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MODULE COMMUNICATIONS NETWORK

COMMUNICATIONS NETWORK – 90 (G2342560)

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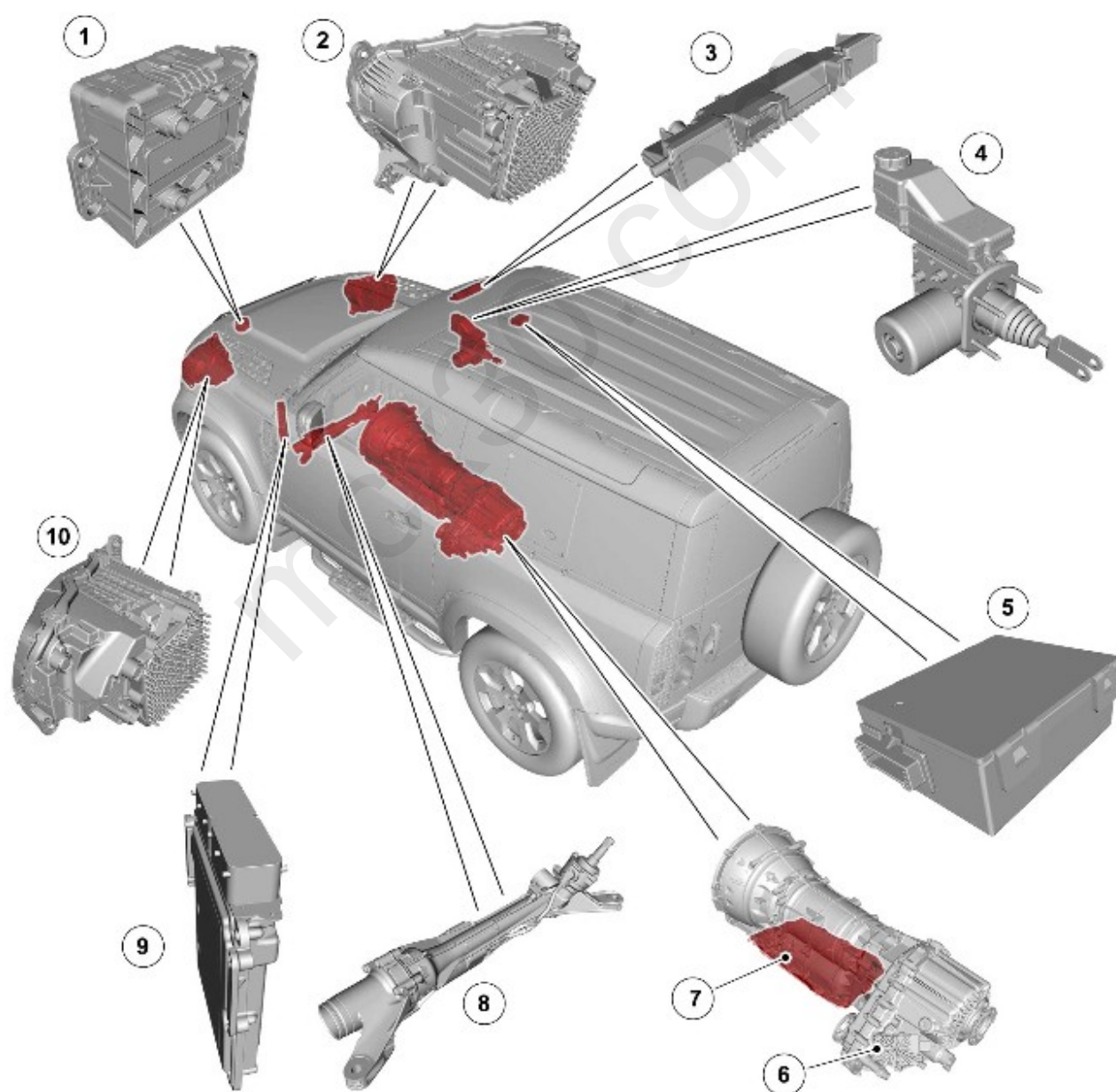
COMPONENT LOCATION

COMPONENT LOCATION - 1 OF 4



NOTE:

Right Hand Drive (RHD) vehicle is shown, Left Hand Drive (LHD) vehicle is similar.



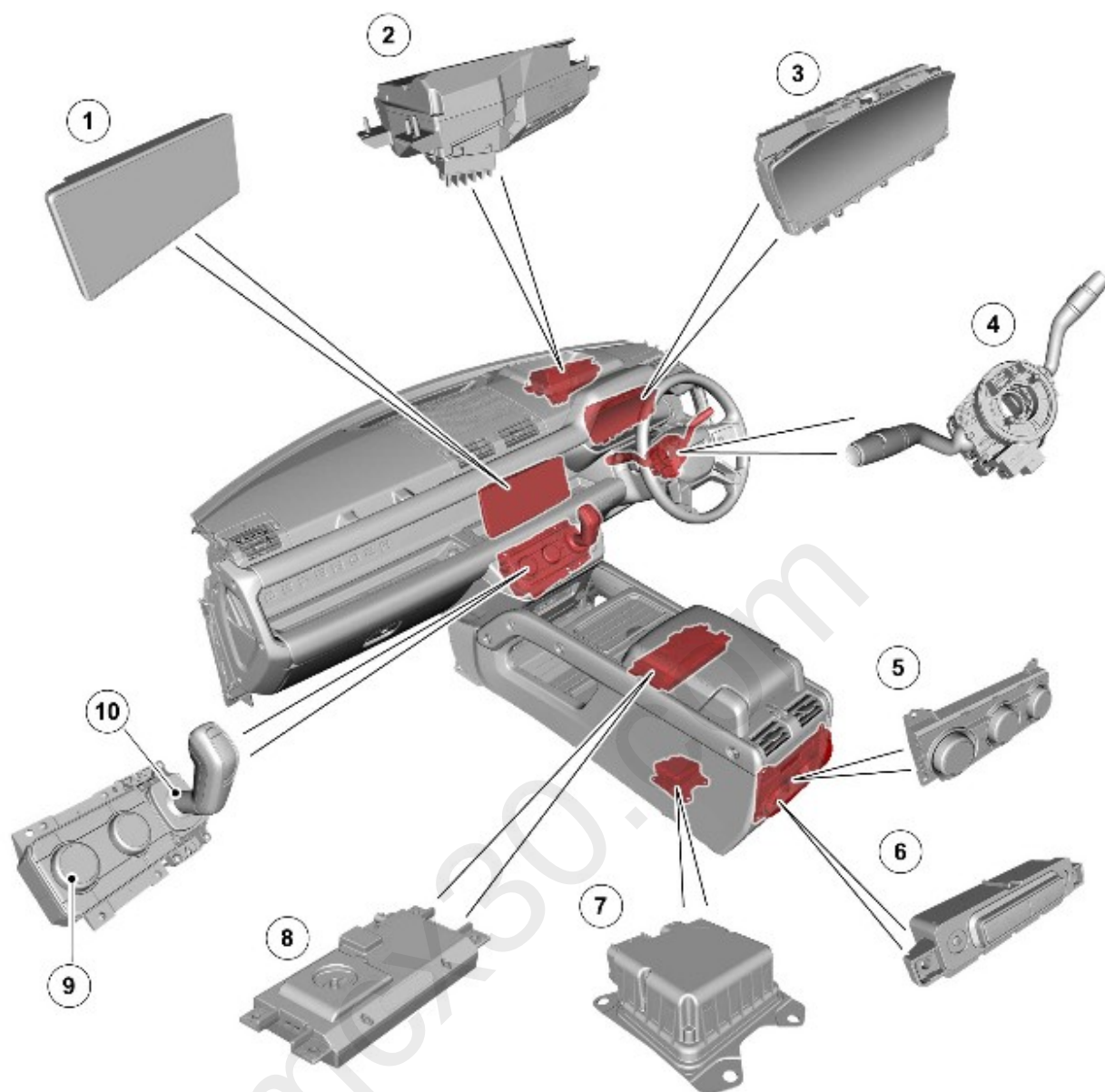
ITEM	DESCRIPTION
1	Cruise Control Module (CCM)
2	Headlamp Control Module B (HCMB)
3	Image Processing Module (IPMA)
4	Anti-Lock Brake System Control Module (ABS)
5	Tire Pressure Monitoring System Control Module (TPM)
6	Transfer Case Control Module (TCCM)
7	Transmission Control Module (TCM)
8	Power Steering Control Module (PSCM)
9	Powertrain Control Module (PCM)
10	Headlamp Control Module A (HCM)

COMPONENT LOCATION - 2 OF 4



NOTE:

RHD vehicle is shown, LHD vehicle is similar.



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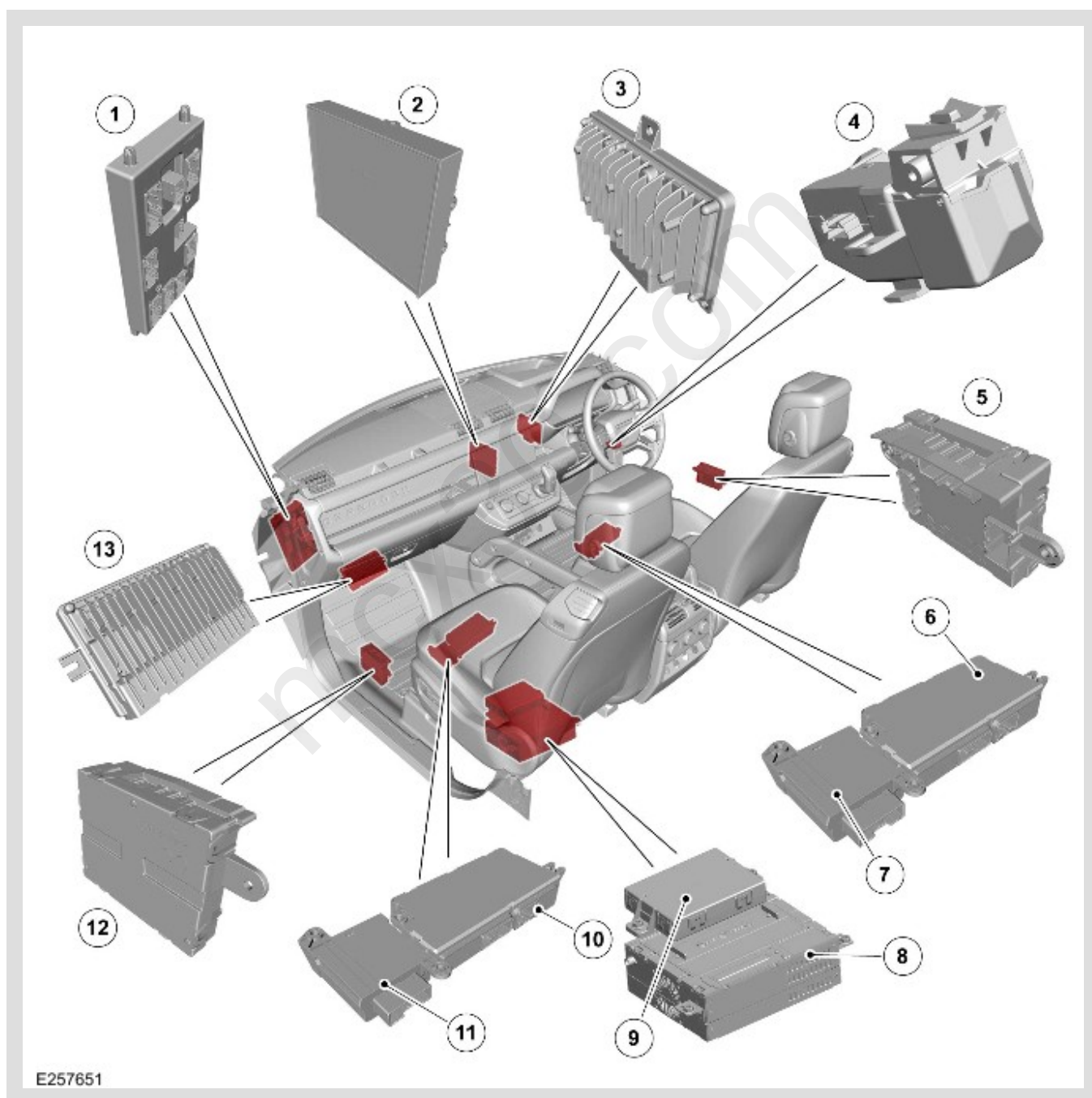
ITEM	DESCRIPTION
1	Touch Screen (FCDIM)
2	Head Up Display (HUD)
3	Instrument Panel Cluster (IPC)
4	Steering Wheel Module (SWM)
5	Rear Integrated Control Panel (FCIMB) (if equipped)
6	Second row seat heater control (if equipped)
7	Restraints Control Module (RCM)
8	Wireless Device Charger Module (WDCM)

ITEM	DESCRIPTION
9	Integrated Control Panel (FCIM)
10	Transmission Control Switch (TCS)

COMPONENT LOCATION - 3 OF 4

NOTE:

RHD vehicle is shown, LHD vehicle is similar.



