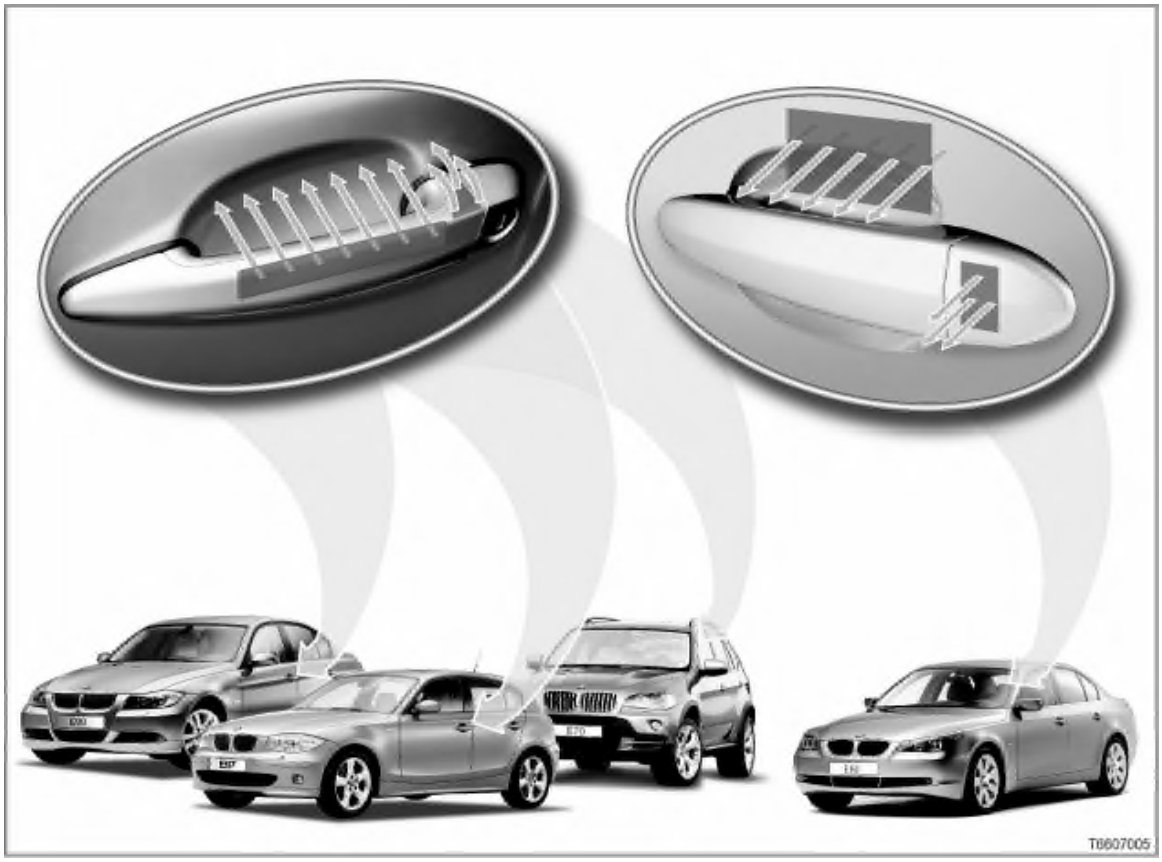
Comfort Access

E60, E61, E63, E64, E70, E81, E87, E90, E91, E92, E93



Introduction

The BMW 1-Series, 3-Series and X5 can be equipped with option 322 "Comfort Access".
This comfort system has been derived from the BMW 7-Series.
From 09/2005, Comfort Access will also be introduced to the BMW 5-Series and BMW 6-Series. The system has been taken from the BMW 3-Series, albeit with a few modifications.

With Comfort Access, an ID transmitter is needed instead of the usual remote control. The ID transmitter also performs standard remote control functions.

Comfort Access can be used to carry out the following functions:

- **Passive Entry**

  Opening the vehicle or luggage compartment without actively using the ID transmitter
- **Passive Go**

  Engine start without actively using the ID transmitter
- **Passive Exit**

  Closing the vehicle without actively using the ID transmitter

Comfort Access prevents an ID transmitter being disabled accidentally.

The CAS control unit is the master control unit for all functions carried out via Comfort Access. Vehicles with Comfort Access are fitted with a CA control unit.

> E60, E61, E63, E64 [system overview ...]

> E70 [system overview ...]

> E81, E87, E90, E91, E92, E93 [system overview ...]

New or modified features on E90, E91, E92 compared to E81, E87, E93:

- The detection range of the interior aerials has been modified as a consequence of the different vehicle design.
- The remote control (FBD) receiver is integrated into the aerial amplifier. (> E81, E87, E93: FBD receiver integrated in interior mirror)

New or modified for the E60, E61, E63, E64:

- The outside door handle electronics is on the reverse of the door handle mounting bracket.
- The CA control unit is installed in the carrier behind the glove compartment.

Brief description of components

The following components are described for Comfort Access:

- **Interior and exterior aerials**

  Different aerials are required for communication with the ID transmitter: Interior and exterior aerials

  The number of aerials depends on the model concerned:

Interior aerials	**E60**	**E61**	**E63**	**E64**	**E70**	**E81**	**E87**	**E90**	**E91**	**E92**	**E93**
Front centre console	x	x	x	x	x	x	x	x	x	x	x
Rear centre console	x	x	x	x	x	x	x	x	x	x	x
Rear window shelf (parcel shelf)	x	---	x	---	---	---	---	---	---	---	---
Back of rear seat	---	x	---	---	---	---	---	---	---	---	---
Luggage compartment, middle	x	---	x	x	---	x	x	x	x	x	x
Luggage compartment, right	---	---	x	x	x	---	---	---	---	---	---
Luggage compartment, left	---	---	--	--	x	---	---	---	---	---	---
Luggage compartment, load edge	---	x	---	---	---	---	---	---	---	---	---

Exterior aerials	**E60**	**E61**	**E63**	**E64**	**E70**	**E81**	**E87**	**E90**	**E91**	**E92**	**E93**
Rear bumper, left	x	---	x	x	---	---	---	---	---	---	---
Rear bumper, middle	---	x	---	---	x	x	x	x	x	x	x
Outside door handle electronics	4	4	2	2	4	2	2	2	2	2	2

  The aerials emit 125 kHz radio signals which are evaluated by the ID transmitter.
  [more ...]

- **Outside door handle electronics**

  The number of outside door handle electronic units depends on the model concerned (see table above).

  The 3 sensors in the outside door handle electronics send the following signals to the CAS control unit

and the CA control unit:

- Unlock: When a hand reaches into the handle recess via capacitive sensor 1
- Unlock: When a hand pulls on the outside door handle via tension sensor (redundant to capacitive sensor 1)
- Locking and deadlocking: On contact with the sensitive area of the door handle via capacitive sensor 2

A built-in aerial also sends radio signals in order to check for an ID transmitter located on the outside of the driver's door or front-passenger door.

> E70, E81, E87, E90, E91, E92, E93

The outside door handle electronics are installed in the outside door handle.

[more ...]

> E60, E61, E63, E64

The outside door handle electronics are behind the grip recess plate.

[more ...]

- **ID transmitter**

  The ID transmitter evaluates the signals from the aerials. It also sends high-frequency radio signals to the FBD receiver.

  Inserting the ID transmitter into the slot deactivates all Comfort Access functions.

- **Remote control receiver for remote control services**

  > E64, E81, E87, E93

  The remote control receiver is integrated in the interior mirror.

