



BMW Light Effects Module

Installation manual

Revision 1.0 05/2024

General precautions

It is strongly recommended to install the product with the help of a qualified personnel with experience in automotive electronics, who knows safety measures related to the use of electrical equipment and conversant with the contents of this manual.

We will not in any way be liable to you for any kind of loss or damage incurred as a result of your use of our product or any of the information provided that may affect you while you use our product.

The warranty is limited to defects in materials and workmanship and does not cover damage or abnormal wear and tear resulting from abuse, misuse, or accidental damage.

Unauthorized repairs or alterations void the product warranty.

Precautions during installation

It is strongly recommended to detach ground line of on-board electrical system battery during an installation.

ANY EXTERNAL CHARGER EQUIPMENT MUST BE DISCONNECTED

The manufacturer is not responsible for damaged equipment during the installation of the Module, or during the operation of the Module, as well as material, moral damage, or loss of health.

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1. Preface

This manual contains a Module installation guide and will help you to install the BMW Light Effects Module (hereinafter Module) on BMW F and G series from the 2015 model year, which are equipped with full LED headlights. Please read thoroughly before installation.

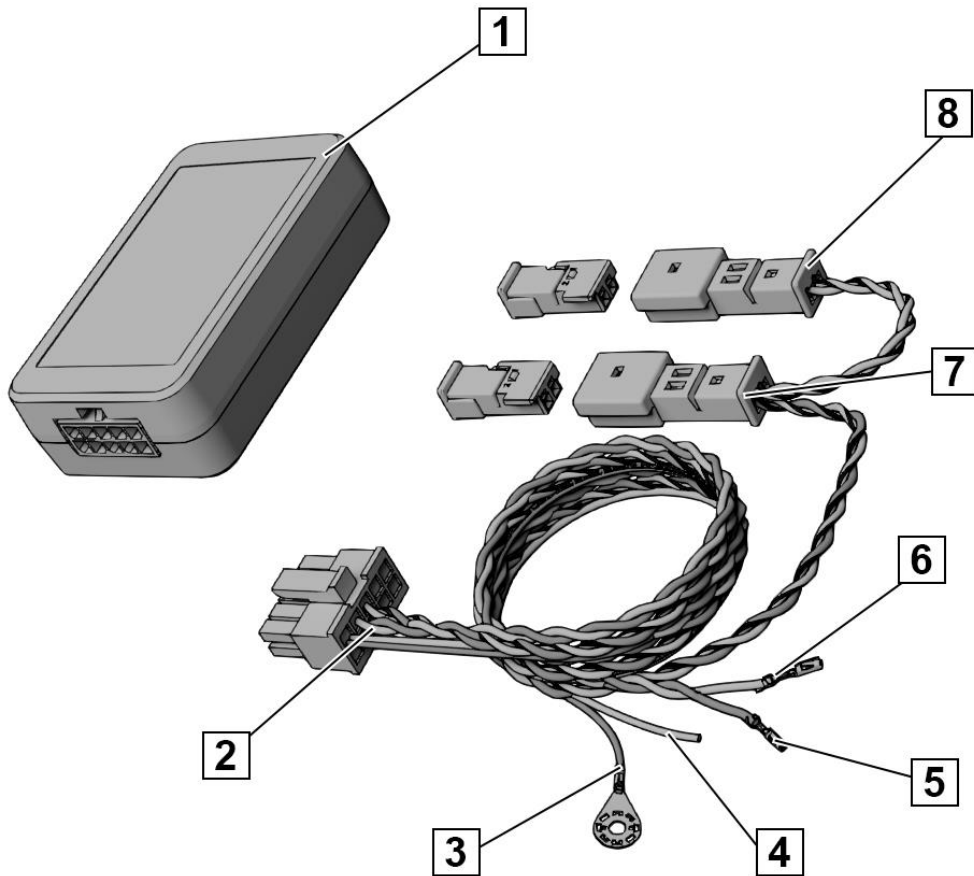
1.1. Audience

The document describes **Module** installation procedure and is intended for customers, partners, and employees of CarSystems. This document provides all necessary instructions and graphics for **Module** installation.

1.2. Required skills

This document assumes that you already familiar with automotive electronics, have knowledge and experience in this field. Advanced car diagnostic skills are welcomed.