ITEM	DESCRIPTION
1	Body Control Module (BCM)/ Gateway Control Module (GWM)

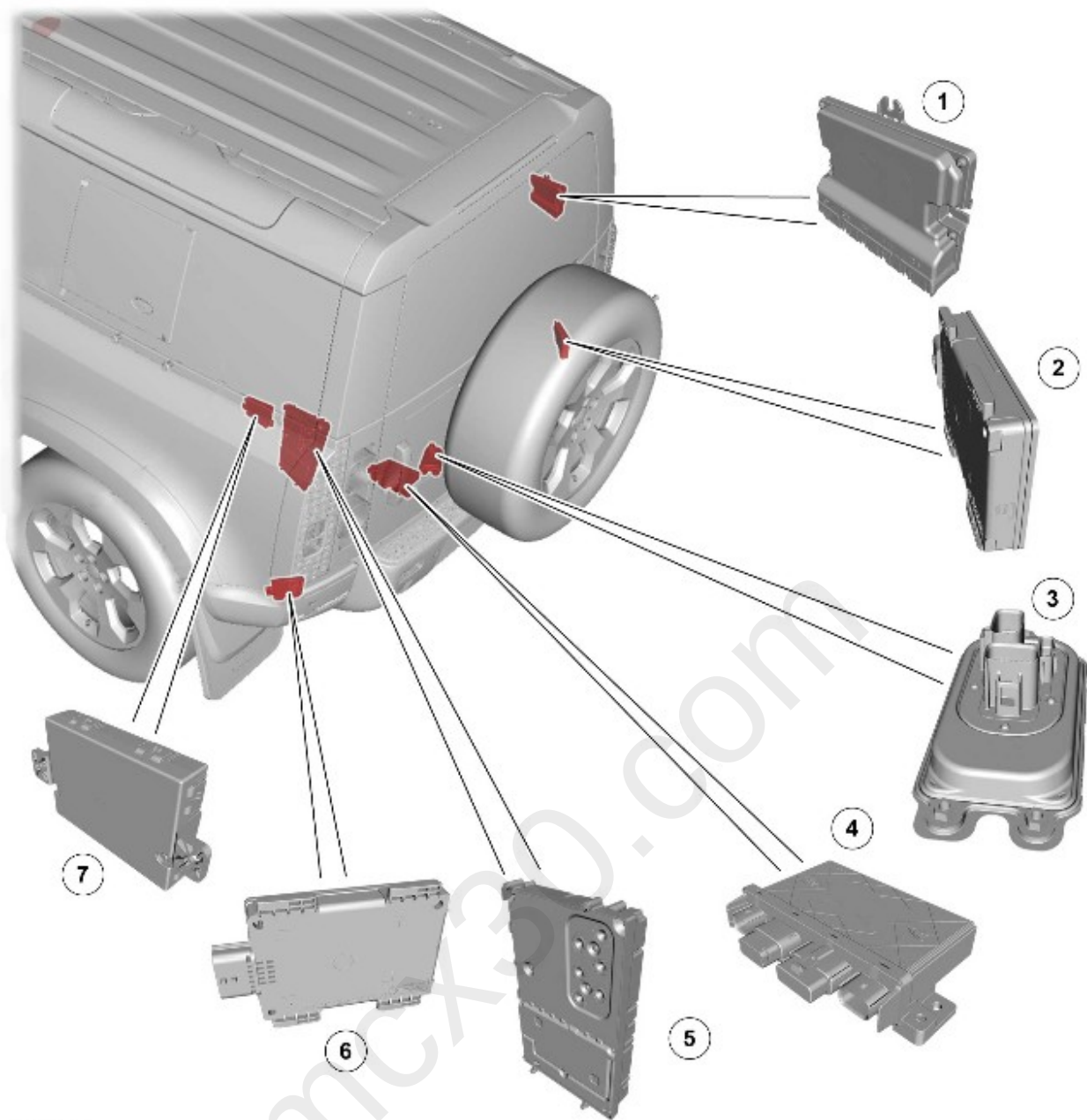
ITEM	DESCRIPTION
2	Heating, ventilation, and air conditioning (HVAC) control module
3	Driver Assistance Domain Controller (DADC)
4	Electric Steering Column Lock Control Module (VIM)
5	Driver Door Control Module (DDM)
6	Seat Module - Driver/Passenger/Rear - Left/Right (DSM)
7	Driver Seat Climate Control Module (DSCCM)
8	Front Infotainment Control Module (IGM / ICCM)
9	Remote Function Actuator (RFA)
10	Seat Module - Driver/Passenger/Rear - Left/Right (PSM)
11	Passenger Seat Climate Control Module (PSCCM)
12	Passenger Door Control Module (PDM)
13	Near Field Sensing Module (NFSM)

COMPONENT LOCATION – 4 OF 4



NOTE:

RHD vehicle is shown, LHD vehicle is similar.



E248261

ITEM	DESCRIPTION
1	Chassis Control Module (CHCM)
2	Side Obstacle Detection Control Module - Right (SODR)
3	Voltage Quality Module (VQM)
4	Towbar Control Module (TBM)
5	Audio Amplifier Control Module (AAM)
6	Side Obstacle Detection Control Module - Left (SODL)
7	Telematics Control Module (TCU)

OVERVIEW

A number of different types of communication network are incorporated into the vehicle wiring harnesses for the transmission of commands and information between control modules. The configuration installed on a particular vehicle depends on the model and equipment level.



NOTE:

The control diagrams shown in this section are schematics reflecting communications networks installed to RHD vehicles only. For detailed layouts of the various communications networks installed to RHD and LHD vehicles refer to the electrical guide.

The communications networks available on the vehicle are shown below:

- Ethernet
- FlexRay
- High Speed (HS) Controller Area Network (CAN) diagnostic bus
- HS CAN Human Machine Interface (HMI) systems bus
- HS CAN body systems bus
- HS CAN power mode zero systems bus
- HS CAN Underbody (UN) systems bus
- HS CAN isolated system bus
- Private CAN bus
- Local Interconnect Network (LIN).

DIAGNOSTIC CONNECTOR

The Diagnostic Connector (J1962) is connected to the BCM/ GWM through the Diagnostic over Internet Protocol (DoIP) and the HS CAN diagnostic bus. The DoIP is the prime connection for the Jaguar Land Rover (JLR) approved diagnostic equipment.

DESCRIPTION

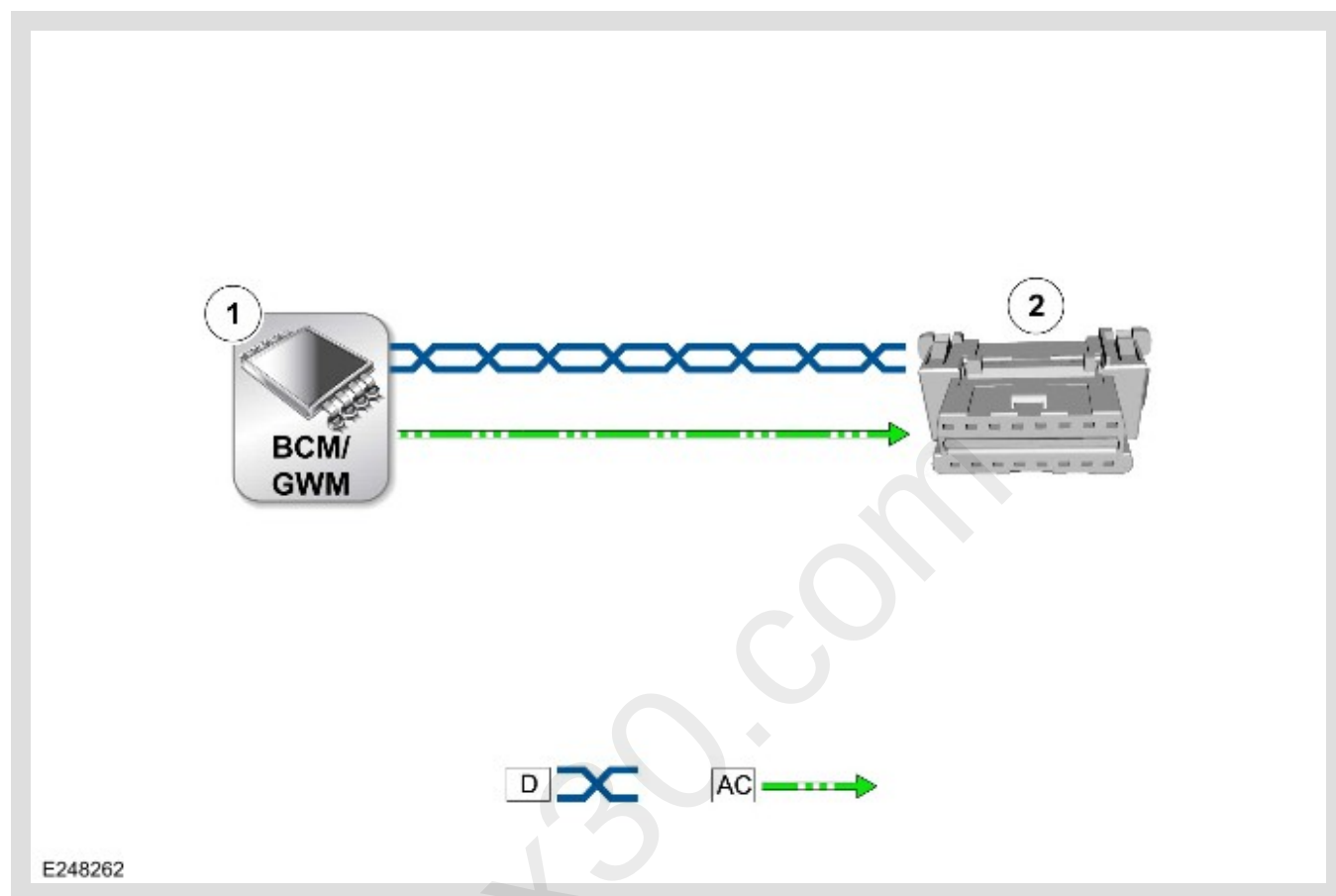
Refer to the relevant system section for details of system description.

OPERATION

Refer to the relevant system section for details of system operation.

CONTROL DIAGRAM

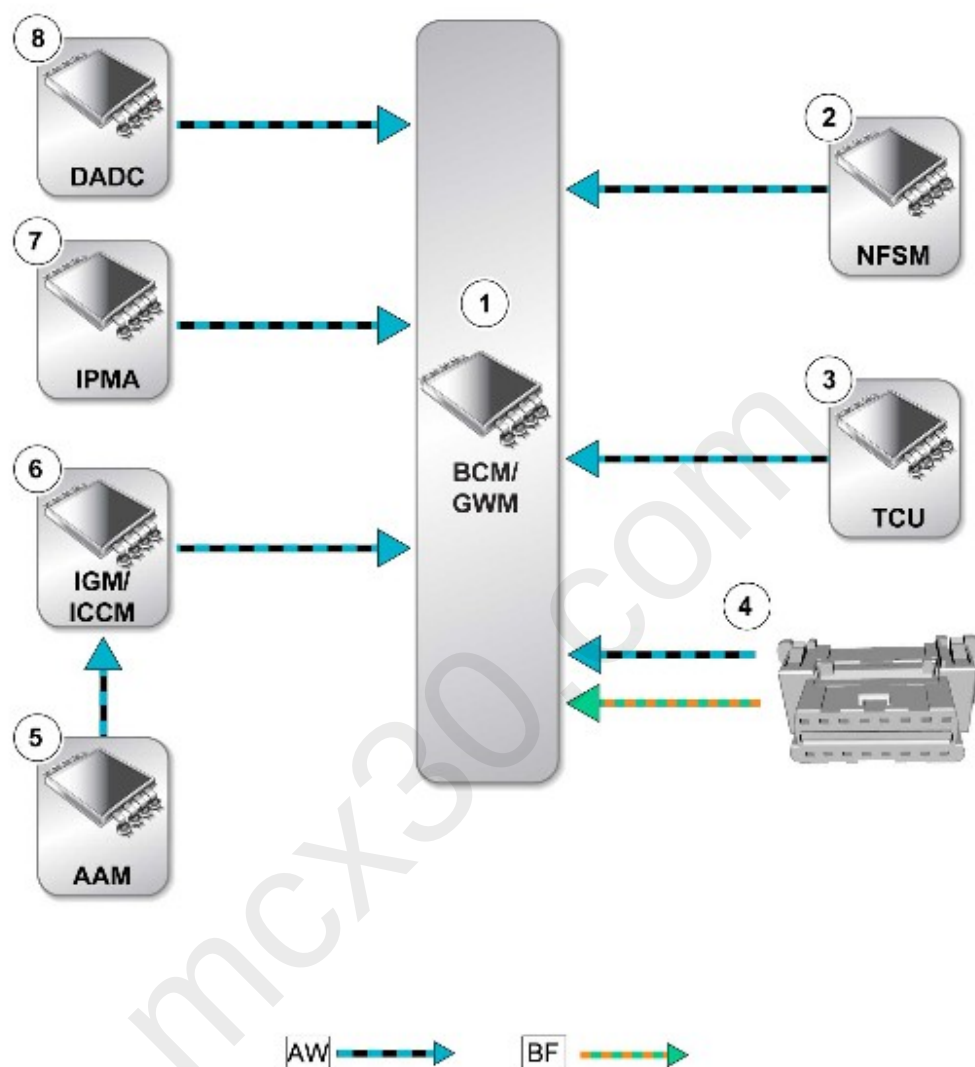
HIGH SPEED CONTROLLER AREA NETWORK DIAGNOSTIC BUS



D = HS CAN DIAGNOSTIC BUS: A C = DOIP.

