOCK-10



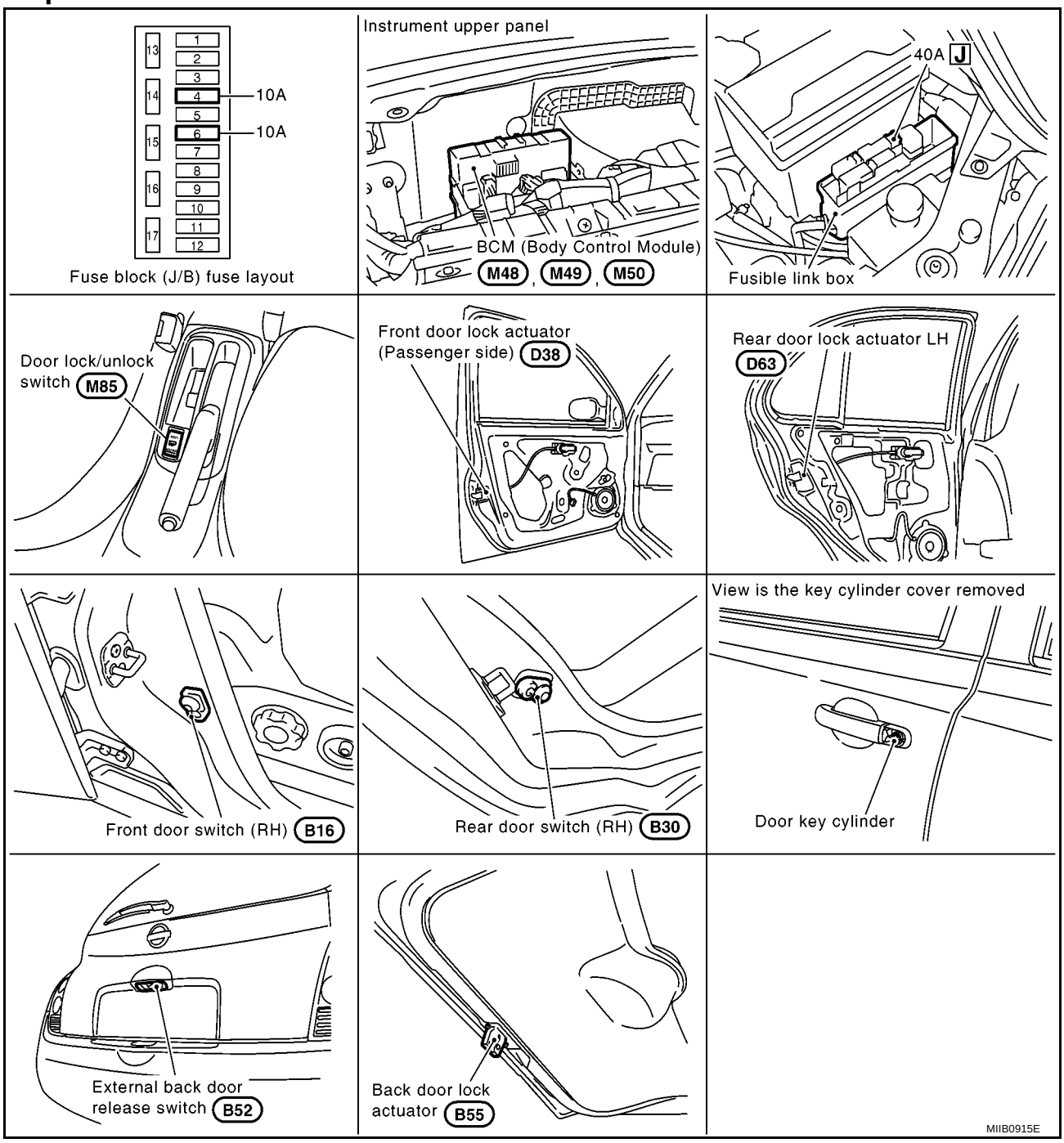


MKWA0873E

POWER DOOR LOCK — SUPER LOCK —

Component Parts and Harness Connector Location

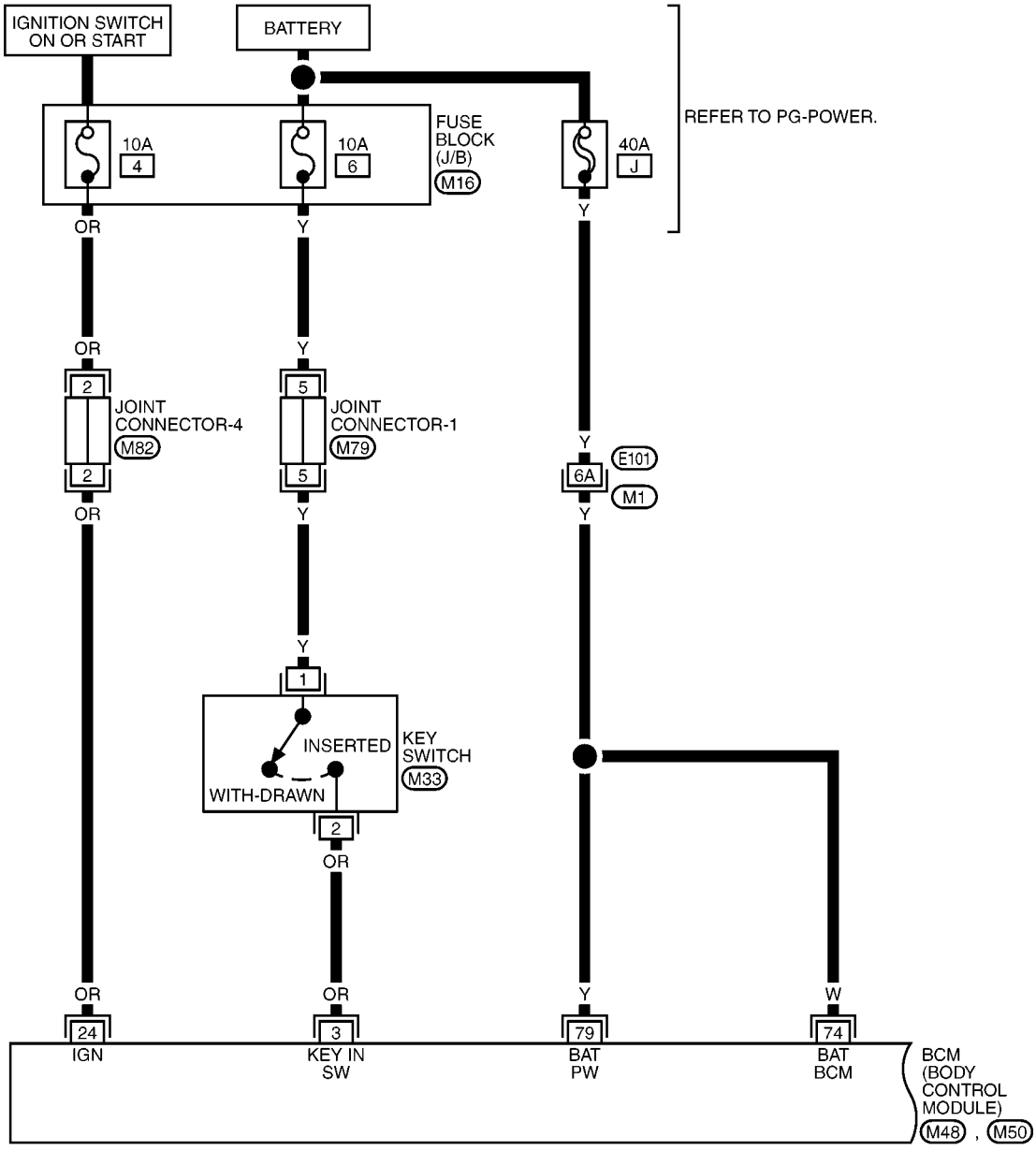
To ESM

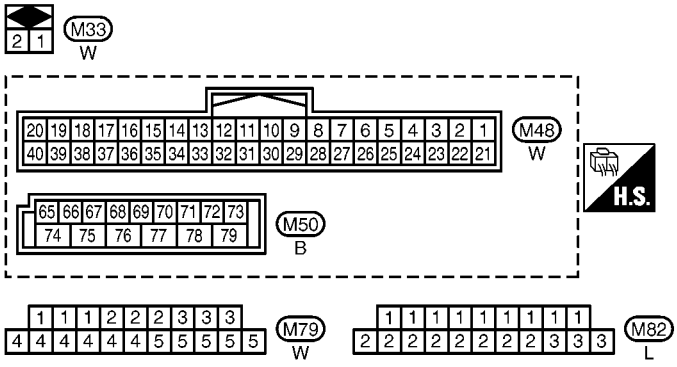


Wiring Diagram — S/LOCK — (Without Intelligent Key System)

To ESM

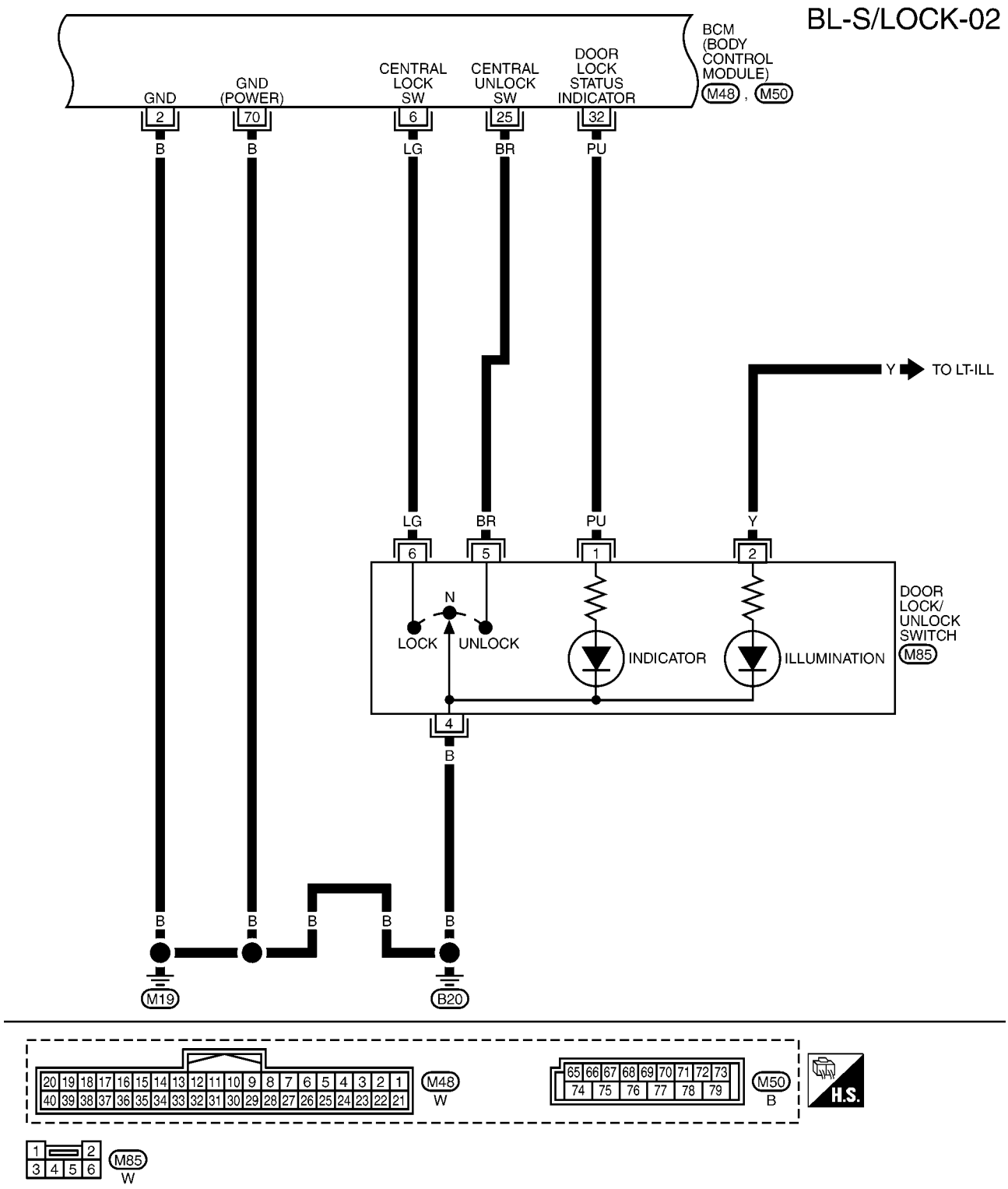
BL-S/LOCK-01





REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)

