Xenon Light Retrofit with Automatic Headlight Adjustment Control
BMW Z4 (E85)

Installation time
Approx. 5 hours, but this may vary depending on the condition of the car and the equipment in it.

Important information
Only for use in the BMW dealer organisation.
Ensure that the cables/lines are not kinked or damaged as you install them in the car.
If the specified PIN numbers are occupied, bridges, double crimps or twin-lead terminals must be used.
Use cable ties when routing cables. Tie back any excess lengths.
Subject to technical modifications.
This retrofit system may only be operated in ECE countries in conjunction with a headlight cleaning system.
Before you install the retrofit system, test the control module status with the CIP (coding, customising, programming) test program. If the test detects incorrect statuses in one or more control modules, these must be updated first using the “Load software” function.

Target group
The target group for these installation instructions is specialist personnel trained on BMW cars with the appropriate specialist knowledge.
All work must be completed using the latest repair manuals, circuit diagrams, servicing manuals and work instructions in a rational order using the prescribed tools (special tools) and observing current health and safety regulations.

Retrofit kit No. 63 12 0 151 691
See EPC for other retrofit kit part numbers.

Special tools required
00 9 317 Trim wedge
00 9 321 Folding leg
00 9 323 Cleaning wedge
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## 1. Preparations

<table>
<thead>
<tr>
<th>Conduct a brief test</th>
<th>TIS instruction No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disconnect the negative pole of the battery</td>
<td>12 00 ...</td>
</tr>
</tbody>
</table>

**The following components must be removed first of all:**

<table>
<thead>
<tr>
<th>Component</th>
<th>TIS instruction No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedal trim</td>
<td>51 45 185</td>
</tr>
<tr>
<td>Side footwell trim on the left A pillar</td>
<td>51 43 070</td>
</tr>
<tr>
<td>Glove box with casing, right</td>
<td>51 16 367</td>
</tr>
<tr>
<td>Side footwell trim on the right A pillar</td>
<td>51 43 075</td>
</tr>
<tr>
<td>Side trim bottom part at rear right</td>
<td>51 43 010</td>
</tr>
<tr>
<td>Side trim top part at rear right</td>
<td>51 43 010</td>
</tr>
<tr>
<td>Right boot – wheel arch trim</td>
<td>51 47 161</td>
</tr>
<tr>
<td>Front bumper trim</td>
<td>51 11 156</td>
</tr>
<tr>
<td>Light module</td>
<td>61 31 033</td>
</tr>
<tr>
<td>Left headlight</td>
<td>63 12 001</td>
</tr>
<tr>
<td>Right headlight</td>
<td>63 12 ...</td>
</tr>
<tr>
<td>Wheel on the front right</td>
<td></td>
</tr>
<tr>
<td>Wheel on the rear right</td>
<td></td>
</tr>
</tbody>
</table>
2. Parts kit

Legend

A  Wiring harness (1x)
B  Level sensor at rear right (1x)
C  Level sensor at front right (1x)
D  Front angle joint (1x)
E  Holder, level sensor at front right (1x)
F  Pan head screw M5x10 (4x)
G  Hexagonal lock nut M6 (6x)
H  Hexagonal lock nut M8 (1x)
I  Holder, level sensor at rear right (1x)
J  Hexagonal screw with washer M6x12 (2x)
K  Control rod (1x)
L  Holder (1x)
M  Hexagonal screw (1x)
N  Extension (1x)
O  Xenon light sticker (2x)
P  Xenon headlight, right (1x)
Q  Xenon headlight, left (1x)
R  Light module (1x) (not included in kit)
S  Cable tie (15x)
3. Connection overview