ITEM	DESCRIPTION
1	BCM/ GWM
2	J1962

ETHERNET



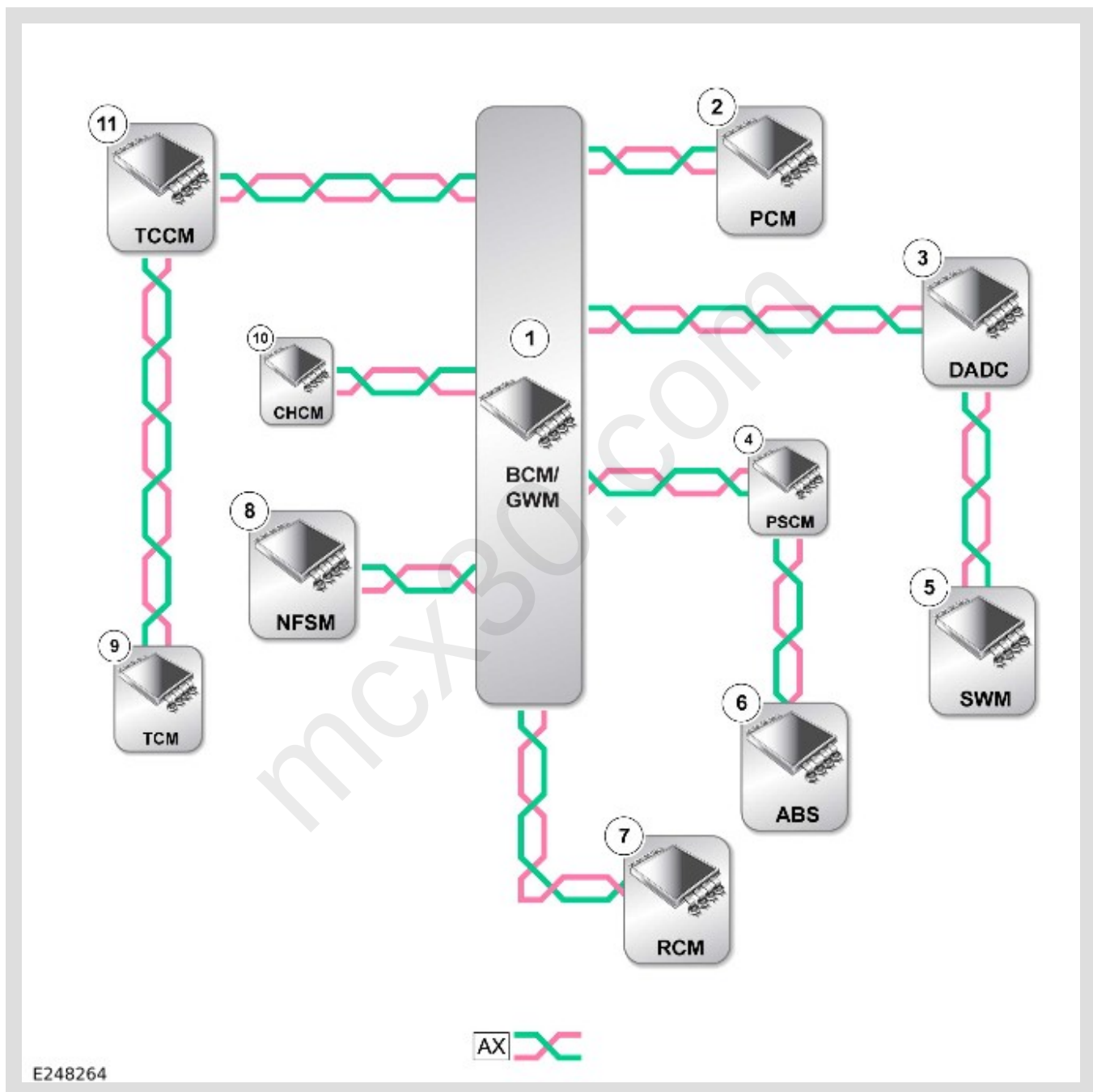
E248263

AW = ETHERNET: BF = ETHERNET WAKE-UP.

ITEM	DESCRIPTION
1	BCM/ GWM
2	NFSM
3	TCU
4	J1962
5	AAM

ITEM	DESCRIPTION
6	IGM / ICCM
7	IPMA
8	DADC

FLEXRAY



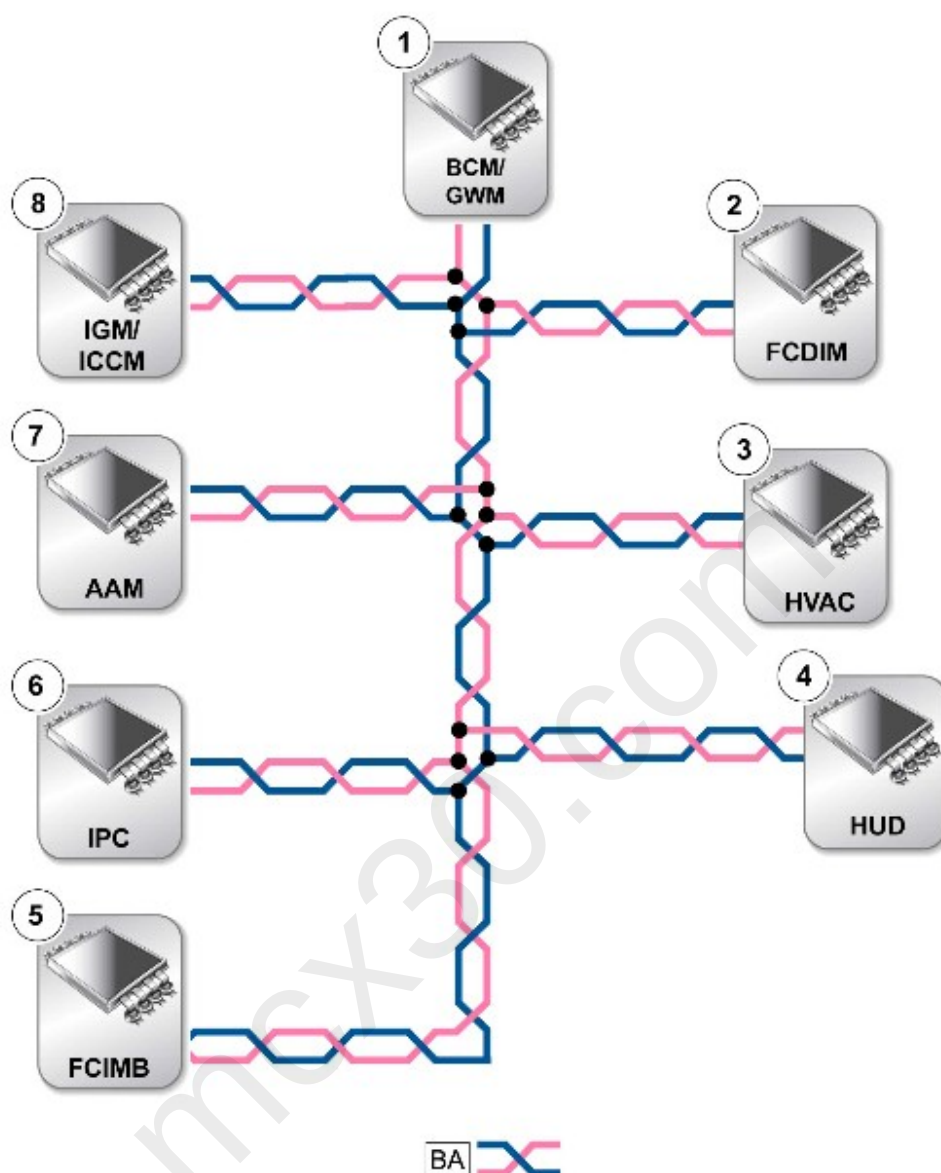
AX = FLEXRAY.

ITEM	DESCRIPTION
1	BCM/ GWM

ITEM	DESCRIPTION
2	PCM
3	DADC
4	PSCM
5	SWM
6	ABS
7	RCM
8	NFSM
9	TCM
10	CHCM
11	TCCM

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HIGH SPEED CONTROLLER AREA NETWORK HUMAN MACHINE INTERFACE SYSTEMS BUS



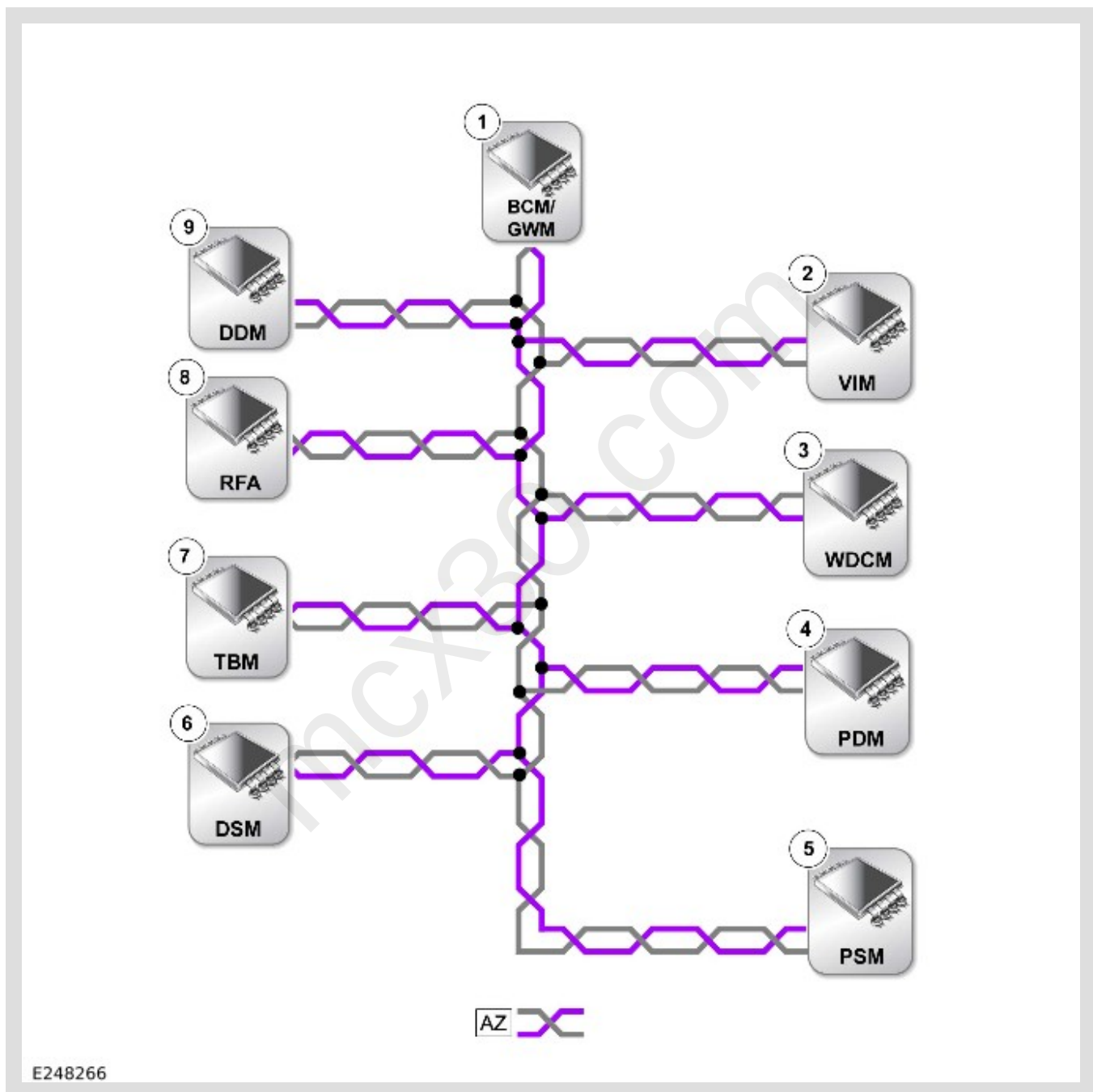
E248265

BA = HS CAN HMI SYSTEMS BUS.