  > E60, E61, E63, E70, E90, E91, E92
  The remote control receiver is integrated into the aerial amplifier.

  The remote control (FBD) receiver picks up radio signals from the ID transmitter and forwards them to the CAS control unit. The Comfort Access control unit (CA control unit) activates the FBD receiver.

- **CAS control unit**

  The CAS control unit (CAS: Car Access System) is the master control unit for all Comfort Access functions. The CAS control unit is the interface to the START/STOP button and to the slot for the ID transmitter. The electronic steering lock is also activated by the CAS control unit.

  The CAS control unit is connected with the following components via the K-bus (sub-bus):

  - Outside door handle electronics (number depends on model concerned)
  - Comfort Access control unit (CA control unit)
  - Electronic steering lock

  When the vehicle is idle, communication may take place on the K-bus without waking up the vehicle.

- **START/STOP button**

  The START/STOP button can be used to switch the terminals in sequence (0, R, 15, R, 0). The engine can be started by depressing the clutch or the brake (manual transmission/automatic transmission) and pressing the START-STOP button.

- **Slot for the ID transmitter/remote control**

  - On vehicles **without** Comfort Access:

    In order to start the engine, the remote control must be latched in place in the slot.

  - On vehicles **with** Comfort Access:

    The remote control must be inserted into the slot if the battery in the ID transmitter is discharged. The

engine can then be started up.

Inserting the ID transmitter into the slot deactivates Comfort Access.

- **JBE: Junction box electronics**

  > E70, E81, E87, E90, E91, E92, E93

  The junction box electronics activates the central locking system.

  If the CAS control unit approves the unlocking of the vehicle, for example, the doors will be unlocked.

- **KGM and KBM: Body gateway module and body basic module**

  > E60, E61, E63, E64

  The body gateway module actuates the central locking in the front doors.

  The body basic module controls the central locking in the rear doors.

  If the CAS control unit approves the unlocking of the vehicle, for example, the doors will be unlocked.

- **Comfort Access control unit**

  The Comfort Access control unit (CA control unit) actuates the internal and exterior aerials.

  An ID transmitter scan is carried out. At the same time, the FBD receiver is activated for any ID transmitters which may respond.

  > E60, E61, E63, E64 [more ...]

  > E70 [more ...]

  > E81, E87, E90, E91, E92, E93 [more ...]

System functions

Comfort Access is used to implement the following functions:

- Passive Entry via driver's door or front passenger door
- Passive Entry via tailgate
- Passive Go
- Passive Exit
- Disabling an ID transmitter located inside the vehicle
- Disabling an opposing command
- Tamperproof lock

Passive Entry via doors

The vehicle is unlocked when the outside door handle is gripped or pulled. Condition: The ID transmitter must be located no further than 1.5 m from the aerial in the outside door handle.

Ideally, the user should carry the ID transmitter in a pocket.

First, the user is authenticated (= authenticity check).

The data transferred during the authenticity check is of course encrypted.

If the ID transmitter authenticity check is successful, the user will be granted access to the vehicle. The central locking is unlocked. The door can be opened.

The same principle is applied for the authenticity check for Passive Entry and Passive Go.

Authenticity check using the example of Passive Entry:

- Trigger signal at outside door handle electronics via capacitive sensor 1.
- Request sent to outside door handle electronics to locate an ID transmitter via the aerials in the

outside door handle. All ID transmitters associated with the vehicle and located outside of it are included in the search (low-frequency radio signal at 125 kHz).

The search determines whether an ID transmitter associated with the vehicle is located in the operating range of the aerials in the outside door handle.

- At the same time, the outside door handle electronics send a message to the CAS control unit via the sub bus (K-bus).
- All ID transmitters located register with the CAS control unit by sending a radio signal via the FBD receiver (high-frequency radio signal, country-specific, e.g. 868 MHz).
- The CAS control unit decides which of the registered ID transmitters will be used for the subsequent authenticity check.
- This selection is sent to the outside door handle electronics in a message via the K-bus. At the same time, a request is sent to the outside door handle electronics to carry out a selective scan of the ID transmitter concerned.
- All ID transmitters not picked up in this scan end reception readiness for the communication operation currently in progress.
- The ID transmitter picked up via the selective scan responds by sending a radio signal to the CAS control unit via the FBD receiver (high-frequency radio signal at 868 MHz).
- The CAS control unit evaluates the response signal and, if confirmation is valid, authorises Passive Entry.

  The vehicle is unlocked.

  In order that the vehicle can be opened quickly, the door lock is mechanically pretensioned with a spring. The spring ensures that the door unlocks whenever the user pulls the outside door handle to its full extent.
- The tension sensor is set up with redundancy to the capacitive sensor (e.g. capacitive sensor 1 deactivated due to long-term lack of use).

  When the tension sensor detects the "Outside door handle pulled" signal, the door is unlocked. The door can be opened by pulling on the outside door handle again.

Passive Entry via the tailgate or front rear window

Comfort Access can be used to open the tailgate without actively using the ID transmitter. Condition: The ID transmitter must be located no further than 1.5 m from the aerial. Ideally, the user should carry the ID transmitter in a pocket.

To open the tailgate, it is necessary to press and hold the tailgate button for approximately 500 ms (top half of BMW logo on the E81, E87, grip on all other vehicles). If an ID transmitter is located in the vicinity of the luggage compartment, the tailgate will open.

If an ID transmitter is located inside the luggage compartment when the tailgate is closed (and there are no authorised ID sensors outside the vehicle), the tailgate will open up again.

The user's attention is drawn to the anti-theft alarm as follows:

- Visual signal via turn signal lights
- Acoustic signal via siren, US version only

> E61, E91: rear window

To open the rear window, the rear window button must be pressed for approx. 500 ms (under the rear window wiper arm).

If an ID transmitter is located in the vicinity of the rear of the vehicle, the rear window will open.

If an ID transmitter is located inside the luggage compartment when the rear window is closed (and there are no authorised ID sensors outside the vehicle), the rear window will open again.

The user's attention is drawn to this as follows: Visual signal via indicators and acoustic signal via sirens (on anti-theft alarm system).

Passive Go

In order to switch the terminal and/or start up the engine, the ID transmitter must **simply** be located inside the vehicle (**not** necessarily in the slot).

On the following models, the luggage compartment counts as part of the interior: E61, E70, E81, E87, E91.

On all other models, it is **not** possible to start the engine if an ID transmitter is detected in the luggage compartment.

In principle, the authenticity check required is the same as that for Passive Entry (except that it is run via the interior aerials).

If there are no ID transmitters inside the vehicle when the START-STOP button is pressed: Check-Control message on instrument cluster.

Press the START/STOP button to switch the terminals. The terminal switching sequence is as follows: 0 -> terminal R -> terminal 15 -> terminal R -> 0.

The START/STOP button must be pressed for approximately 500 ms in order to start up the engine. The clutch pedal or brake pedal (manual transmission or automatic transmission respectively) must be depressed at the same time.

The engine may be started up in any terminal position.

Once the engine has been switched off, it may be restarted within 5 seconds even if no ID transmitter is detected inside the vehicle (i.e. no valid drive authorisation). This safety measure is required for possible emergencies.

Passive Exit

The sensitive area on the outside door handle must be touched (depends on model concerned) for the vehicle to be locked and then secured. Your hand must touch the middle of the sensitive area for at least 1 second.
If the locking area is touched for approx. 3 seconds, auto-remote closing will start. The side windows and sliding/tilting sunroof or Panorama glass sunroof on the E61/E91 then close. On the E64, the convertible top closes. If applicable, the exterior mirrors are folded in.

