Original BMW Accessories.
Installation Instructions.

Anti-Theft Alarm System Retrofit.
BMW 5 Series (F07, F10, F11)

These installation instructions only apply to cars without SA 302 (anti-theft alarm system).

Retrofit kit number
65 75 2 448 363  Anti-theft alarm system

Installation time
The installation time is approx. 2.0 hours. This may vary depending on the condition of the vehicle and the equipment in it.

Important information
These installation instructions are primarily designed for use within the BMW dealership organisation and by authorised BMW service companies.

These installation instructions are intended for use by qualified specialist staff trained on BMW vehicles with the relevant expert knowledge.

All work must be completed using the latest BMW repair manuals, wiring diagrams, servicing manuals and work instructions, in a rational order, using the prescribed tools (special tools) and observing current health and safety regulations.

If you experience installation or function problems, restrict troubleshooting to approx. 0.5 hours for mechanical work and 1.0 hour for electrical work.

To avoid unnecessary extra work and/or costs, send an inquiry straight away to the technical parts support team via the Aftersales Assistance Portal (ASAP).

Quote the following information:
– Chassis number,
– Retrofit kit part number,
– A detailed description of the problem,
– Any work already carried out.

Do not archive the hard copy of these installation instructions since daily updates are provided via ASAP.

Pictograms
⚠ Denotes instructions that draw your attention to dangers.
▶ Denotes instructions that draw your attention to special features.
↩ Denotes the end of the instruction or other text.
Installation information
Ensure that the cables and/or lines are not kinked or damaged as you install them in the car. Costs arising from this will not be reimbursed by BMW AG.

Additional cables/wires that you install must be secured with cable ties. If the specified PIN chambers are occupied, bridges, double crimps, or twin-lead terminals must be used.

All pictures show LHD cars; proceed accordingly on RHD cars.

List of special equipment
The following special equipment must be taken into consideration during the installation work:

- **SA 302**  Anti-theft alarm system
- **SA 1CC**  Auto Start/Stop function

Customer information
Print out the “Customer information” section at the end of the installation instructions and give it to the customer.

Special tools required
Details of the special tools required can be found in the relevant ISTA repair manual.
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parts list for retrofit kit</td>
<td>4</td>
</tr>
<tr>
<td>2. Preparatory work</td>
<td>6</td>
</tr>
<tr>
<td>3. Retrofit wiring harness connection diagram</td>
<td>7</td>
</tr>
<tr>
<td>4. Adapter cable and ultrasonic sensors connection diagram</td>
<td>8</td>
</tr>
<tr>
<td>5. Installation and cabling diagram</td>
<td>9</td>
</tr>
<tr>
<td>6. Install emergency power siren and route retrofit wiring harness</td>
<td>10</td>
</tr>
<tr>
<td>7. Concluding work and function test</td>
<td>16</td>
</tr>
<tr>
<td>8. Wiring diagram</td>
<td>17</td>
</tr>
<tr>
<td>9. Customer information</td>
<td>19</td>
</tr>
</tbody>
</table>
1. Parts list for retrofit kit

**Legend**

A Retrofit wiring harness  
B Adapter cable  
C Ultrasonic sensors with wiring harness  
D Emergency power siren  
E Hexagon nut with washer M6  
F Emergency power siren mount  
G Hexagon screw M6 x 16  
H Lock nut M6  
I Bonnet contact mount  
J Phillips screw M4 x 12  
K Washer M4  
L Bonnet contact  
M Cable ties (5 x)
1. Parts list for retrofit kit

Legend

N  Control unit
O  5-way miniature connector (2 x)
P  2-way miniature connector (2 x)
Q  Socket casing
R  LED
S  SW 10-pin plug housing
T  SW 10-pin socket casing
U  Drilling template
V  Covers for ultrasonic sensors (3 x)
W  Philips screw M2 x 6 mm (3 x)
X  Washer M2 (2 x)