ITEM	DESCRIPTION
1	BCM/ GWM - Terminator module
2	FCDIM
3	HVAC control module
4	HUD
5	FCIMB

ITEM	DESCRIPTION
6	IPC - Terminator module
7	AAM
8	IGM / ICCM

HIGH SPEED CONTROLLER AREA NETWORK BODY SYSTEMS BUS



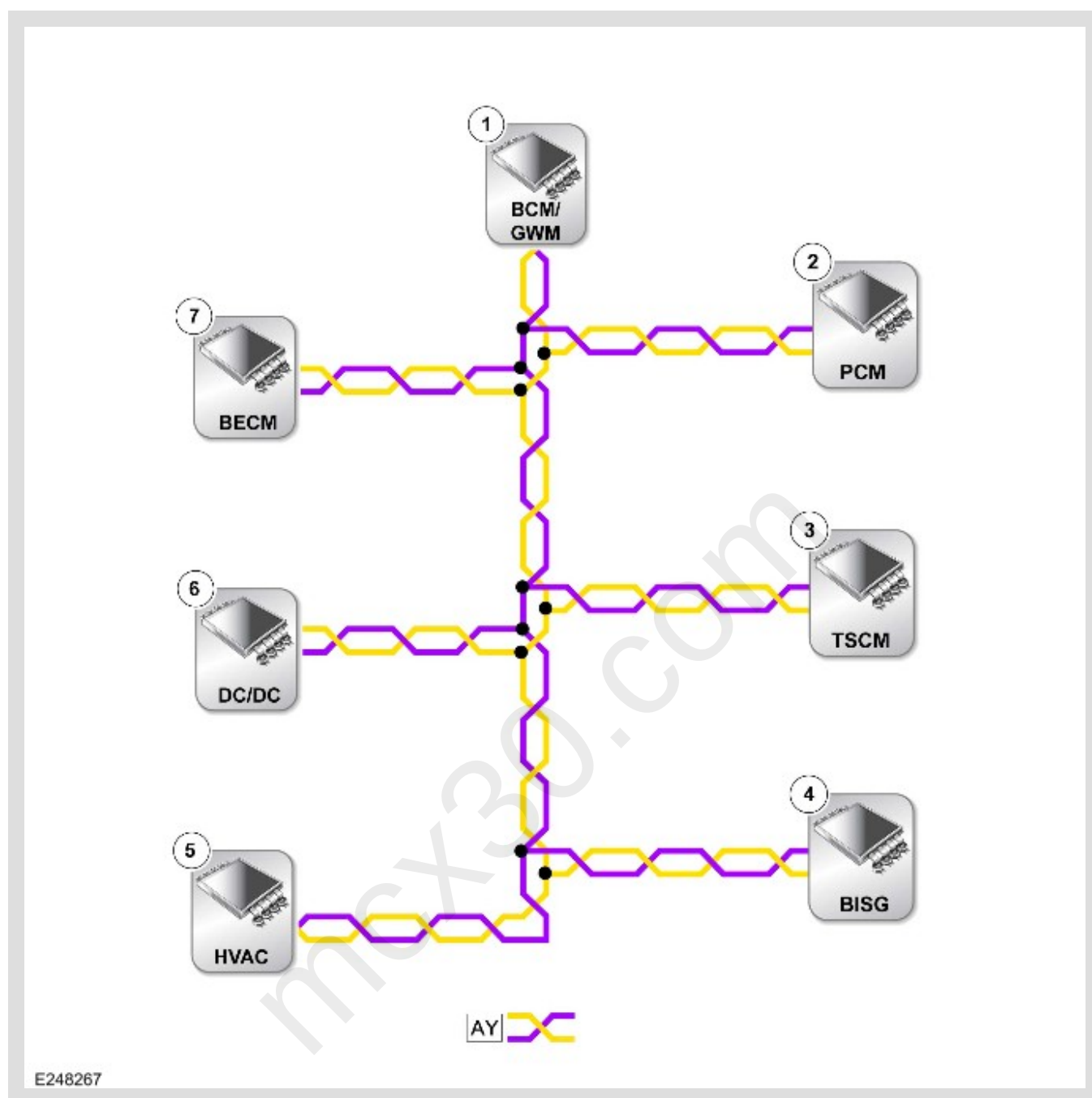
AZ = HS CAN BODY SYSTEMS BUS.

ITEM	DESCRIPTION
1	BCM/ GWM - Terminator (quantity 2) module

ITEM	DESCRIPTION
2	VIM
3	WDCM
4	PDM
5	PSM
6	DSM
7	TBM
8	RFA
9	DDM

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HIGH SPEED CONTROLLER AREA NETWORK POWER MODE ZERO SYSTEMS BUS

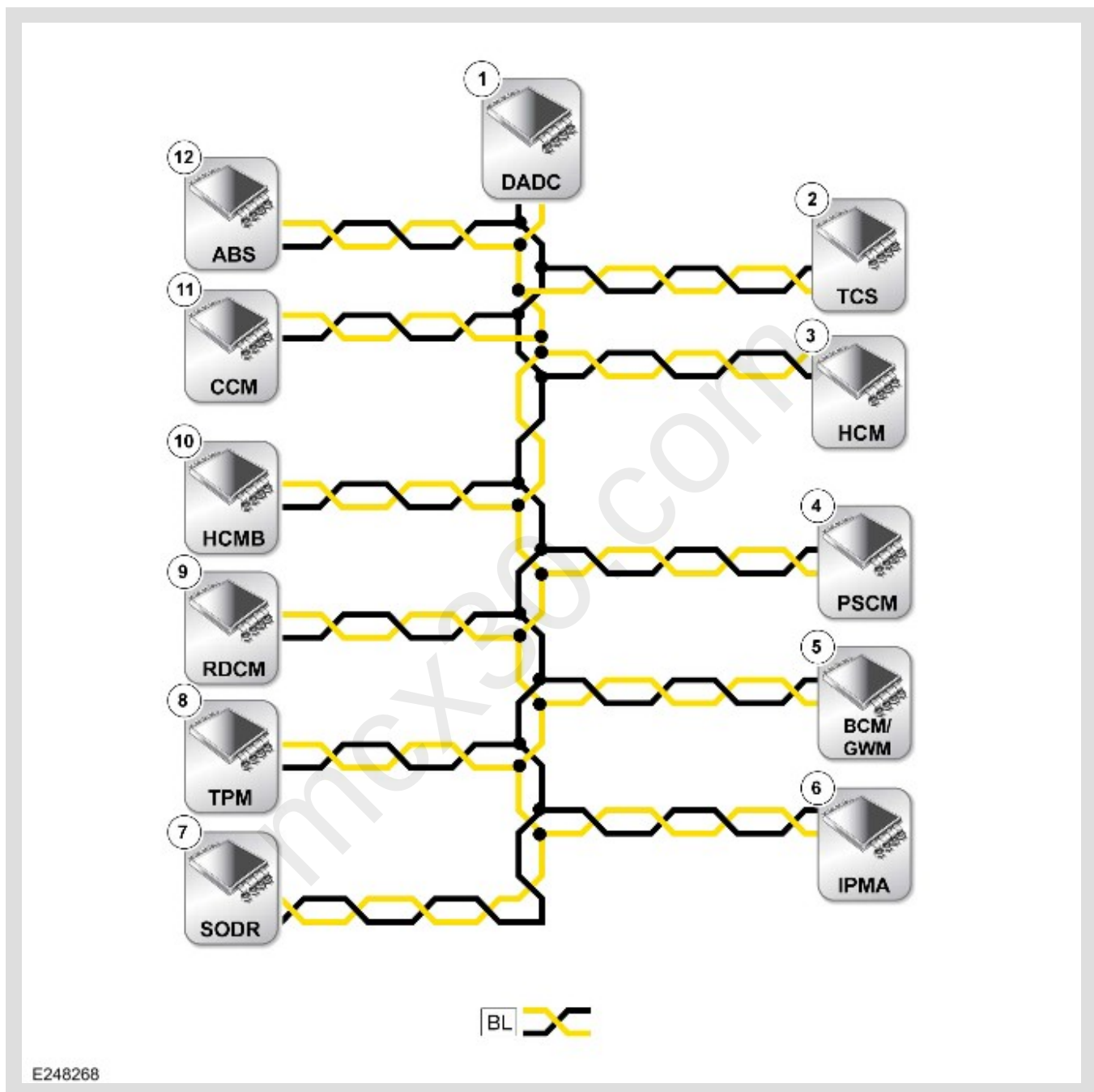


AY = HS CAN POWER MODE ZERO SYSTEMS BUS.

ITEM	DESCRIPTION
1	BCM/ GWM - Terminator module
2	PCM - Only Ingenium I6 3.0L petrol
3	Turbocharger / Supercharger Control Module (TSCM) (if equipped)
4	Belt Integrated Starter Generator (BISG) (if equipped)
5	HVAC control module - Terminator module

ITEM	DESCRIPTION
6	Direct Current to Direct Current converter (DC/DC) (if equipped)
7	Battery Energy Control Module (BECM) (if equipped)

HIGH SPEED CONTROLLER AREA NETWORK UNDERBODY SYSTEMS BUS

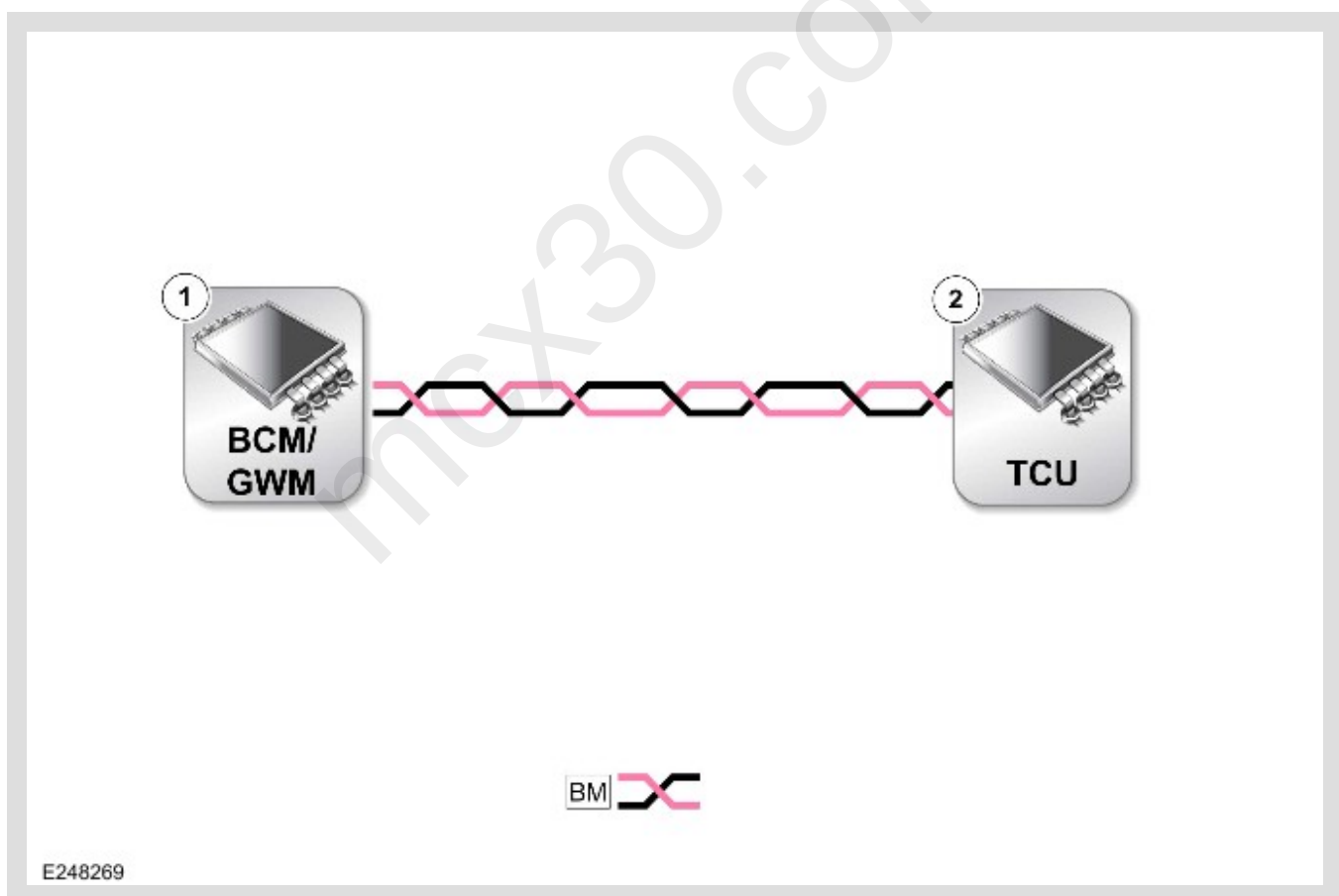


BL = HS CAN UN SYSTEMS BUS.