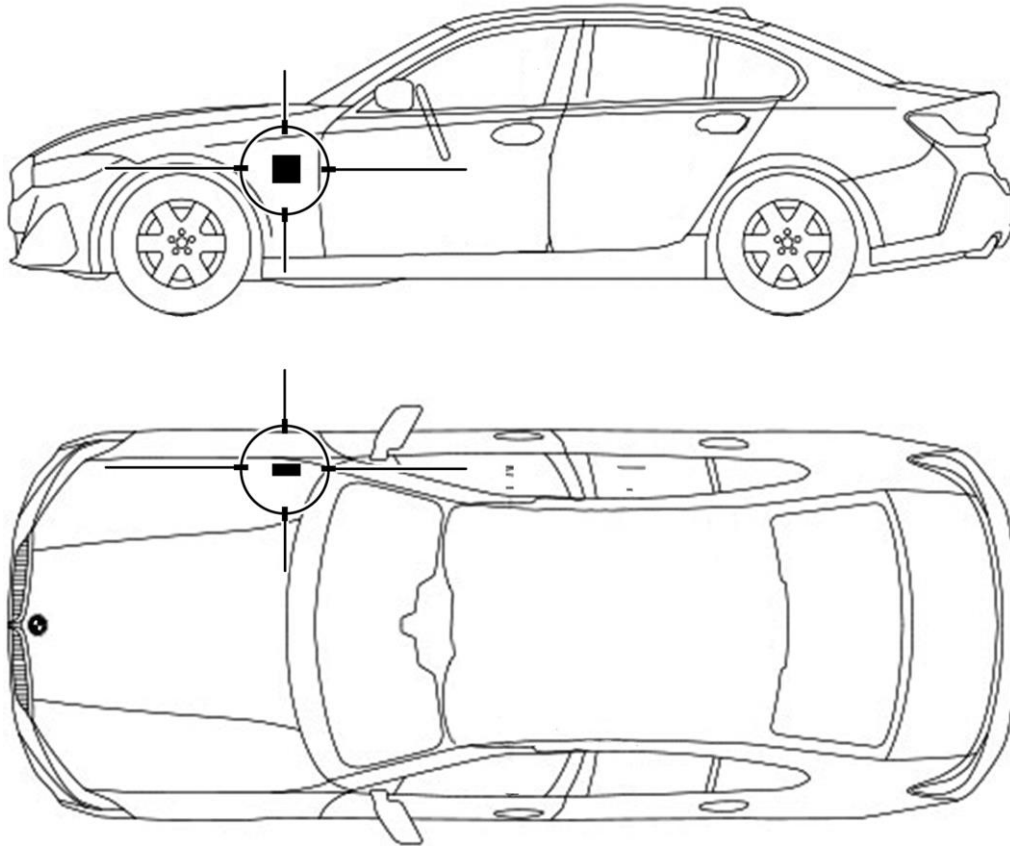
2. Delivery kit and appearance



Picture 1 Delivery kit and appearance

- 1 Module
- 2 Wire harness with Main connector
- 3 GND wire (brown)
- 4 Power wire (red)
- 5 CAN1L wire (blue)
- 6 CAN1H wire (yellow)
- 7 X1 connector
- 8 X2 connector

3. Location of the elements for Module installation



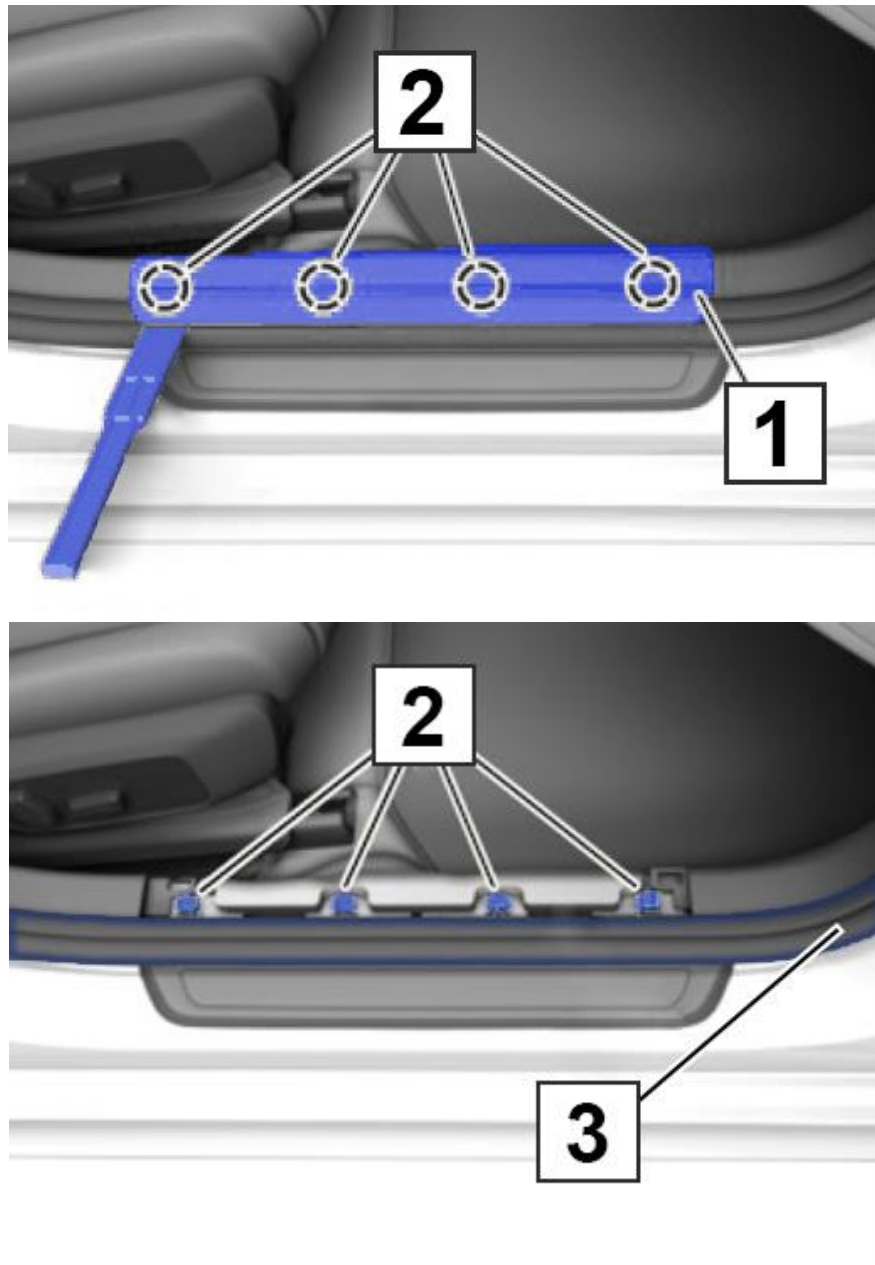
Picture 2 Zone of interest for Module installation

