

# Reference Manual



# G07 COMPLETE VEHICLE



## Technical Training

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**Technical training.**  
**Product information.**  
**G07 Complete Vehicle**



**BMW Service**

Edited for the U.S. market by:  
**BMW Group University**  
**Technical Training**

ST1832

2/1/2019

## General information

### Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:



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Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

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### Information status: July 2018

BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

The information contained in the training course materials is solely intended for participants in this training course conducted by BMW Group Technical Training Centers, or BMW Group Contract Training Facilities.

This training manual or any attached publication is not intended to be a complete and all inclusive source for repair and maintenance data. It is only part of a training information system designed to assure that uniform procedures and information are presented to all participants.

For changes/additions to the technical data, repair procedures, please refer to the current information issued by BMW of North America, LLC, Technical Service Department.

This information is available by accessing TIS at [www.bmwcenternet.com](http://www.bmwcenternet.com).

### Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Handbook
- Integrated Service Technical Application
- Aftersales Information Research (AIR)

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# G07 Complete Vehicle

## 1. Introduction

The new G07 has a distinctive and confident presence. It sets new standards in elegance and luxury and is satisfyingly generously appointed. Based on the concept of the G05, the G07 is a larger design and, with 3 rows of seats as standard, offers comfortable seating space for six or seven people.

Since the G05 forms the basis for the G07, this product information module only describes the particular features specific to the BMW X7. Details of all the shared features can be found in the product information modules for the G05.



TG18-2224

BMW G07

### 1.1. Further information

Detailed descriptions of the common components of the G05 and G07 can be found in the following product information module:

- ST1831 G05 Complete Vehicle

### 1.2. Models

The G07 will be available at market introduction with the following models:

Model	Engine	Cubic capacity [cm <sup>3</sup> ]	Power in kW (HP)	Torque in Nm
BMW X7 xDrive50i	N63B44M3	4395	340 (456)	650
BMW X7 xDrive40i	B58B30M1	2998	250 (335)	450

# G07 Complete Vehicle

## 1. Introduction

### 1.2.1. Weights and payload

Models	Unit	Vehicle curb weight (US)	Payload
BMW X7 xDrive50i	lbs	5617	1202
BMW X7 xDrive40i	lbs	5370	1202

### 1.3. Dimensions

The external dimensions of the G07 are listed below. For comparison, the table also shows the external dimensions of the G05.

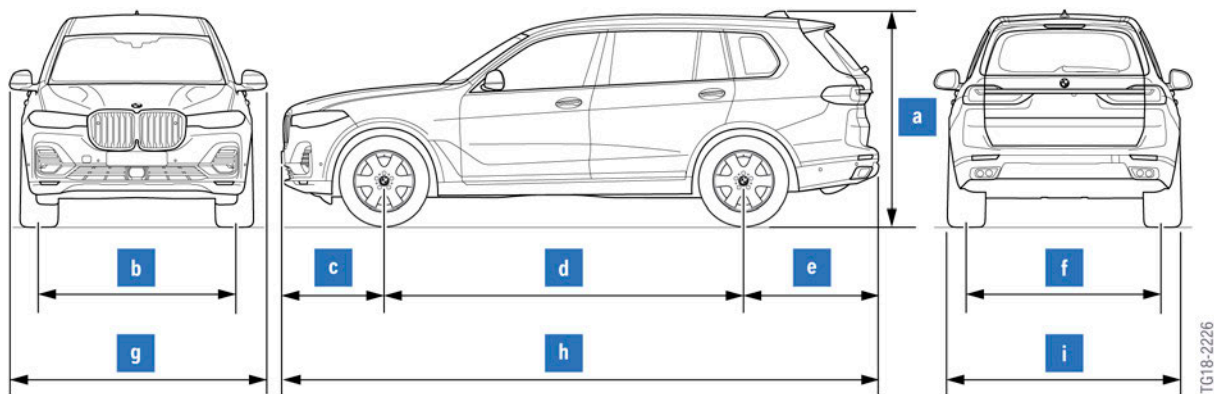


Diagram of G07

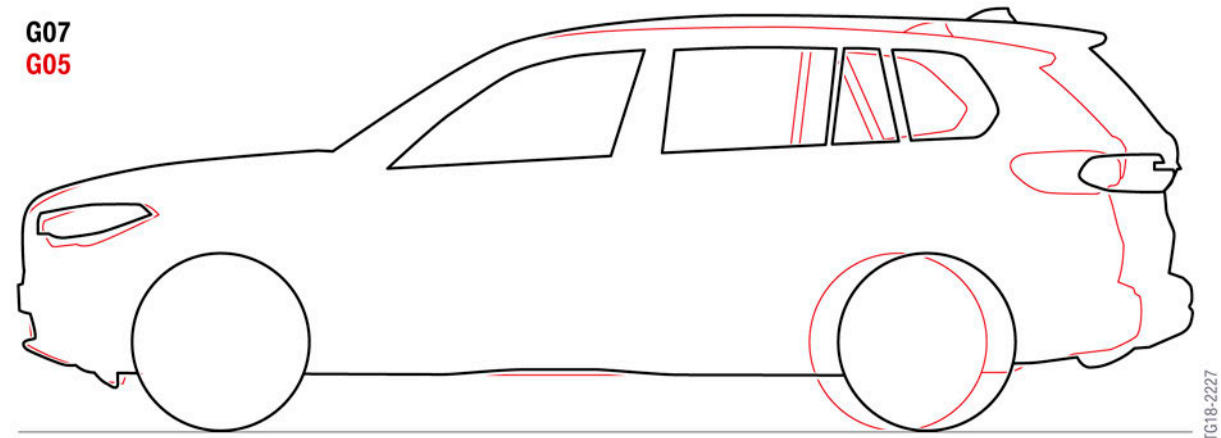
Index	Explanation	G07 [mm]	G05 [mm]
a	Vehicle height, empty	1805	1744
b	Front track width, basic wheels	1684	1666
c	Front overhang	888	888
d	Wheelbase	3105	2975
e	Rear overhang	1172	1073
f	Rear track width, basic wheels	1705	1684
g	Vehicle width with exterior rearview mirror	2218	2218
h	Vehicle length	5165	4936
i	Width excluding exterior mirrors	2000	2004

# G07 Complete Vehicle

## 1. Introduction

### 1.4. Silhouette comparison

A silhouette comparison with the G05 shows the differences in the dimensions of the two vehicles.



Silhouette comparison of G07 and G05



# G07 Complete Vehicle

## 2. Body

### 2.1. Exterior equipment

#### 2.1.1. Exterior design

Even though the G07 is based on the G05, the exterior design of the BMW X7 is individually styled. As a result, the two vehicles are easily distinguishable from one another by their visual appearance. The particular features of the exterior trim include the larger symmetrically split and rounded radiator grill, the distinctively styled headlights and the full-width trim strip and vehicle-specific rear light cluster.



G07 exterior design highlights

TG18-2228

# G07 Complete Vehicle

## 2. Body

Index	Explanation
1	Larger BMW badge
2	Larger radiator grill, one-piece
3	Headlights extending to radiator grill
4	Unique rear light cluster
5	Continuous rear trim strip

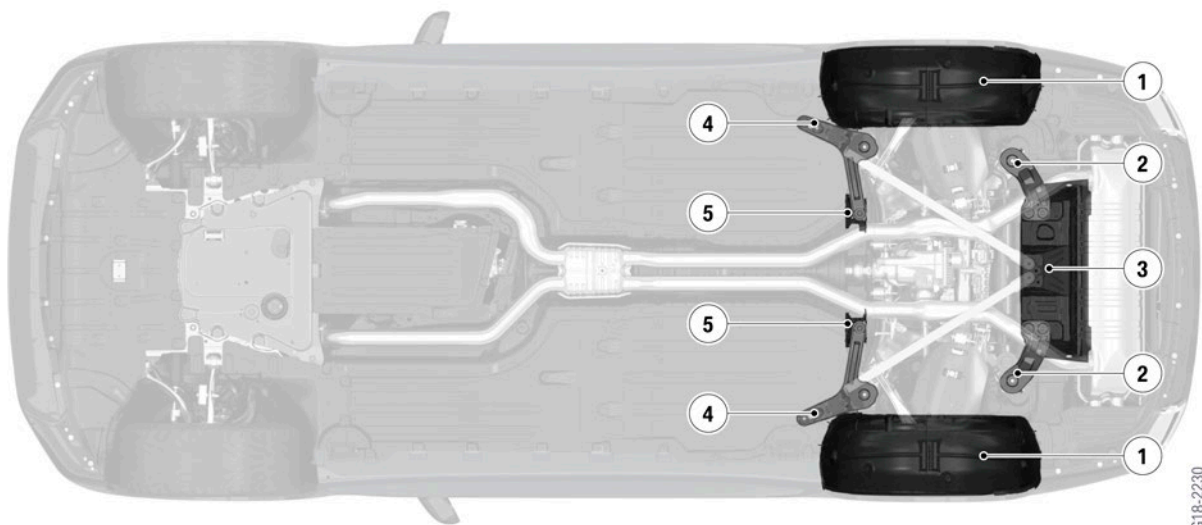
### 2.1.2. Outer body skin materials

In keeping with the technological basis, the same materials are used for the body outer skin on the G07 as on the G05.

More information on the body outer skin materials can be found in ST1831 G05 Complete Vehicle.

### 2.1.3. Underbody

The body design in the area of the rear axle has been adapted to the demands of the longer wheelbase and greater overall length of the vehicle. The following table shows the particular features of the G07 compared with the G05 body:



G07 underbody

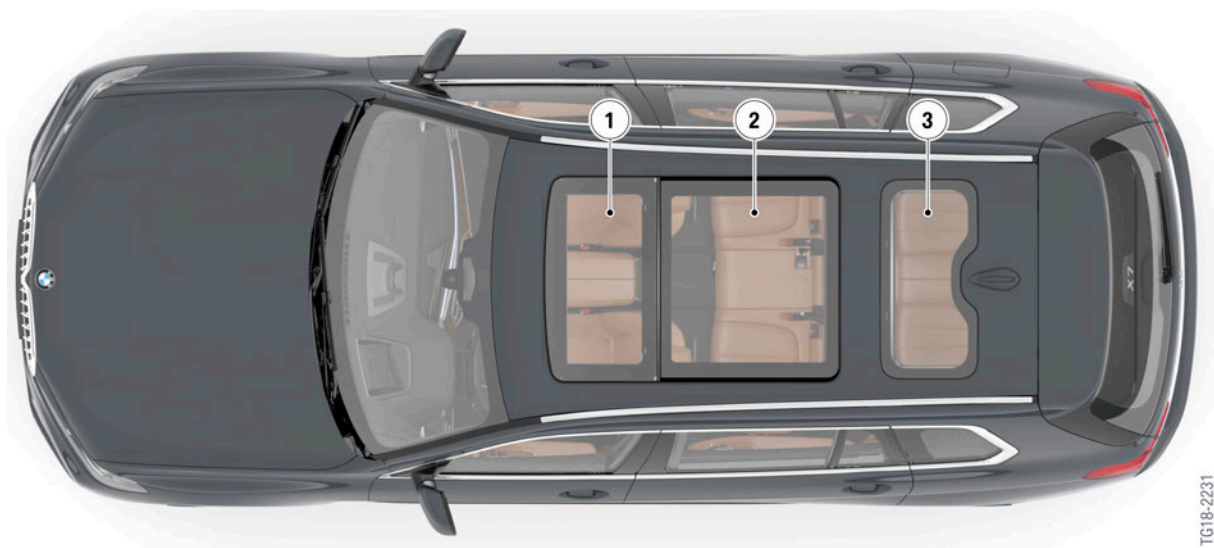
# G07 Complete Vehicle

## 2. Body

Index	Explanation
1	Larger wheel arches
2	Rear compression struts
3	Deeper battery tray
4	Front compression struts
5	Front compression strut mount

### 2.1.4. Panorama roof

The panoramic sunroof is standard equipment on the G07 and is the same as on the G05. The panoramic sunroof consists of a fixed and a movable part. In addition, the G07 has a permanently bonded glass roof panel in the area of the 3rd row of seats.