The other parts in the retrofit kit are not required.
2. Preparatory work

<table>
<thead>
<tr>
<th>Preparatory work</th>
<th>ISTA No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disconnect all negative battery cables</td>
<td>61 20 900</td>
</tr>
<tr>
<td>Release and disconnect various plug connections.</td>
<td>61 13 ...</td>
</tr>
<tr>
<td>Cut, strip and crimp cables</td>
<td>61 11 ...</td>
</tr>
<tr>
<td>Open the plug housing and remove the contacts from various connection systems</td>
<td>61 13 ...</td>
</tr>
<tr>
<td>Instructions for handling the documents: Repair manual, technical data, tightening torques</td>
<td>00 11 ...</td>
</tr>
<tr>
<td>Instructions for handling wiring harnesses and cables</td>
<td>61 00 ...</td>
</tr>
</tbody>
</table>

The following components must be removed first of all

<table>
<thead>
<tr>
<th>Component</th>
<th>ISTA No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedal trim</td>
<td>51 45 184</td>
</tr>
<tr>
<td>Front roof pillar trim on the left</td>
<td>51 43 201</td>
</tr>
<tr>
<td>Trim for door pillar (top) left</td>
<td>51 43 148</td>
</tr>
<tr>
<td>Trim for door pillar (bottom) left</td>
<td>51 43 150</td>
</tr>
<tr>
<td>Front left (interior) door sill cover strip</td>
<td>51 47 000</td>
</tr>
<tr>
<td>Rear left (interior) door sill cover strip</td>
<td>51 47 030</td>
</tr>
<tr>
<td>Interior rear-view mirror</td>
<td>51 16 063</td>
</tr>
<tr>
<td>Roof switch cluster</td>
<td>61 31 043</td>
</tr>
<tr>
<td>Top rear connection</td>
<td>51 64 020</td>
</tr>
</tbody>
</table>
### 3. Retrofit wiring harness connection diagram

![Diagram of retrofit wiring harness connection](image)

<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</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>Retrofit wiring harness</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>A1</td>
<td>SW 6-pin socket casing</td>
<td>---</td>
<td>---</td>
<td>To emergency power siren D</td>
<td>H1*1B</td>
</tr>
<tr>
<td>A2</td>
<td>SW 3-pin socket casing</td>
<td>---</td>
<td>---</td>
<td>To bonnet contact L</td>
<td>---</td>
</tr>
<tr>
<td>A3</td>
<td>Open cable</td>
<td>30</td>
<td>GN/RT 0.35 mm²</td>
<td>With miniature connector O to cable from CAS A16</td>
<td>A16*1B PIN 34</td>
</tr>
<tr>
<td>A4</td>
<td>Open cable</td>
<td>31</td>
<td>BR 0.35 mm²</td>
<td>With miniature connector O to cable from CAS A16</td>
<td>A16*1B PIN 25</td>
</tr>
<tr>
<td>A5</td>
<td>Open cable</td>
<td>K_CAN2_H</td>
<td>GE/RT 0.35 mm²</td>
<td>With miniature connector P to cable from CAS A16</td>
<td>A16*1B PIN 35</td>
</tr>
<tr>
<td>A6</td>
<td>Open cable</td>
<td>K_CAN2_L</td>
<td>GE/BR 0.35 mm²</td>
<td>With miniature connector P to cable from CAS A16</td>
<td>A16*1B PIN 26</td>
</tr>
<tr>
<td>A7</td>
<td>Round socket contact</td>
<td>---</td>
<td>BU/SW 0.35 mm²</td>
<td>To branch B4</td>
<td>---</td>
</tr>
<tr>
<td>A8</td>
<td>Round socket contact</td>
<td>---</td>
<td>BL 0.35 mm²</td>
<td>To branch B5</td>
<td>---</td>
</tr>
<tr>
<td>A9</td>
<td>Socket contact</td>
<td>LED +</td>
<td>RT/SW 0.35 mm²</td>
<td>To interior rear-view mirror A60</td>
<td>A60*1B PIN 8</td>
</tr>
<tr>
<td>A10</td>
<td>Socket contact</td>
<td>LED -</td>
<td>BR 0.35 mm²</td>
<td>To interior rear-view mirror A60</td>
<td>A60*1B PIN 9</td>
</tr>
</tbody>
</table>
4. **Adapter cable and ultrasonic sensors connection diagram**