Auto-remote opening via the outside door handle is **not** possible.

Terminal R is deactivated when the outside door handle is locked.

Terminal 15 is **not** deactivated when the vehicle is locked. A Check-Control message appears as a warning when the driver's door is opened with terminal 15 ON.

Special feature: Comfort Access allows the vehicle to be locked whilst the engine is running.

> E93

Note: No convenience closing of the hardtop via the exterior door handle electronics.

It is **not** possible to close the hardtop via the exterior door handle electronics. Convenience closing is performed at the lock cylinder.

Disabling an ID transmitter located inside the vehicle

When the vehicle is closed via the outside door handle, any ID transmitter inside the vehicle will be detected.

This ID transmitter is disabled for all Comfort Access functions. However, it is still possible to access the luggage compartment. The ID transmitter is reactivated when the vehicle is unlocked again.

Disabling an opposing command

When the vehicle is unlocked via the outside door handle, it cannot be locked again for

approx. 2 seconds.

Similarly, when the vehicle is locked via the outside door handle, it cannot be unlocked again for approximately 2 seconds.
This allows the user to pull on the outside door handle to check that the vehicle is actually locked.

Tamperproof lock

The vehicle may only be locked and unlocked consecutively a maximum of 8 times. After this, the tamperproof lock is activated.

Operation is disabled for 10 seconds. The tamperproof lock is deactivated completely after 5 minutes. Once again, the vehicle may then only be locked and unlocked consecutively a maximum of 8 times.

Notes for service staff

Service staff should note the following points:

- General note: [more ...]
- Diagnosis: [more ...]
- Encoding/programming: ---
- Personal Profile [more ...]

  Almost all functions of the Car and Key Memory are programmed inside the vehicle itself (please refer to the "Personal profile" section of Owner's Handbook: individual settings for a maximum of 3 remote control units via the display in the instrument cluster or via the Central Information Display)

National versions

The following details are available with regard to national versions:

> E93

Convenience functions performed using the remote control or ID transmitter depend on the national version concerned.

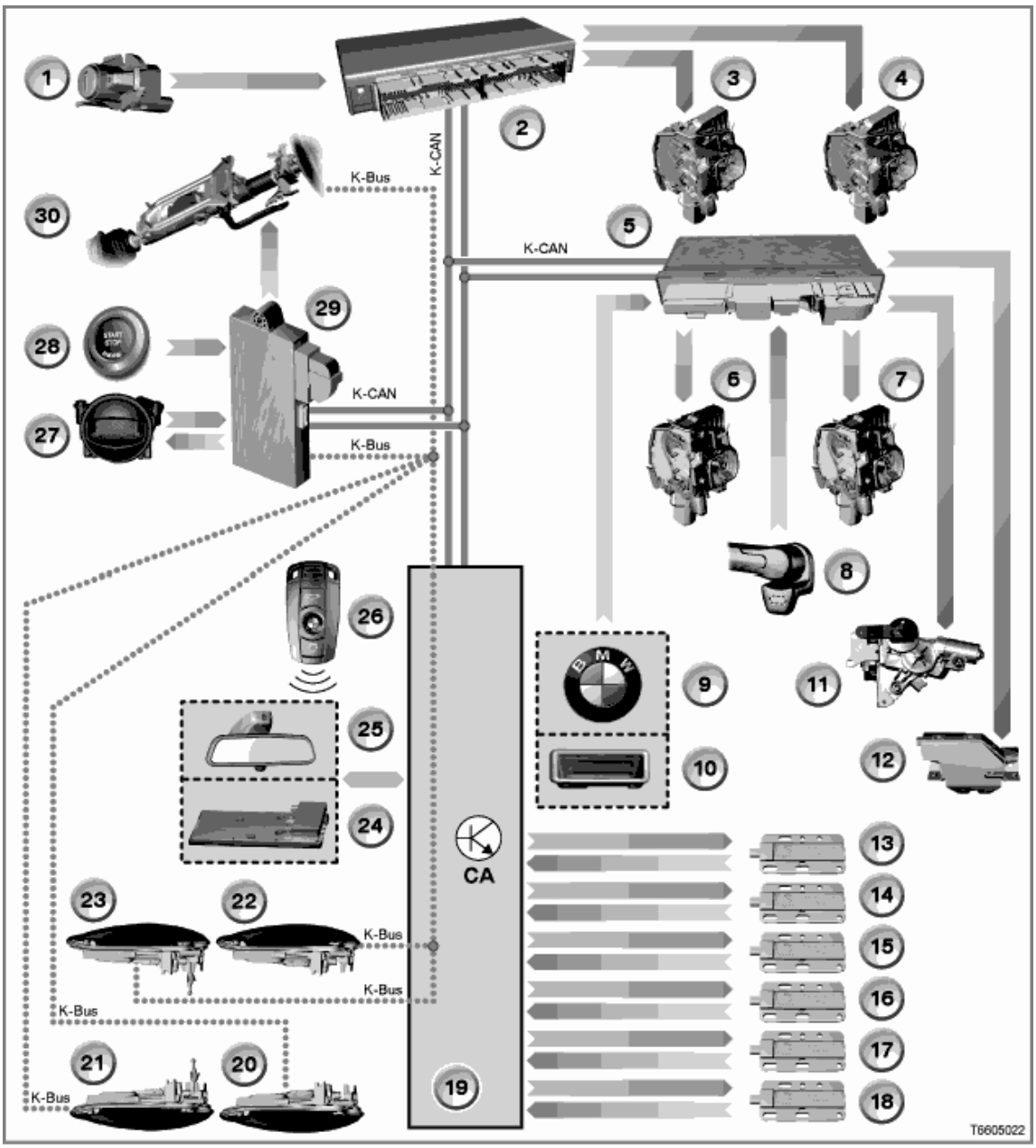
Conditions for operating Comfort Access (option 322) with the remote control or ID transmitter

	without option 322 (Comfort Access)	**with option 322** (Comfort Access)
EURO and rest of worlds	Roof OPEN: possible with remote control Convenience function for loading and unloading: possible with remote control	Roof OPEN: even if the ID transmitter is more than 4 metres away Roof CLOSED: only if the ID transmitter is less than 4 metres away Convenience function for loading and unloading: even if the ID transmitter is more than 4 metres away
USA/ Canada	--- (not encoded)	Roof OPEN: only if the ID transmitter is less than 4 metres away Roof CLOSED: only if the ID transmitter is less than 4 metres away Convenience function for loading and unloading: only if the ID transmitter is less than 4 metres away

Subject to change.