TG18-2231

G07 panoramic sunroof

Index	Explanation
1	Glass slide/tilt sunroof
2	Fixed glass roof panel
3	Fixed glass roof panel

The fixed glass roof panel for the 3rd row of seats is fitted with a separate, independently controllable roller blind to provide individual protection from the sun. The roller blind can be operated by the driver from the roof function center control panel. In addition, there is a control panel in the roof with a button for opening or closing the panoramic sunroof roller blind from the 3rd row of seats. The position of the roller sunblind is infinitely adjustable and the mechanism also has an anti-trap function.

# G07 Complete Vehicle

## 2. Body



Control of panoramic sunroof roller blind for 3rd row of seats

Index	Explanation
1	Open panoramic sunroof roller blind
2	Close panoramic sunroof roller blind
3	Open/close panoramic sunroof roller blind

### 2.1.5. Electric tailgate

As on the G05, the tailgate of the G07 is a split design and both parts are electrically operated as standard.

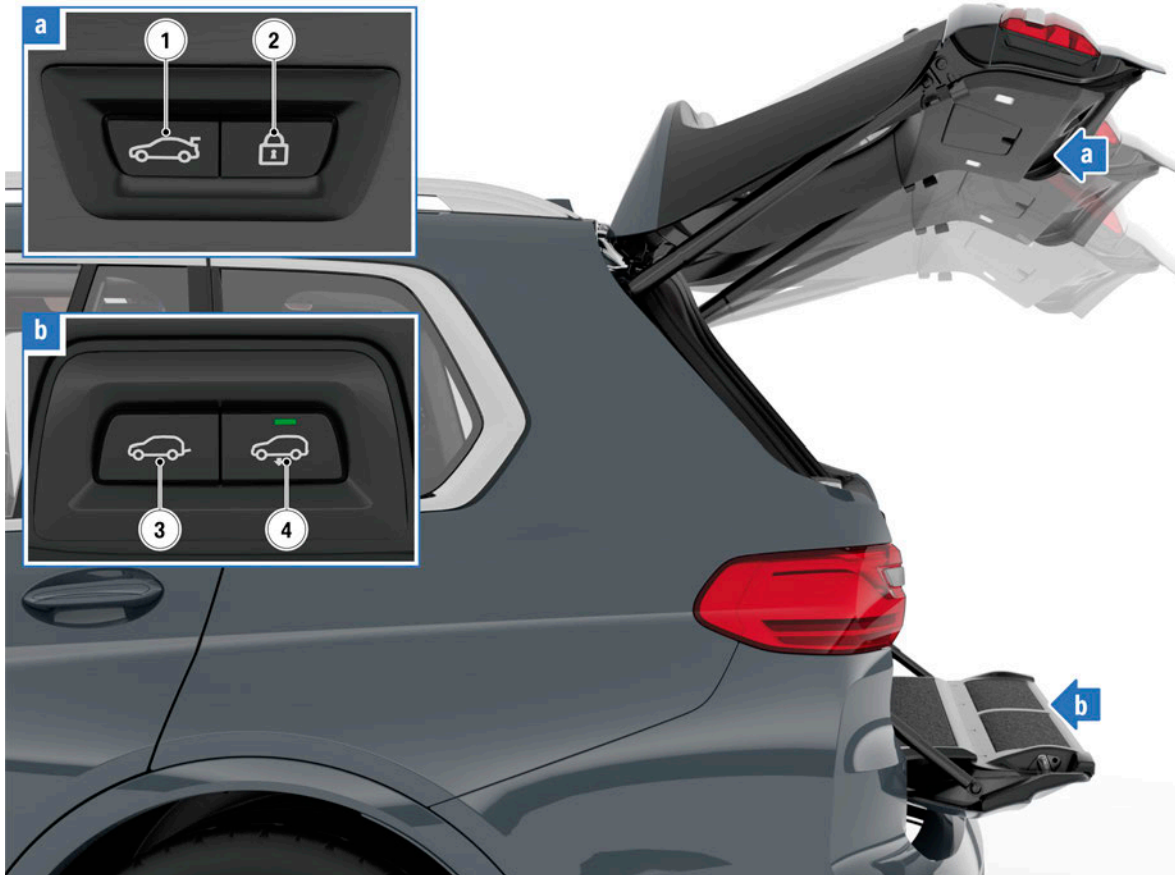
Opening and closing of the tailgate sections can be performed as follows:

- Both tailgate sections can be opened or closed using the button in the driver's door.\*
- The tailgate upper section can be opened or closed with the button on the ID transmitter.
- The tailgate upper section can be opened with the outside button on the tailgate.
- Both tailgate sections can be contactlessly opened or closed with the corresponding foot movement.
- Both tailgate sections close automatically when the button on the tailgate upper section is pressed.
- When the button on the tailgate lower section is pressed, only the tailgate lower section opens or closes automatically.

# G07 Complete Vehicle

## 2. Body

\* It is also possible to change the setting on the CID under Tailgate Setting so that only the upper section of the tailgate opens or closes when the button in the driver's door is operated.



G07 electric tailgate

TG18-2234

Index	Explanation
1	Button for closing tailgate upper and lower sections
2	Lock vehicle button
3	Button for opening/closing tailgate lower section
4	Load level button

# G07 Complete Vehicle

## 2. Body

### 2.2. Interior equipment

#### 2.2.1. Overview

Apart from a few minor details, the design of the G07 interior is the same as the G05 interior. There are merely a few minor styling or material differences on some of the decorative trims.



G07 interior

#### 2.2.2. Center console

As the G07 is fitted with a 4/3-zone integrated heating and air conditioning system as standard, the center console incorporates the heating/air conditioning control panel for the rear seats. In the lower part of the center console there is also a power socket (12 V) and two USB connections purely for charging electronic devices. If the option SA 6FH is chosen, the rear seat entertainment panel is fitted in place of a storage compartment.

# G07 Complete Vehicle

## 2. Body



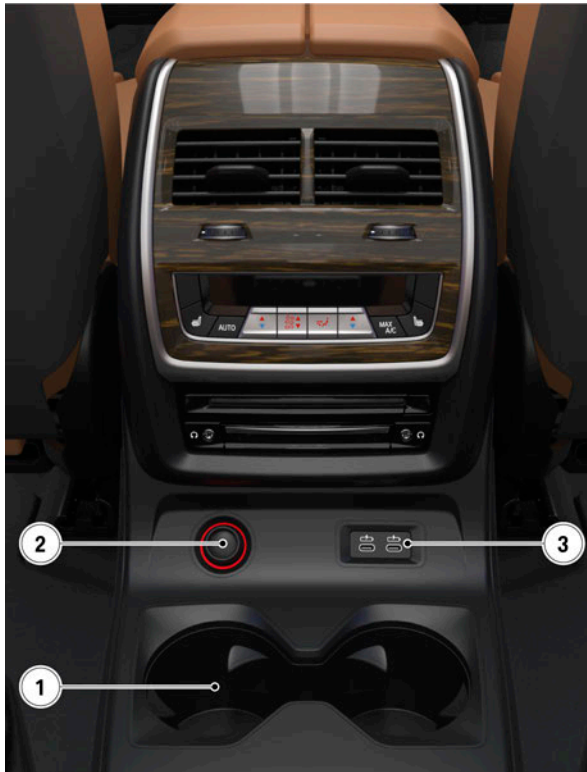
Center console in G07 with 7 seats

Index	Explanation
1	IHKA control panel
2	Rear Seat Entertainment (RSE)
3	Type C USB ports
4	Power socket (12 V)

If the G07 is fitted with 6 seats, there are two cupholders for the rear seats in the center console. Above the cupholders are a power socket (12 V) and two USB ports.

# G07 Complete Vehicle

## 2. Body



Center console in G07 with 6 seats

Index	Explanation
1	Cupholder
2	Power socket (12 V)
3	Type C USB ports



# G07 Complete Vehicle

## 2. Body

### 2.2.3. Doors

The design of the doors and the door switch panels very largely matches those on the G05.



TG18-2241

Driver's door switch panels

Index	Explanation
1	Memory button
2	Button for adjusting the seat position
3	Button for adjusting the seat position
4	Button for fore/aft adjustment of 2nd seat row
5	Button for massage function
6	Gentleman function, front passenger seat
7	Button for opening/closing tailgate sections
8	Button for adjusting the exterior mirror
9	Select the mirror, Automatic curb monitor
10	Power window regulator, passenger side

# G07 Complete Vehicle

## 2. Body

Index	Explanation
11	Power window for 2nd row of seats on passenger's side
12	Fold the exterior rearview mirrors in and out
13	Power window regulator, driver's side
14	Power window for 2nd row of seats on driver's side
15	Safety switch
16	Button for opening/closing roller sunblinds on rear door windows
17	Button for locking the vehicle
18	Button for unlocking the vehicle

If the vehicle has equipment option SA 417, the roller sunblinds on both rear door windows are electrically operated. The roller sunblinds can be operated either from the driver's door control panel or the control panels in the rear doors.



Rear door switch panels

Index	Explanation
1	Button for opening/closing roller sunblinds on rear door windows
2	Button for opening/closing roller sunblind on left rear door window
3	Power window, 2nd row of seats
4	Button for opening/closing roller sunblind on right rear door window
5	Button for opening/closing panoramic sunroof roller blind

# G07 Complete Vehicle

## 2. Body

### 2.2.4. 2nd-row seats

As the G07 always has 3 rows of seats, the adjustment of the 2nd row of seats is fully electric as standard.

#### Comfort seats in the rear

As standard, the G07 has comfort seats in the rear. As on the G05, the G07 offers the usual 40:20:40 folding backrests. The two outer backrests are electrically operated, whereas the center backrest is folded manually and is locked to the left-hand backrest. In addition, 145 mm of fore/aft adjustment of the individual seats powered by two electric motors provides extra comfort or more load space in the luggage compartment. Those functions are controlled separately left and right by two control units. If seats are replaced in a vehicle, they must be retaught with the ISTA diagnosis system.

The seat belts on the 2nd row of seats are vertically adjustable as standard.