<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</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>B</td>
<td>Adapter cable</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>B1</td>
<td>Socket casing</td>
<td>---</td>
<td>---</td>
<td>To control unit <strong>N</strong></td>
<td>---</td>
</tr>
<tr>
<td>B2</td>
<td>Open cable</td>
<td>30</td>
<td><strong>RT/IGN</strong> 0.35 mm²</td>
<td>With miniature connector <strong>O</strong> to cable from CAS <strong>A16</strong></td>
<td><strong>A16*1B PIN 34</strong></td>
</tr>
<tr>
<td>B3</td>
<td>Open cable</td>
<td>31</td>
<td><strong>BR</strong> 0.35 mm²</td>
<td>With miniature connector <strong>O</strong> to cable from CAS <strong>A16</strong></td>
<td><strong>A16*1B PIN 25</strong></td>
</tr>
<tr>
<td>B4</td>
<td>Pin housing</td>
<td>---</td>
<td><strong>SWBL</strong> 0.35 mm²</td>
<td>To branch <strong>A7</strong></td>
<td>---</td>
</tr>
<tr>
<td>B5</td>
<td>Pin housing</td>
<td>---</td>
<td><strong>BL</strong> 0.35 mm²</td>
<td>To branch <strong>A8</strong></td>
<td>---</td>
</tr>
<tr>
<td>C</td>
<td>Ultrasonic sensor retrofit wiring harness</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>C1</td>
<td>RT 2-pin socket casing</td>
<td>---</td>
<td>---</td>
<td>To control unit <strong>N</strong></td>
<td><strong>RX</strong></td>
</tr>
<tr>
<td>C2</td>
<td>SW 2-pin socket casing</td>
<td>---</td>
<td>---</td>
<td>To control unit <strong>N</strong></td>
<td><strong>TX</strong></td>
</tr>
</tbody>
</table>
5. Installation and cabling diagram

A Retrofit wiring harness
B Adapter cable
C Ultrasonic sensors
D Emergency power siren
L Bonnet contact
N Control unit
R LED

1 CAS control unit A16
6. Install emergency power siren and route retrofit wiring harness

Secure emergency power siren **D** using hexagon nut **E** to emergency power siren holder **F**.

Secure emergency power siren **D** with emergency power siren holder **F** near the brake booster using the existing borehole and a hex head screw **G** and lock nut **H**.

**Cars without SA 1CC only**
Secure the bonnet contact holder **I** using a Philips screw **J** and washer **K** as shown to the cooling air duct **1**.

Install bonnet contact **L** in bonnet contact holder **I**.
6. Install emergency power siren and route retrofit wiring harness

Connect branch **A1** on retrofit wiring harness **A** to emergency power siren **D**.
Route branch **A2** to the location of bonnet contact **L**.

Connect branch **A2** on retrofit wiring harness **A** to bonnet contact **L**.
Secure retrofit wiring harness **A** to the standard wiring harness using cable ties **M**.

**Cars with SA 1CC only**
Connect branch **A1** on retrofit wiring harness **A** to emergency power siren **D**.
Tie back branch **A2** (it is not required)

**For all cars**

⚠ Ensure that, when you drill, you do not damage any cables in the car.

Place the driver's side footwell mat to one side.
Using a 6 mm diameter drill bit, drill a hole (2) through at the cable grommet (1).
Route branches **A3-A10** through the rubber grommet into the interior of the car.
6. Install emergency power siren and route retrofit wiring harness

Route branches A3-A6 to the location of the CAS A16 (1).

Route branches A9–A10 to the location of the interior rear-view mirror A60 (2).

Secure control unit N to original wiring harness using cable ties M.

Connect branch B1 on adapter cable B to control unit N.

Connect branches A3-A6 on retrofit wiring harness A and branches B2-B3 on adapter cable B as follows to the cables from plug A16*1B.