ITEM	DESCRIPTION
1	DADC - Terminator module
2	TCS

ITEM	DESCRIPTION
3	HCM
4	PSCM
5	BCM/ GWM
6	IPMA
7	SODR
8	TPM
9	Rear Differential Control Module (RDCM)
10	HCMB
11	CCM
12	ABS - Terminator module

HIGH SPEED CONTROLLER AREA NETWORK ISOLATED SYSTEMS BUS

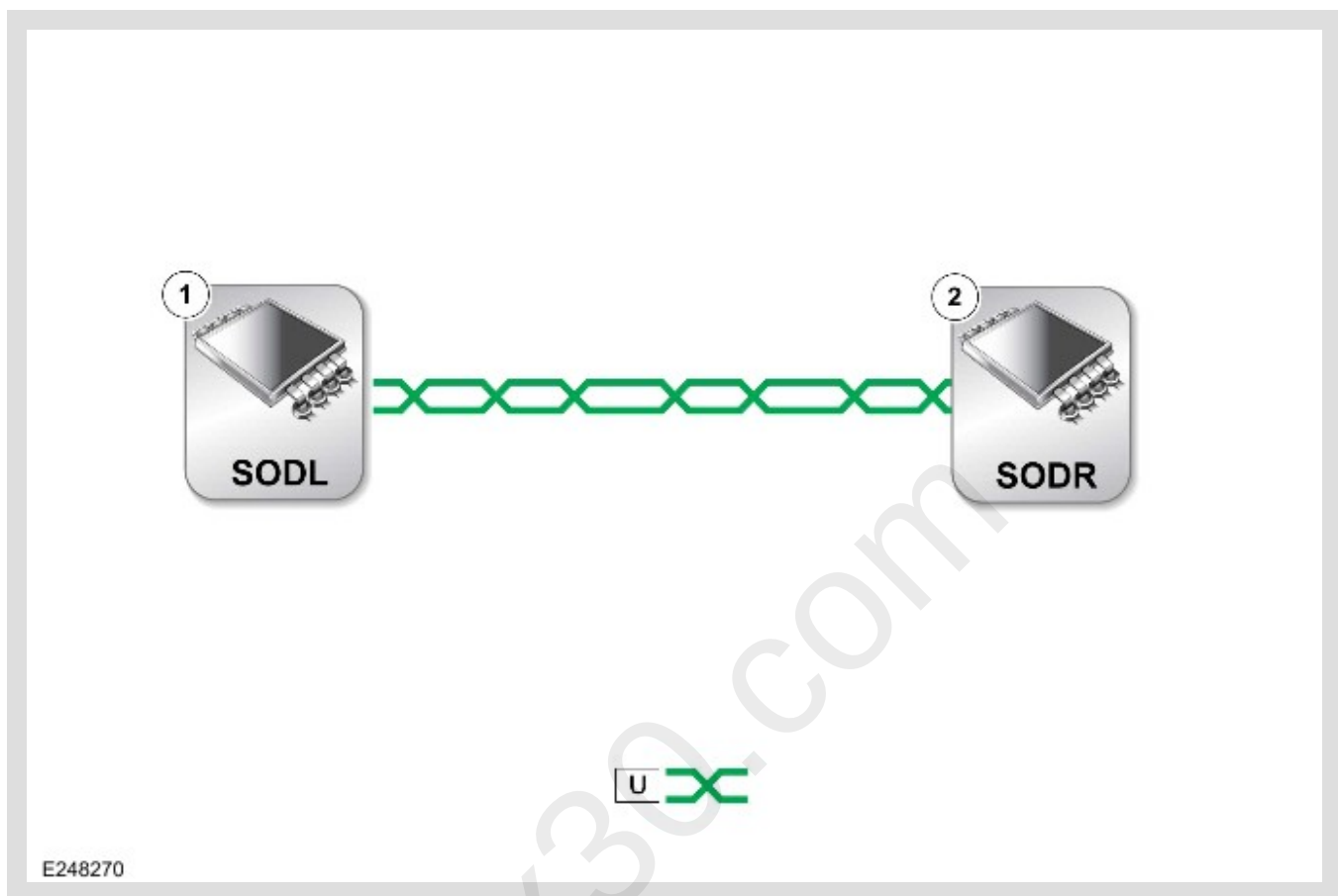


BM = HS CAN ISOLATED SYSTEMS BUS.

ITEM	DESCRIPTION
1	BCM/ GWM - Terminator module

ITEM	DESCRIPTION
2	TCU - Terminator module

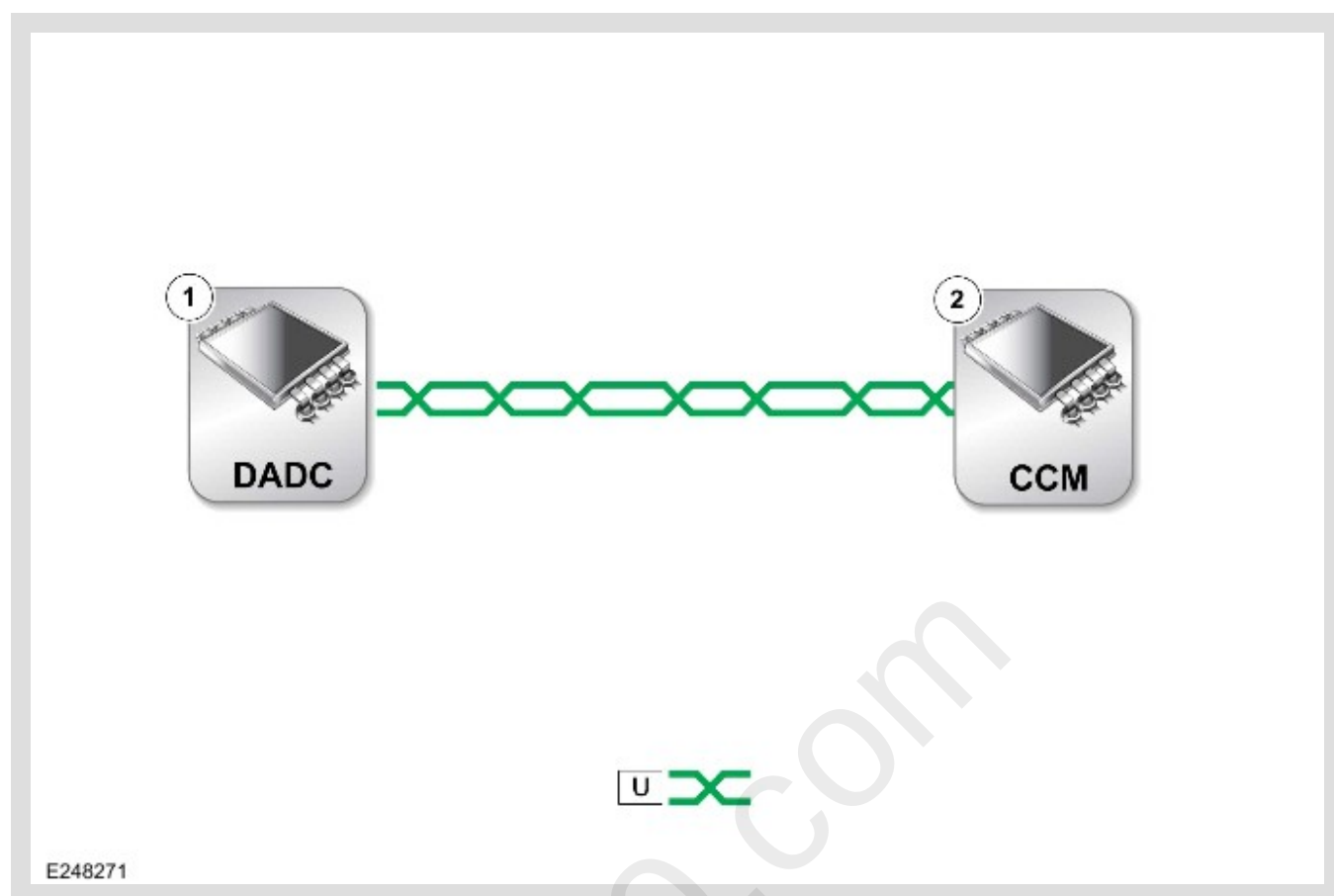
PRIVATE CONTROLLER AREA NETWORK BUS - 1 OF 4 - SIDE OBSTACLE DETECTION CONTROL CIRCUIT



U = PRIVATE CAN BUS.

ITEM	DESCRIPTION
1	SODL
2	SODR

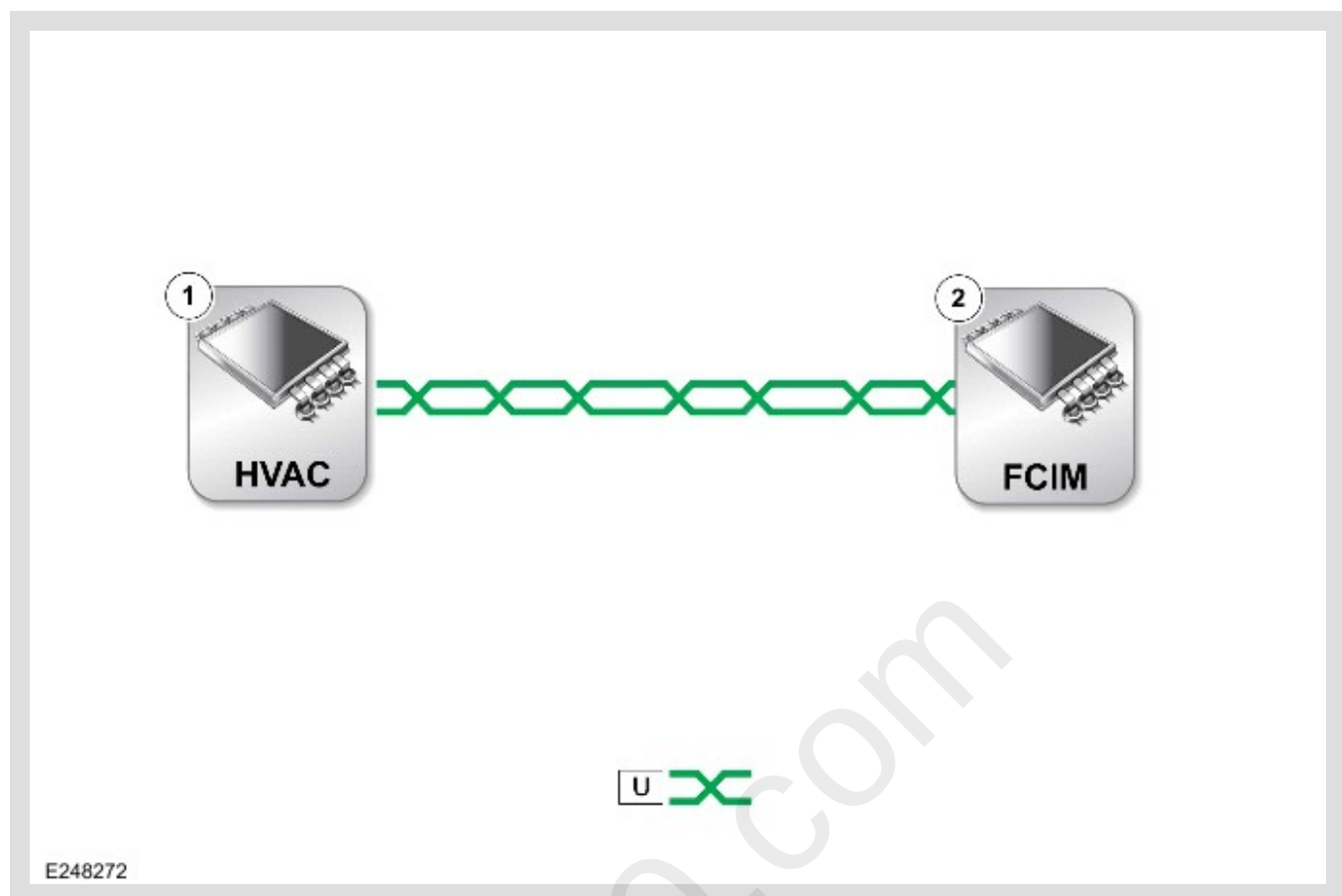
PRIVATE CONTROLLER AREA NETWORK BUS – 2 OF 4 – DRIVER ASSISTANCE DOMAIN CONTROLLER CIRCUIT



U = PRIVATE CAN BUS.