Comfort seats in the rear

Index	Explanation
1	Cupholder
2	Release to tilt the head restraint
3	Release for electrically folding the backrest
4	Button for electric easy entry function
5	ISOFIX
6	Button for electric seat adjustment
7	Seat belt height adjustment

# G07 Complete Vehicle

## 2. Body

### Rear comfort seats

With the equipment option SA 4U5, the comfort seats in the rear are replaced by two individual captains chairs. The rear comfort seat equipment is virtually identical to the 1st row of seats and fully electric. The electric fore/aft adjustment has a range of 220 mm. Between the seats there is a variably adjustable and removable armrest.



Rear comfort seats

Index	Explanation
1	Comfort head restraint
2	Adjustable armrest
3	Button for electric backrest adjustment
4	Button for electric seat adjustment
5	Button for electric comfort position setting

### 2.2.5. 3rd-row seats

Even the basic version of the G07 has a 3rd row of seats. The materials, the interior trim and the ambient lighting match the equipment of the vehicle as a whole. There are cup holders and armrests for the 3rd row of seats integrated in the interior trim. On each side below the armrests, hidden by a cover, there is a USB socket installed if the Travel and Comfort System option SA 4FL or Rear-seat

# G07 Complete Vehicle

## 2. Body

Entertainment Professional SA 6FH along with a lashing hook. Unlocking and folding the seats is performed by fully electric means. There are switch clusters fitted in the area of the C-pillars and in the luggage compartment for controlling the 3rd row of seats. The head restraints can be folded manually. The head restraints are folded in with the aid of a pull-strap.



3rd-row seats

Index	Explanation
1	Cupholder
2	Mounting point for luggage compartment roller cover
3	Roof air vent
4	Armrest
5	Release loop for folding the backrest
6	Button for electrically folding the right-hand seat
7	Button for electrically folding the left-hand seat
8	ISOFIX
9	Footwell air outlet
10	Type C USB socket (option SA 4FL or SA 6FH)
11	Lashing hook

# G07 Complete Vehicle

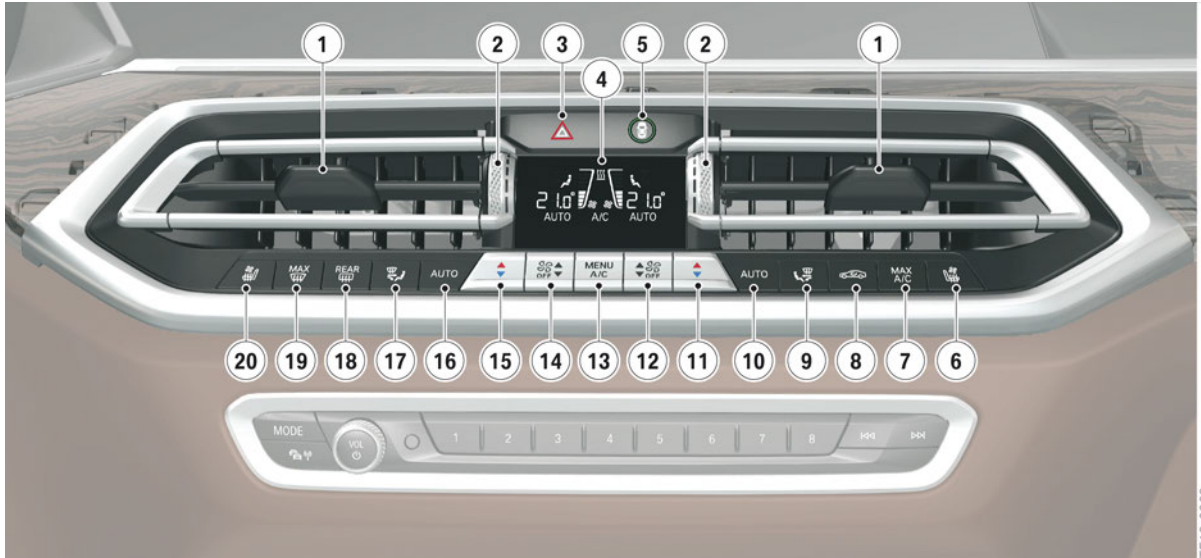
## 2. Body

### 2.3. Heating and air-conditioning systems

Two versions of the integrated automatic heating/air conditioning system (IHKA) are available for the G07. The IHKA regulated on the air side is based in part on the G12 and G01. More in-depth topics can be found in the product information ST1501 G12 Climate Control.

- 4/3-zone IHKA (standard equipment)
- 5/4-zone integrated heating and air conditioning system (option SA 4NN).

From a technical perspective the climate control is divided into zones (e.g. driver, front passenger, rear passenger compartment, temperature...). The 1st digit represents the number of individually adjustable temperature zones, while the 2nd digit represents the number of zones in which the air volume is separately controllable. On the G05 and G07 the heating/air conditioning display is fitted between the center air vents for the first time.



Air conditioning control panel for driver/front passenger

Index	Explanation
1	Lever for changing the airflow direction
2	Knurled wheel for steplessly opening and closing the ventilation outlets
3	Hazard warning switch
4	Display
5	Intelligent Safety button
6	Active seat ventilation/seat heating, right
7	Max. cooling on/off
8	Air recirculation function on/off
9	Manual air distribution regulation, right
10	Automatic program, right
11	Temperature adjustment, right

# G07 Complete Vehicle

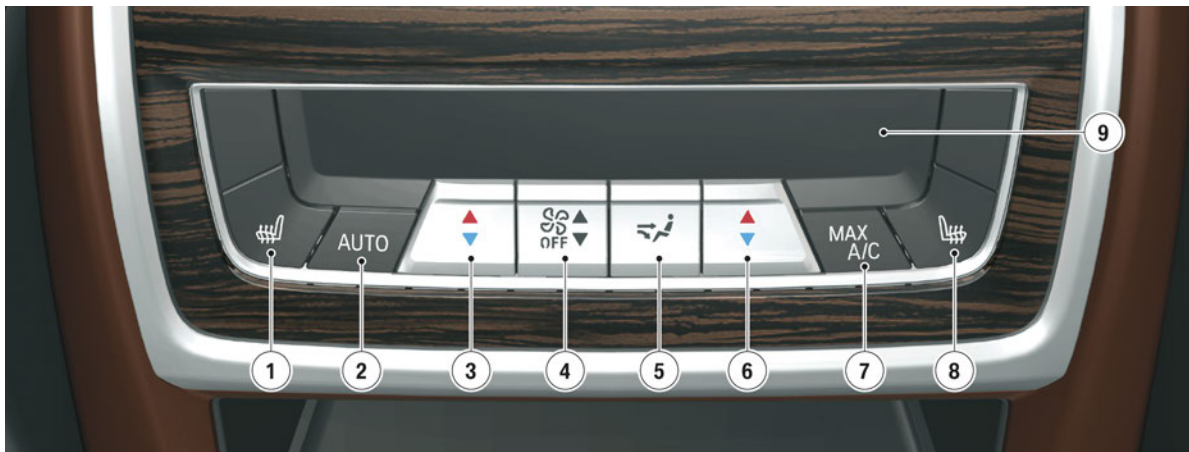
## 2. Body

Index	Explanation
12	Decrease/increase amount of air, right
13	Call up A/C menu
14	Decrease/increase amount of air, left
15	Temperature adjustment, left
16	Automatic program, left
17	Manual air distribution regulation, left
18	Rear window heating on/off
19	Windscreen defrosting
20	Active seat ventilation/seat heating, left

### 2.3.1. 4/3-zone IHKA

A 4/3-zone IHKA is already installed as basic equipment in the G07. Four different temperature zones can be set by the driver, front passenger and in the rear passenger compartment. The air volume and temperature in the 1st row of seats can be regulated by the driver and front passenger.

For the rear seats, there is a 2nd air conditioning control panel. It enables control of two temperature zones and the shared air volume and air distribution in the rear passenger compartment.



Air conditioning control panel for rear passenger compartment

Index	Explanation
1	Seat heating, left
2	Automatic program
3	Temperature adjustment, left
4	Decrease/increase amount of air
5	Manual air distribution regulation

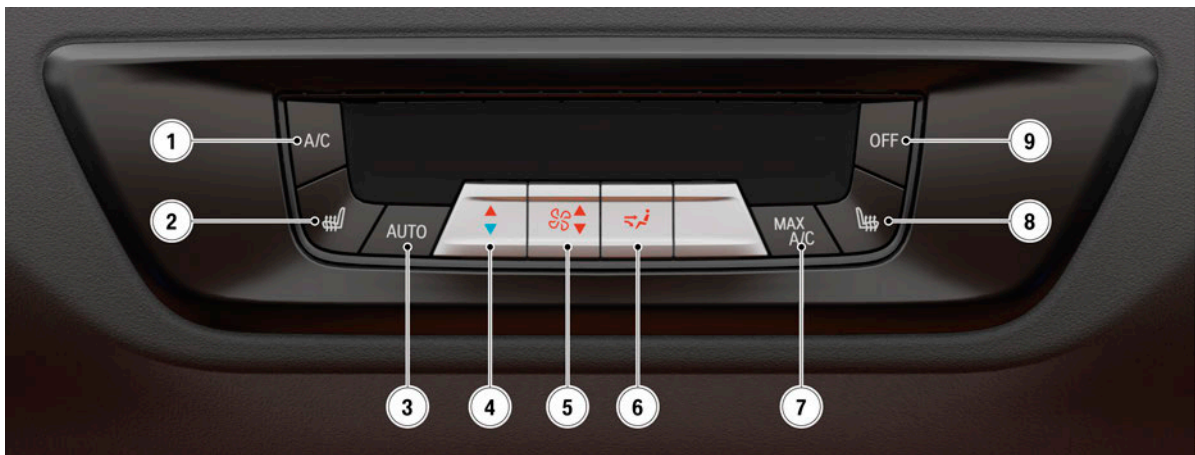
# G07 Complete Vehicle

## 2. Body

Index	Explanation
6	Temperature adjustment, right
7	Max. cooling on/off
8	Seat heating, right
9	Display

### 2.3.2. 5/4-zone IHKA

If fitted with equipment option SA 4NN, the G07 has a 5/4-zone integrated heating and air conditioning system. With this automatic heating/air conditioning system, an additional air conditioning control panel for the 3rd row of seats is fitted in the roof. That means that a separate temperature zone and common air volume can be set for the 3rd row of seats. In addition, individual air distribution and an automatic programme are also possible. With the 5/4-zone integrated heating and air conditioning system for the 3rd row of seats, there are additional air vents in the footwell area and in the roof.



5/4-zone air conditioning control panel for 3rd row of seats

Index	Explanation
1	Air conditioning on/off
2	Seat heating, left
3	Automatic program
4	Set temperature
5	Decrease/increase amount of air
6	Manual air distribution regulation
7	Max. cooling on/off
8	Seat heating, right
9	OFF switch



# G07 Complete Vehicle

## 2. Body

With the 5/4-zone integrated heating and air conditioning option, an additional air conditioner unit is installed in the rear of the vehicle. It is used exclusively for climate control for the third row of seats. The rear air conditioner is connected to the air conditioning compressor along with the heating and air conditioning unit for the first and second seat rows. The rear air conditioner is accommodated in the luggage compartment, on the left behind the trim panel.