4. Installation process

4.1 Dismantling of interior elements for Module installation

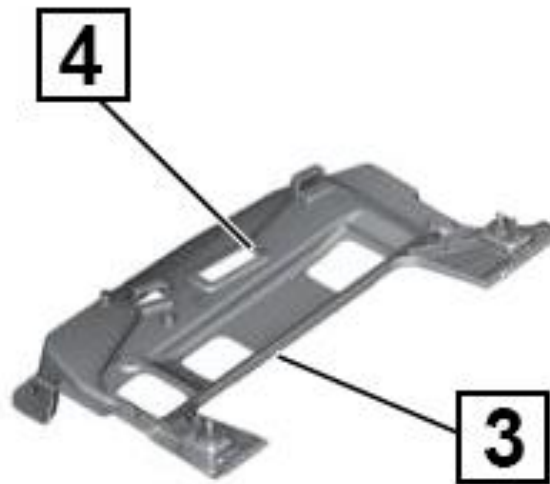
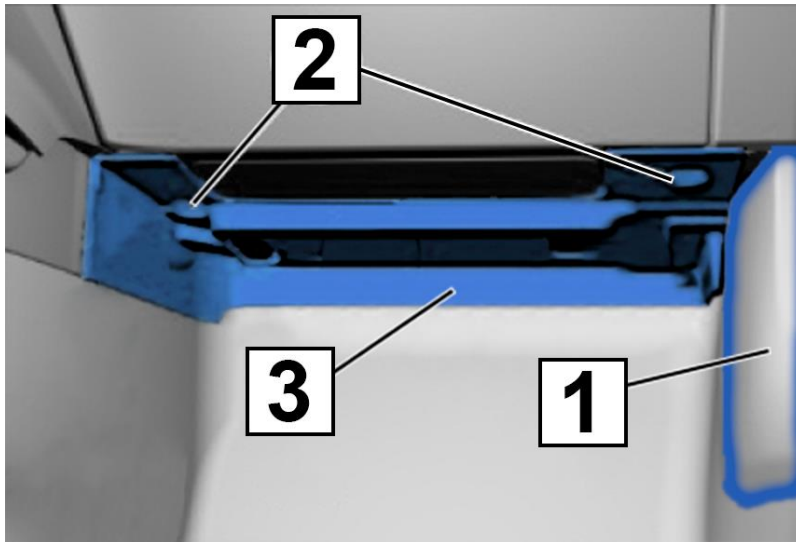
Remove front passenger side floor covering:

- remove the floor mat;
- detach the front door sill (1) from 4 clips (2) (**Picture 3**);
- remove the front door seal (3) (**Picture 3**);



Picture 3 Front passenger door interior elements

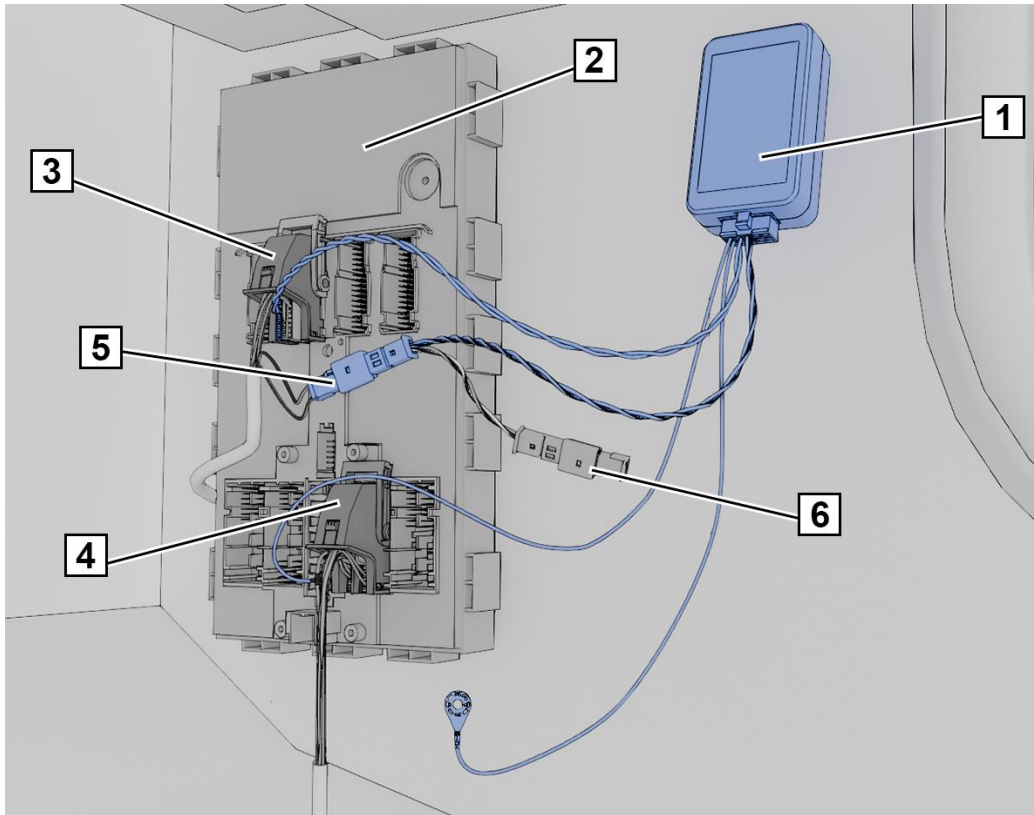
- detach the kick paneling on passenger side (1) (**Picture 4**);
- remove bottom paneling for dashboard on passenger side (**Picture 4**);
 - unclip 2 locks (2);
 - pull down the trim (3);
 - disconnect electrical connector (4);
 - remove trim (3).