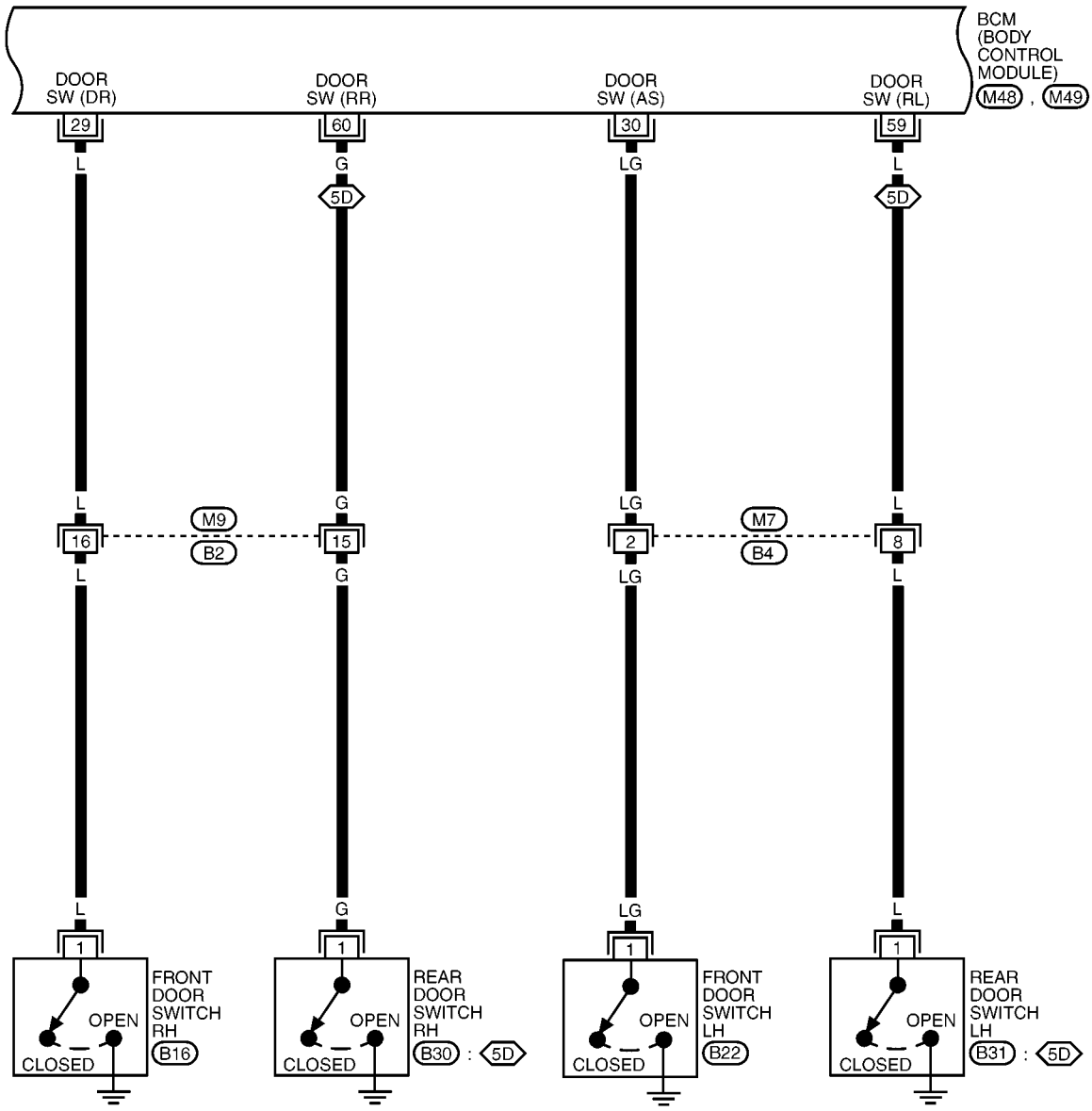
MKWA1782E

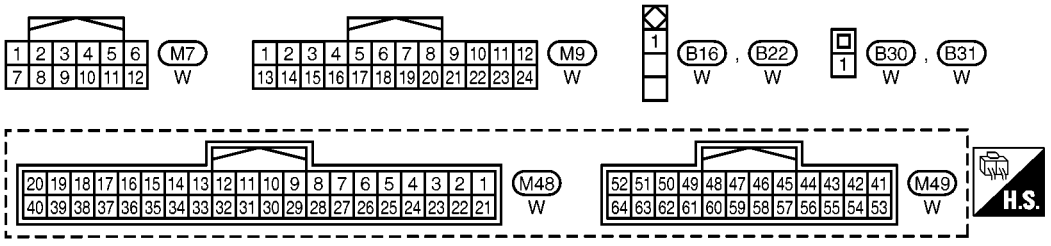

BL-S/LOCK-02
BCM (BODY CONTROL MODULE)
M48 , M50
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
PU
Y
TO LT-ILL
LG
BR
PU
Y
6
5
1
2
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M85
4
B
B
B
B
B
B
M19
B20
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M48
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M50
B
H.S.
1 2
3 4 5 6
M85
W