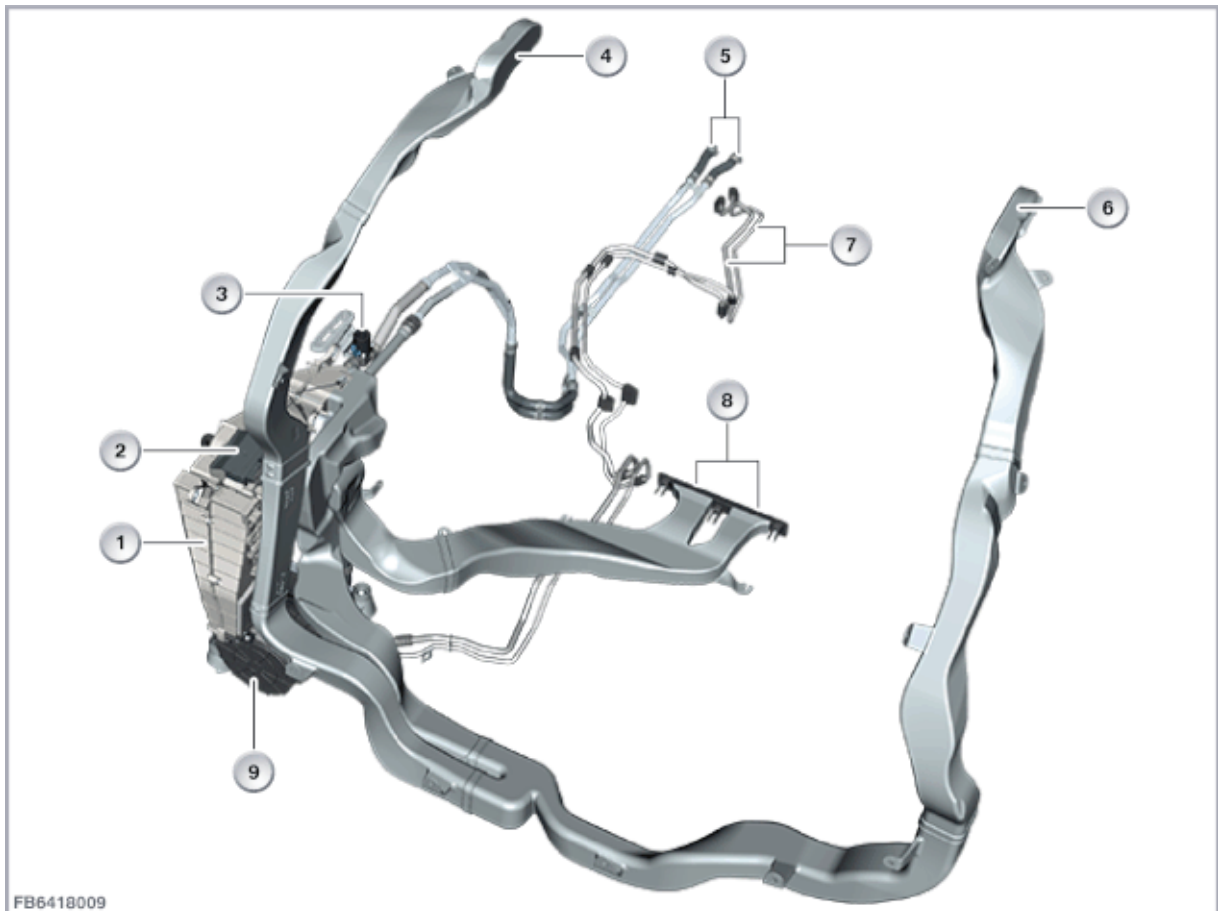
TG18-2747

Rear air conditioner

Index	Explanation
1	Rear air conditioner

# G07 Complete Vehicle

## 2. Body



FB6418009

3rd row climate control

Index	Explanation
1	Rear air conditioner
2	IHKA control unit
3	Heater circuit shutoff valve
4	Roof air vent, left
5	Cooling circuit connection
6	Roof air vent, right
7	Refrigerant circuit connection
8	Footwell air outlet
9	Blower

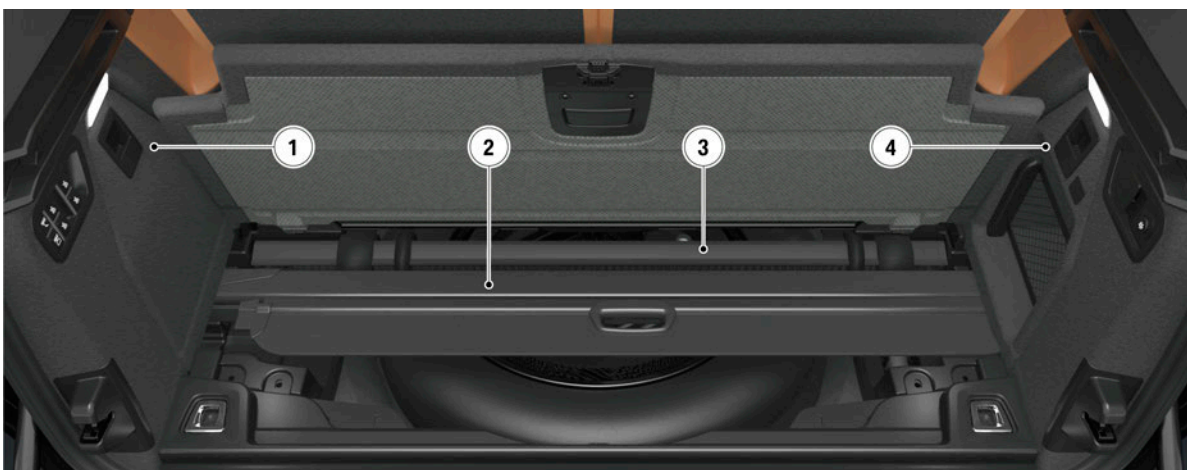
# G07 Complete Vehicle

## 2. Body

### 2.4. Luggage compartment

#### 2.4.1. Luggage compartment volume

The luggage compartment capacity of the new BMW X7 varies according to the position of the 3rd row of seats. If the 3rd-row seats are folded down, the luggage compartment capacity is 750 liters. If the 3rd-row seats are in the upright position, the luggage compartment capacity is reduced to 300 liters. The luggage compartment roller cover can be stowed in a separate compartment under the luggage compartment floor. Due to the length of the luggage compartment roller cover, stowage or removal of the roller cover requires the side covers in the luggage compartment to be removed.



G07 luggage compartment

Index	Explanation
1	Cover for rear air conditioner, receiver audio module and booster
2	Storage for luggage compartment roller cover
3	Storage compartment for load area net
4	Cover for fuse holder

The following table shows a comparison with the luggage compartment capacity of the G05:

Variant	G07 [liters]	G05 [liters]
3rd-row seats folded down	750	650
3rd-row seats in upright position	300	200
3rd and 2nd-row seats folded down	2120	1861

# G07 Complete Vehicle

## 2. Body

### 2.4.2. Switch panels

On the left-hand side of the luggage compartment there is a switch cluster for controlling the backrests of the 2nd and 3rd seat rows. It enables the backrests to be electrically operated from the luggage compartment.

As well as the buttons for folding the individual backrests, there are two other buttons. The button for maximum passenger convenience raises all the 2nd and 3rd seat row backrests. At the same time, the 2nd row of seats is moved forwards to make enough space for the 3rd row of seats.

The cargo adjuster button folds down the backrests of the 2nd and 3rd seat rows. At the same time, the 2nd row of seats moves backwards to close the gap between the luggage compartment floor and the 2nd row of seats. That creates a continuous load-space floor.

In the lower tailgate switch panel there is a button for lowering the vehicle. When that button is pressed, the height of the vehicle is lowered by 40 mm to make loading and unloading the luggage compartment easier.



Switch panels in the luggage compartment

Index	Explanation
1	Button for maximum passenger comfort
2	Button for electrically folding the 3rd-row left-hand seat
3	Button for electrically folding the 2nd-row left-hand seat
4	Button for electrically folding the 2nd-row right-hand seat
5	Button for electrically folding the 3rd-row right-hand seat

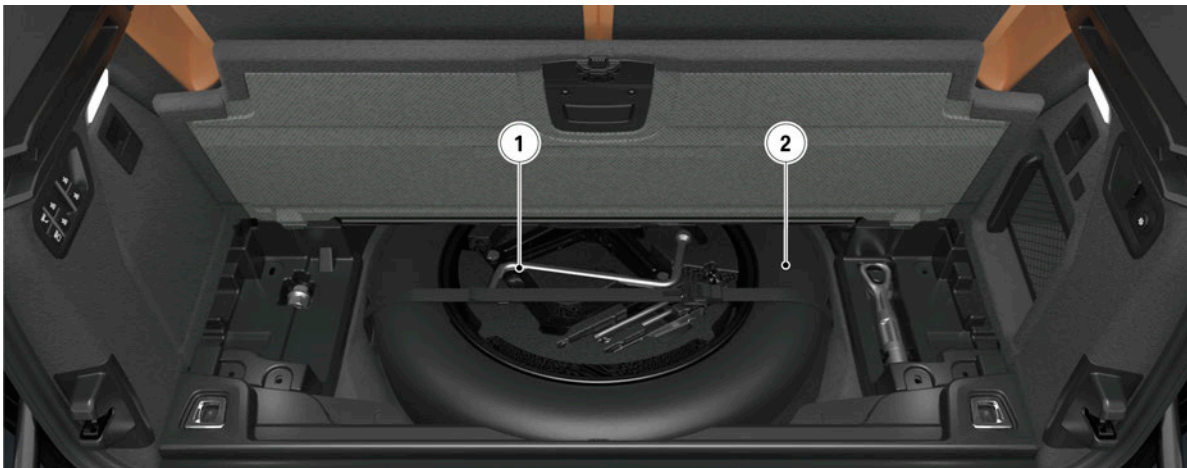
# G07 Complete Vehicle

## 2. Body

Index	Explanation
6	Button for maximum cargo space
7	Button for opening/closing tailgate lower section
8	Load level button
9	Power socket (12 V)

### 2.4.3. Space-saver spare

Due to the length of the G07, there is sufficient space for a space-saving spare under the luggage compartment floor. Therefore there is a space-saving spare available as equipment option SA 300.



Space-saving spare in the luggage compartment

Index	Explanation
1	Vehicle tool-kit
2	Compact spare wheel

# G07 Complete Vehicle

## 3. Chassis and Suspension

### 3.1. Air suspension

The G07 already has front and rear air suspension as standard. As a result, even the basic version of the BMW X7 has four-wheel ride-height adjustment, which on the G05 is offered as an option. The highlight of the four-wheel ride height adjustment is the design of the sealed system in which the air pressure is not constantly equalized between the external atmosphere and the control system but internally within the control system between the pressure accumulator and the air suspension struts.