- Branch A3, GN/RT cable, and branch B2, RT/GN cable, to RT/BR cable from PIN 34 using 5-way miniature connector O.
- Branch A4, BR cable, and branch B3, BR cable, to the same coloured cable from PIN 25 using 5-way miniature connector O.
- Branch A5, GE/RT cable, to the same coloured cable from PIN 35 using 2-way miniature connector P.
- Branch A6, GE/BR cable, to the same coloured cable from PIN 26 using 2-way miniature connector P.
6. Install emergency power siren and route retrofit wiring harness

Connect branches A7-A8 using plug housing Q as follows to branches B4-B5:
- Branch A7, BL/SW cable, to branch B4, SW/BL cable
- Branch A8, BL cable, to branch B5, BL cable

Mark the drilling point (1) on the left half of the caps (2) using the dimensions shown and drill it with a 6 mm bit.

If plug A60*1B is not present, use plug housing S.

Clip LED R into the borehole (1) on the cap (2).
Connect the cables for LED R as follows to plug A60*1B:
- SW/RT cable to PIN 8
- SW cable to PIN 9

Install the interior rear-view mirror (3).

If plug A60*1B is not present, use socket housing T.

Connect branches A9-A10 as follows to plug A60*1B:
- Branch A9, RT/SW cable, to PIN 8
- Branch A10, BR cable, to PIN 9
6. Install emergency power siren and route retrofit wiring harness

Affix drilling template U to the top door pillar trim (3) flush with the edge (1) and in the centre between holders (2).

Drill through drilling template U as follows on the top door pillar trim (3):
- Drill the holes (1) using a 4.2 mm drill bit.
- Drill the hole (2) using a 12 mm drill bit.

Cut-off the pins (1) on ultrasonic sensors C.
Screw the cap V of the appropriate colour using a Philips screw W to ultrasonic sensors C.

Ensure that there are no cables on the seat belt.
Route branches C1-C2 from ultrasonic sensors C through the borehole (1).
Secure ultrasonic sensors C with Phillips screws W and washers X to the top door pillar trim (2).
Route branches C1-C2 to the location of control unit N.
Secure branches C1-C2 to the standard wiring harness using cable ties M.
6. Install emergency power siren and route retrofit wiring harness

Connect branches C1-C2 as follows to control unit N:

- Branch C1, RT 2-pin socket housing, to RX connector
- Branch C2, SW 2-pin socket housing, to TX connector
7. **Concluding work and function test**

The retrofit system does not require programming/coding.
- Connect the battery
- Connect the battery charger to the car
- Carry out a vehicle test using the ISTA system and note or work through any entered error memory
- Conduct a function test
- Re-assemble the car
- Give the customer the customer information.

**Function test**

Function test 1:
1. Open the bonnet.
2. Lock the car.
3. Disconnect the emergency power siren plug after around 1 minute.
4. The alarm will be triggered.

Function test 2:

- The bonnet must be closed.
  - This function test must be carried out by two people.
1. One person must be inside the car.
2. The second person locks the car from the outside.
3. After around 1 minute the person sitting inside the car must move.
4. The alarm will be triggered.
8. Wiring diagram

Legend

A1* SW 6-pin socket housing, to emergency power siren D*
A2* SW 3-pin socket housing, to bonnet contact L*
A3* Cable open, GN/RT cable, using 5-way miniature connector O* to the cable from plug A16*1B
A4* Cable open, BR cable, using 5-way miniature connector O* to the cable from plug A16*1B
A5* Cable open, GE/RT cable, using 2-way miniature connector P* to the cable from plug A16*1B
A6* Cable open, GE/BR cable, using 2-way miniature connector P* to the cable from plug A16*1B
A7* Socket contact, BL/SW cable, with socket housing Q to branch B4
A8* Socket contact, BL cable, with socket housing Q to branch B5
A9* Socket contact, RT/SW cable, to socket housing A60*1B
A10* Socket contact, BR cable, to socket housing A60*1B
B1* SW 12-pin socket housing, to ultrasonic sensors control unit N*
B2* Cable open, RT/GN cable, using 5-way miniature connector O* to the cable from plug A16*1B
B3* Cable open, BR cable, using 5-way miniature connector O* to the cable from plug A16*1B
B4* Plug housing, SW/BL cable, to branch A7
B5* Plug housing, BL cable, to branch A8
C1* RT 2-pin socket housing, to ultrasonic sensors control unit N*
C2* SW 2-pin socket housing, to ultrasonic sensors control unit N*
C* Ultrasonic sensors
D* Emergency power siren
L* Bonnet contact
N* Ultrasonic sensors control unit
O* 5-way miniature connector
P* 2-way miniature connector
Q* Socket housing