Picture 4 Dashboard cover on passenger side

4.2 Module connection

For pre-LCI models: G01, G02, G11, G12, G30, G31, G32, G38, F90, F97, F98

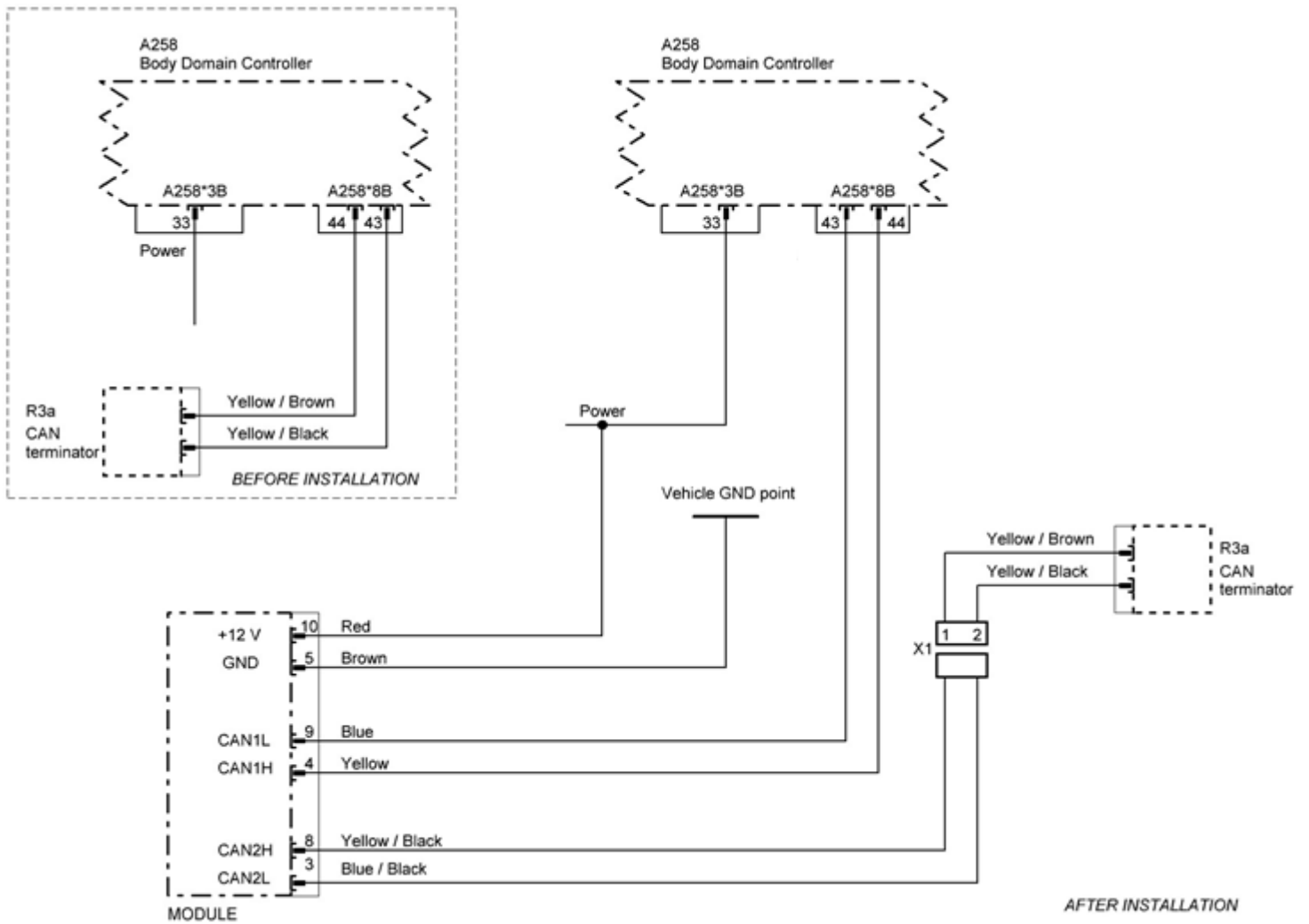


- 1 Module
- 2 Body Domain Controller (A258)
- 3 Connector (A258*8B)
- 4 Connector (A258*3B)
- 5 X1 connector
- 6 X2 connector