Comfort Access system overview: E60, E61, E63, E64

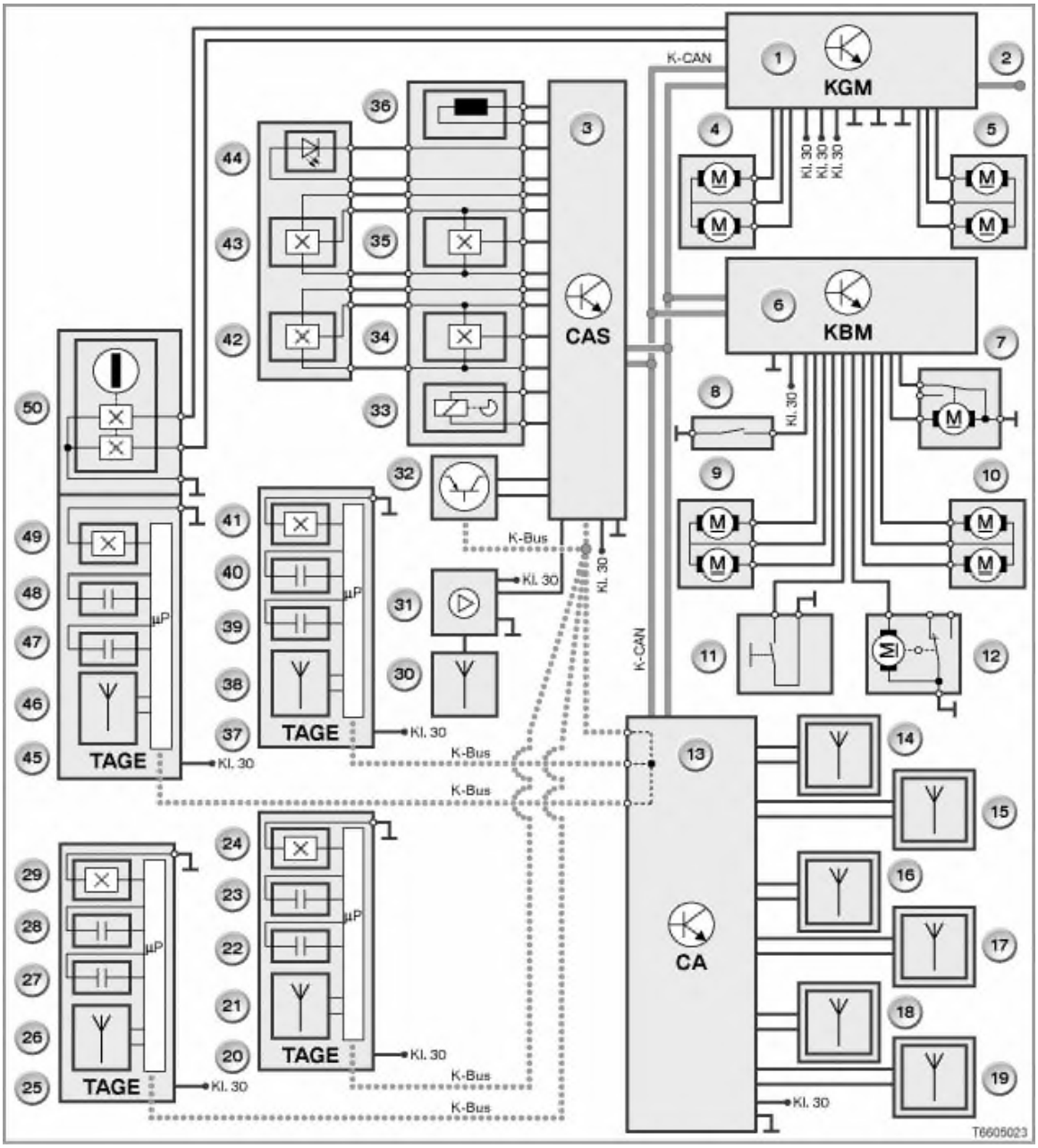
- Inputs/outputs



Item	Description	Item	Description
1	Driver's door lock cylinder	2	Body gateway module (KGM)
3	Central locking drive for driver's door	4	Central locking drive for front-passenger door
5	Body basic module (KBM)	6	Central locking drive for left rear door
7	Central locking drive for right rear door	8	> E61 Rear window button
9	> E63, E64 Tailgate button	10	> E60, E61 Tailgate button
11	Rear window lock	12	Tailgate lock

13	Interior aerial (centre console front)	14	Interior aerial (centre console rear)
15	> E60, E63 Interior aerial (rear shelf) > E61 Interior aerial (back of rear seat)	16	> E60, E63, E64 Interior aerial (luggage compartment) > E61 Interior aerial (luggage compartment, middle)
17	> E63, E64 Interior aerial (luggage compartment, right)	18	Exterior aerial (rear bumper)
19	CA control unit (CA: Comfort Access)	20	> E60, E61 Outside door handle electronics on front-passenger side, rear
21	> E60, E61 Outside door handle electronics on driver's side, rear	22	Exterior door handle electronics, front passenger
23	Outside door handle electronics, driver	24	> E60, E61, E63 FBD receiver in aerial amplifier
25	> E64 FBD receiver in rear-view mirror	26	ID transmitter
27	Slot	28	START/STOP button
29	Car Access System (CAS)	30	Electronic steering lock
K-bus	Body bus (single-core bus)	K-CAN	Body CAN

- System circuit diagram



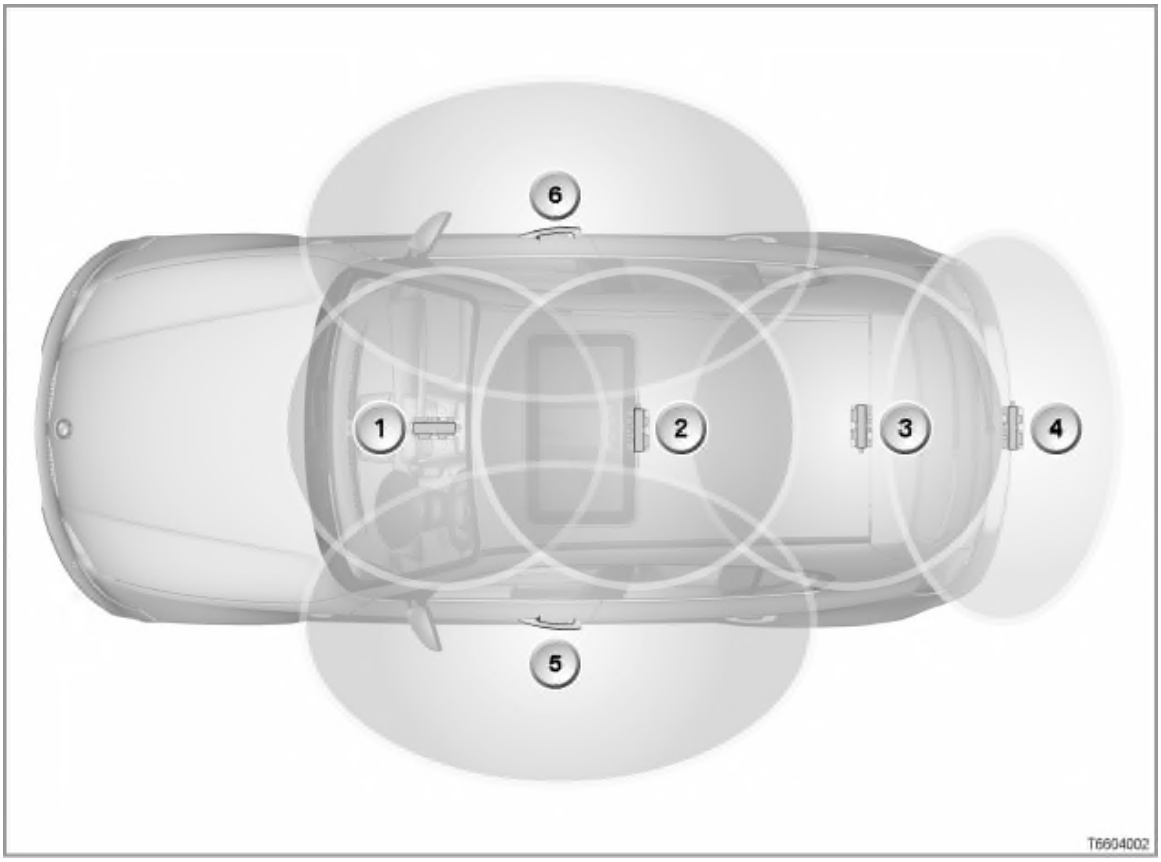
Item	Description	Item	Description
1	Body gateway module (KGM)	2	Diagnosis wire
3	Car Access System (CAS)	4	Central locking drive for driver's door
5	Central locking drive for front-passenger door	6	Body basic module (KBM)
7	Tailgate lock	8	Tailgate switch
9	Central locking drive for left rear door	10	Central locking drive for right rear door
11	> E61 Rear window button	12	> E61 Rear window lock
13	CA control unit (CA: Comfort Access)	14	Interior aerial (centre console front)
15	Interior aerial (centre console rear)	16	> E60, E63 Interior aerial (rear shelf)