ITEM	DESCRIPTION
1	DADC
2	CCM

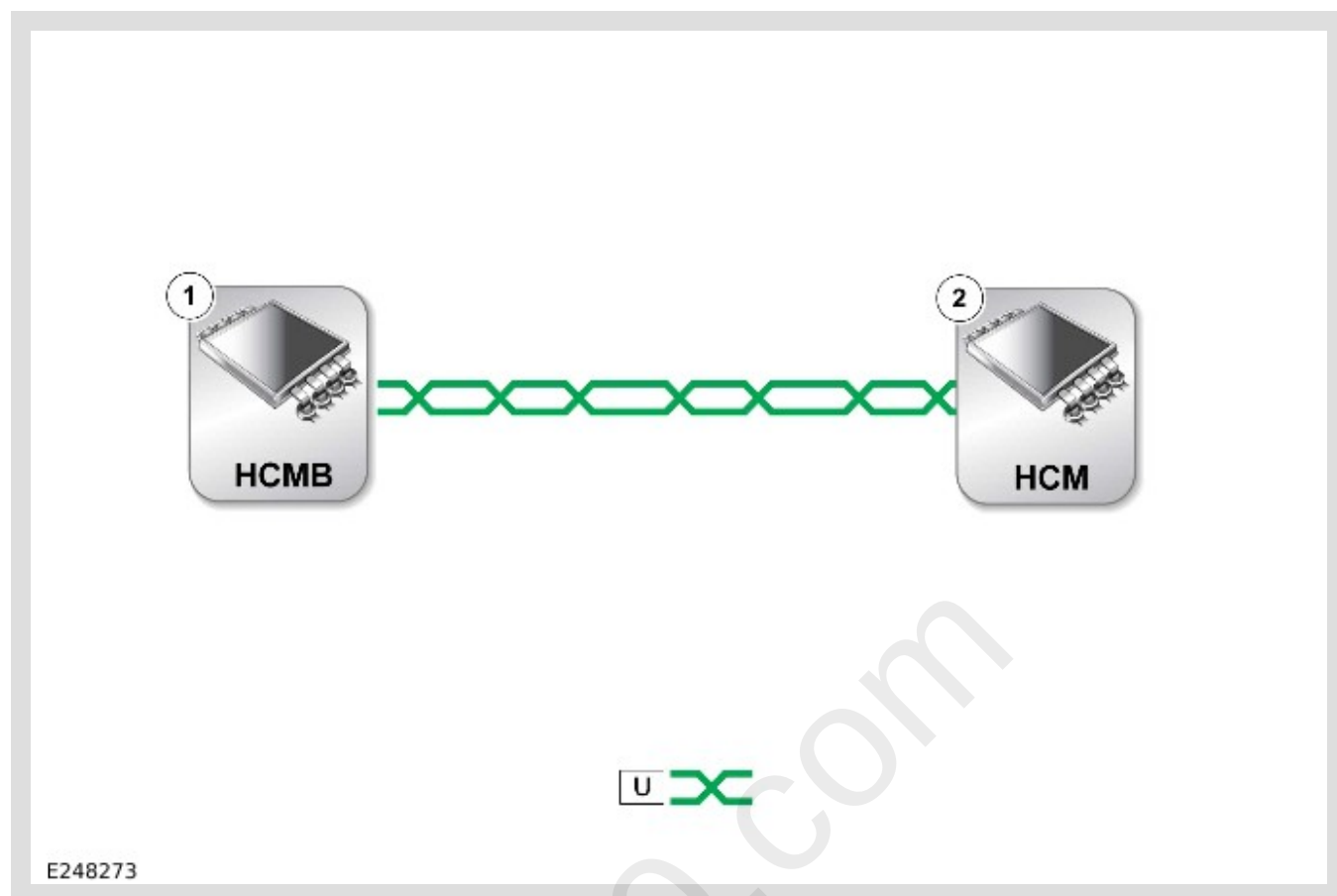
PRIVATE CONTROLLER AREA NETWORK BUS – 3 OF 4 – HVAC CONTROL CIRCUIT



U = PRIVATE CAN BUS.

ITEM	DESCRIPTION
1	HVAC control module
2	FCIM

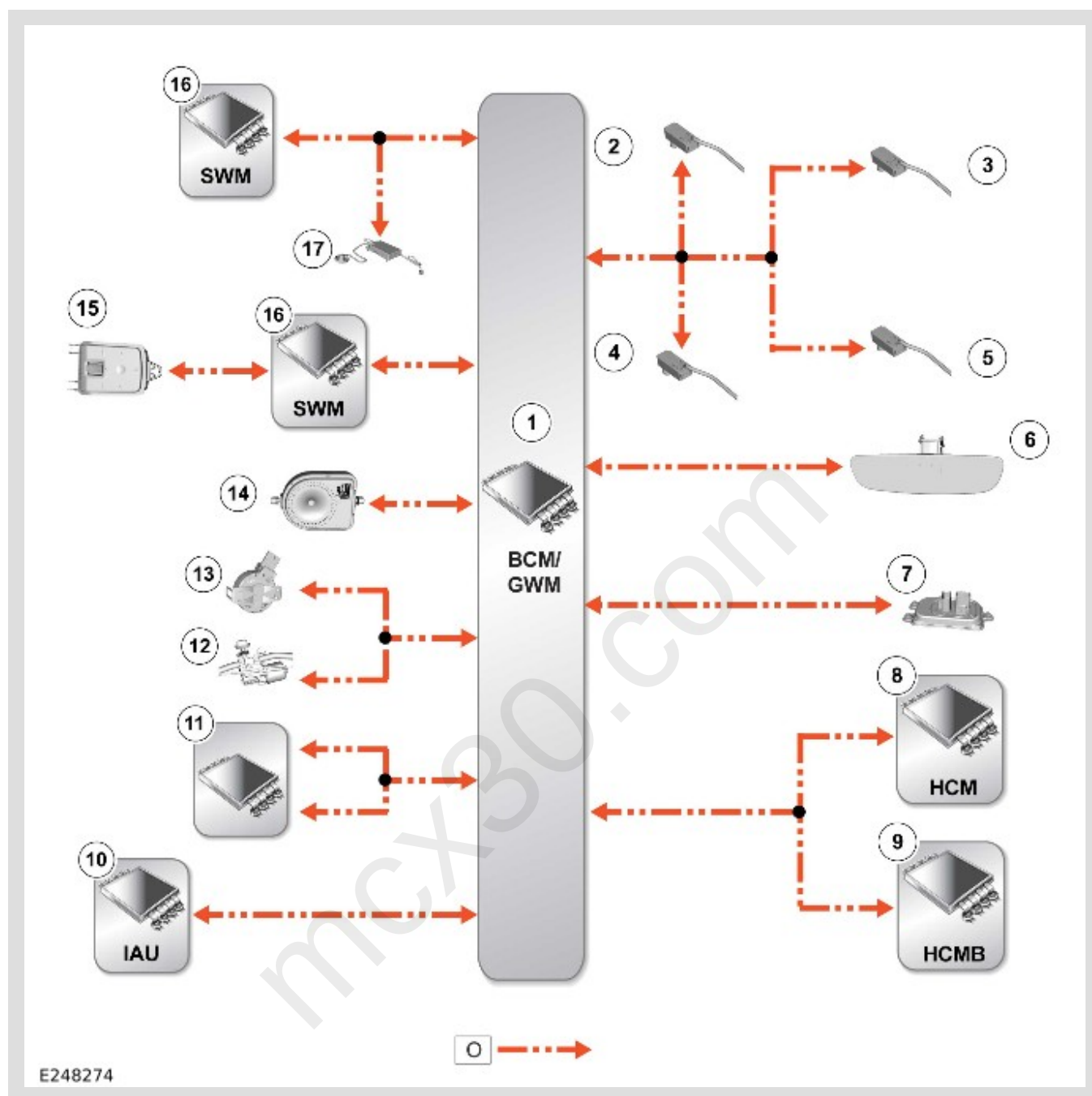
PRIVATE CONTROLLER AREA NETWORK BUS – 4 OF 4 – HEADLAMP CONTROL CIRCUIT



U = PRIVATE CAN BUS.

ITEM	DESCRIPTION
1	HCMB
2	HCM

LOCAL INTERCONNECT NETWORK - 1 OF 9 - BODY CONTROL MODULE/GATEWAY CONTROL MODULE CONTROL CIRCUIT

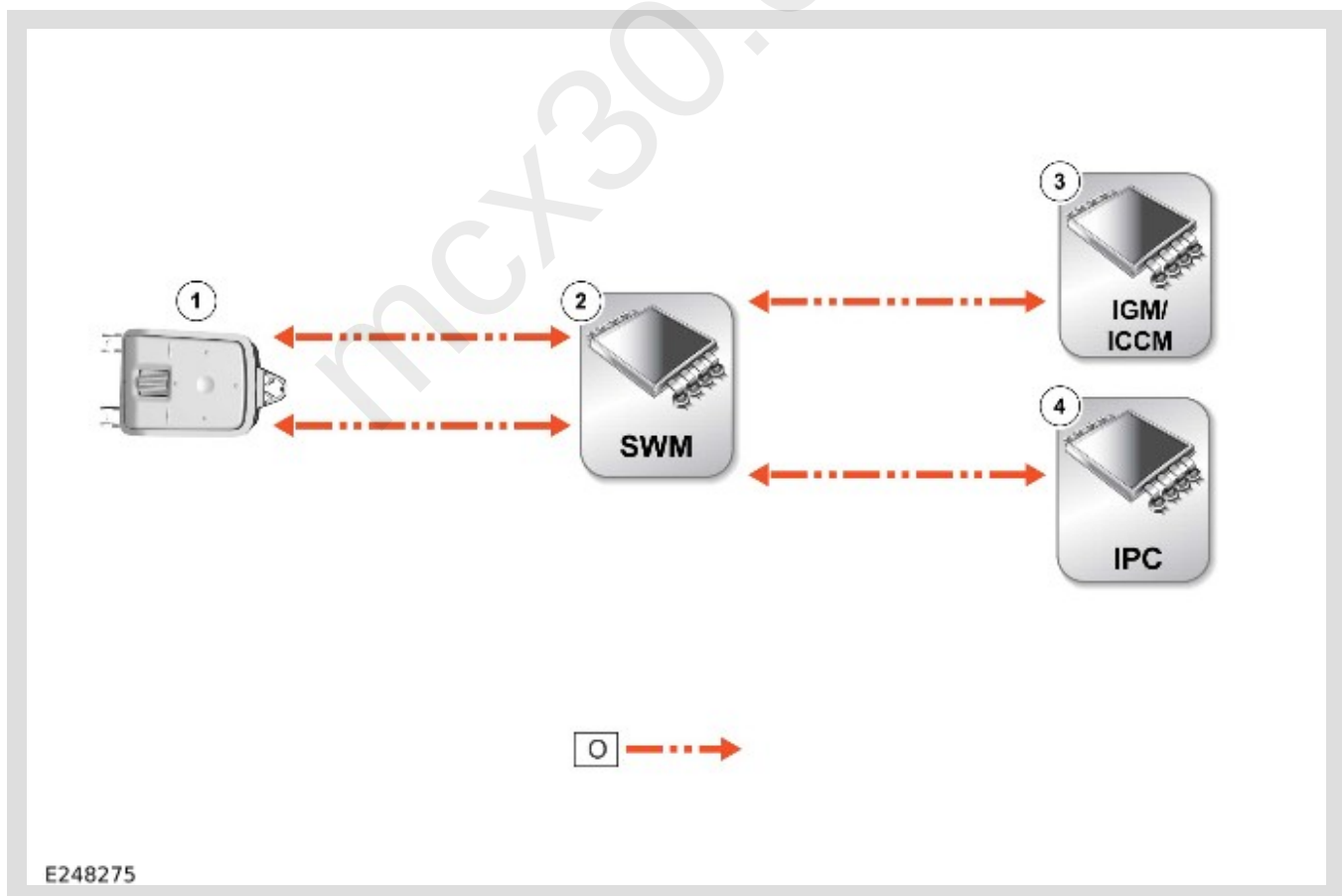


O = LIN.

ITEM	DESCRIPTION
1	BCM/ GWM
2	Ambience lighting Light Emitting Diode (LED) - Rear left quarter pocket
3	Ambience lighting LED - Instrument panel
4	Ambience lighting LED - Rear right quarter pocket
5	Ambience lighting LED - Console

ITEM	DESCRIPTION
6	Rear View Mirror (RVM)
7	VQM
8	HCM
9	HCMB
10	Immobilizer Antenna Unit (IAU)
11	Roof opening panel control module (Glass roof has 1 node, canvas roof has 2 nodes)
12	Windshield wiper motor
13	Rain/light sensor
14	Battery Back-Up Sounder (BBUS)
15	Right steering wheel switch
16	SWM
17	Volumetric sensor