Picture 5 Zone of interest for Module installation

For pre-LCI models: G01, G02, G11, G12, G30, G31, G32, G38, F90, F97, F98

4.2.1 Connection to A258*8B and A258*3B connectors schematic

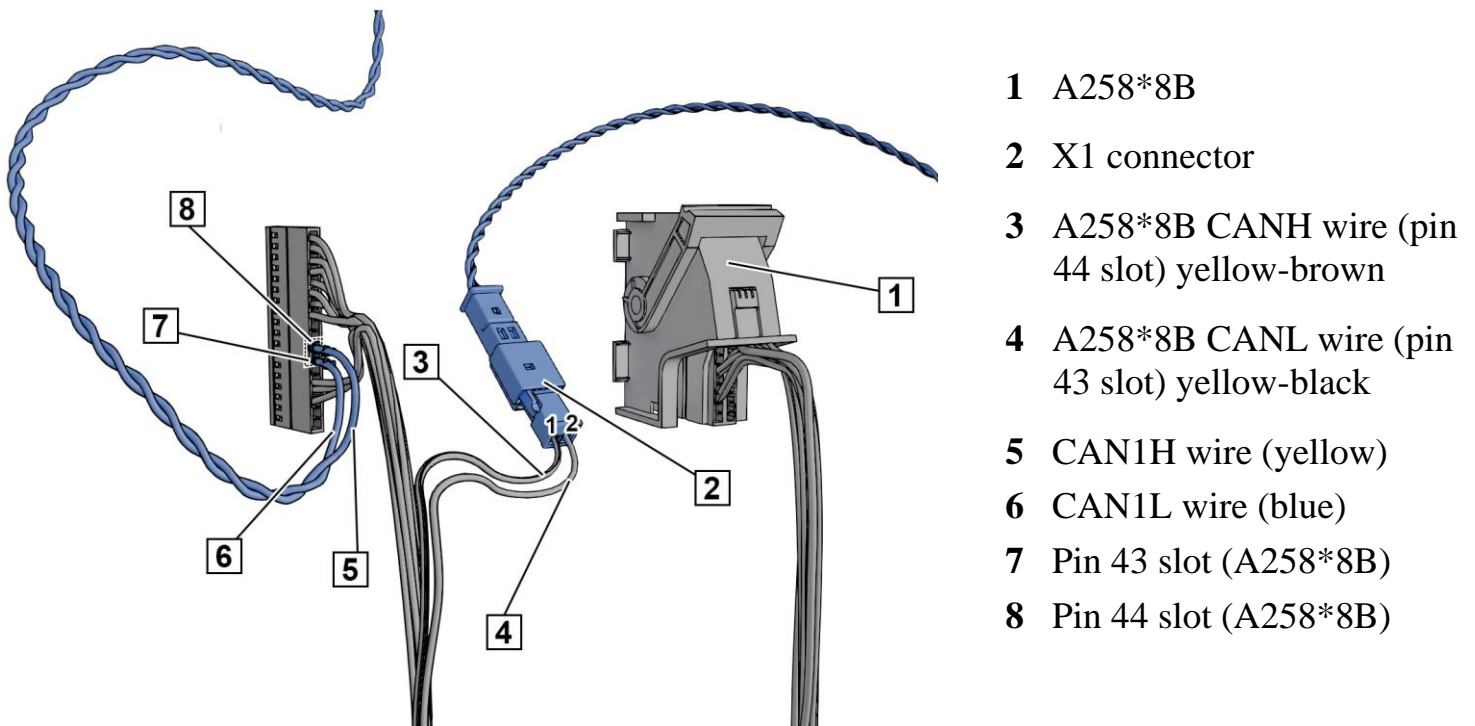


Picture 6 Module connection schematic

For pre-LCI models: G01, G02, G11, G12, G30, G31, G32, G38, F90, F97, F98

4.2.2 CAN1 and CAN2 connection to the connector A258*8B (hereinafter A258*8B)

- Unplug A258*8B (4) from body domain controller (2) (hereinafter BDC) (**Picture 5**);
- Unpin A258*8B CANH wire [yellow-brown] (3) from pin 44 slot (8) and insert it into X1 connector (2) pin 1 slot (**Picture 7**);
- Unpin A258*8B CANL wire [yellow-black] (4) from pin 43 slot (7) and insert it into X1 connector (2) pin 2 slot (**Picture 7**);
- Insert CAN1H wire [yellow] from the Module (5) into A258*8B pin 44 slot (8) (**Picture 7**);
- Insert CAN1L wire [blue] from the Module (6) into A258*8B pin 43 slot (7)(**Picture 7**);

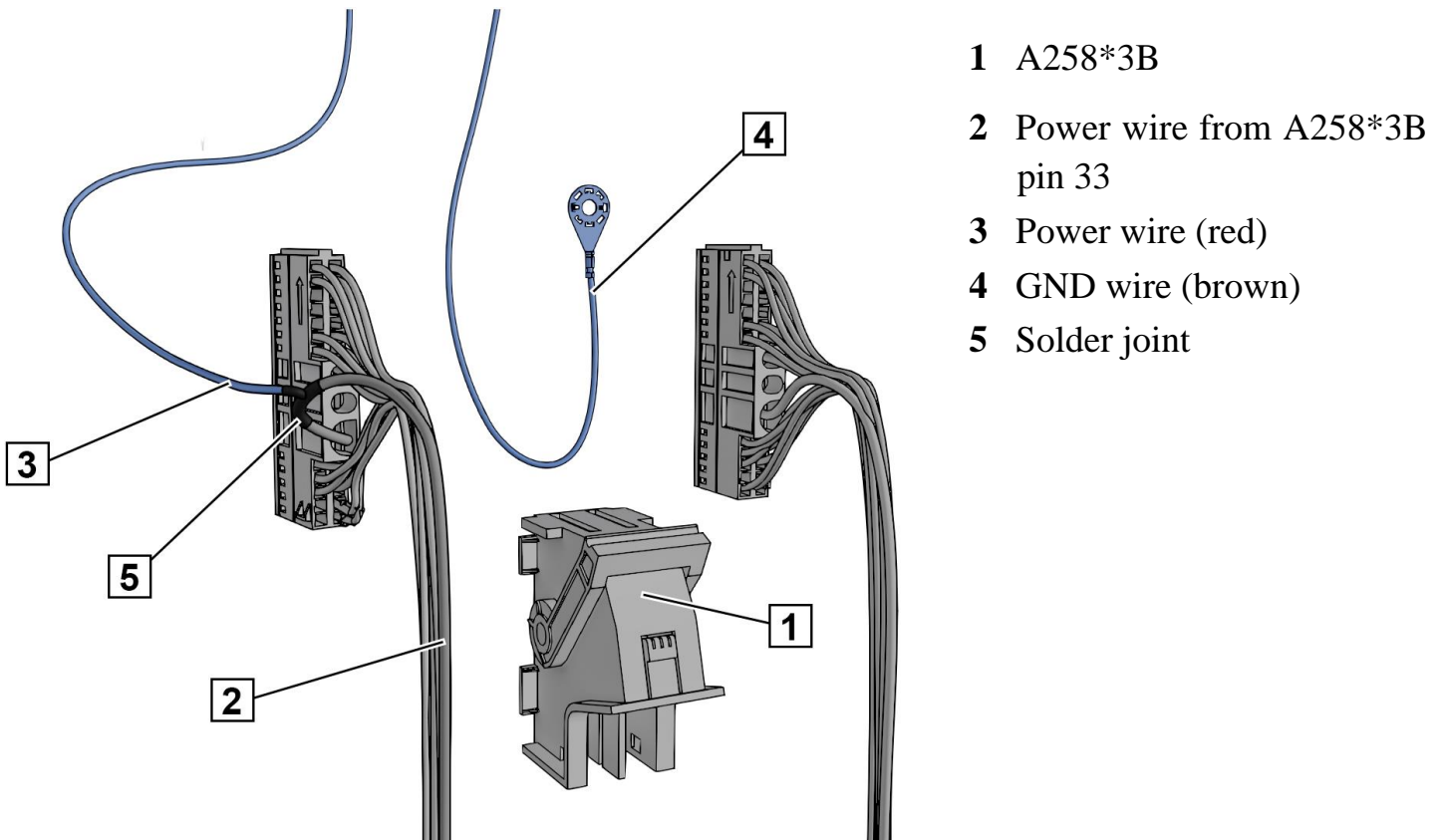


Picture 7 A258*8B CAN bus connection

For pre-LCI models: G01, G02, G11, G12, G30, G31, G32, G38, F90, F97, F98

4.2.3 Power connection from the Module to the connector A258*3B(hereinafter A258*3B)

- Unplug A258*3B (4) from BDC (2) (**Picture 5**);
- Cut off part of the power wire [red] insulation (2) [A258*3B pin 33] (**Picture 8**);
- Connect power wire [red] from the Module (3) to A258*3B power wire (2), solder and isolate connection (6) (**Picture 8**);
- Connect GND wire [brown] from the Module (4) to the nearest vehicle GND point (**Picture 8**);