			> E61 Interior aerial (back of rear seat)
17	Interior aerial (luggage compartment)	18	> E63, E64 Interior aerial (luggage compartment, right)
19	Exterior aerial (rear bumper)	20	> E60, E61 Outside door handle electronics on front-passenger side, rear (TAGE)
21	Aerial	22	Capacitive sensor 1
23	Capacitive sensor 2	24	Tension sensor
25	> E60, E61 Outside door handle electronics on driver's side, rear (TAGE)	26	Aerial
27	Capacitive sensor 1	28	Capacitive sensor 2
29	Tension sensor	30	FBD receiver aerial
31	FBD receiver > E60/E61/E63 in aerial amplifier > E64 in interior mirror	32	Electronic steering lock
33	Catch in slot	34	Hall sensor 1 in slot
35	Hall sensor 2 in slot	36	Transponder
37	Outside door handle electronics, front-passenger door	38	Aerial
39	Capacitive sensor 1	40	Capacitive sensor 2
41	Tension sensor	42	Hall sensor 1 in START-STOP button
43	Hall sensor 2 in START-STOP button	44	LED in START-STOP button
45	Outside door handle electronics, driver's door	46	Aerial
47	Capacitive sensor 1	48	Capacitive sensor 2
49	Tension sensor	50	Driver's door lock cylinder
K-bus	Body bus (single-core bus)	K-CAN	Body CAN
Kl. 30	Terminal 30		

Interior and exterior aerials E60, E61, E63, E64, E70, E81, E87, E90, E91, E92, E93

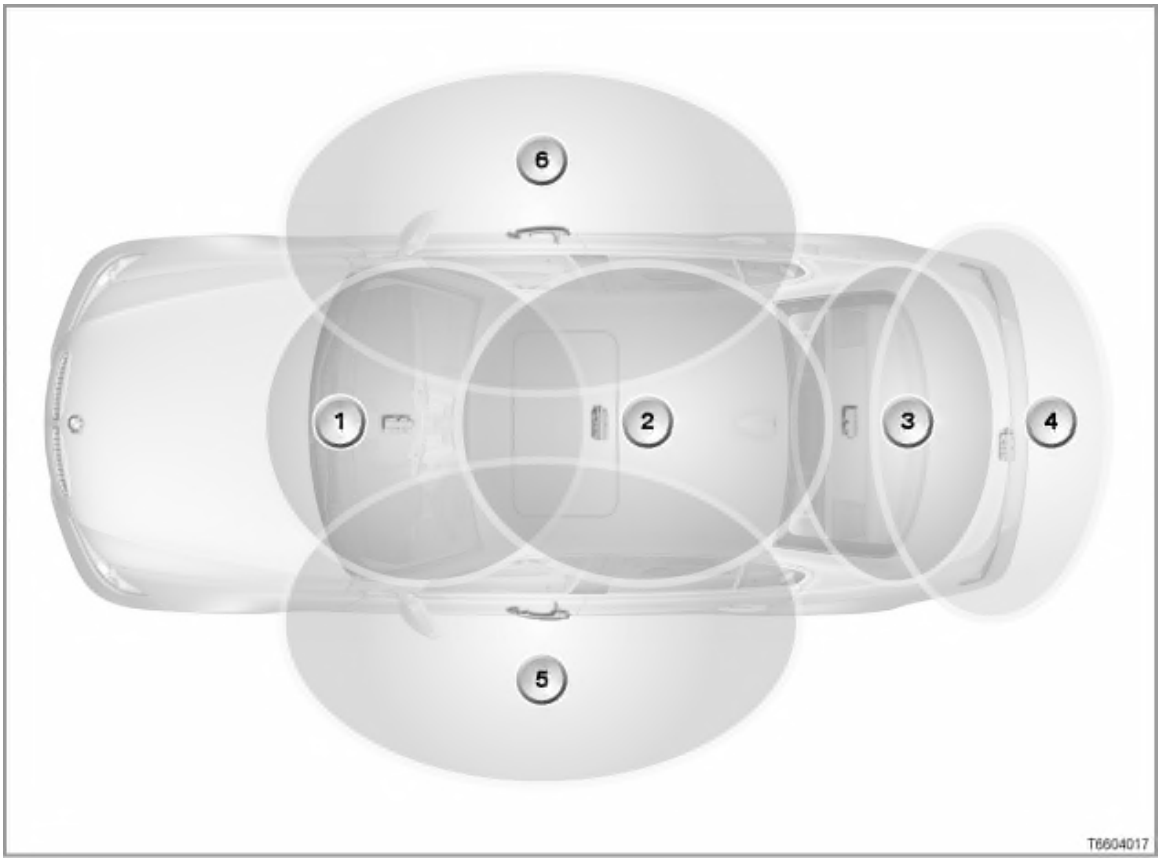
Installation location

Various aerials are fitted for Comfort Access. These aerials are distributed around the interior and exterior.