MIWA0278E

BL-S/LOCK-03

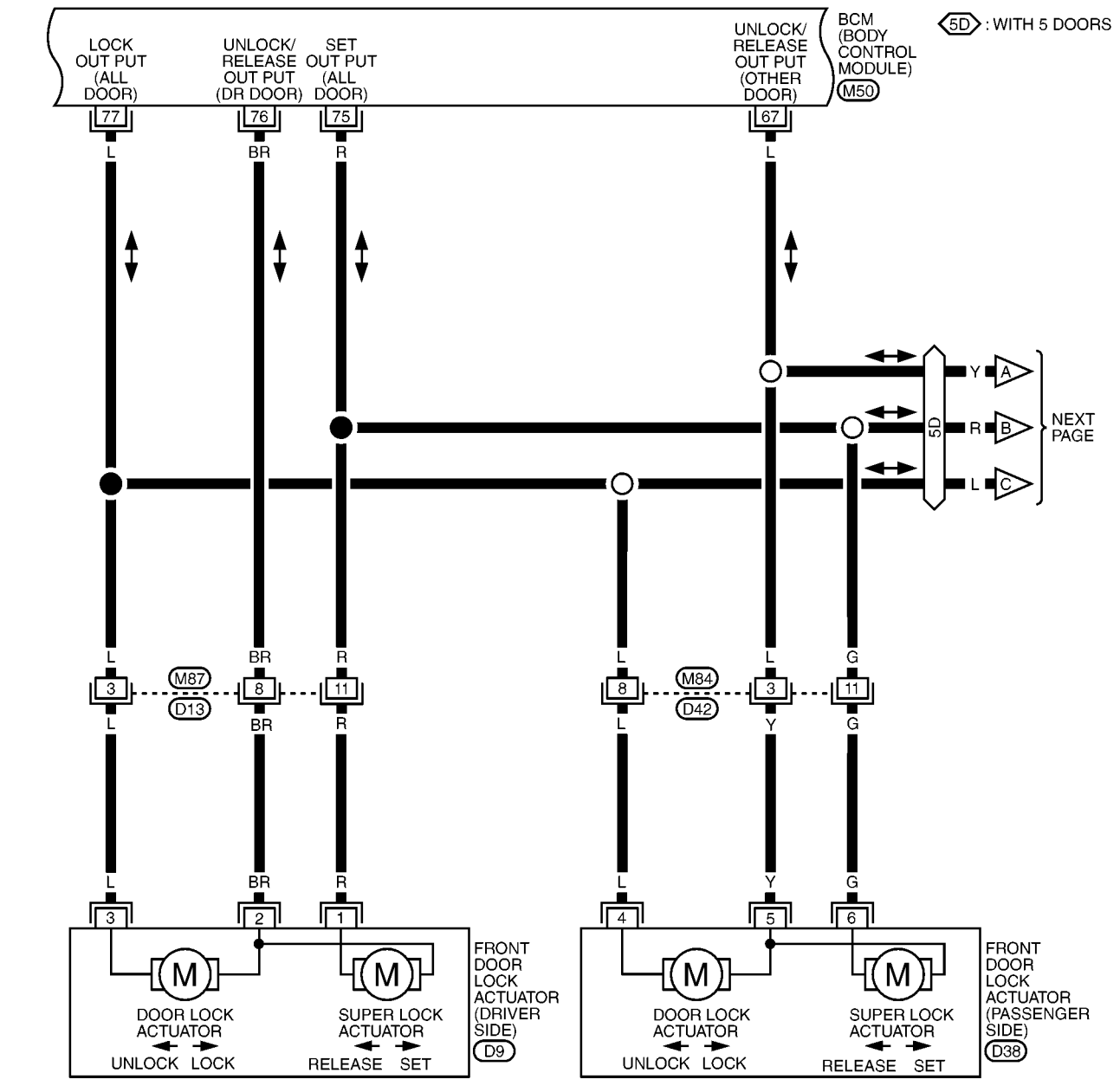
5D : WITH 5 DOORS

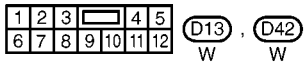




MKWA0877E

BL-S/LOCK-04

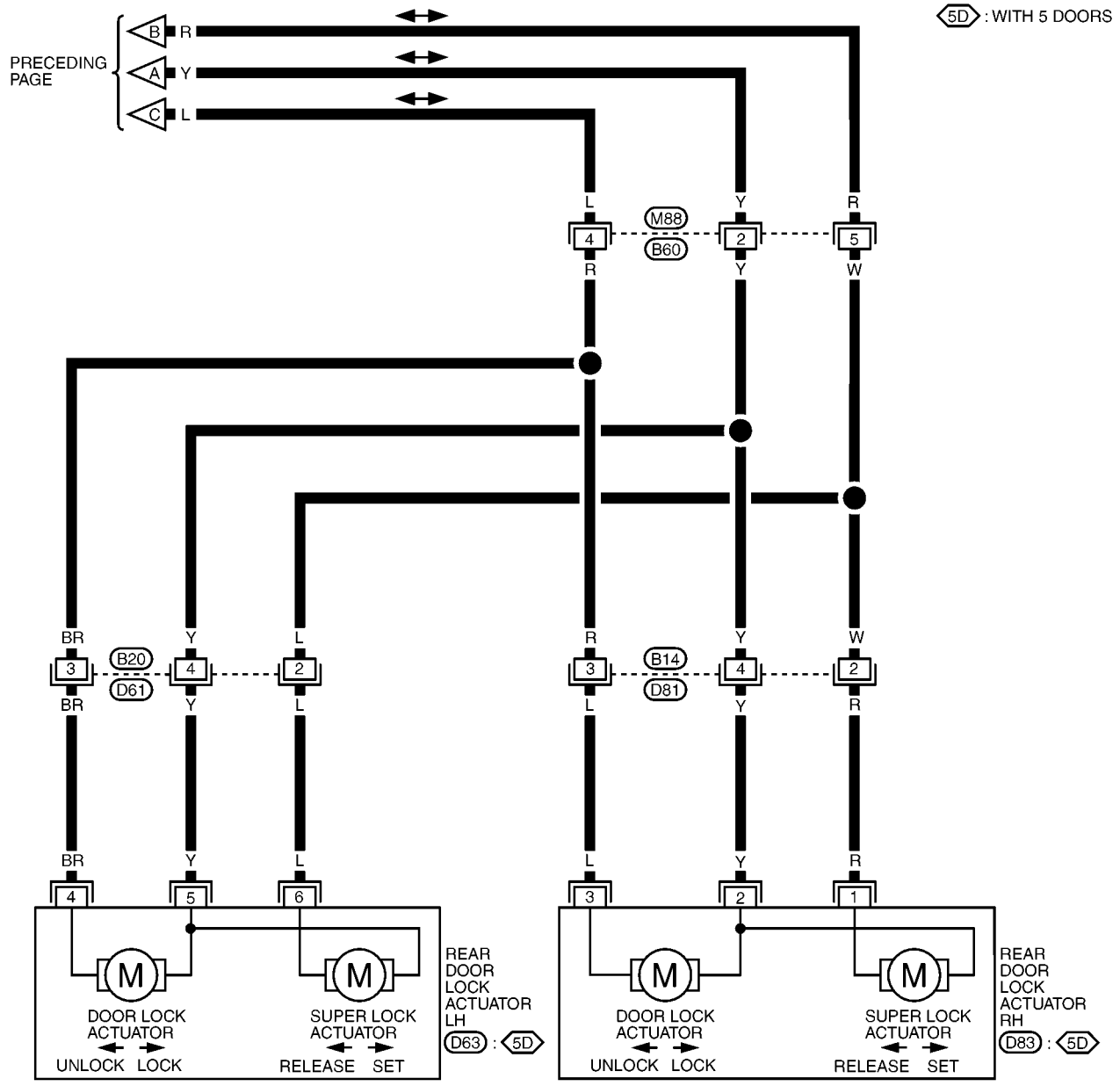


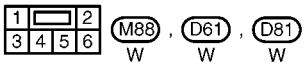


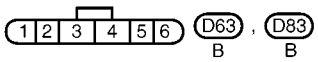
MIWA0279E

BL-S/LOCK-05

5D : WITH 5 DOORS

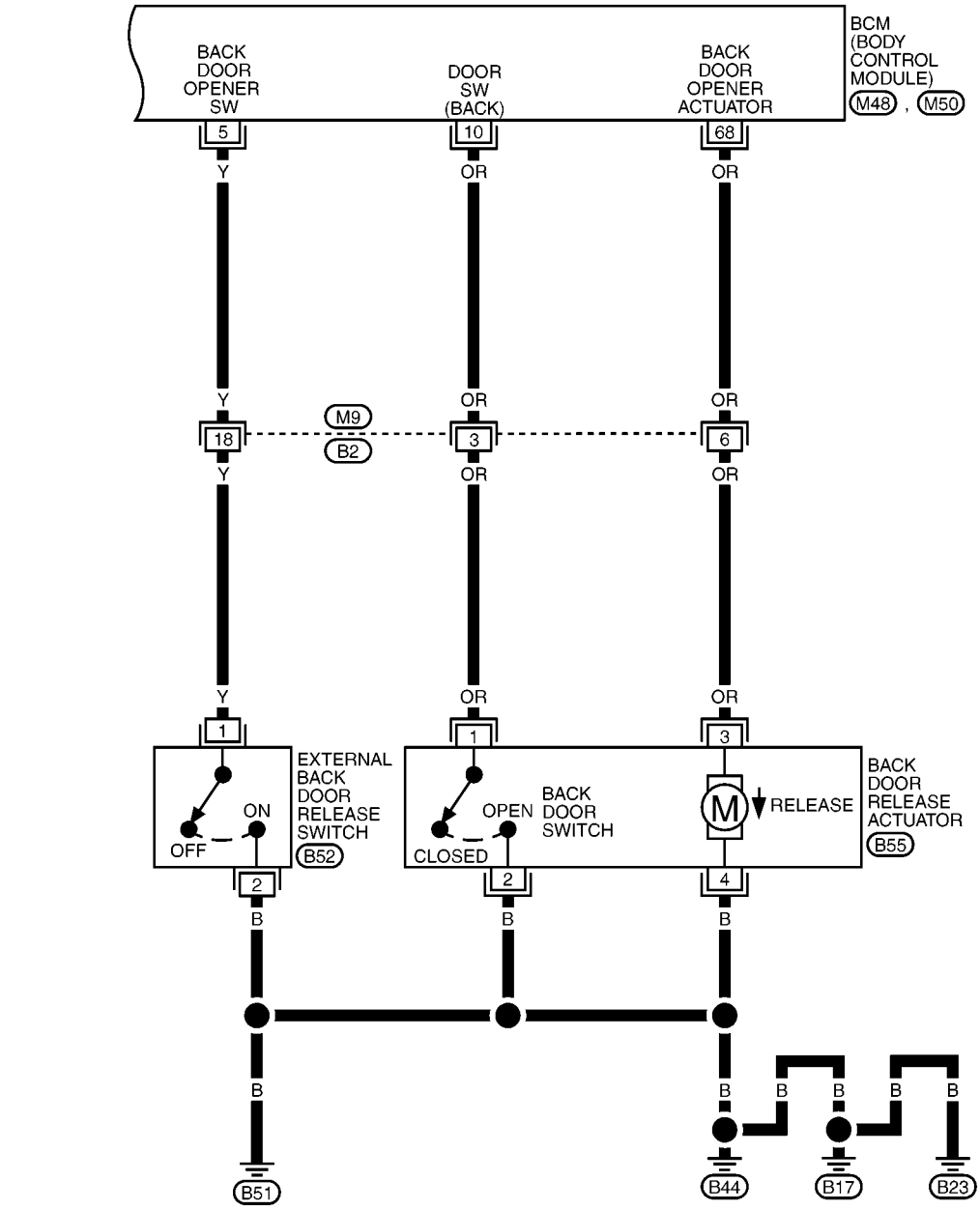


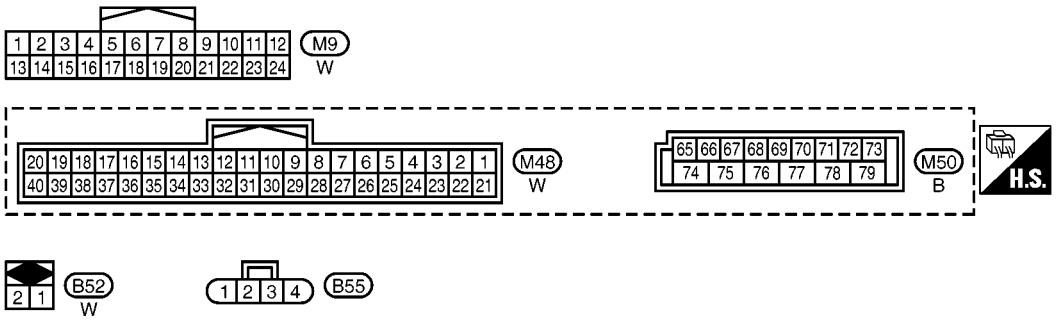




MIWA0280E

BL-S/LOCK-06



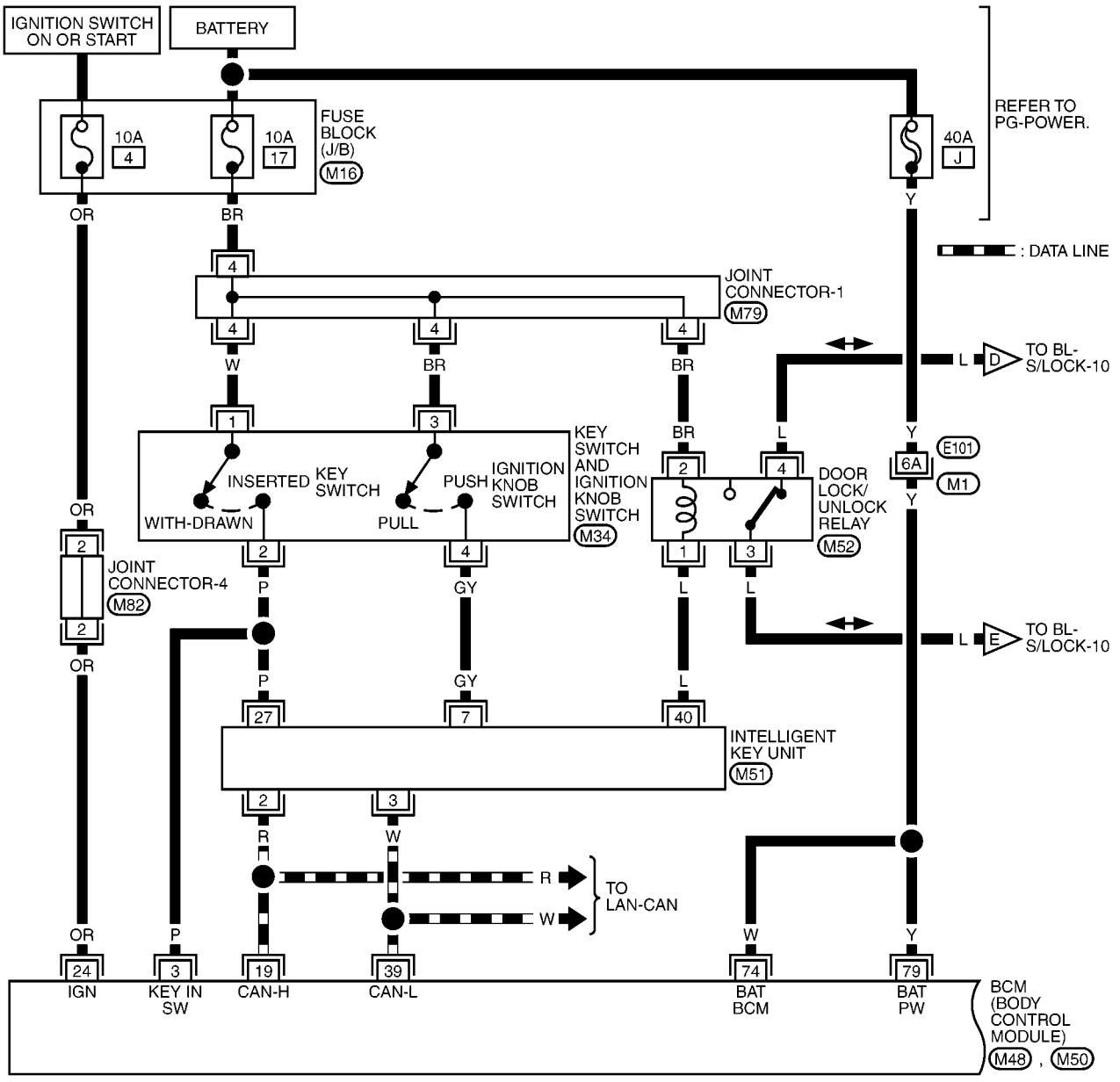


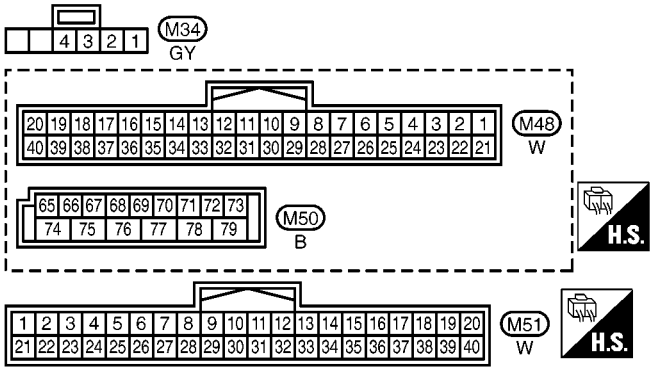
MKWA0880E

Wiring Diagram — S/LOCK — (With Intelligent Key System)

To ESM

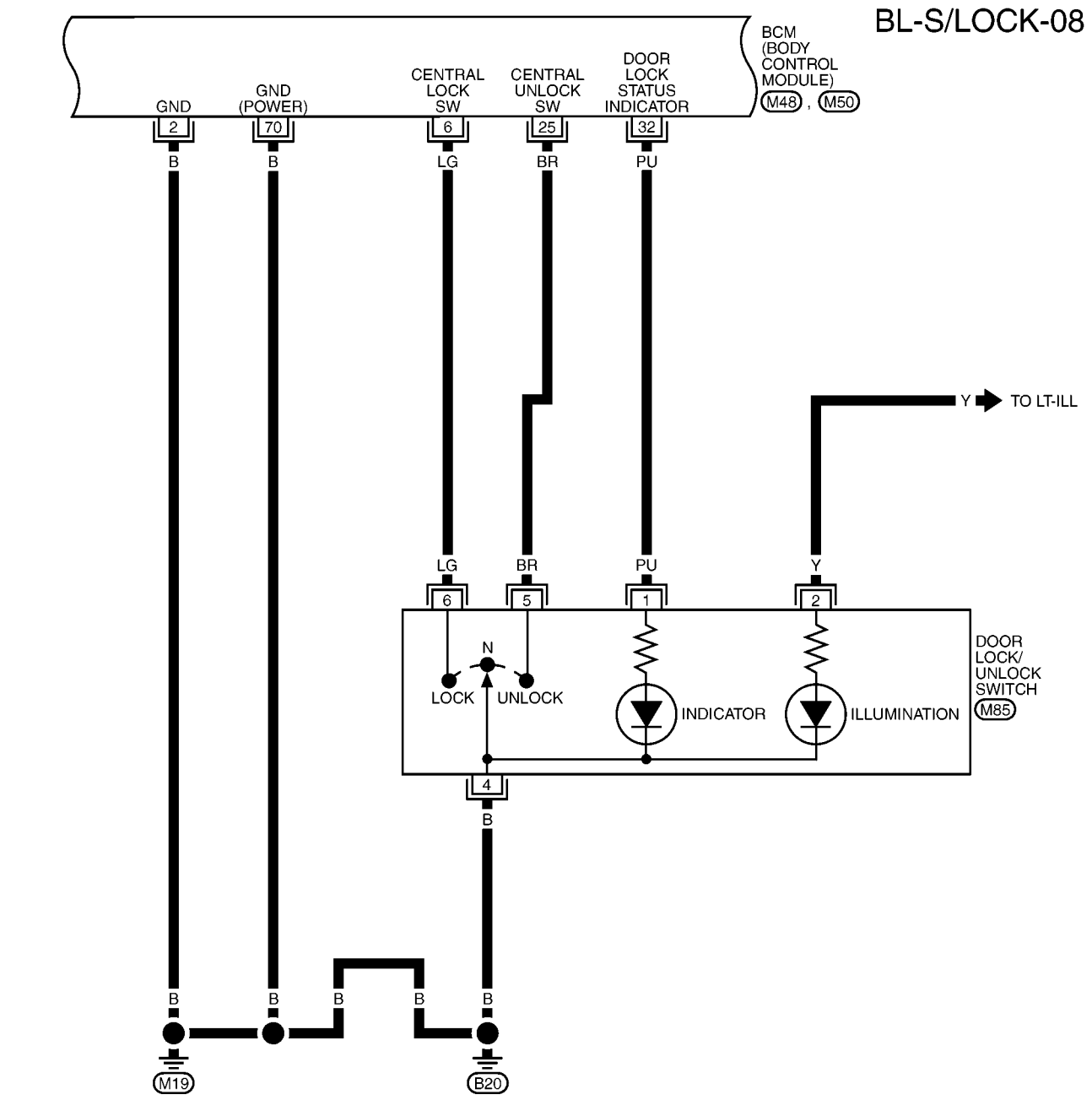
BL-S/LOCK-07

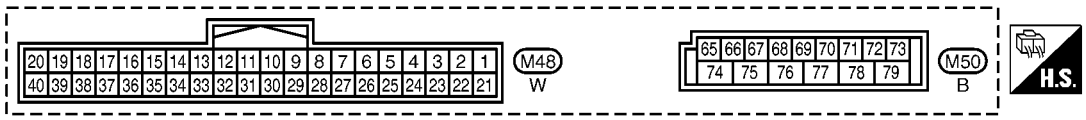


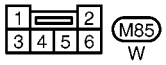


REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)
M79 , M82 -JOINT CONNECTOR (J/C)