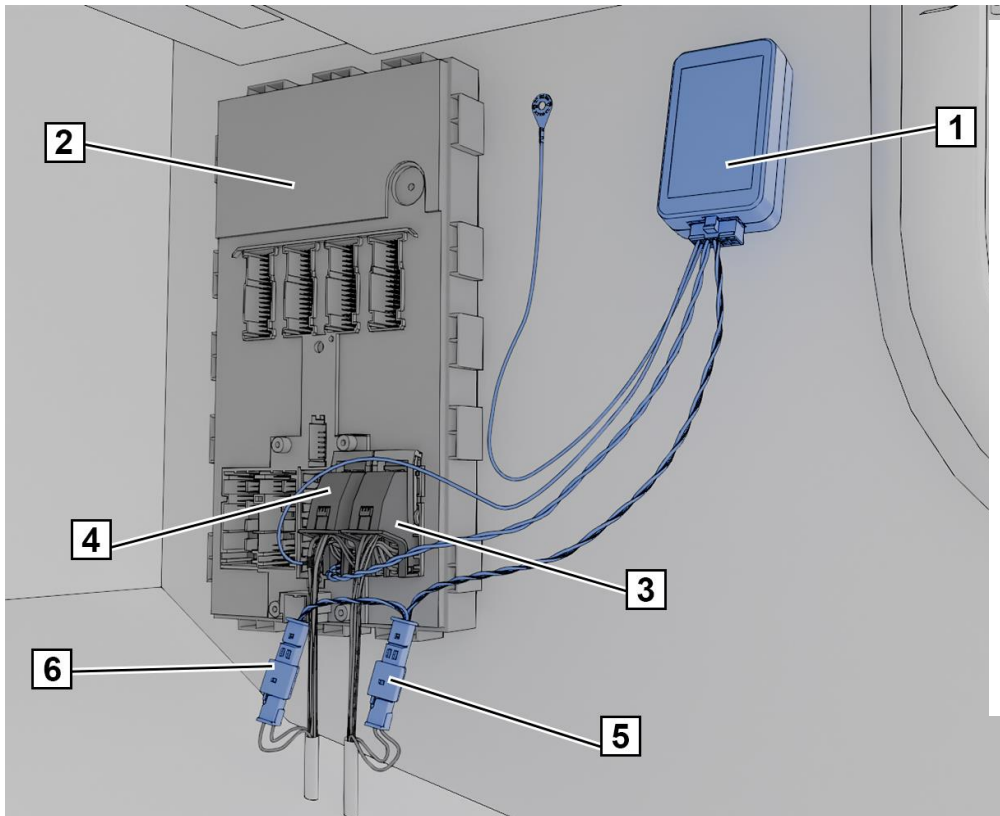


Picture 8 Power and GND wires connection

For pre-LCI models: G01, G02, G11, G12, G30, G31, G32, G38, F90, F97, F98

4.3 Module connection

For models: G20, G21, G22, G23, G26, G28, G42, G80, G81, G82, G83, G87

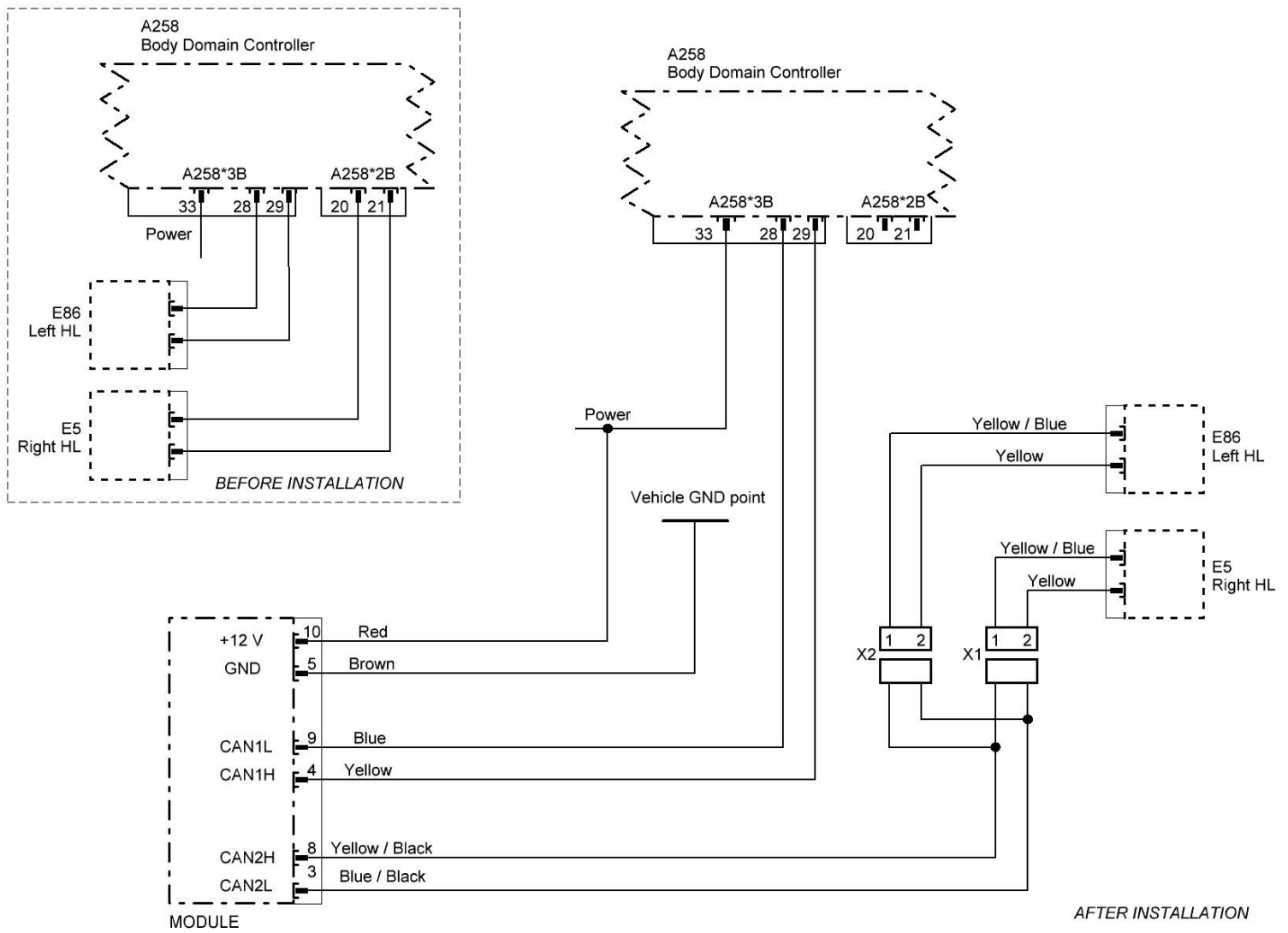


- 1 Module
- 2 Body Domain Controller (A258)
- 3 Right headlamp connector (A258*2B)
- 4 Left headlamp connector (A258*3B)
- 5 X1 connector
- 6 X2 connector