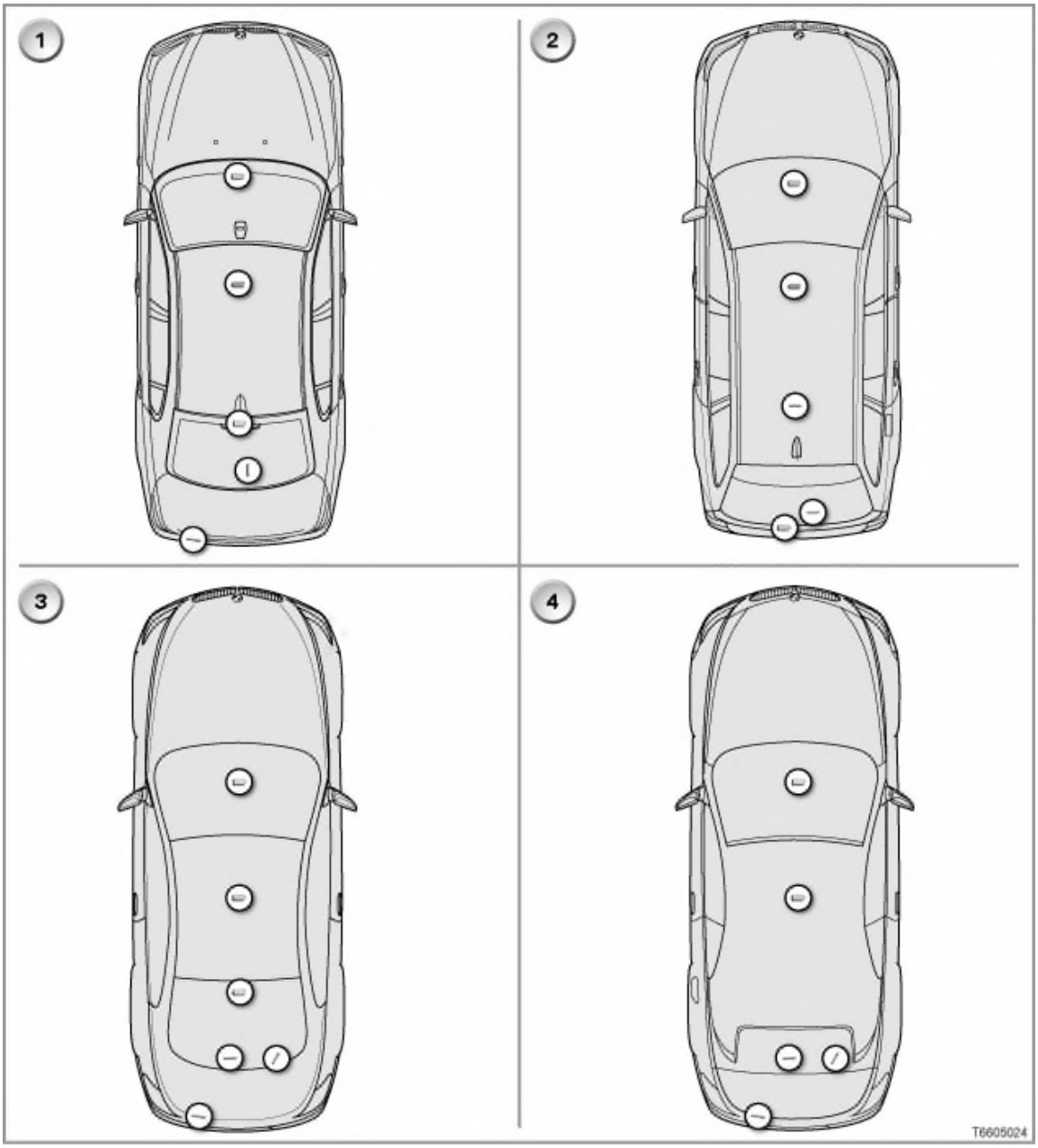
Aerials with detection range, E81, E87

Item	Description	Item	Description
1	Interior aerial in centre console, front	2	Interior aerial in centre console, rear
3	Interior aerial in luggage compartment	4	Exterior aerials in rear bumper
5	Exterior aerial in outside door handle on driver's side	6	Exterior aerial in outside door handle on front-passenger side



Aerials in effective range of E90. E91, E92, E93 are similar

Item	Description	Item	Description
1	Interior aerial in centre console, front	2	Interior aerial in centre console, rear
3	Interior aerial in luggage compartment	4	Exterior aerials in rear bumper
5	Exterior aerial in outside door handle on driver's side	6	Exterior aerial in outside door handle on front-passenger side



Item	Description	Item	Description
1	Aerials on E60	2	Aerials on E61
3	Aerials on E63	4	Aerials on E64

Construction

The internal and exterior aerials are made of ferrite.

Note: Description of ferrite

Ferrite is a material made from metal oxides not capable of conducting electricity. Ferrite is manufactured using a sintering process (= burning). Ferrite is used for example to make aerials (compact dimensions possible).

Item	Description	Item	Description
1	Interior aerial	2	Exterior aerials in rear bumper

The interior aerial and the exterior aerial in the rear bumper are almost identical in terms of design. However, they do have different connectors (watertight for bumpers).
The aerial in the outside door handle is also a ferrite aerial (see Outside door handle electronics).

How it works

The aerials transmit at a frequency of 125 kHz. The wave emitted by the aerials are spherical in form. The ID transmitters are requested to identify themselves via the aerials. All radio signals are encrypted and therefore protected against unauthorised access.

Differences for detection range:

The detection range of the interior aerials matches the vehicle concept.

> E60, E63, E64, E90, E92, E93
The luggage compartment **does not** count as part of the vehicle interior. Similarly, the rear shelf (parcel shelf) is not considered part of the vehicle interior but part of the luggage compartment. The separation of the luggage compartment and vehicle makes it easier for the ID transmitter to be detected in the luggage compartment.

> E61, E70, E81, E87, E91
The luggage compartment **does count** as part of the vehicle interior. It is possible to start the engine if an ID transmitter is detected in the luggage compartment.

Outside door handle electronics: E60, E61, E63, E64

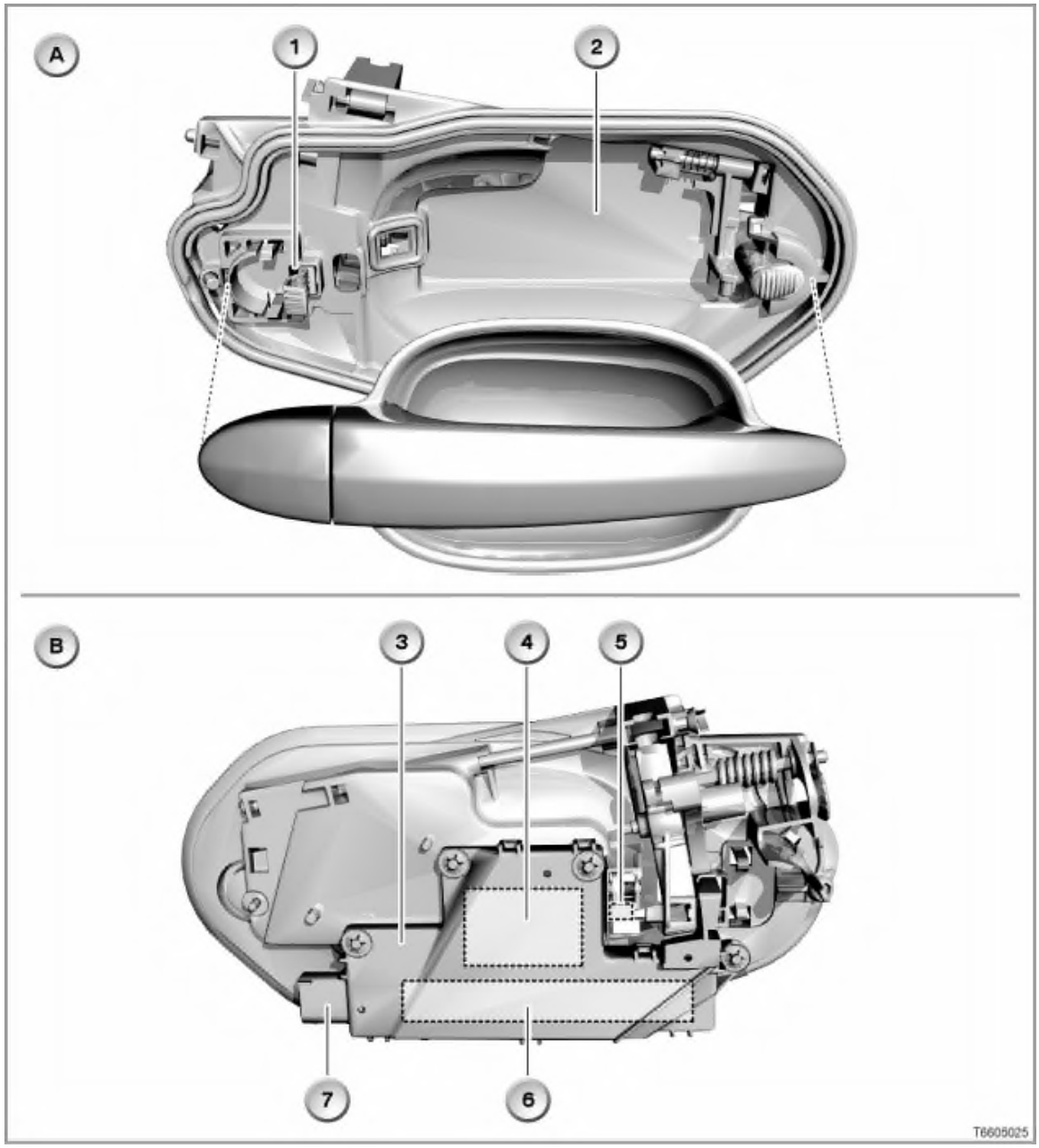
Installation location

The outside door handle electronics are inseparably mounted on the back of the door handle mounting bracket.