MKWA1787E


BL-S/LOCK-08
BCM (BODY CONTROL MODULE)
M48 , M50
GND
GND (POWER)
CENTRAL LOCK SW
CENTRAL UNLOCK SW
DOOR LOCK STATUS INDICATOR
2
70
6
25
32
B
B
LG
BR
PU
Y
TO LT-ILL
LG
BR
PU
Y
6
5
1
2
N
LOCK
UNLOCK
INDICATOR
ILLUMINATION
DOOR LOCK/ UNLOCK SWITCH
M85
4
B
B
B
B
B
B
M19
B20

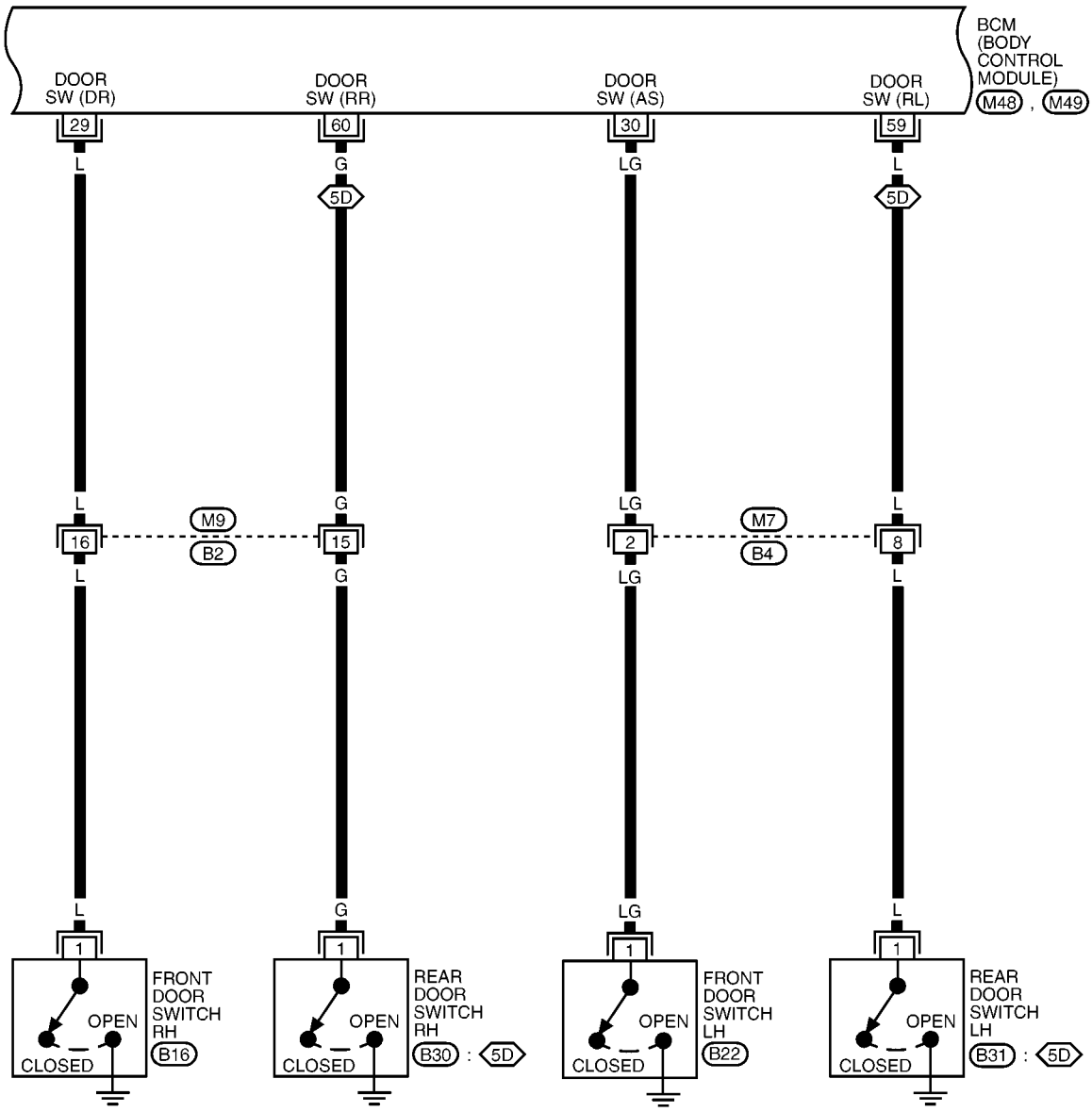

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
M48
W
65 66 67 68 69 70 71 72 73
74 75 76 77 78 79
M50
B
H.S.