© BMW AG, Munich
8.  Wiring diagram

A16    CAS control unit
A60    Interior rear-view mirror
A16*1B  SW 41-pin socket housing
A60*1B  SW 10-pin socket housing

All of the designations marked with * apply only to these installation instructions or this wiring diagram.

### Cable colours

<table>
<thead>
<tr>
<th>Code</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL</td>
<td>Blue</td>
</tr>
<tr>
<td>BO</td>
<td>Bordeaux (Burgundy)</td>
</tr>
<tr>
<td>BR</td>
<td>Brown</td>
</tr>
<tr>
<td>GE</td>
<td>Yellow</td>
</tr>
<tr>
<td>GN</td>
<td>Green</td>
</tr>
<tr>
<td>GR</td>
<td>Grey</td>
</tr>
<tr>
<td>L-GN</td>
<td>Light green</td>
</tr>
<tr>
<td>NT</td>
<td>Natural</td>
</tr>
<tr>
<td>OR</td>
<td>Orange</td>
</tr>
<tr>
<td>RO</td>
<td>Pink</td>
</tr>
<tr>
<td>SW</td>
<td>Black</td>
</tr>
<tr>
<td>TR</td>
<td>Transparent</td>
</tr>
<tr>
<td>VI</td>
<td>Violet</td>
</tr>
<tr>
<td>WS</td>
<td>White</td>
</tr>
<tr>
<td>GE</td>
<td>Yellow</td>
</tr>
<tr>
<td>OR</td>
<td>Orange</td>
</tr>
<tr>
<td>RO</td>
<td>Pink</td>
</tr>
<tr>
<td>SW</td>
<td>Black</td>
</tr>
<tr>
<td>TR</td>
<td>Transparent</td>
</tr>
<tr>
<td>VI</td>
<td>Violet</td>
</tr>
<tr>
<td>WS</td>
<td>White</td>
</tr>
</tbody>
</table>
9. Customer information

![Remote control with labels 1 and 2]

General information

⚠️ The sensor installed in the door pillar must not be covered. Do not arm the anti-theft alarm system with the interior motion sensor if there are people, animals or moving objects in the car (see "Arm the anti-theft alarm system without interior motion sensor").

⚠️ The anti-theft alarm system has been developed to prevent the theft of interior car components. Protection against the theft of loose items (if a window is open, for example) cannot be guaranteed in full.

The life of the integral battery in the emergency power siren is a maximum of 10 years.

When the system has been armed, the alarm will be triggered in the following situations:
- If a door, the boot lid or bonnet is open without using the proper key or remote control
- If movement is detected in the car by the interior motion sensor
- If the car’s battery or emergency power siren is disconnected
- If the car is raised

**Arm the anti-theft alarm system:**
- By pressing the locking key (1) on the remote control once

Arm the anti-theft alarm system without interior motion sensor:
- By pressing the locking key (1) on the remote control twice
  - To re-arm the interior motion sensor, the anti-theft alarm system must be disarmed and then armed again by pressing the locking key (1) on the remote control once.

**Disarm the anti-theft alarm system:**
- By unlocking the car using the unlocking key (2) on the remote control
  - After the anti-theft alarm system has been tripped, the hazard lights system must be disarmed manually using the hazard lights button in the interior.