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Signal</th>
<th>Cable colour / Cross-section</th>
<th>Connection location in the car</th>
<th>Abbreviation / Slot</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Wiring harness</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>A1</td>
<td>Black 6-pin socket casing</td>
<td>---</td>
<td>SWGN/SWWS/ SWGR/ 0.5 mm²</td>
<td>To level sensor B64 rear right</td>
<td>X13251 PIN 4/1/5</td>
</tr>
<tr>
<td>A2</td>
<td>Socket contacts</td>
<td>---</td>
<td>SWGN/SWWS/ SWGR/ 0.5 mm²</td>
<td>To black 54-pin socket casing on light module A3</td>
<td>X12 PIN 14/46/26</td>
</tr>
<tr>
<td>A3</td>
<td>Black 6-pin socket casing</td>
<td>GRGN/GRWS/ GRBR/ 0.5 mm²</td>
<td>To level sensor B42 front right</td>
<td>X18032 PIN 4/1/5</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>Socket contact</td>
<td>SWBL/ 0.5 mm²</td>
<td>To xenon headlight E148 front right</td>
<td>X19035 PIN B</td>
<td></td>
</tr>
<tr>
<td>A5</td>
<td>Socket contacts</td>
<td>---</td>
<td>GRGN/GRWS/ GRBR/SWBL/SW/ 0.5 mm²</td>
<td>To black 54-pin socket casing on light module A3</td>
<td>X12 PIN 22/19/23/36</td>
</tr>
<tr>
<td>A6</td>
<td>Socket contact</td>
<td>---</td>
<td>SW/ 0.5 mm²</td>
<td>To xenon headlight E147 front left</td>
<td>X19034 PIN B</td>
</tr>
</tbody>
</table>
4. Installation and cabling diagram

Legend

1. Level sensor rear right
2. Level sensor front right
3. Xenon headlight, right
4. Xenon headlight, left
5. Light module
5. **To install the front right level sensor**

Install as shown in the following illustrations. Tighten all screw connections.
6. To install the rear right level sensor

- Install as shown in the following illustrations. Tighten all screw connections.
7. To install the wiring harness

Connect branch A1 to rear right level sensor B.
Insert cable holder (1) into the hole in top transverse control arm (2).
Insert grommet (3) into the boot floor and route the wiring harness into the boot.

Route branch A2 from the boot through opening (1) and hole (2) into the interior.
Then route branch A2 into the driver’s footwell.

Route branch A4 along the standard wiring harness in the engine compartment on the right to the right headlight.
Route branches A5 and A6 through grommet (1) into the interior.
Then route branch A3 into the front right wheel arch.

Route branch A3 from the engine compartment behind plastic lining (1) along the brake line into the front right wheel arch.
7. To install the wiring harness

Connect branch **A3** to plug (1) of the front right level sensor.
Attach to existing cables (2) with cable ties.

- Route branches **A5** and **A6** into the driver’s footwell. Then route branch **A5** together with branch **A2** to the light module.
- Route branch **A6** through opening (1) in the plastic lining and forwards into the engine compartment.

- Route branch **A6** through electrics box (1) and further along the standard wiring harness in the engine compartment on the left to the left headlight.

- Connect branches **A2** and **A5** into black 54-pin socket casing X12 (1) of the light module as follows:
  - SWGN to PIN 14
  - SWWS to PIN 46
  - SWGR to PIN 26
  - GRGN to PIN 22
  - GRWS to PIN 19
  - GRBR to PIN 23
  - SWBL to PIN 2
  - SW to PIN 36
8. **Concluding work and coding**

The xenon light retrofit with automatic headlight adjustment control requires coding.

- Connect the battery, connect a charger
- Program/code the parking distance control (PDC) retrofit with DISPlus or GT-1 using the CIP application and follow the instructions in the program
- Conduct a function test
- Re-assemble the car
- Stick the xenon light stickers onto the xenon headlights where they are clearly visible
9. Circuit diagram
9. Circuit diagram

Legend

A3    Light module
B42   Level sensor front right
B64   Level sensor rear right
E147  Xenon headlight, left
E148  Xenon headlight, right

X12   Black 54-pin socket casing on light module
X13251 Black 6-pin socket casing on level sensor, rear right
X18032 Black 6-pin socket casing on level sensor, front right
X19034 Black 8-pin socket casing on xenon headlight, left
X19035 Black 8-pin socket casing on xenon headlight, right

Cable colours

GR    grey
GN    green
WS    white
BR    brown
SW    black
BL    blue