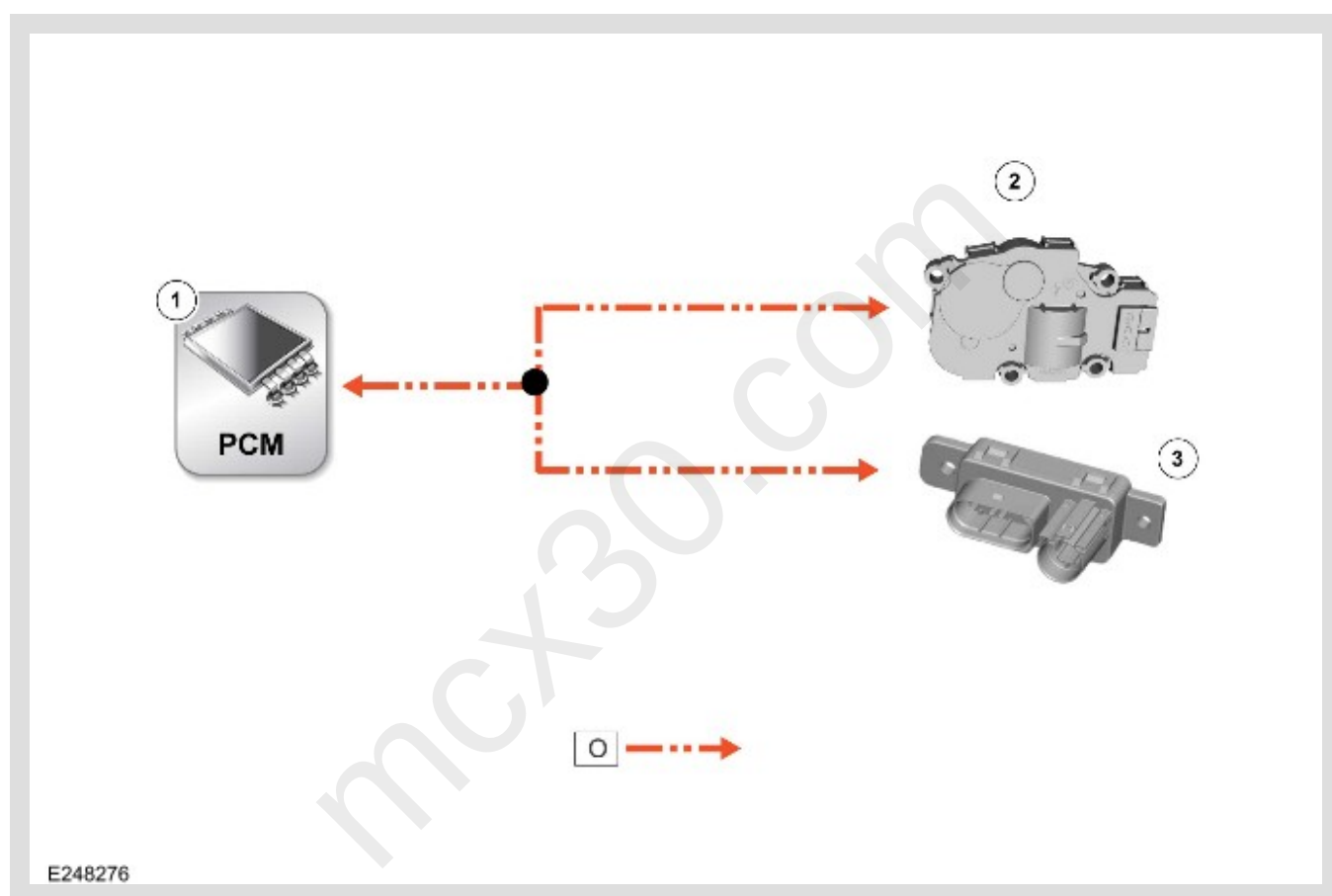
LOCAL INTERCONNECT NETWORK - 2 OF 9 - LEFT STEERING WHEEL SWITCH



O = LIN.

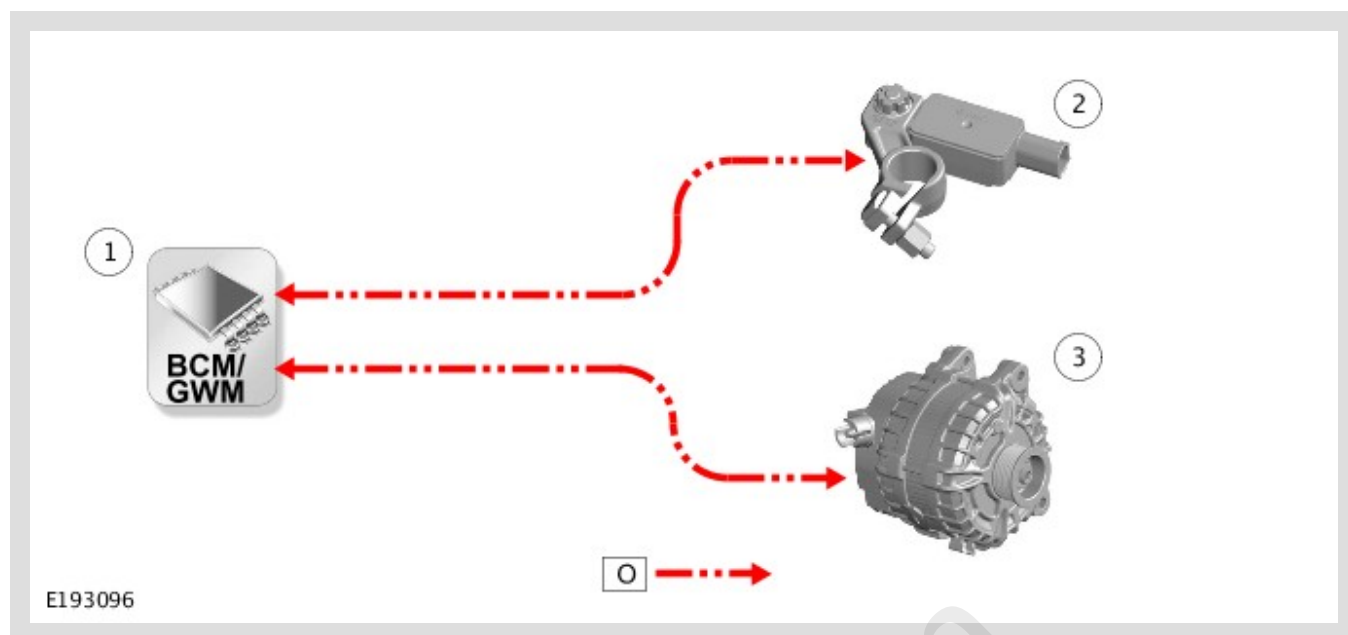
ITEM	DESCRIPTION
1	Left steering wheel switch
2	SWM
3	IGM / ICCM
4	IPC

LOCAL INTERCONNECT NETWORK – 3 OF 9 – POWERTRAIN CONTROL MODULE



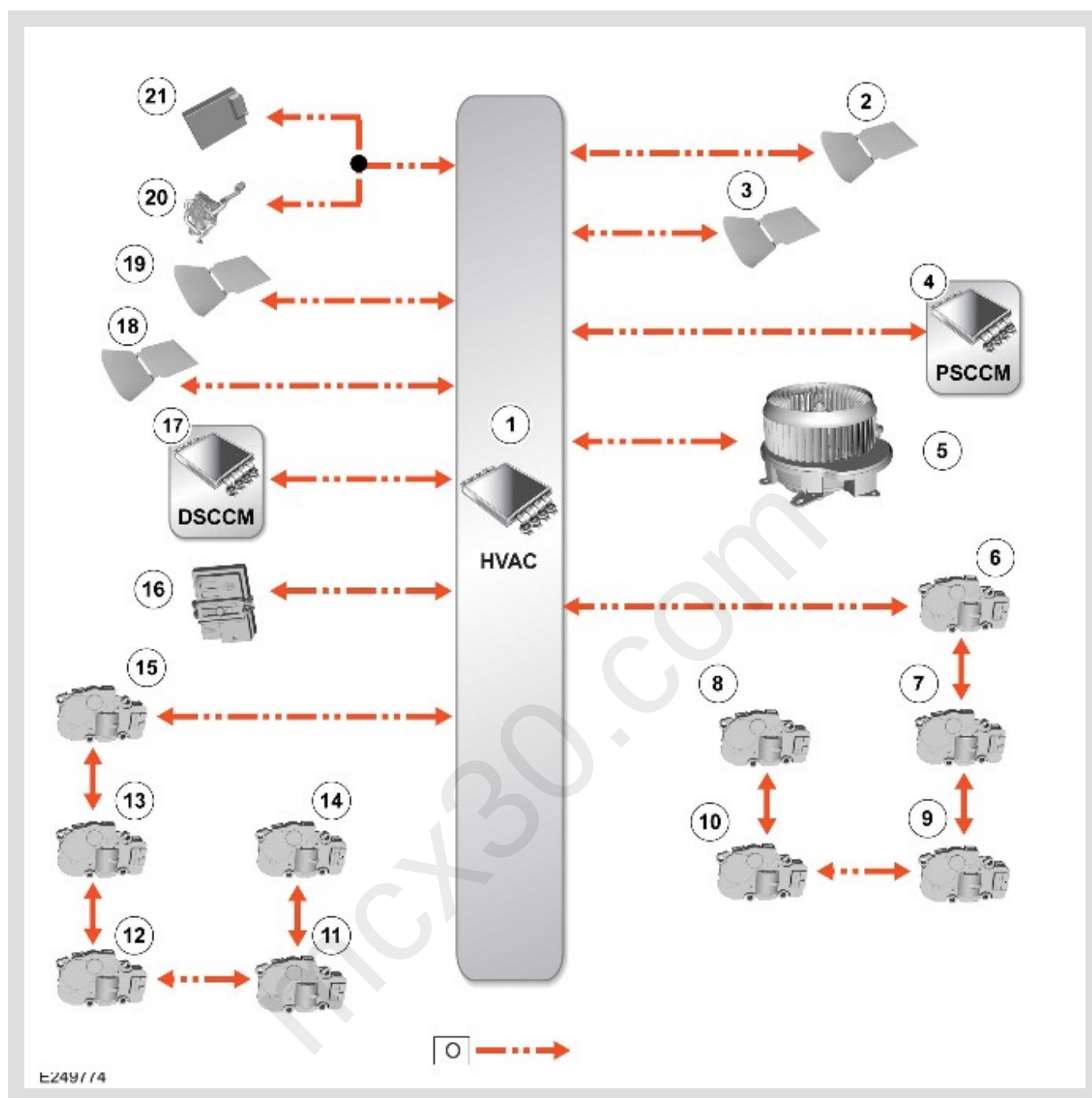
O = LIN.

ITEM	DESCRIPTION
1	PCM
2	Active grille air shutter motor
3	Glow plug control module (diesel vehicles only)



0 = LIN.

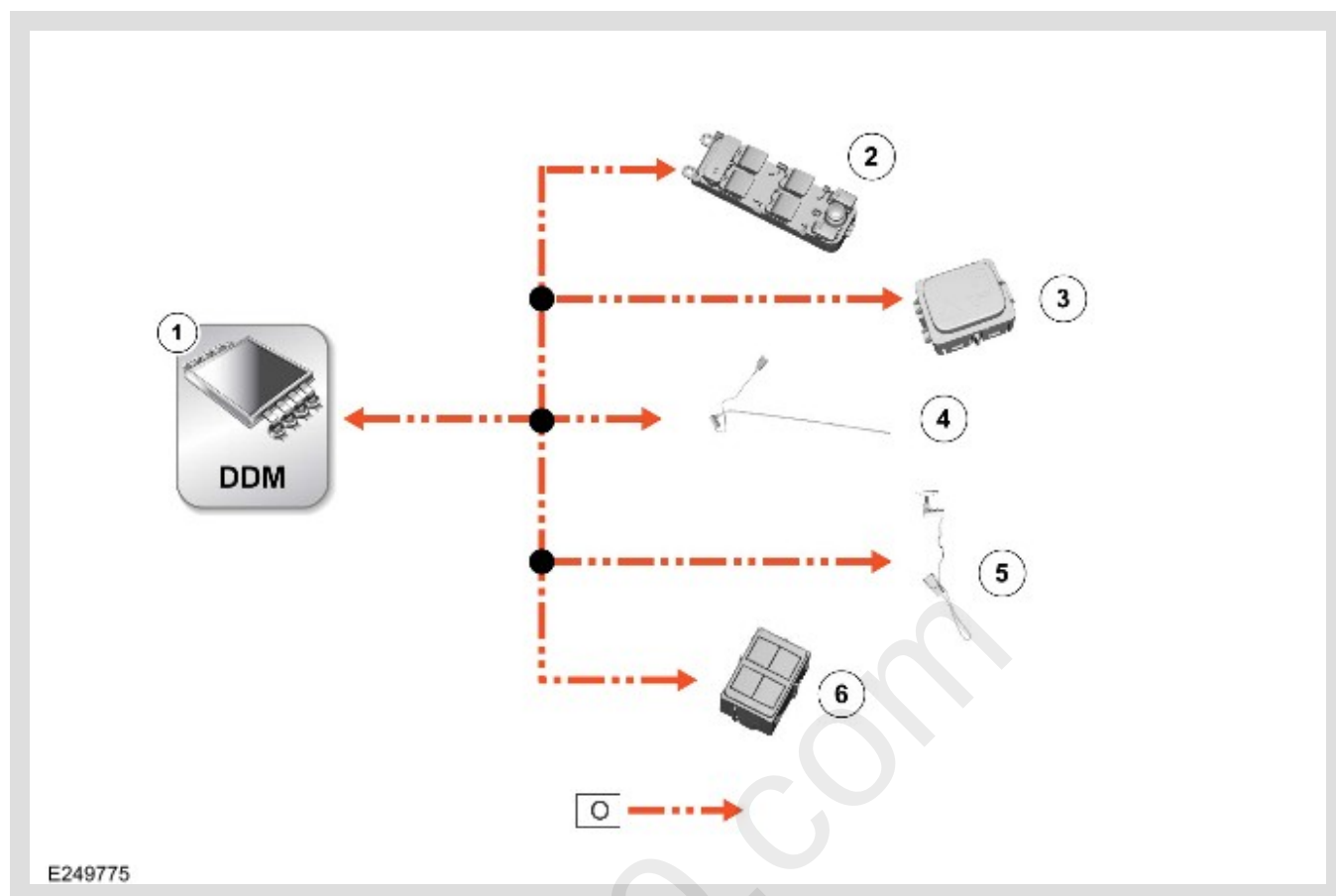
ITEM	DESCRIPTION
1	BCM/ GWM
2	Battery Monitoring System (BMS) control module
3	Generator



O = LIN.