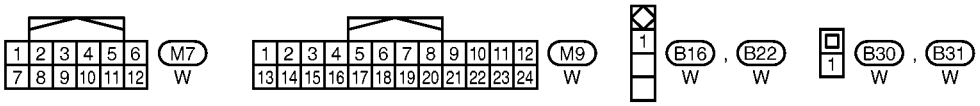

1 2
3 4 5 6
M85
W

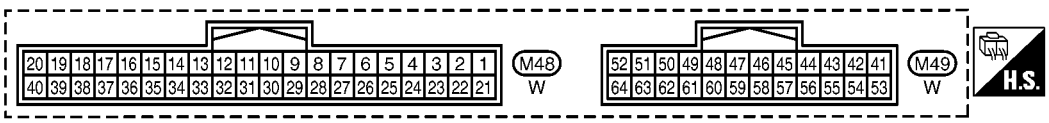
MIWA0281E

BL-S/LOCK-09

5D : WITH 5 DOORS

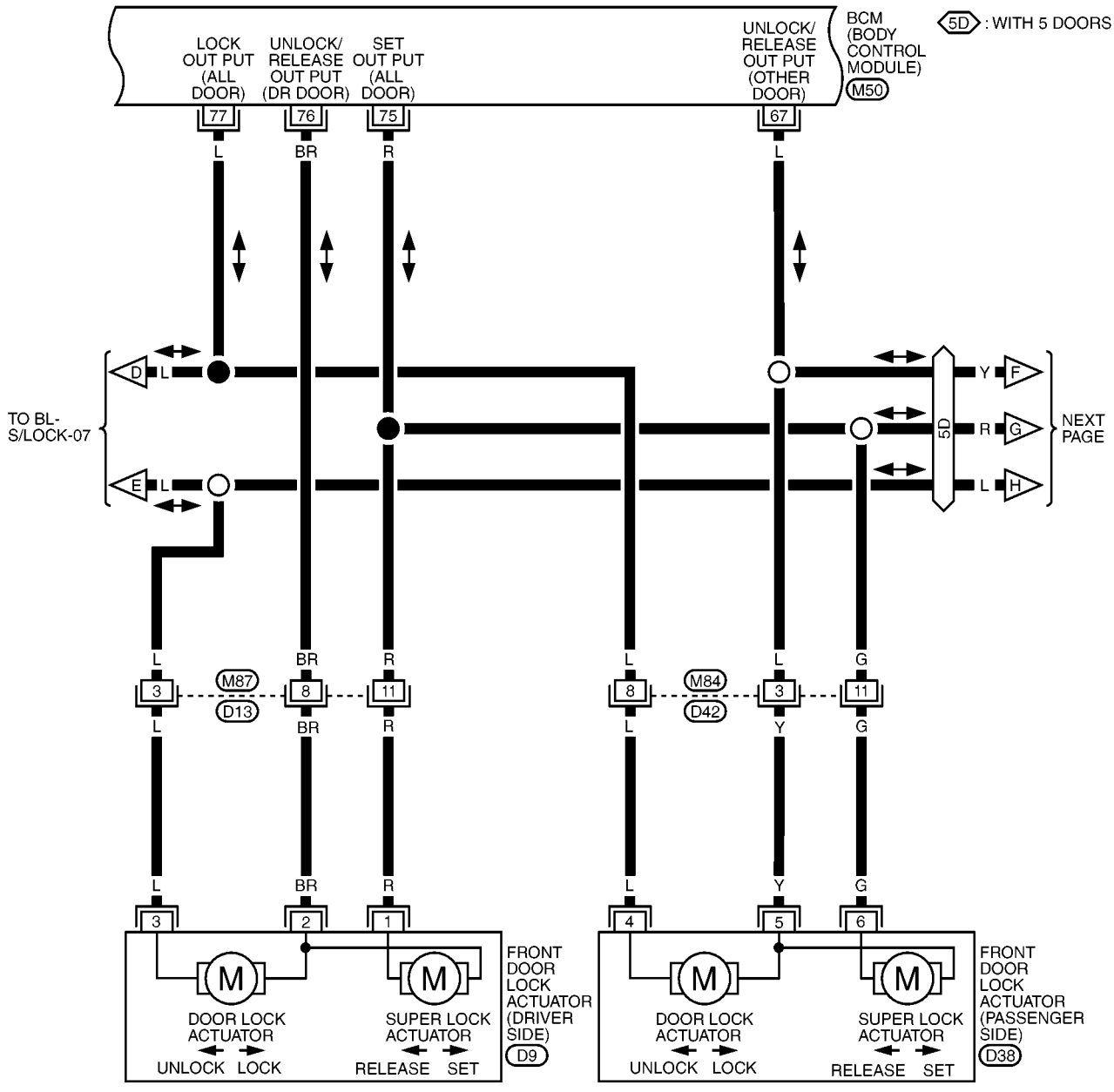


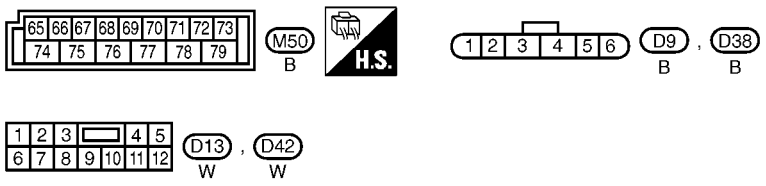




MKWA0884E

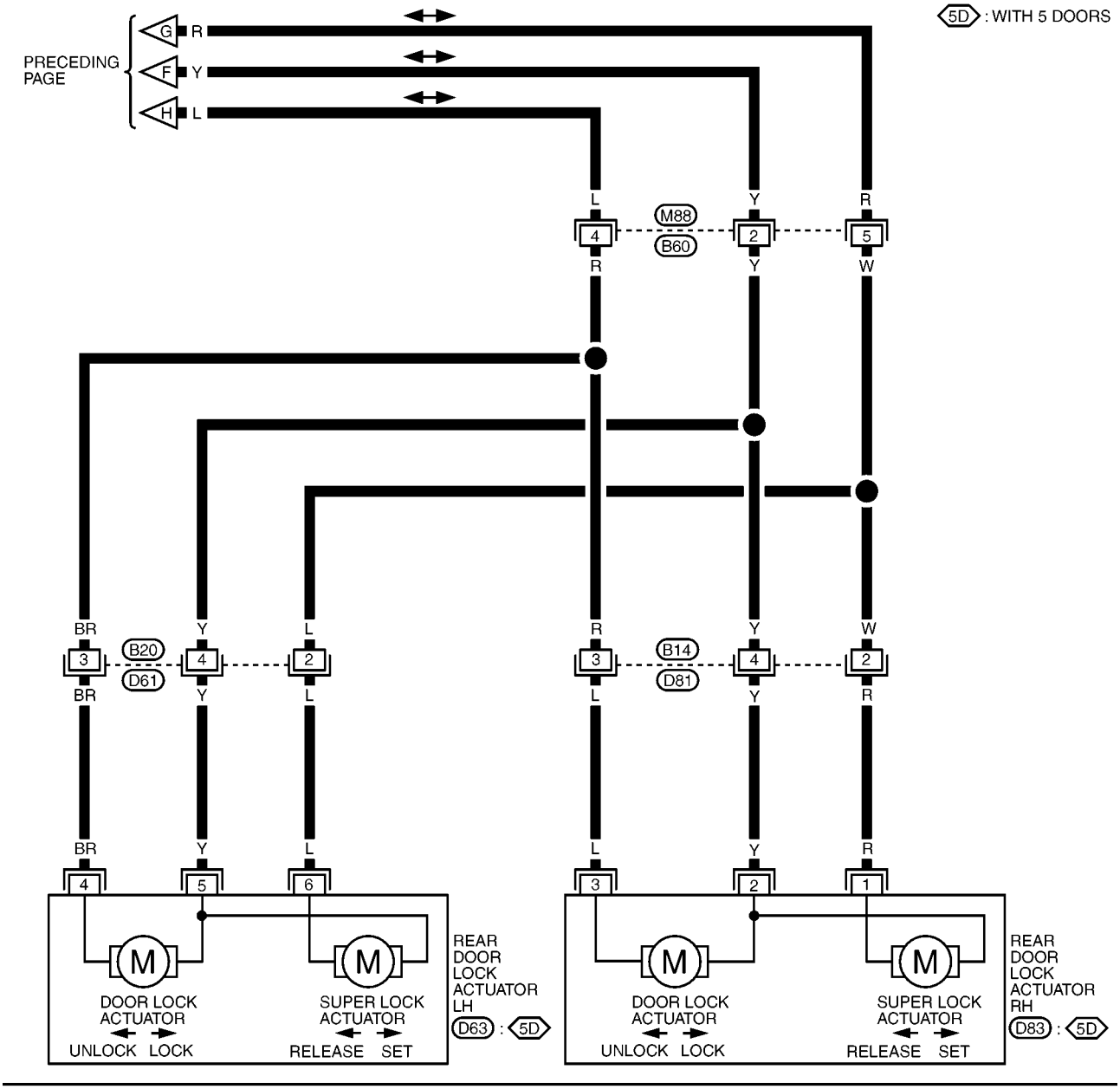
BL-S/LOCK-10





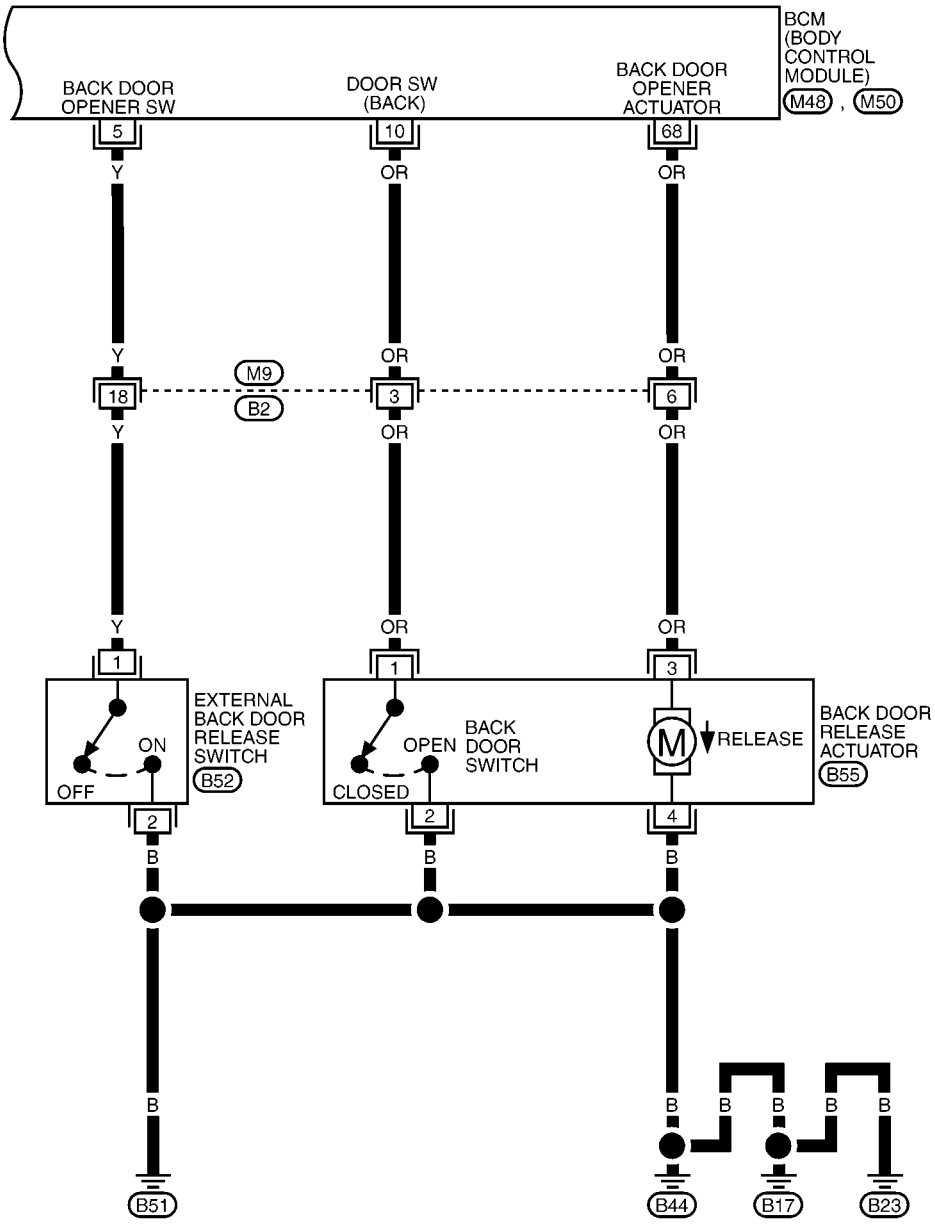
MIWA0282E

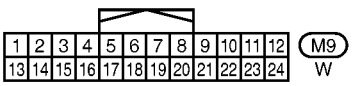
BL-S/LOCK-11

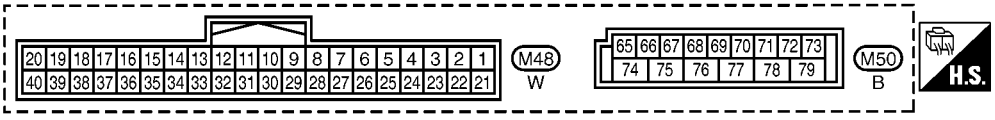


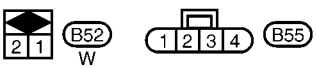
MIWA0283E

BL-S/LOCK-12









MKWA0887E

Door Lock Actuator Check

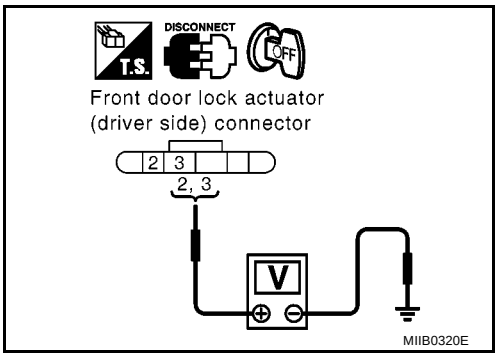
DRIVER SIDE

To ESM

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (driver side) connector.
3. Door lock / unlock switch operate, check voltage between front door lock actuator (driver side) connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D9	2 (BR)	Ground	Unlock	0 → Battery voltage → 0
	3 (L)		Lock	0 → Battery voltage → 0



OK or NG

OK >> Replace front door lock actuator (driver side).
NG >> GO TO 2.

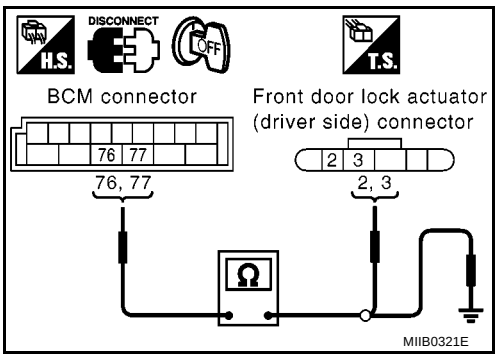
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M50 terminal 76, 77 and front door lock actuator (driver side) connector D9 terminal 2, 3.

76 (BR) – 2 (BR) : Continuity should exist.
77 (L) – 3 (L) : Continuity should exist.

3. Check continuity between BCM connector M50 terminal 76, 77 and ground.

76 (BR) – Ground : Continuity should not exist.
77 (L) – Ground : Continuity should not exist.



OK or NG

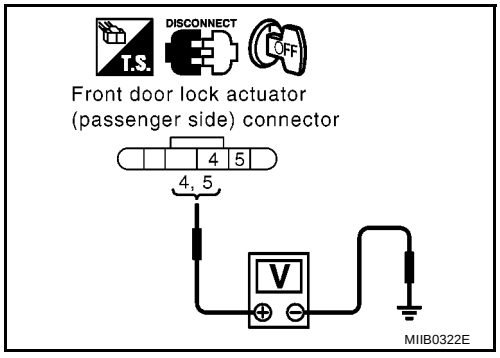
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

PASSENGER SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect front door lock actuator (passenger side) connector.
3. Door lock / unlock switch operate, check voltage between front door lock actuator (passenger side) connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D38	4 (L)	Ground	Lock	0 → Battery voltage → 0
	5 (Y)		Unlock	0 → Battery voltage → 0



OK or NG

OK >> Replace front door lock actuator (passenger side).
NG >> GO TO 2.

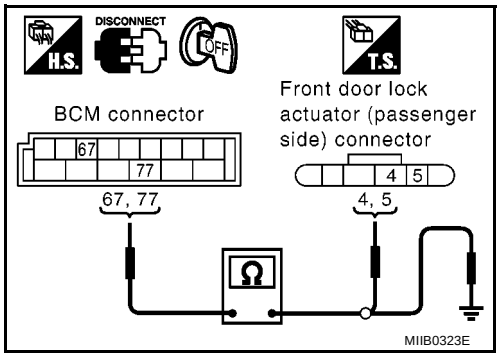
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M50 terminal 67, 77 and front door lock actuator (passenger side) connector D38 terminal 4, 5.

67 (L) – 5 (Y) : Continuity should exist.
77 (L) – 4 (L) : Continuity should exist.

3. Check continuity between BCM connector M50 terminal 67, 77 and ground.

67 (L) – Ground : Continuity should not exist.
77 (L) – Ground : Continuity should not exist.



OK or NG

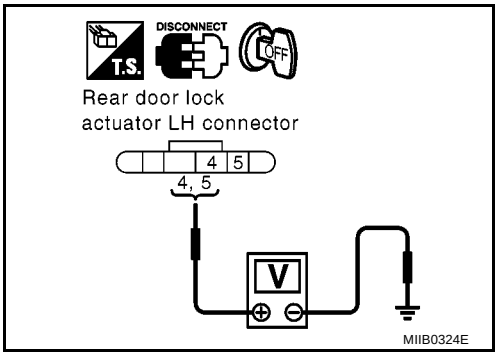
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

REAR LH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator LH connector.
3. Door lock / unlock switch operate, check voltage between rear door lock actuator LH connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D63	4 (BR)	Ground	Lock	0 → Battery voltage → 0
	5 (Y)		Unlock	0 → Battery voltage → 0



OK or NG

OK >> Replace rear door lock actuator LH.
NG >> GO TO 2.

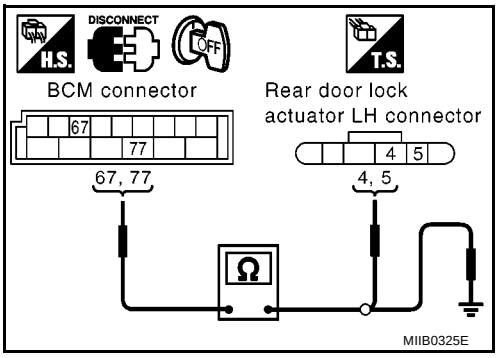
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M50 terminal 67, 77 and rear door lock actuator LH connector D63 terminal 4, 5.

67 (L) – 5 (Y) : Continuity should exist.
77 (L) – 4 (BR) : Continuity should exist.

3. Check continuity between BCM connector M50 terminal 67, 77 and ground.

67 (L) – Ground : Continuity should not exist.
77 (L) – Ground : Continuity should not exist.



OK or NG

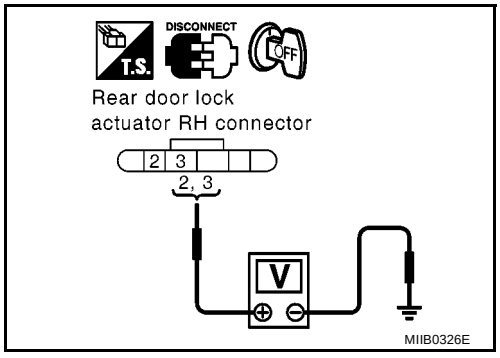
OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

REAR RH SIDE

1. CHECK DOOR LOCK ACTUATOR

1. Turn ignition switch OFF.
2. Disconnect rear door lock actuator RH connector.
3. Door lock / unlock switch operate, check voltage between rear door lock actuator RH connector and ground.

Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(-)		
D83	2 (Y)	Ground	Unlock	0 → Battery voltage → 0
	3 (L)		Lock	0 → Battery voltage → 0



OK or NG

OK >> Replace rear door lock actuator RH.
NG >> GO TO 2.

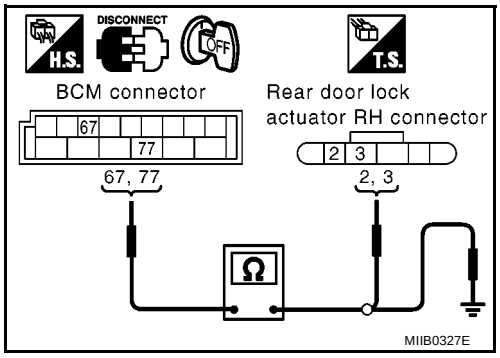
2. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector.
2. Check continuity between BCM connector M50 terminal 67, 77 and rear door lock actuator RH connector D83 terminal 2, 3.