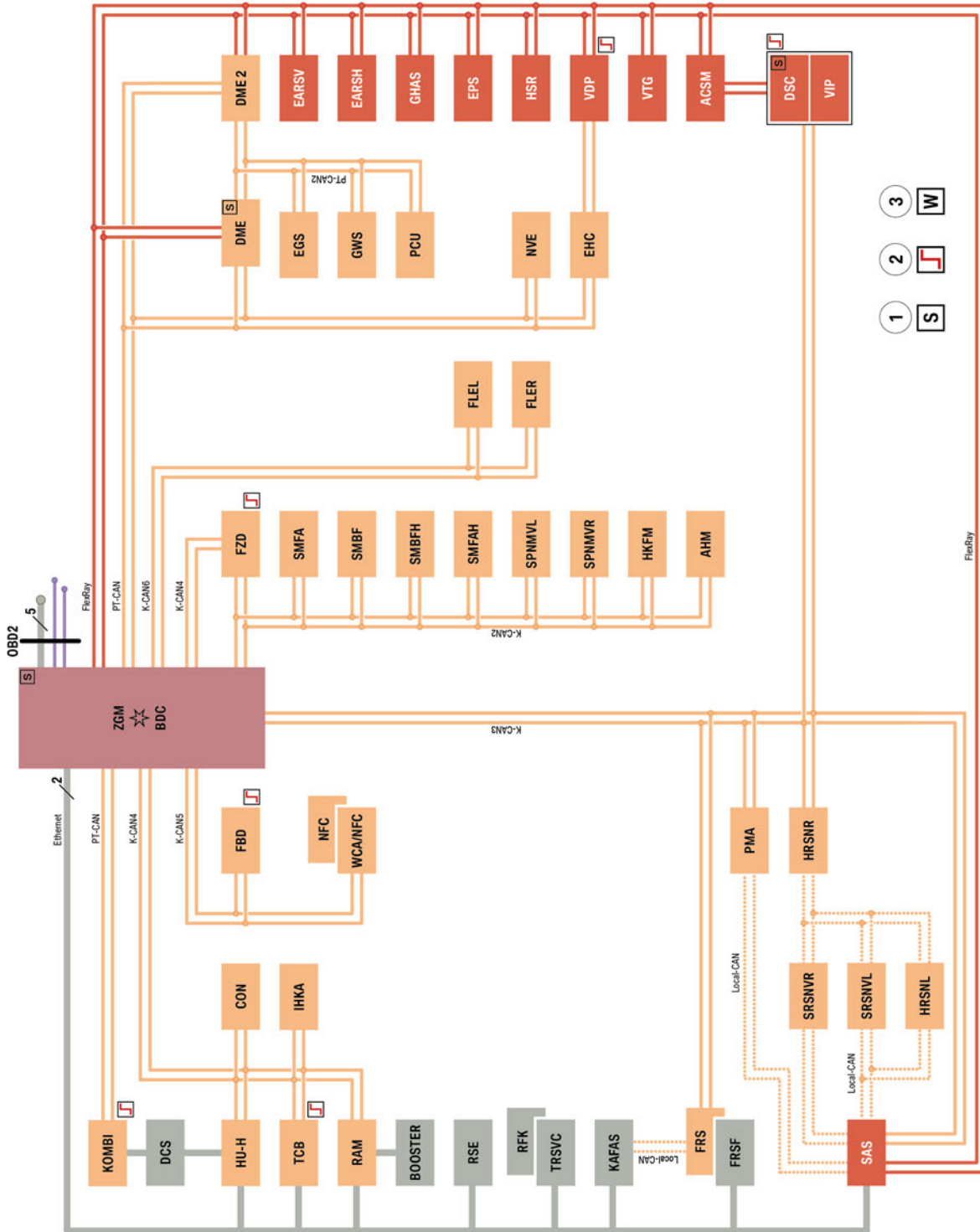
The table below provides an overview of the components of the four-wheel ride-height adjustment system:

<b>Components</b>	<b>G07</b>
Control unit for self-levelling suspension (function logic)	Electronic ride height control (EHC)
Channels	3-channel control
Drive level	Off-road level (+40 mm) High level (+20 mm) Normal level (+/-0 mm) Dynamic level (-10 mm) Sports level (-20 mm) Loading level (-40 mm)
Control options of air suspension	Level-change rocker button Ride style button Offroad button Offroad rocker button Loading level button Display key
Shock absorber	EDC High single-stage

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.1. Bus overview



TE18-0286\_2

Bus overview

# G07 Complete Vehicle

## 4. General Vehicle Electronics

<b>Index</b>	<b>Explanation</b>
ACSM	Advanced Crash Safety Module
AHM	Trailer module
BDC	Body Domain Controller
Booster	Booster
CON	Controller
DCS	Driver Camera System
DME	Digital Motor Electronics
DME2	Digital Motor Electronics 2
DSC	Dynamic Stability Control
EARSH	Electric active roll stabilization rear
EARSV	Front electric active roll stabilization
EGS	Electronic transmission control
EHC	Electronic ride height control
EPS	Electromechanical Power Steering
FBD	Remote control receiver
FLEL	Frontal Light Electronics Left
FLER	Frontal Light Electronics Right
FRS	Front Radar Sensor
FRSF	Front radar sensor long range
FZD	Roof function center
GHAS	Regulated rear axle differential lock
GWS	Gear selector switch
HU-H	Head Unit High
HKFM	Tailgate function module
HRSNL	Rear radar sensor short range left
HRSNR	Rear radar sensor short range right
HSR	Rear axle slip angle control
IHKA	Integrated automatic heating / air conditioning
KAFAS	Camera-based driver assistance systems
KOMBI	Instrument panel
NFC	Near Field Communication
NVE	Night Vision Electronics
PCU	Power Control Unit
PMA	Parking Manoeuvring Assistant
RAM	Receiver Audio Module



# G07 Complete Vehicle

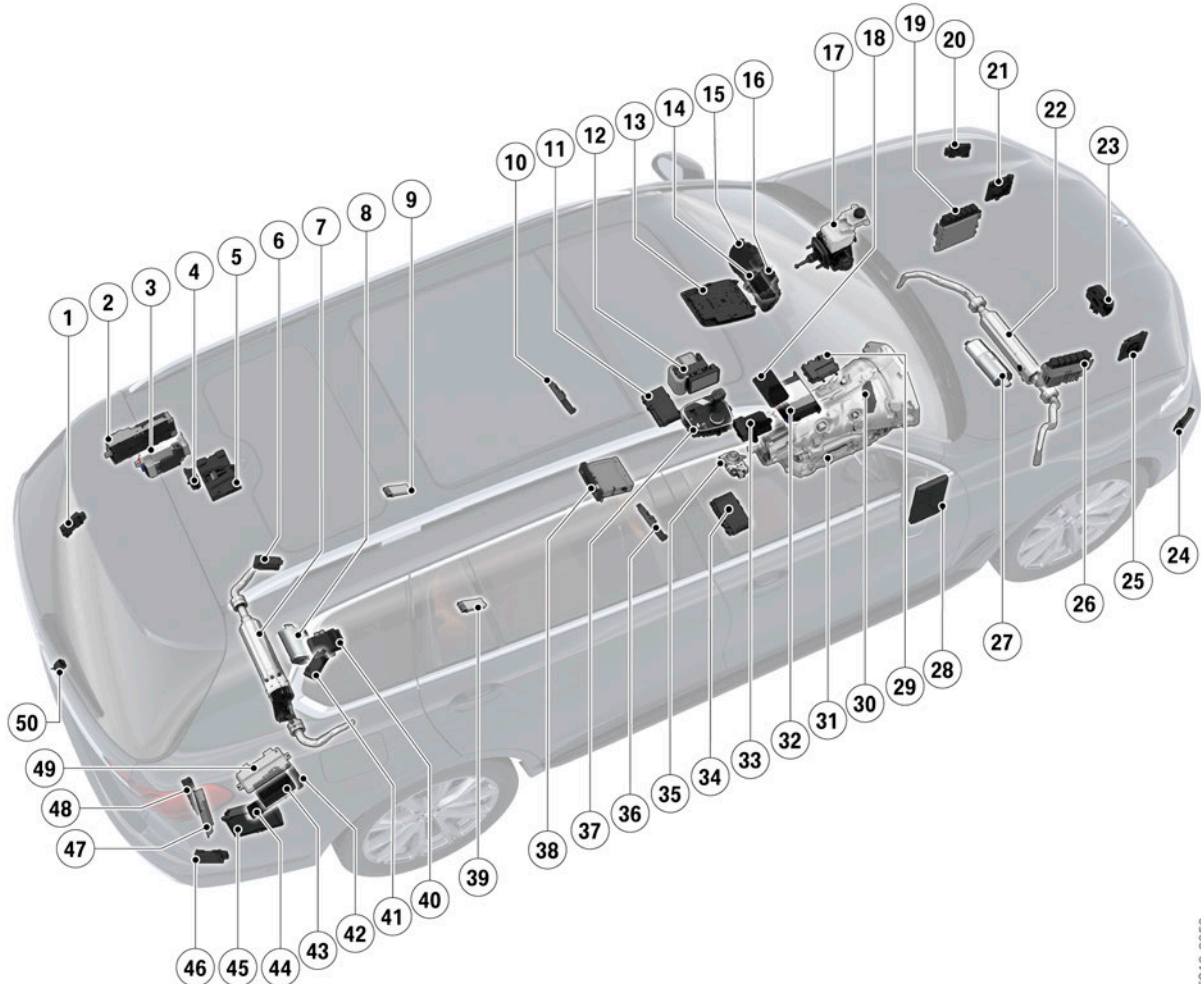
## 4. General Vehicle Electronics

<b>Index</b>	<b>Explanation</b>
RFK	Rear view camera
RSE	Rear Seat Entertainment
SAS	Optional equipment system
SMBF	Front passenger seat module
SMFA	Driver's seat module
SMBFH	Seat module, front passenger's side, rear
SMFAH	Seat module, driver's side, rear
SPNMVL	Seat pneumatics module front left
SPNMVR	Seat pneumatics module front right
SRSNVL	Side radar sensor short range front left
SRSNVR	Side radar sensor short range front right
TCB	Telematic Communication Box
TR SVC	Top Rear Side View Camera
VDP	Vertical Dynamic Platform
VIP	Virtual Integration Platform
VTG	Transfer box
WCA/NFC	Wireless charging station with control electronics for Near Field Communication
ZGM	Central Gateway Module
1	Start-up node control units for starting and synchronizing the FlexRay bus system
2	Control units authorized to perform wake-up function
3	Control units also connected at terminal 15WUP

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.2. Installation locations of control units



G07 Installation locations of control units

TG18-2252

Index	Explanation
1	Rear radar sensor short range left (HRSNL)
2	Booster
3	Receiver Audio Module (RAM)
4	Remote control receiver (FBD)
5	Telematic Communication Box (TCB)
6	Left seat module for 3rd row of seats
7	Electric active roll stabilization rear (EARSH)
8	Rear axle slip angle control (HSR)
9	Driver's seat module, rear (SMFAH)
10	Seat pneumatics module front left (SPNMVL)