Picture 9 Module installation

For models: G20, G21, G22, G23, G26, G28, G42, G80, G81, G82, G83, G87

4.3.1 Connection to A258*2B and A258*3B connectors schematic

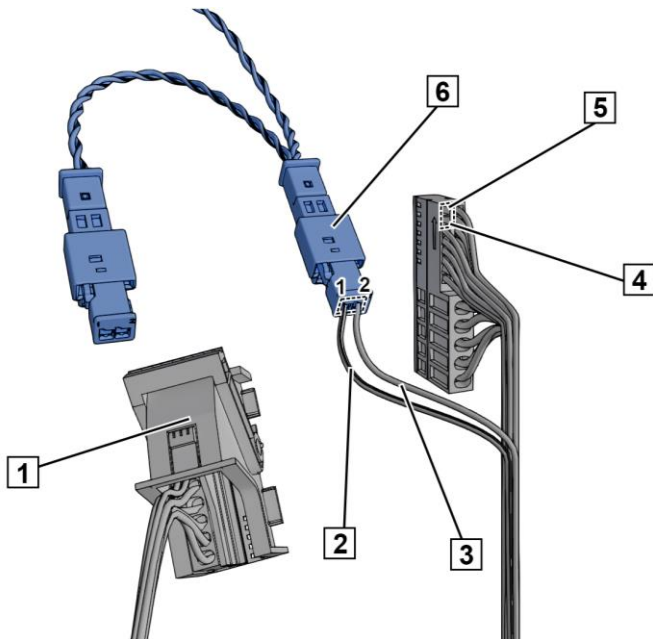


Picture 10 Module connection schematic

For models: G20, G21, G22, G23, G26, G28, G42, G80, G81, G82, G83, G87

4.3.2 CAN2 connection to the right headlamp connector (hereinafter A258*2B)

- Unplug A258*2B (3) from BDC (2) (**Picture 9**);
- Unpin A258*2B CANH wire [yellow-blue] (2) from pin 21 slot (5) and insert it into X1 connector (6) pin 1 slot (**Picture 11**);
- Unpin A258*2B CANL wire [yellow] (3) from pin 20 (4) and insert it into X1 connector (6) slot 2 (**Picture 11**);



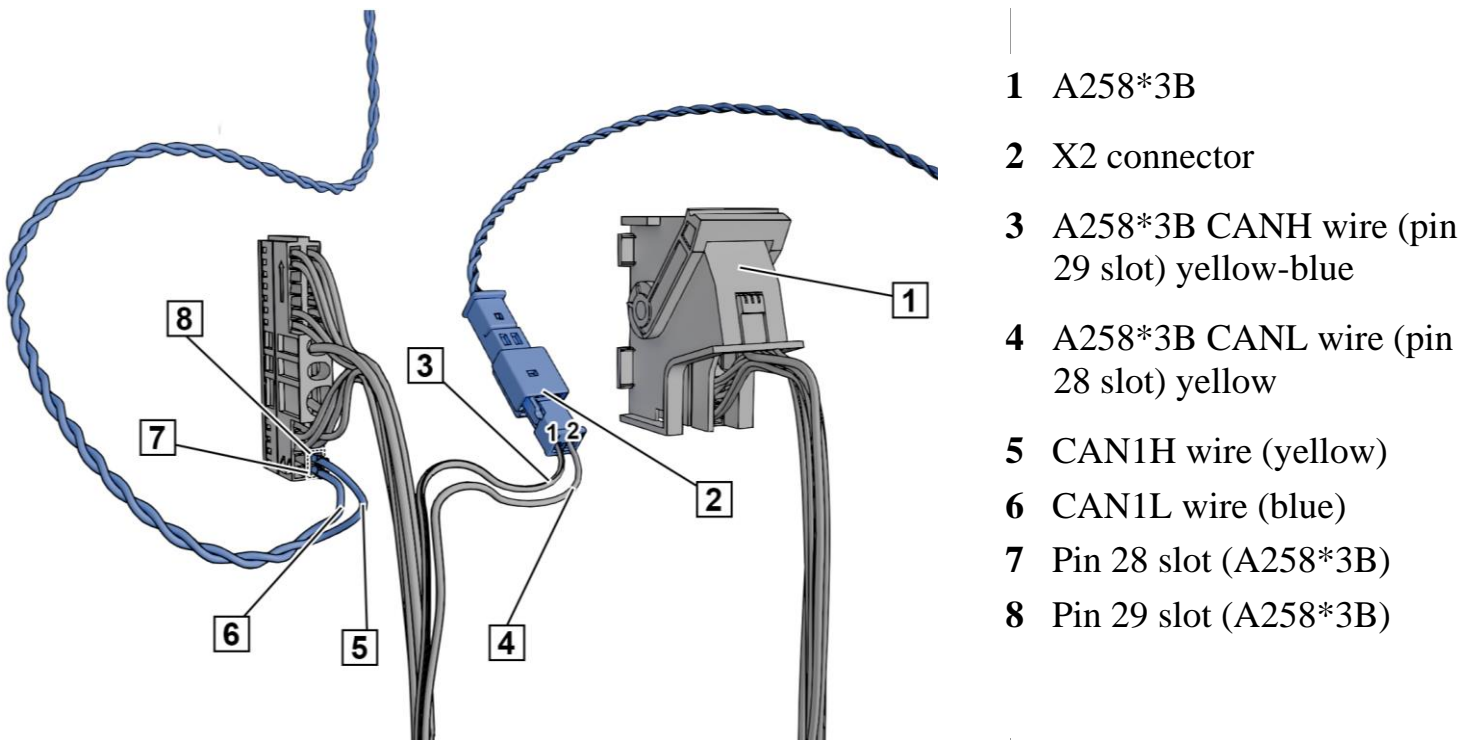
- 1 A258*2B
- 2 A258*2B CANH wire [yellow-blue] (pin 21 slot)
- 3 A258*2B CANL wire [yellow] (pin 20 slot)
- 4 Pin 20 slot (A258*2B)
- 5 Pin 21 slot (A258*2B)
- 6 X1 connector