67 (L) – 2 (Y) : Continuity should exist.
77 (L) – 3 (L) : Continuity should exist.

3. Check continuity between BCM connector M50 terminal 67, 77 and ground.

67 (L) – Ground : Continuity should not exist.
77 (L) – Ground : Continuity should not exist.

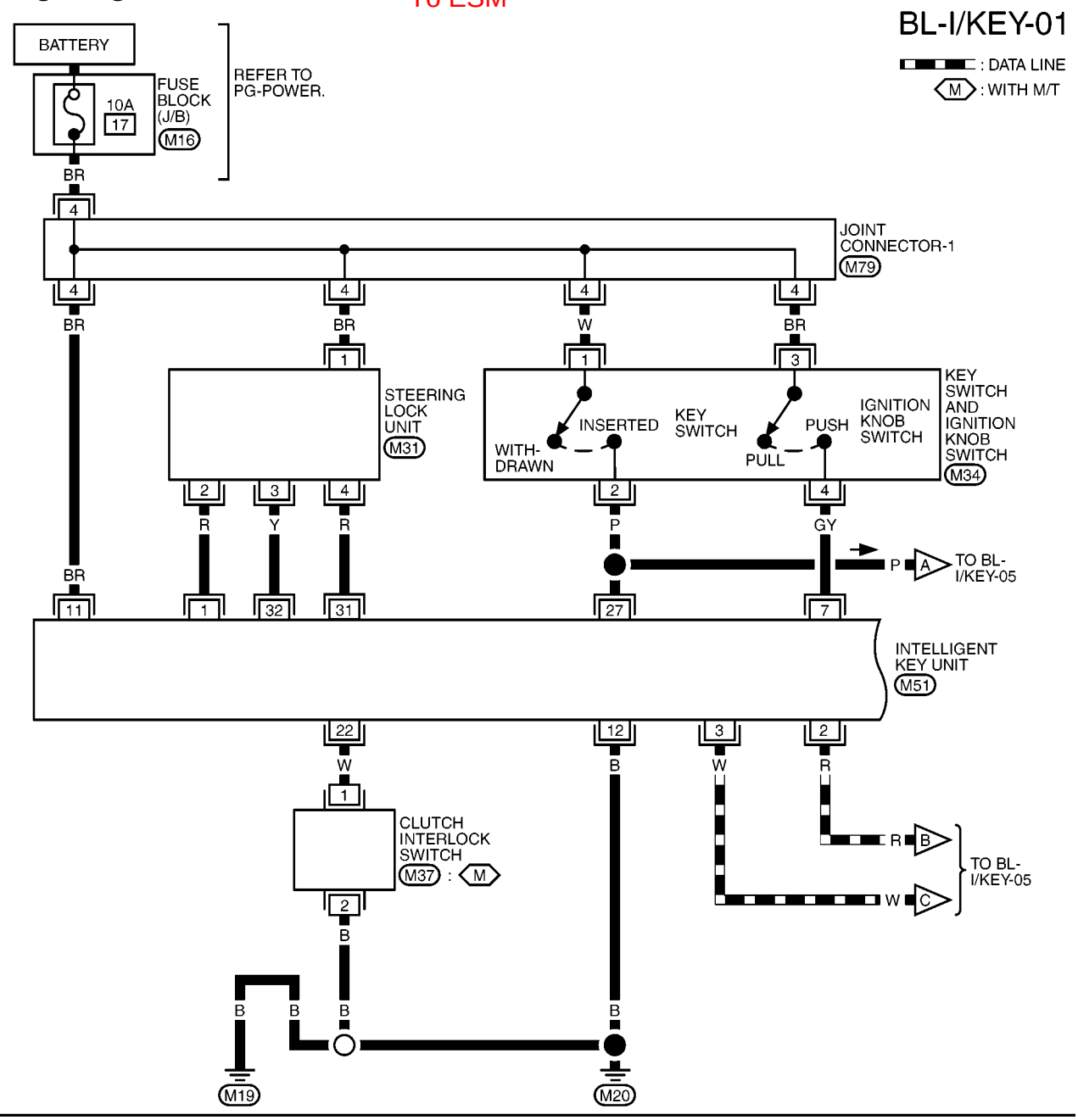


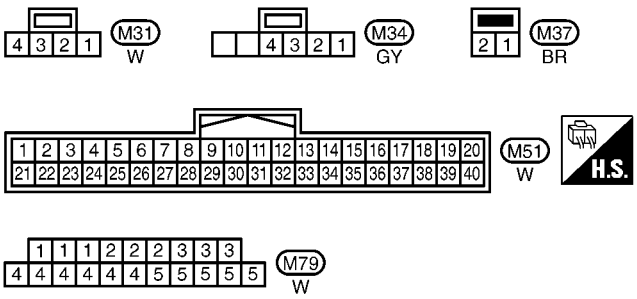
OK or NG

OK >> Check the condition of the harness and the connector.
NG >> Repair or replace harness.

INTELLIGENT KEY SYSTEM

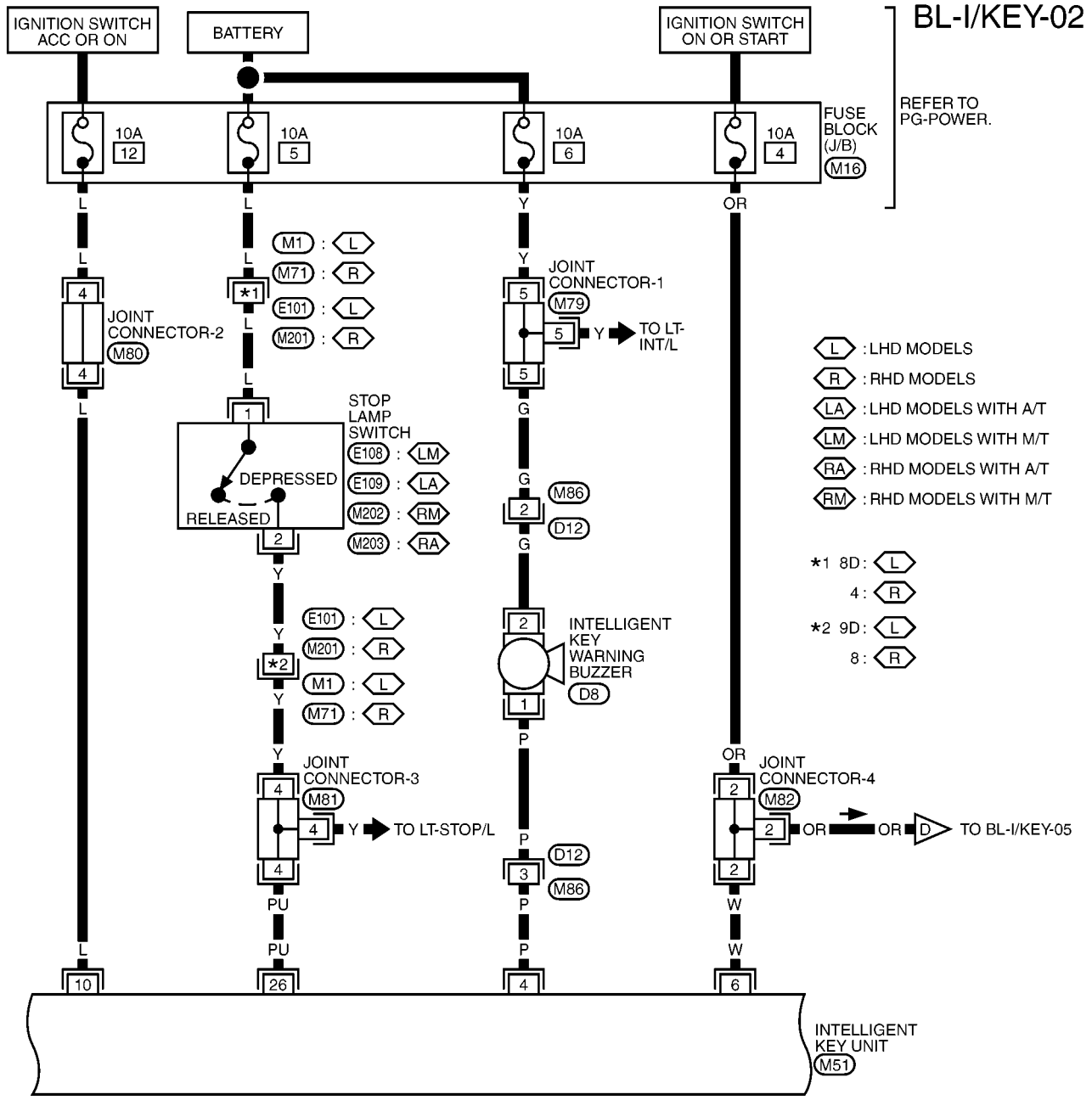
Wiring Diagram — I/KEY—

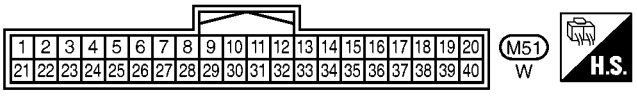


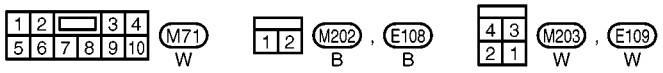


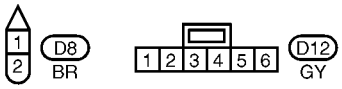
REFER TO THE FOLLOWING.
M16 -FUSE BLOCK-
JUNCTION BOX (J/B)

MKWA1406E





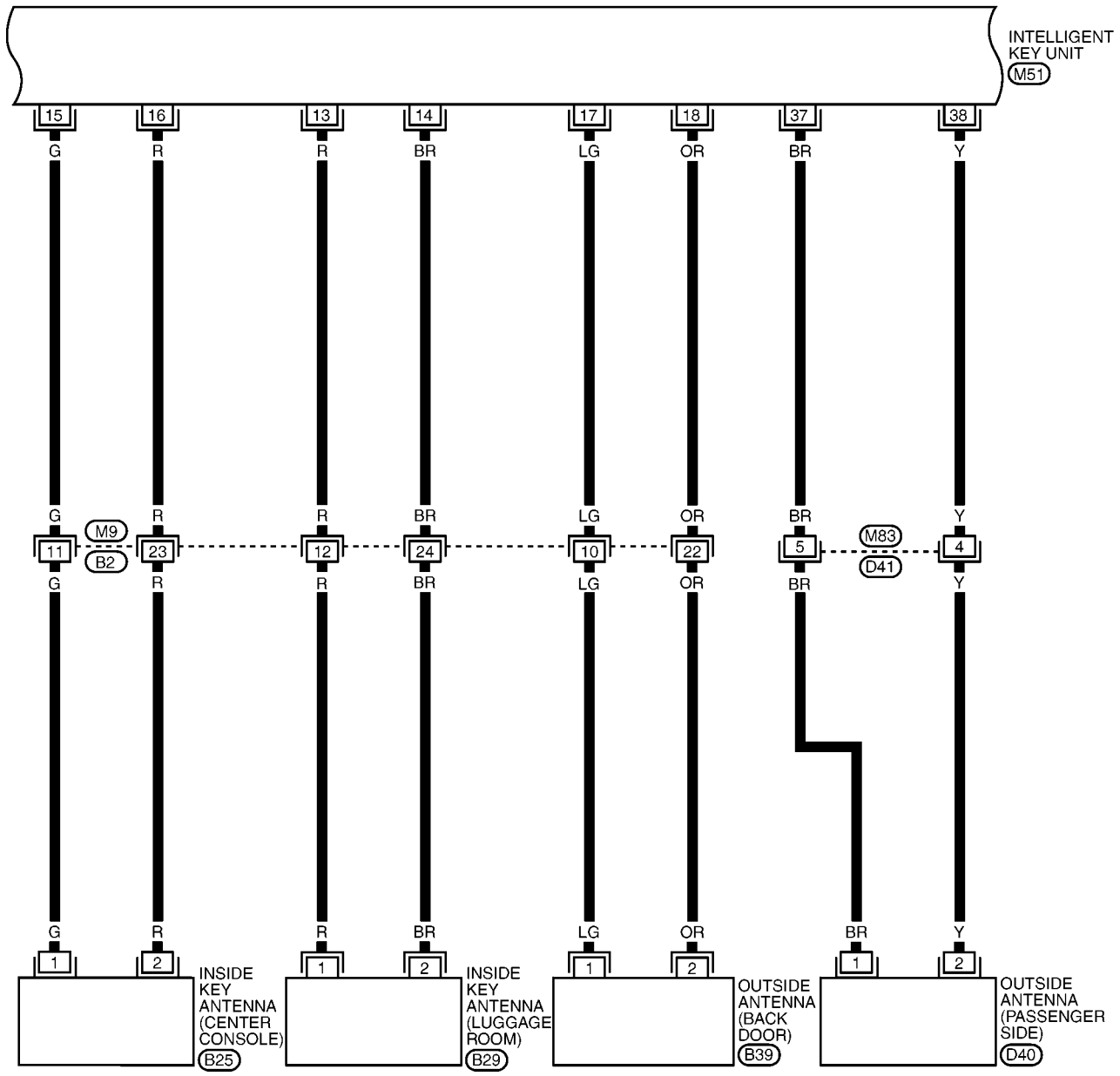




REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)
M79 , M80 , M81 , M82 -JOINT CONNECTOR (J/C)