# G07 Complete Vehicle

## 4. General Vehicle Electronics

<b>Index</b>	<b>Explanation</b>
11	Driver's seat module (SMFA)
12	Electronic ride height control (EHC)
13	Roof function center (FZD)
14	Camera-based driver support systems (KAFAS)
15	Instrument cluster (KOMBI)
16	Optional equipment system (SAS)
17	Dynamic Stability Control (DSC/MIP)
18	Wireless charging station (WCA/NFC)
19	Digital Motor Electronics (DME)
20	Side radar sensor short range front left (SRSNVL)
21	Frontal Light Electronics Left (FLEL)
22	Electric active roll stabilization front (EARSV)
23	Front radar sensor (FRS)/Front radar sensor long range (FRSF)
24	Side radar sensor short range front right (SRSNVR)
25	Frontal Light Electronics Right (FLER)
26	Digital Engine Electronics 2 (DME2)
27	Electronic Power Steering (EPS)
28	Body Domain Controller (BDC)/Central Gateway Module (ZGM)
29	Night Vision Electronics (NVE)
30	Integrated automatic heating/air conditioning (IHKA)
31	Electronic transmission control (EGS)
32	Head unit (HU-H)
33	Advanced Crash Safety Module (ACSM)
34	Front passenger seat module (SMBF)
35	Transfer box (VTG)
36	Seat pneumatics module front right (SPNMVR)
37	Controller (CON)/Gear selector switch (GWS)
38	Rear Seat Entertainment (RSE)
39	Seat module, passenger's side rear (SMBFH)
40	Regulated rear axle differential lock (GHAS)
41	Right seat module for 3rd row of seats
42	Parking Manoeuvring Assistant (PMA)
43	Top Rear Side View Camera (TRSVC)
44	Selective Catalytic Reduction (SCR) (Not for US)
45	Trailer module (AHM)

# G07 Complete Vehicle

## 4. General Vehicle Electronics

Index	Explanation
46	Tailgate function module (HKFM)
47	Power Control Unit (PCU)
48	Rear radar sensor short range right (HRSNR)
49	Vertical Dynamic Platform (VDP)
50	Rear view camera (RFK)

### 4.2.1. Telematic Communication Box (TCB)

The G07 is fitted with the TCB 3. Compared with the TCB 2, the casing dimensions have been reduced. The unit is a modular design. The configuration can be adapted to suit the basic or optional equipment, which simultaneously reduces the number of variants. Equipment retrofits are also possible.

### 4.2.2. Top Rear Side View Camera (TRSVC)

The TRSVC control unit on the G07 is located in the luggage compartment behind the right-hand side trim panel. On the G05, the control unit was fitted at the front on the left in the instrument panel support.

## 4.3. Headlight

### 4.3.1. Overview

The following exterior light versions are offered for the G07:

- Adaptive Full LED Lights (standard)
- Icon Adaptive LED Headlights with Laserlight (Option SA 5AZ).

Like the G05, the G07 no longer features the customary rotary light switch. The new light switch panel only has buttons.



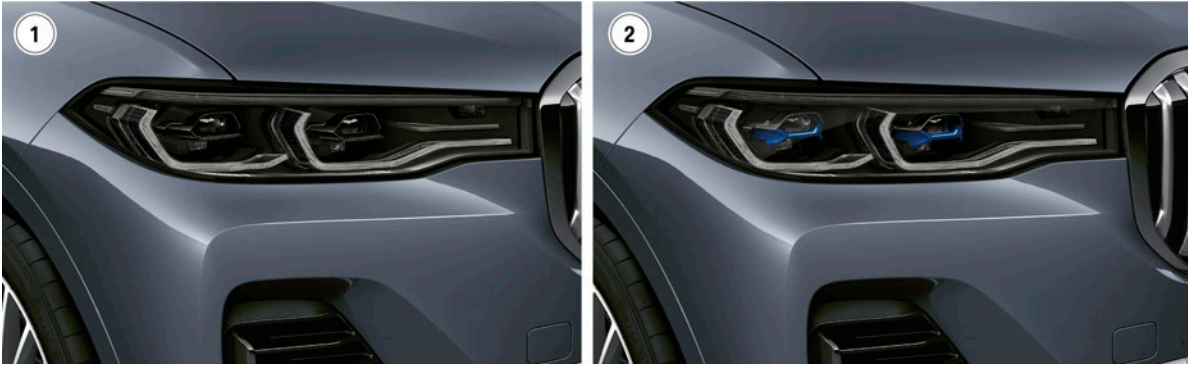
The low-beam headlight is automatically switched on when the system recognizes that it is dark, even in the OFF mode and when driving readiness is activated (country-specific).

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.3.2. Variants

Headlight versions for the G07:



Headlight versions

Index	Explanation
1	Adaptive Full LED Lights (Standard)
2	Icon Adaptive LED Headlights with Laserlight (SA 5AZ)

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.3.3. Adaptive Full LED Lights



TE18-2254

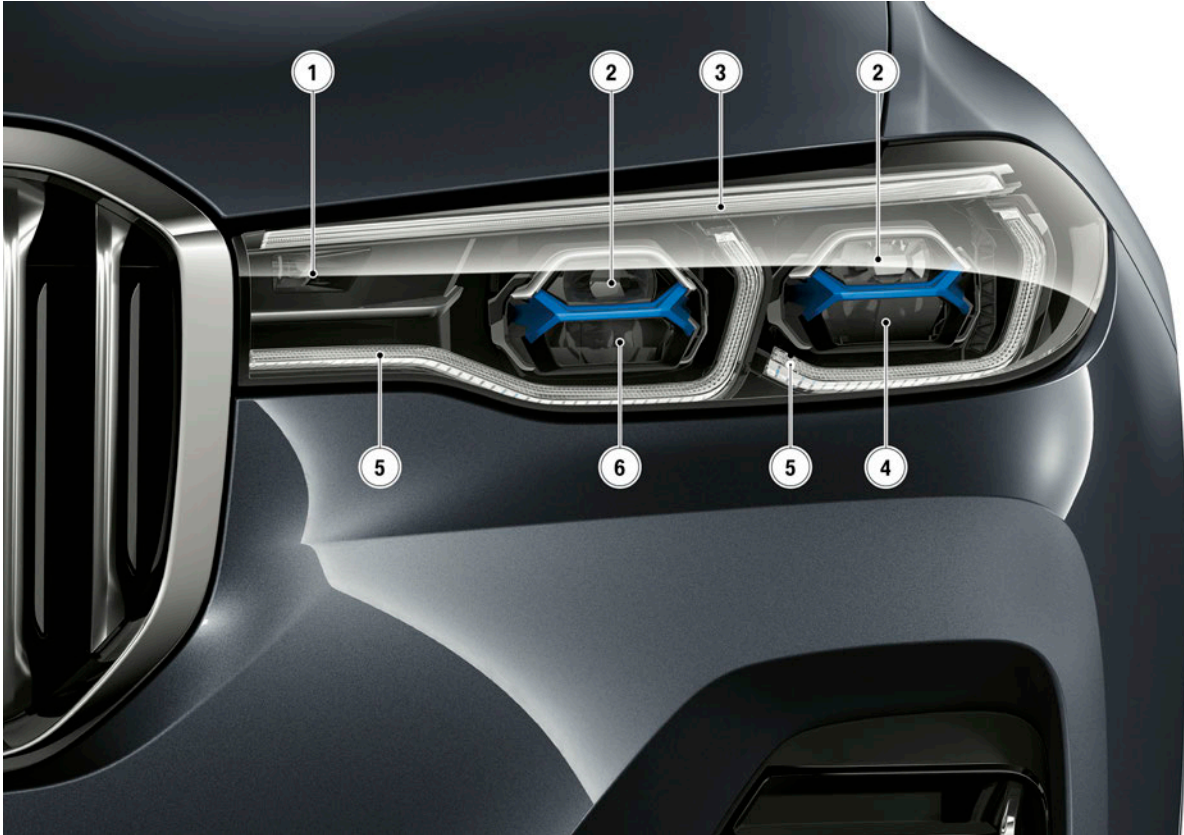
Adaptive Full LED Lights

Index	Explanation
1	Cornering light
2	Low-beam headlight
3	Turn indicator
4	LED high-beam headlight
5	Side light, daytime driving lights and low-beam headlight

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.3.4. Icon Adaptive LED Headlights with Laserlight



TE18-2255

BMW LED Headlights with Laserlight

Index	Explanation
1	Cornering light
2	Low-beam headlight
3	Turn indicator
4	LED high-beam headlight with Laserlight
5	Side light, daytime driving lights and low-beam headlight
6	LED high-beam headlight

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.4. Rear lights

The rear light clusters of the G07 are equipped entirely with LED modules.



Rear light

Index	Explanation
1	Tail light and brake light
2	Reversing light
3	Tail light
4	Brake light
5	Turn indicator



# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.5. Driver Camera System

The DCS driver camera system includes a camera on the instrument cluster to observe whether the driver's eyes are open and which direction the driver is facing. The DCS is connected to the electrical system via OABR Ethernet and has a separate wake-up line.



Driver Camera System

The DCS is able to detect the alertness and tiredness of the driver. The system also detects a change of driver. The following assistance systems use the data from the driver camera system:

- Alertness assistant
- Front collision mitigation  
Active cruise control with Stop&Go
- Steering and traffic jam assistant



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The driver camera system processes all data in real time and does not have a memory for permanently storing the data recorded.

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More information on the driver camera system can be found in ST1858 Driver Assistance Systems 2018.

### 4.6. Rear Seat Entertainment system

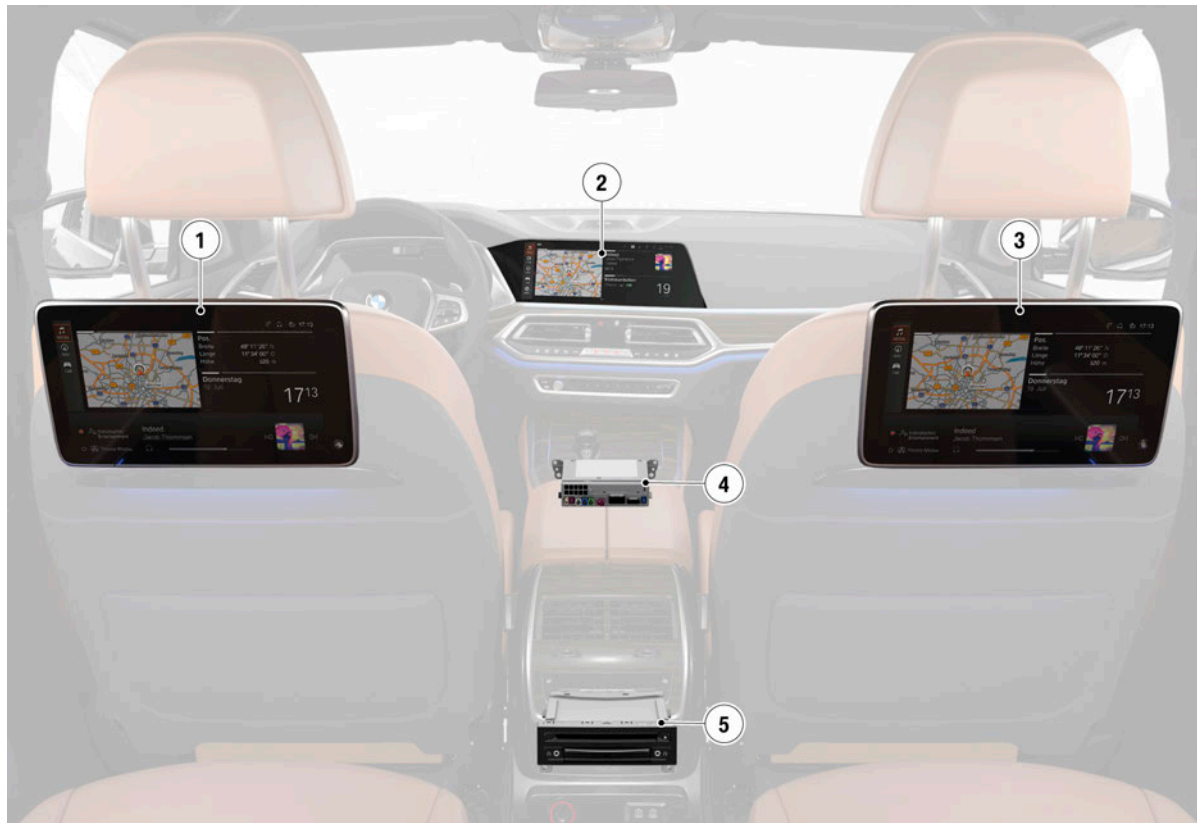
The control unit for the rear seat entertainment system is the Rear Seat Entertainment (RSE) control unit. The Rear Seat Entertainment (RSE) is always adapted to the installed head unit.