Construction

The outside door handle electronics comprises the following components:

- 2 capacitive sensors
- Tension sensor
- Aerial
- Electronic circuitry

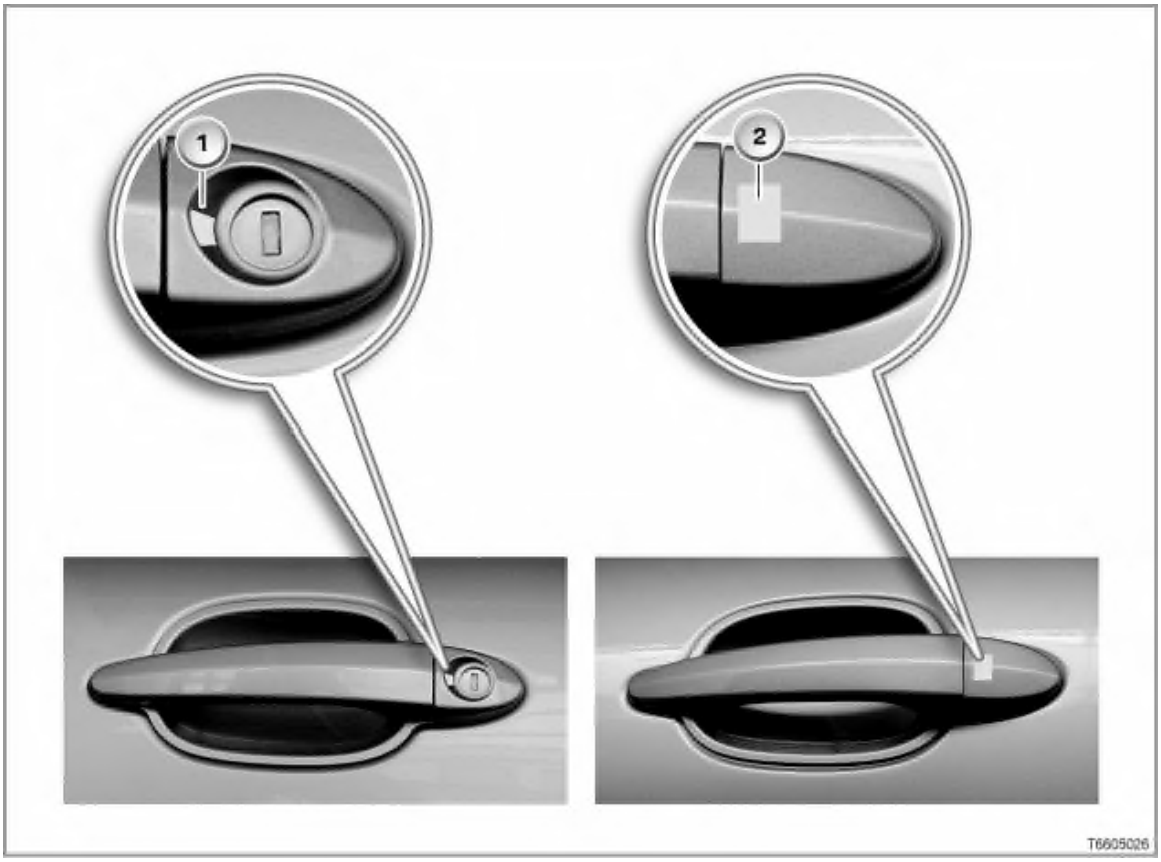


Item	Description	Item	Description

A	Outside door handle electronics, front	B	Outside door handle electronics, back
1	Capacitive sensor 1	2	Door handle mounting bracket
3	Electronics box	4	Capacitive sensor 2
5	Tension sensor	6	Aerial
7	Connectors		

How it works

A capacitive sensor operates like a capacitor.
When a hand moves towards the contact surface of the outside door handle, capacitive sensor 1 generates a pulse. The outside door handle electronics are woken up and the authenticity check starts. The status of the outside door handle is sent to the CAS control unit and the CA control unit via the K-bus.
When a thumb presses the sensitive area, capacitive sensor 2 sends a signal to indicate that the vehicle has been locked.



Item	Description	Item	Description
1	Sensitive area for locking driver's door	2	Sensitive area for locking other doors

To reduce the off-load current consumption of the outside door handle electronics, the capacitive sensors are deactivated once an encoded period of time has elapsed.
The deactivation times for the capacitive sensors are:

- Driver's door: 8 days (= 192 hours) in order that infrequent drivers can use the Comfort Access function
- Front-passenger door: 3 days (= 72 hours) to straddle a weekend

A tension sensor is fitted with redundancy to capacitive sensor 1.
The tension sensor sends a signal when the outside door handle is pulled. The tension sensor is monitored by

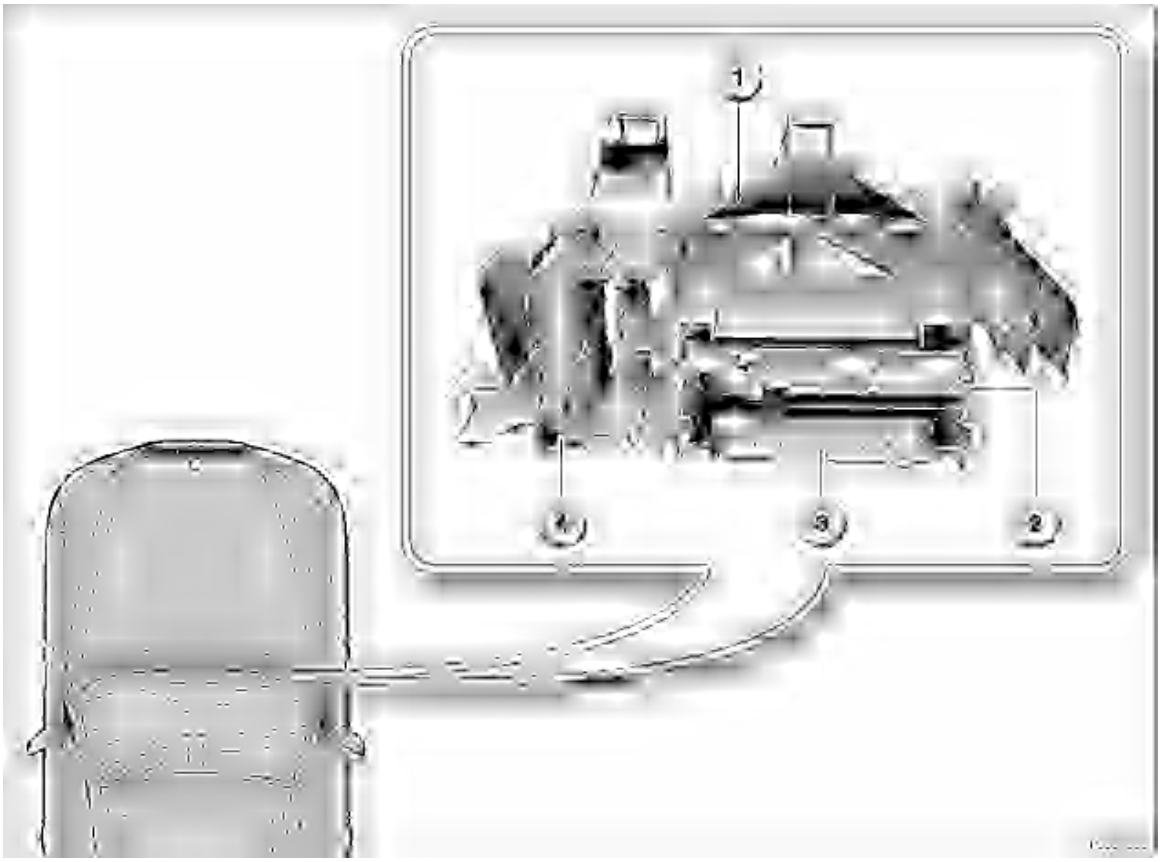
the outside door handle electronics. To reduce the off-load current consumption, the tension sensor is clocked (40 ms).
When a hand pulls on the outside door handle, this change in state on the tension sensor wakes up the controller in the outside door handle electronics.
The controller set the tension sensor to continuous ON to check the validity of the signal.