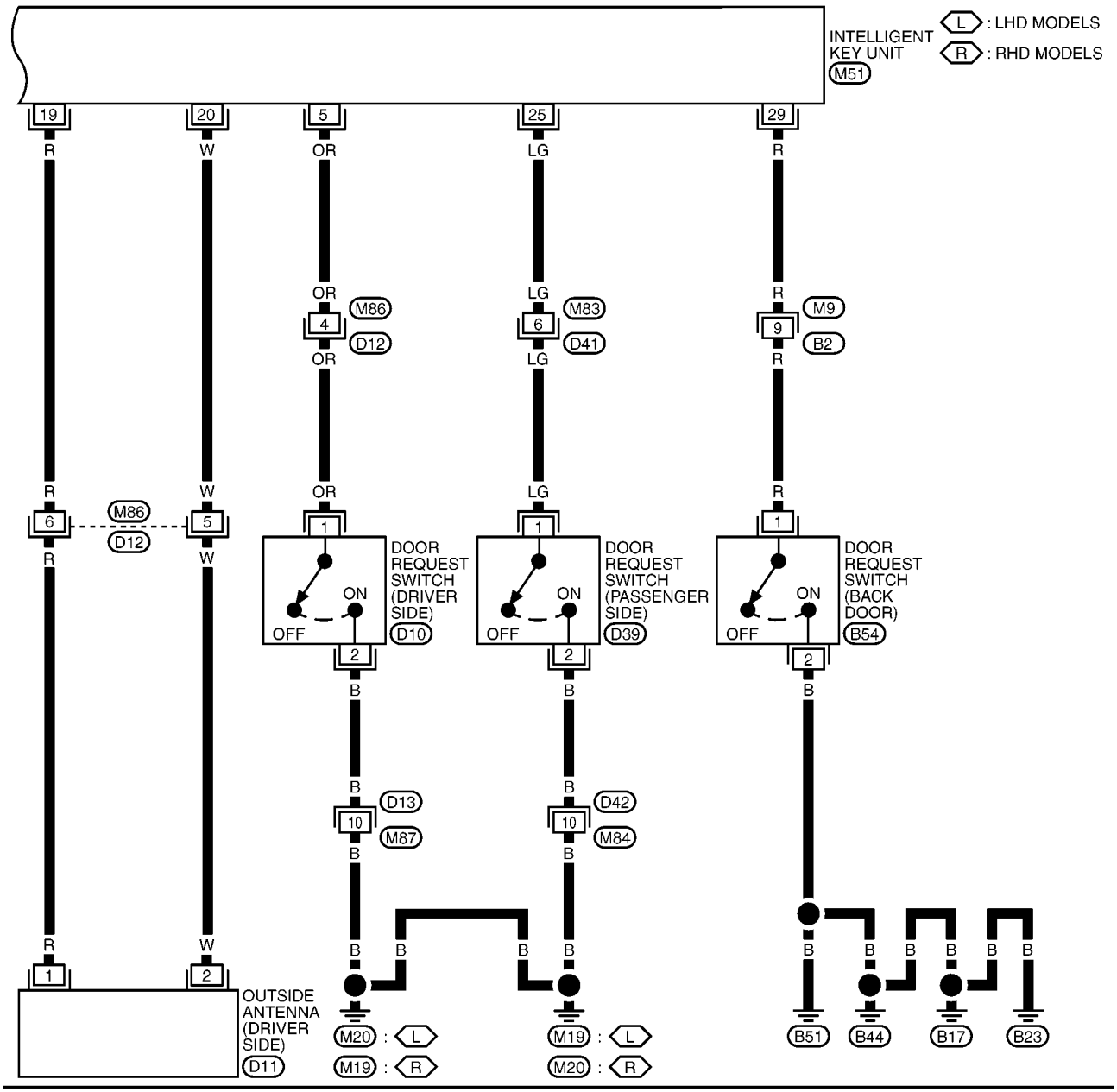
MIWA0284E

BL-I/KEY-03

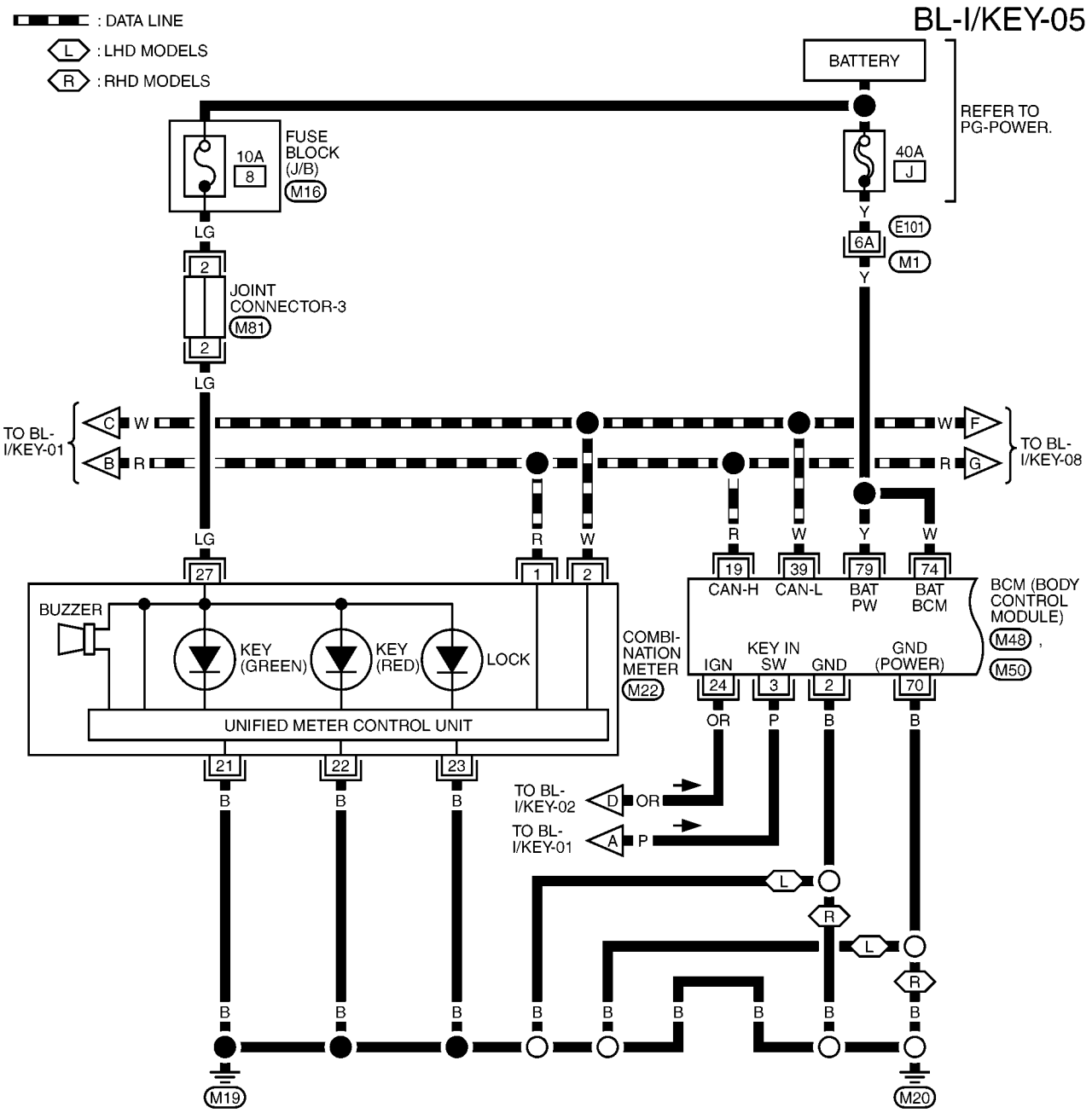


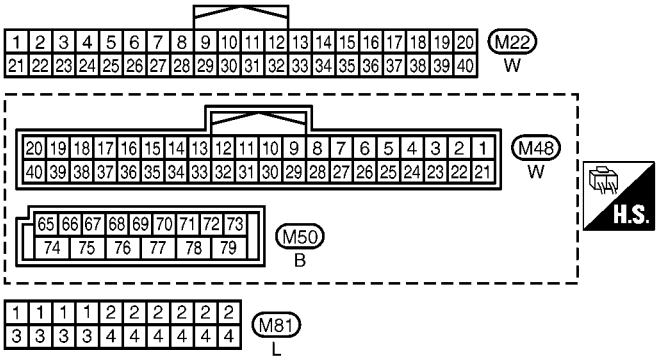
MIWA0285E

BL-I/KEY-04



MIWA0286E



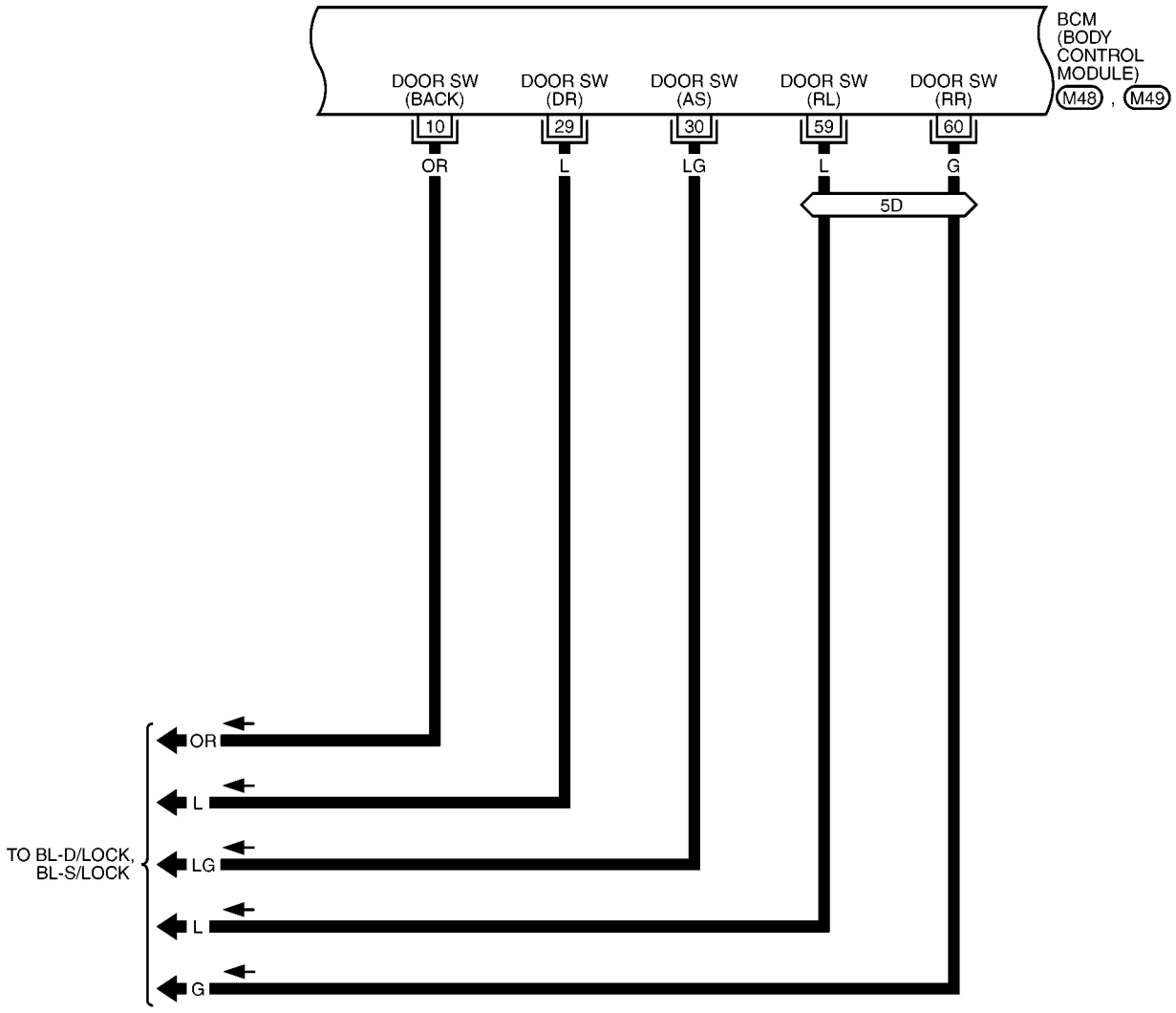


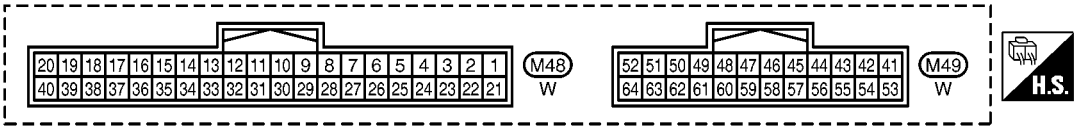
REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M16 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA1796E