#### 4.6.1. Head Unit High 3

The G07 uses the RSE rear seat entertainment system in conjunction with the Head Unit High 3 (HU-H3).

# G07 Complete Vehicle

## 4. General Vehicle Electronics



Overview of Rear Seat Entertainment HU-H3

Index	Explanation
1	Left rear display panel
2	Central Information Display (CID)
3	Right rear display panel
4	Head Unit High 3 (HU-H3)
5	Rear Seat Entertainment (RSE)

The Rear Seat Entertainment system has the following features:

- DVD/Blu-ray drive
- 2 USB ports, type C with 3 A
- HDMI/MHL connection
- 2 connections for headphones 3.5 mm
- 2 radio modules for wireless headphones

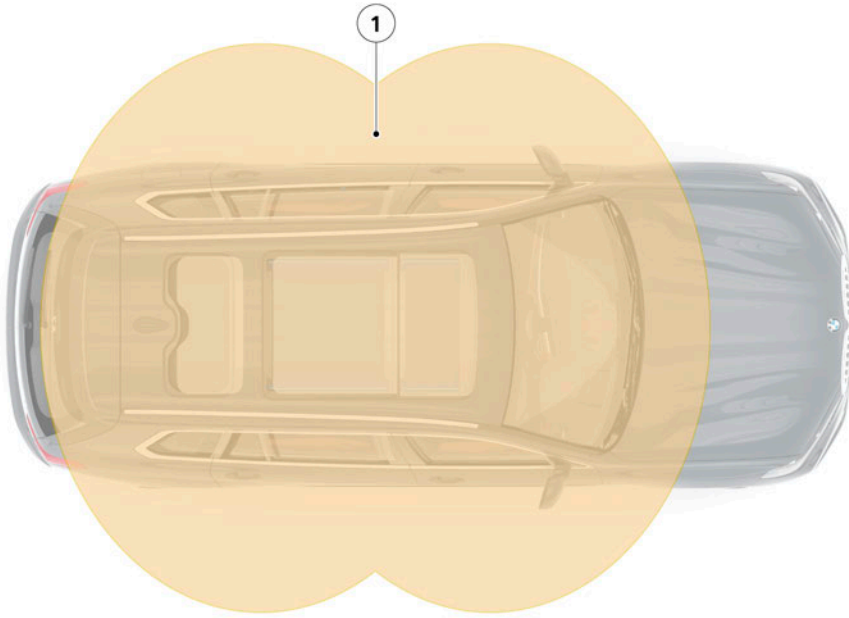
The rear compartment displays are integrated in the rear seat backrests of the front seats. They have touch-screen controls and are the only means of operating the rear seat entertainment system. The resolution is 1080p.

# G07 Complete Vehicle

## 4. General Vehicle Electronics

### 4.6.2. Zone allocation

Zoning has been discontinued on the rear seat entertainment system as of HU-H3. All media sources can be accessed in the rear passenger compartment as well as in the front.



TE18-2669

Common zone allocation

Index	Explanation
1	Common zone for the use of media

Individual or theater mode can be activated so that the occupants in the rear passenger compartment and front can use separate media sources.

#### Individual mode

In individual mode every passenger can play individual content. The audio playback in the rear passenger compartment is effected via headphones. The audio playback in the front is effected via the speakers.

#### Theater mode

In theater mode the audio playback is effected via the speakers. Both occupants in the rear passenger compartment use the same content in the Rear Seat Entertainment.

# G07 Complete Vehicle

## 5. Infotainment

### 5.1. Overview

In the G07, Three sound systems are offered. The following equipment options are available:

- Hi-Fi system (standard in the X7 xDrive40i)
- Harman Kardon surround sound system (standard in the X7 xDrive50i)
- Bowers & Wilkins Diamond surround sound system (option SA 6F1)

	<b>Hi-Fi system</b>	<b>Harman Kardon surround sound system (option SA 688)</b>	<b>Bowers &amp; Wilkins Diamond surround sound system (option SA 6F1)</b>
Overall power	205 W	464 W	1500 W
Number of diamond tweeters	—	—	2
Number of tweeters	3	7	5
Number of mid-range speakers	5	7	7
Number of bass speakers	2	2	2
3D speakers	—	—	4
Amplifier	Receiver Audio Module	Receiver audio module and booster	Receiver audio module and booster
Bus connection	—	Ethernet	Ethernet

### 5.2. Bowers & Wilkins high end audio system

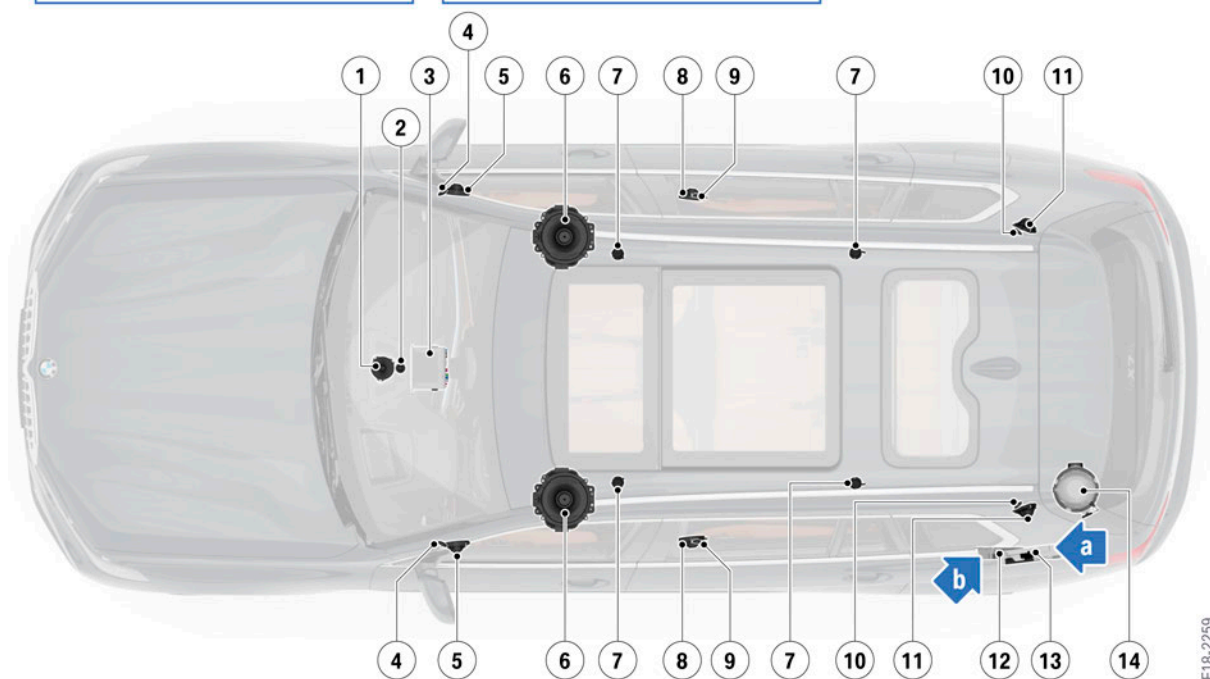
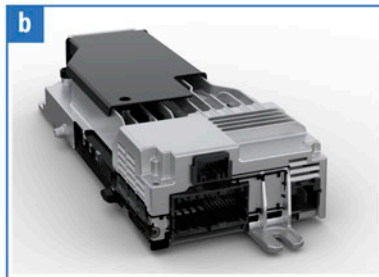
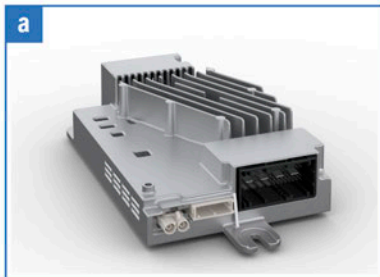
The Bowers & Wilkins Diamond surround sound high end audio system consists of the following components:

- 2 diamond tweeters
- 5 tweeters
- 7 mid-range speakers
- 2 bass speakers
- 4 3D speakers
- Receiver Audio Module
- Booster

# G07 Complete Vehicle

## 5. Infotainment

### 5.2.1. Component overview



TE18-2259

G07 Bowers & Wilkins high end audio system overview

Index	Explanation
1	Mid-range speaker, front center
2	Tweeter, front center
3	Head unit
4	Diamond tweeters
5	Mid-range speaker, front
6	Bass speakers
7	3D roof speakers
8	Mid-range speaker, rear
9	Tweeter, rear
10	Tweeter, D-pillar

# G07 Complete Vehicle

## 5. Infotainment

Index	Explanation
11	Mid-range speaker, D-pillar
12	Receiver Audio Module (RAM)
13	Booster
14	Speaker for outside sound

### 5.2.2. LED lighting

With the Bowers & Wilkins high end audio system, the diamond tweeters in the mirror triangle are illuminated. The illumination is achieved by means of LEDs.