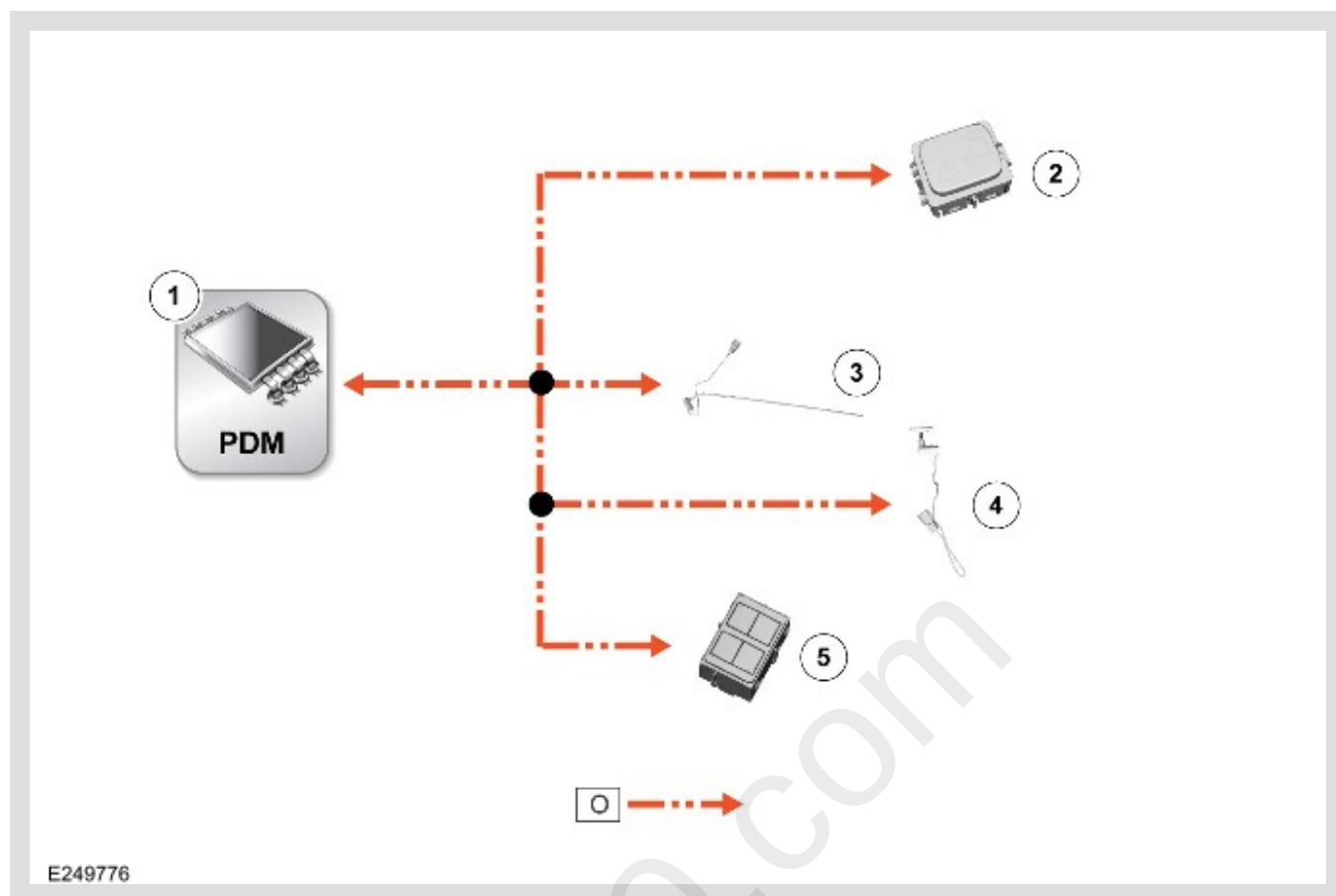
ITEM	DESCRIPTION
1	HVAC control module
2	Seat heater - Passenger
3	Seat heater - Second row left
4	PSCCM
5	Blower - Front

ITEM	DESCRIPTION
6	Recirculation motor
7	Cool air bypass motor
8	Distribution motor - Front left
9	Temperature blend motor - Front left
10	Temperature blend motor - Rear left
11	Temperature blend motor - Front right
12	Temperature blend motor - Rear right
13	Auxiliary climate control face/feet motor
14	Distribution motor - Front right
15	Distribution motor - Demist
16	Humidity sensor
17	DSCCM
18	Seat heater - Second row right
19	Seat heater - Driver
20	Fuel Fired Booster Heater Control Module (AHCM)
21	AHCM receiver



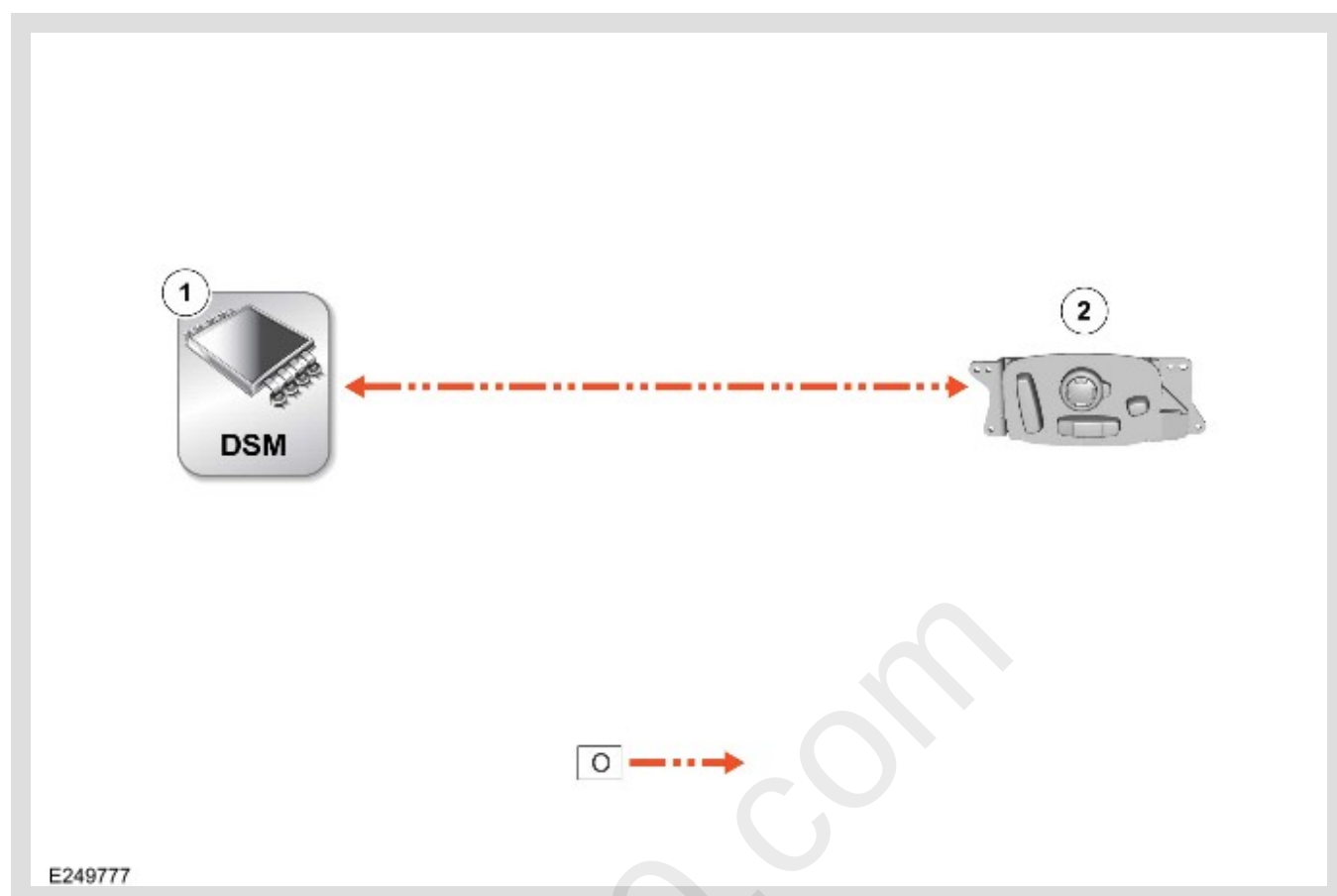
O = LIN.

ITEM	DESCRIPTION
1	DDM
2	Door switchpack - Driver
3	Clear Exit Detection System (CEDS) indicator
4	Ambience lighting LED - Driver door
5	Ambience lighting LED - Driver door handle
6	Seat memory switchpack - Driver



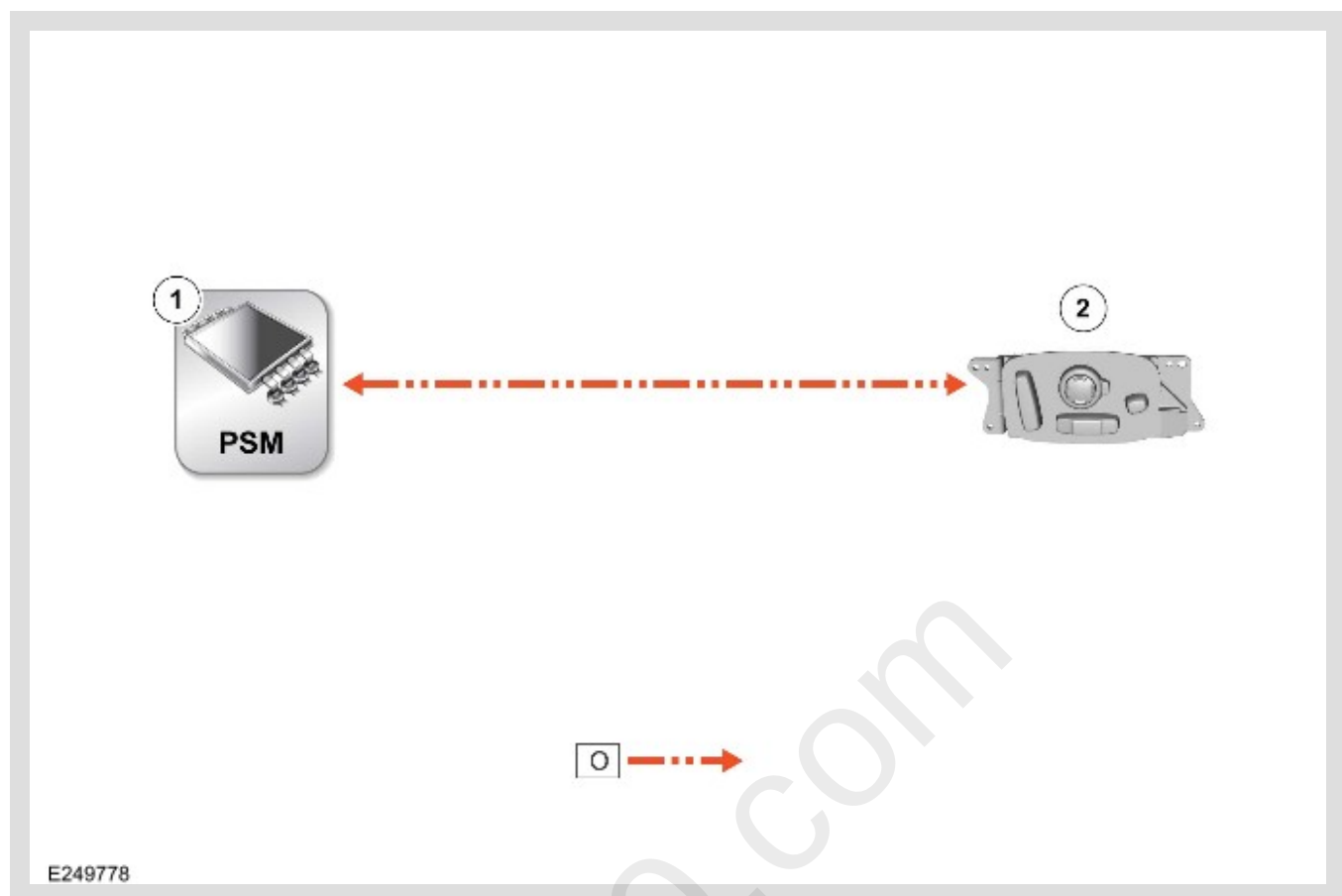
O = LIN.

ITEM	DESCRIPTION
1	PDM
2	Clear Exit Detection System (CEDS) indicator
3	Ambience lighting Light Emitting Diode (LED) - Passenger door
4	Ambience lighting LED - Passenger door handle
5	Seat memory switchpack - Passenger



O = LIN.

ITEM	DESCRIPTION
1	DSM
2	Seat switchpack - Driver



0 = LIN.

ITEM	DESCRIPTION
1	PSM
2	Seat switchpack - Passenger