BL-I/KEY-06

5D : WITH 5 DOORS

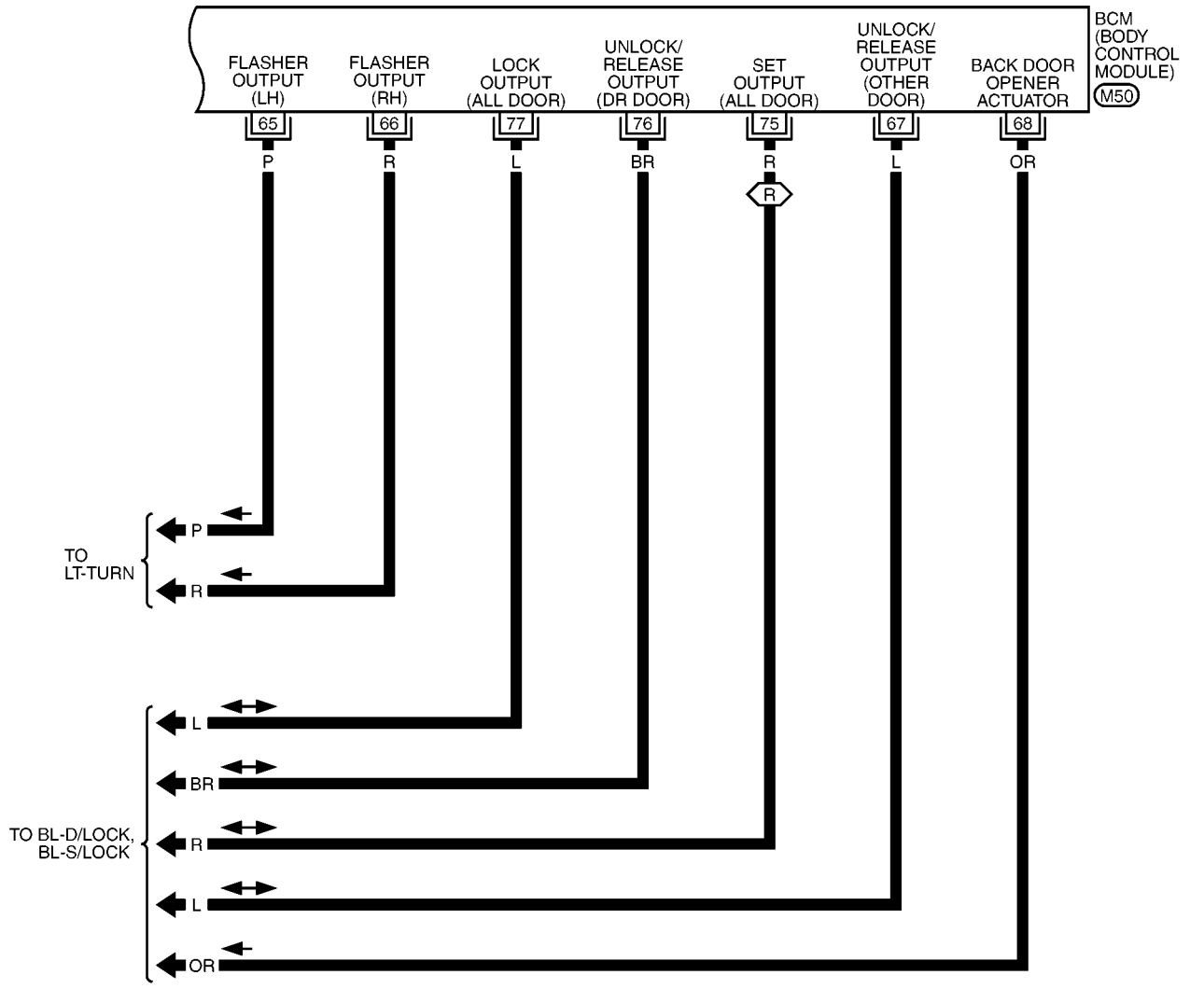


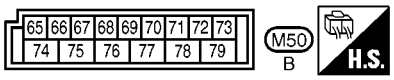


MKWA1412E

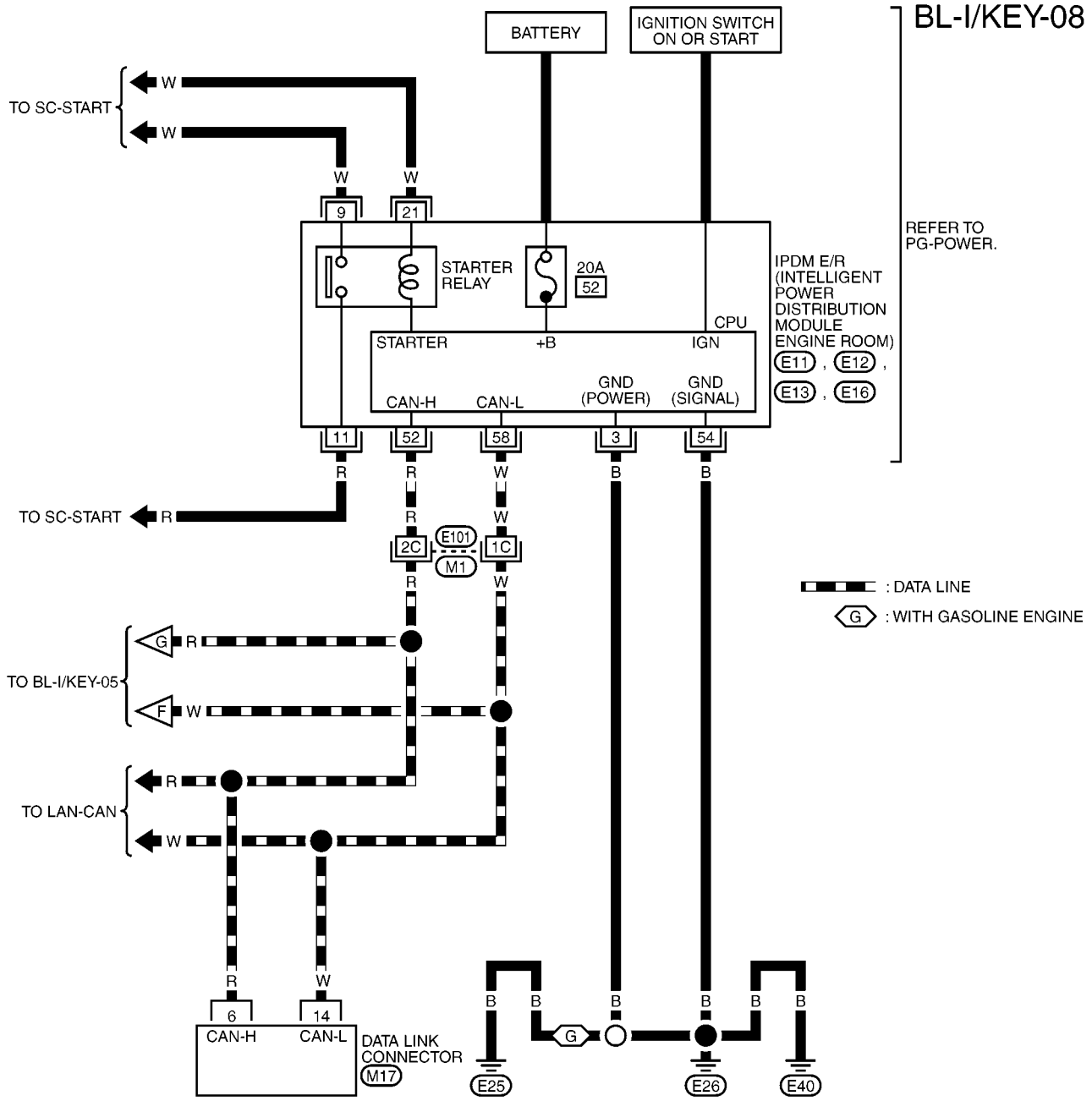
BL-I/KEY-07

R : RHD MODELS





MKWA1413E


BL-I/KEY-08
BATTERY
IGNITION SWITCH ON OR START
TO SC-START
W
W
9
21
STARTER RELAY
20A
52
CPU
STARTER
+B
IGN
CAN-H
CAN-L
GND (POWER)
GND (SIGNAL)
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E11 , E12 , E13 , E16
REFER TO PG-POWER.
11
52
58
3
54
R
R
W
B
B
TO SC-START
R
2C
E101
M1
1C
: DATA LINE
G : WITH GASOLINE ENGINE
TO BL-I/KEY-05
G
F
TO LAN-CAN
6
14
CAN-H
CAN-L
DATA LINK CONNECTOR
M17
E25
E26
E40
REFER TO THE FOLLOWING.
M1 -SUPER MULTIPLE JUNCTION (SMJ)
M17
W
E11
B
E12
W
E13
BR
E16
W
H.S.

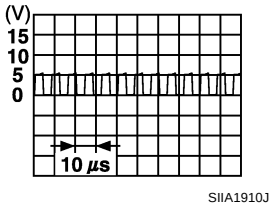
MKWA1414E

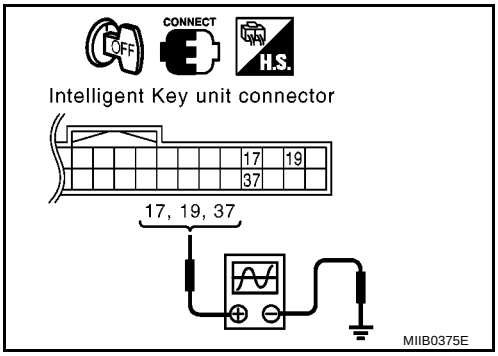
Check Outside Antenna

To ESM

1. OUTSIDE ANTENNA POWER SUPPLY INSPECTION

Operate each door request switch (push), and use an oscilloscope to check voltage waveform of harness between Intelligent Key unit connector M51 terminals 17 (back door), 19 (driver door), and 37 (passenger door) and ground.

Push each door request switch.	
Back door: 17 (LG) - Ground	 SIIA1910J
Driver: 19 (R) - Ground	
Passenger: 37 (BR) - Ground	



MIIB0375E

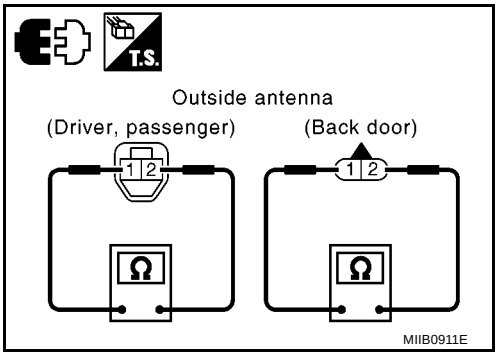
OK or NG

OK >> Outside antenna circuit is OK.
NG >> GO TO 2.

2. OUTSIDE ANTENNA OPERATION INSPECTION

1. Disconnect each door antenna connector.
2. Check continuity between each door antenna connector D11 (driver door), B39 (back door), D40 (passenger door) terminals 1 and 2.

1 - 2 : Continuity should exist.



MIIB0911E

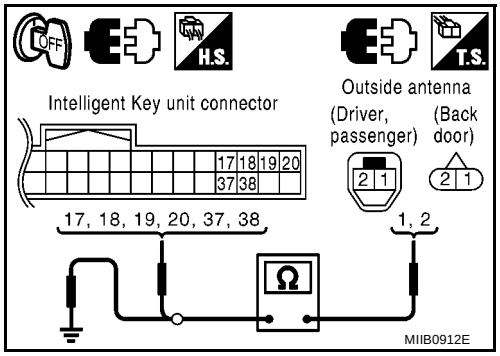
OK or NG

OK >> GO TO 3.
NG >> Replace outside antenna.

3. OUTSIDE ANTENNA CIRCUIT INSPECTION

1. Disconnect Intelligent Key unit connector.
2. Check continuity between each outside antenna connector D11 (driver door), B39 (back door), D40 (passenger door) terminals 1 and 2 and Intelligent Key unit connector M51 terminals 17, 18, 19, 20, 37, and 38.

Back door	**1 (LG) - 17 (LG): Continuity should exist.**
	2 (OR) - 18 (OR): Continuity should exist.
Driver door	**1 (R) - 19 (R): Continuity should exist.**
	2 (W) - 20 (W): Continuity should exist.
Passenger door	**1 (BR) - 37 (BR): Continuity should exist.**
	2 (Y) - 38 (Y): Continuity should exist.



3. Check continuity between each door antenna connector terminals 1 and 2 and ground.

1 - Ground : Continuity should not exist.
2 - Ground : Continuity should not exist.

OK or NG

OK >> Replace Intelligent Key unit.
NG >> Replace harness between door antenna and Intelligent Key unit.