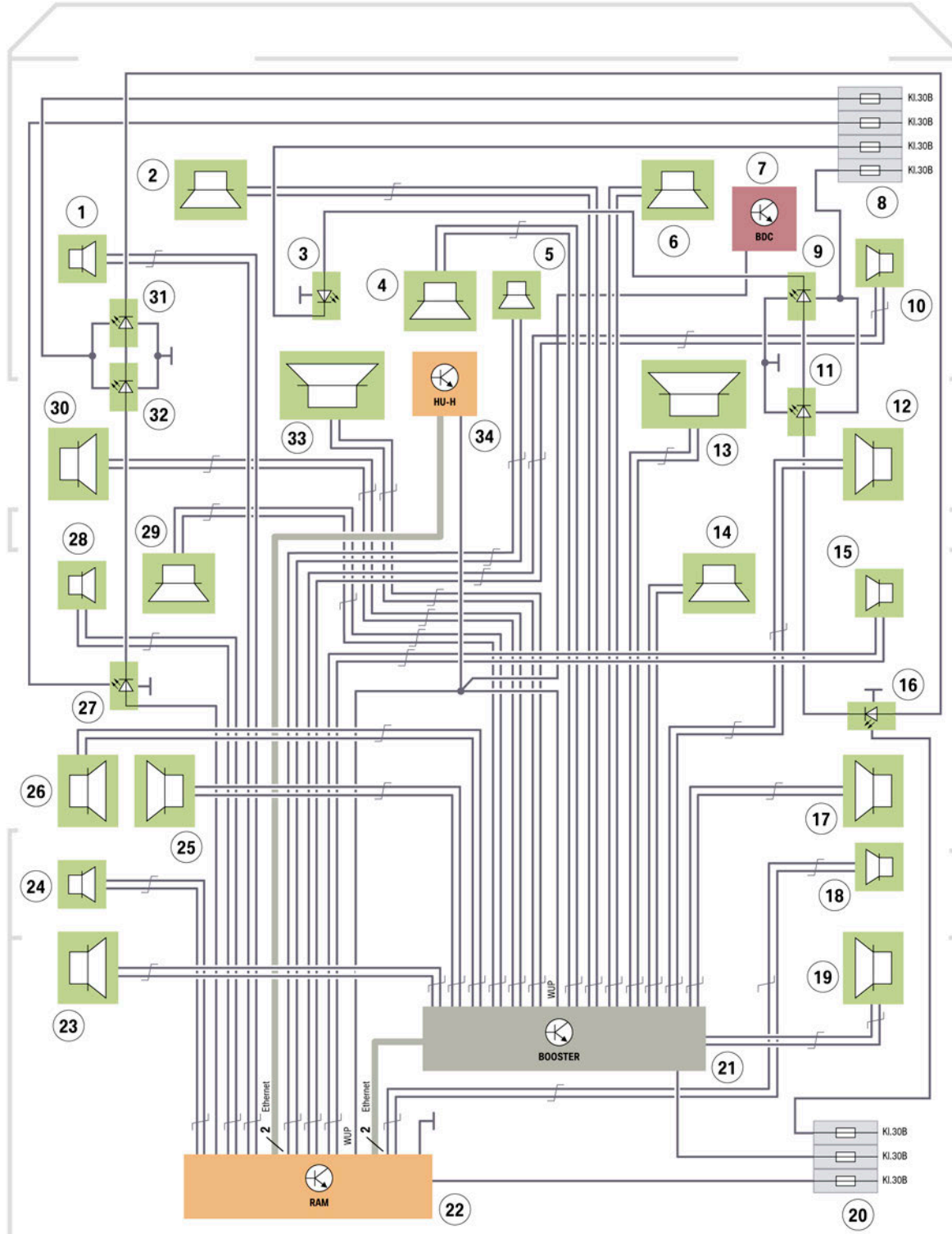


Illuminated diamond tweeters

# G07 Complete Vehicle

## 5. Infotainment

### 5.2.3. Wiring diagram



TE18-2257

Wiring diagram for Bowers & Wilkins high end audio system on G07

# G07 Complete Vehicle

## 5. Infotainment

<b>Index</b>	<b>Explanation</b>
1	Front left diamond tweeter
2	Front left 3D roof speaker
3	Front center speaker LED
4	Mid-range speaker, front center
5	Tweeter, front center
6	Front right 3D roof speaker
7	Body Domain Controller
8	Front power distribution box fuses
9	Front right diamond tweeter LED
10	Front right diamond tweeter
11	Front right mid-range speaker LED
12	Mid-range speaker, front right
13	Bass speaker, right
14	Rear right 3D roof speaker
15	Tweeter, rear right
16	Rear right speaker LED
17	Mid-range speaker, rear right
18	Tweeter, right D-pillar
19	Mid-range speaker, right D-pillar
20	Rear power distribution box fuses
21	Booster
22	Receiver Audio Module (RAM)
23	Mid-range speaker, left D-pillar
24	Tweeter, left D-pillar
25	Speaker for outside sound
26	Mid-range speaker, rear left
27	Rear left speaker LED
28	Tweeter, rear left
29	Rear left 3D roof speaker
30	Mid-range speaker, front left
31	Front left mid-range speaker LED
32	Front left diamond tweeter LED
33	Bass speaker, left
34	Head unit



# G07 Complete Vehicle

## 6. Driver Assistance Systems

The assistance systems on the G07 do not differ from those on the G05. More information on the assistance systems can be found in the following product information modules:

Product information	Information on	
Driver Assistance Systems 2018 (New Features)	<ul style="list-style-type: none"> <li>• KAFAS Mid-Camera</li> <li>• KAFAS High-Camera</li> <li>• Driver Camera System (DCS)</li> <li>• Front Collision Mitigation</li> <li>• Lane Departure Warning</li> <li>• Emergency Stop Assistant</li> </ul>	<ul style="list-style-type: none"> <li>• Intersection collision warning</li> <li>• Active cruise control with Stop&amp;Go function</li> <li>• Automatic Parking</li> <li>• Back-up Assistant</li> <li>• Evasion Assistant</li> <li>• Automatic Lane Change</li> </ul>
G05 Driver Assistance Systems (New Features)	<ul style="list-style-type: none"> <li>• Daytime Pedestrian Protection</li> <li>• Intersection collision warning</li> <li>• Lane departure warning</li> <li>• Automatic Lane Change</li> </ul>	<ul style="list-style-type: none"> <li>• Back-up Assistant</li> <li>• Speed Limiter</li> <li>• Emergency Stop Assistant</li> <li>• Evasion Assistant</li> <li>• Speed Limit Assistant</li> </ul>
G30 Driver Assistance Systems (Already familiar)	<ul style="list-style-type: none"> <li>• Collision warning</li> <li>• Speed Limit info</li> <li>• Intersection Warning</li> <li>• Lane Departure Warning</li> <li>• Active Blind Spot Detection</li> <li>• BMW Night Vision</li> </ul>	<ul style="list-style-type: none"> <li>• Surround View</li> <li>• Remote 3D View</li> <li>• Park Distance Control (PDC)</li> <li>• Cross-traffic Alert front/rear</li> <li>• Parking Manoeuvring Assistant (PMA)</li> <li>• Evasion Aid</li> <li>• Active Lane Keeping Assistant</li> </ul>

# G07 Complete Vehicle

## 6. Driver Assistance Systems

### 6.1. Overview

#### 6.1.1. Offer structure "Driving"

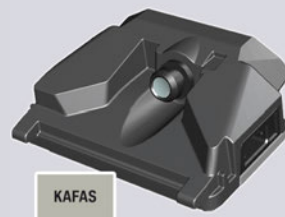
The purpose of the following tables is to provide an overview of the dependencies between the offer structure and assistance systems used as well as their system components. Furthermore, they also list all assistance systems available in the G07.

#### Standard equipment

The G07 always has the KAFAS Mid-camera and the front radar sensor (FRS).

#### Active Driving Assistant (SA 5AS)

- Frontal Collision Warning  
City Collision Mitigation with braking
- Pedestrian Warning with braking
- Lane Departure Warning
- Speed Limit Information
- Blind Spot Detection
- Automatic High Beams
- Rear Cross Traffic Alert
- Rear Collision Preparation



#### Dynamic Cruise Control (standard)

- Speed Limiter

#### Optional equipment

In the BMW X7 xDrive40i the customer has the choice of two optional equipment packages. **Driving Assistant Professional Package (SA ZDY)** that includes (SA 5AR) Extended Traffic Jam Assistant for limited access highways, and (SA 5AU) Active Driving Assistant Pro that includes Active Cruise Control with Stop&Go, Active Lane Keep Assistant w/side Collision Avoidance, Steering and Traffic Jam Assistant, Automatic Lane Change and Evasion Assistant & Cross traffic alert front. **Parking Assistance Package (SA ZPK)** that includes Parking Assist Plus (SA 5DN) and Surround View with 3D View (SA ZX3).

These packages are standard on the BMW X7 xDrive50i.

# G07 Complete Vehicle

## 6. Driver Assistance Systems

### Driving Assistant Professional Package (SA ZDY)

- Extended Traffic Jam Assistant for limited access highways
- Active Lane Keeping Assistant with side collision avoidance
- Active Cruise Control with Stop&Go function (up to 210 km/h)
- Crossing traffic alert front
- Evasion Assistant
- Automatic lane change



### 6.1.2. Offer structure "Parking"

The optional equipment Remote Control Parking (SA 5DV) is not available for the G07.

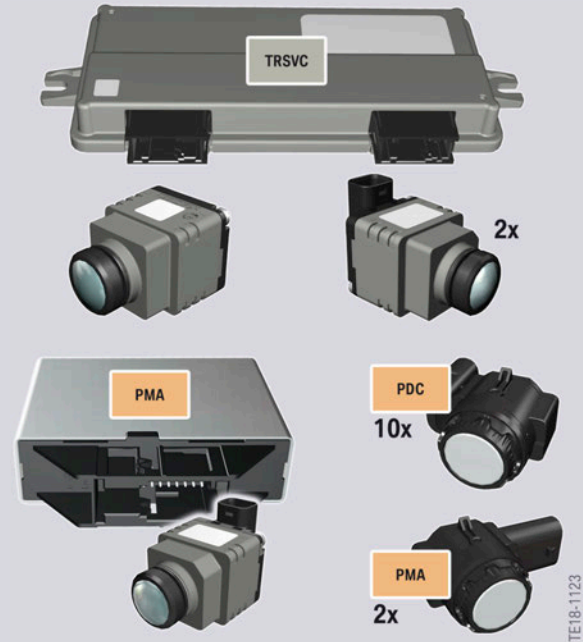
Vehicles not equipped with the Parking Manoeuvre Assistant (PMA) but with the Park Distance Control (PDC) have a separate control unit, which is recognized as the PMA control unit by the diagnosis and is also referred to by this name in the bus diagram. In other words, there is no longer a difference in the naming of the PDC and PMA control unit (there are however differences in the hardware design between the control units and the software is adapted to the equipment specification).

# G07 Complete Vehicle

## 6. Driver Assistance Systems

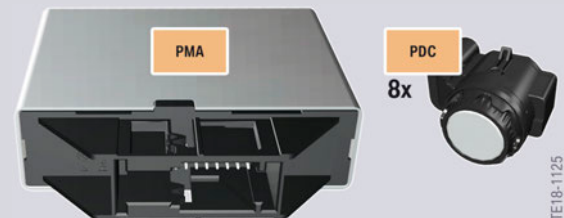
### Parking Assistant Package (SA ZPK)

- Automatic Parking with parallel parking and maneuvering out of parking space
- Back-up Assistant
- Side protection
- Rear view camera
- Surround View with 3D View
- Panorama View (GPS-based)
- Remote 3D View



### Park Distance Control (PDC) (standard)

- Front and rear
- Auto PDC



More information can be found in ST1831 G05 Driver Assistant Systems.