*Picture 11 A258*2B CAN bus connection*

For models: G20, G21, G22, G23, G26, G28, G42, G80, G81, G82, G83, G87

4.3.3 CAN1 and CAN2 connection to the left headlamp connector (hereinafter A258*3B)

- Unplug A258*3B (4) from BDC (2) (**Picture 9**);
- Unpin A258*3B CANH wire [yellow/blue] (3) from pin 29 slot (7) and insert it into X2 connector (2) pin 1 slot (**Picture 12**);
- Unpin A258*3B CANL wire [yellow] (4) from pin 28 slot (8) and insert it into X2 connector (2) pin 2 slot (**Picture 12**);
- Insert CAN1H wire [yellow] from the Module (5) into A258*3B pin 29 slot (8) (**Picture 12**);
- Insert CAN1L wire [blue] from the Module (6) into A258*3B pin 28 slot (7) (**Picture 12**);

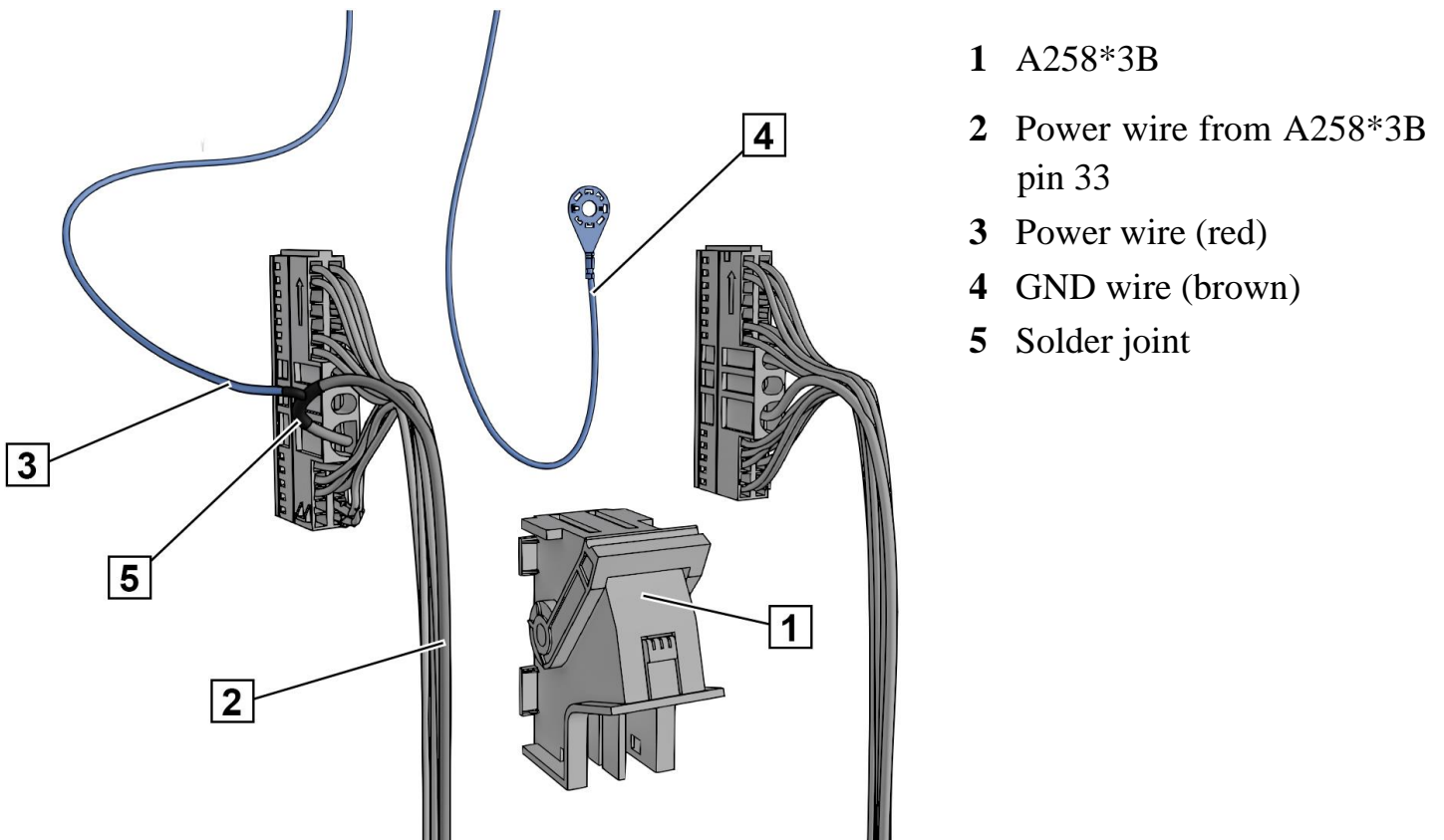


*Picture 12 A258*3B CAN bus connection*

For models: G20, G21, G22, G23, G26, G28, G42, G80, G81, G82, G83, G87

4.3.4 Power connection from the Module to the A258*3B (hereinafter A258*3B)

- Cut off part of the power wire [red] insulation (2) [A258*3B pin 33] (**Picture 13**);
- Connect power wire [red] from the Module (3) to A258*3B power wire (2), solder and isolate connection (6) (**Picture 13**);
- Connect GND wire [brown] from the Module (4) to the nearest vehicle GND point (**Picture 13**);



Picture 13 Power and GND wires connection

For models: G20, G21, G22, G23, G26, G28, G42, G80, G81, G82, G83, G87

5. Additionally

- To activate the strobe function - pull, release, pull and hold the lever (1) (**Picture 10**);
- For continuous operation - pull, release, pull and push the lever (1). For deactivation - pull the lever (1) (**Picture 10**);



Picture 14 Function activation lever