For inductive communication with the ID transmitter, an aerial is fitted in each outside door handle, via which a request for the ID transmitter can be started. The request is an inductive message with a frequency of 125 kHz.

Comfort Access control unit: E60, E61, E63, E64

Installation location

The Comfort Access control unit is installed in the carrier behind the glove compartment.



Item	Description	Item	Description
1	Device holder	2	Body basic module (KBM)
3	Body gateway module (KGM)	4	Comfort Access control unit (CA control unit)

Construction

The Comfort Access control unit is connected to the vehicle wiring harness via a 26-pin connector.

- Pin assignments

Pin assignment for connector X13354, 26-pin		
Pin	**Type**	**Description**
1	E/A	Bus cable 1 for K-bus
2	E/A	K-CAN Low
3	A	FBD receiver actuation
4	E/A	Bus cable 2 for K-bus
5	A	> E60, E63

		Actuation of interior aerial on rear shelf > E61 Actuation of interior aerial on luggage compartment load edge > E64 ---
6	A	Actuation of interior aerial in centre console, rear
7	A	Actuation of interior aerial in centre console, front
8	---	---
9	---	---
10	A	> E60 Actuation of interior aerial on luggage compartment, middle > E61 Actuation of interior aerial on back of rear seat > E63, E64 Actuation of exterior aerial in rear bumper, left
11	---	---
12	A	> E60, Actuation of exterior aerial in rear bumper, left > E61 Actuation of exterior aerial in rear bumper, middle > E63, E64 Actuation of interior aerial on luggage compartment, middle
13	A	> E60, E61 --- > E63, E64 Actuation of interior aerial on luggage compartment, right
14	V	Terminal 30, power supply
15	E/A	K-CAN High
16	M	Terminal 31, earth
17	E/A	Bus cable 3 for K-bus
18	A	> E60, E63 Actuation of interior aerial on rear shelf > E61 Actuation of interior aerial on luggage compartment load edge > E64 ---
19	A	Actuation of interior aerial in centre console, rear
20	A	Actuation of interior aerial in centre console, front
21	---	---
22	---	---
23	A	> E60 Actuation of interior aerial on luggage compartment, middle > E61 Actuation of interior aerial on back of rear seat

		Actuation of exterior aerial in rear bumper, left
24	---	---
25	A	> E60 Actuation of exterior aerial in rear bumper, left > E61 Actuation of exterior aerial in rear bumper, middle > E63, E64 Actuation of interior aerial on luggage compartment, middle
26	A	> E60, E61 --- > E63, E64 Actuation of interior aerial on luggage compartment, right
	A = Output E = Input E/A = Input and output M = Earth V = Power supply For current specifications regarding pin assignments, please refer to BMW diagnosis system	

General information for service staff on Comfort Access: E60, E61, E63, E64, E70, E81, E87, E90, E91, E92, E93

Note: Power supply for ID transmitter.

As standard, 2 ID transmitters are available for each vehicle. The ID transmitter has a battery. The service life of the battery is approximately 2 years.
The battery compartment is located on the rear of the ID transmitter. The battery compartment can be opened by lifting out the integrated key.

A Check-Control message is sent to notify the user that the battery is almost empty.
If the user ignores the Check-Control message, the ID transmitter will shut down (for data backup purposes).

Note: Mechanical key integrated into ID transmitter

In emergencies, e.g. local static interference, the vehicle can be opened using the integrated key in the remote control.

Note: Data for the Condition Based Service.

The CBS data is always written to the ID transmitter when terminal 15 is ON. The data is transmitted wirelessly (aerials for Comfort Access).
A concealed function is available for updating the CBS data. To activate this function, switch on terminal 15. Next, press and hold down the central locking button. Then press the START/STOP button. An acoustic signal sounds after the update.
CBS data are updated on a cyclical basis when the ID transmitter is in the slot.

Note: No function limitation for wearers of prosthetic hands.

Capacitive sensor 1 may not respond to wearers of prostheses. In such cases, the tension signal will supply a signal. The outside door handle must then be pulled twice in order to open the door.

Note: Move automatic transmission to position P

On vehicles with automatic transmission, "P" must be engaged in order to switch off the engine.

Note: Special point to bear mind in the car wash.

Insert the ID transmitter into the slot when driving through a car wash (Comfort Access functions are then deactivated).

Note: Special point to bear mind when replacing parts - E60, E61, E63, E64.

The grip recess plate must be primed with a non-conducting filler.

Comfort Access diagnosis: E60, E61, E63, E64, E70, E81, E87, E90, E91, E92, E93

Please note the following information on Comfort Access diagnosis:

Reset the Car Access Systems

After working on the Comfort Access system, in particular on the door handles:
It may be necessary to reset the Car Access System (CAS control unit).
The following methods are available:

- Using service functions: Service functions -> Drive -> CAS -> CAS reset
- Using control unit functions under CAS

Note: Reset can be recognised at the START/STOP button.
When resetting the CAS, the START/STOP button illumination is briefly deactivated.

Initialising Comfort Access

Initialisation must be performed after the following operations:

- Comfort Access control unit replaced
- Outside door handle electronics replaced

Switching terminals from 0 to R ON will trigger initialisation. When this happens, the CAS control unit automatically initialises the Comfort Access control unit and the outside door handle electronics.

There is also a test module under Comfort Access for initialisation.

Personal profiles for Comfort Access: E60, E61, E63, E64, E70, E81, E87, E90, E91, E92, E93

Note: Car and Key Memory = Personal profile
As of the E87, Car and Key Memory is referred to as Personal Profile by Marketing (sales literature).

The customer can unlock the vehicle as follows:

- Door-specific, i.e. driver's door or front-passenger door
- All doors together

On vehicles **without** M-ASK or CCC:
The Personal Profile is set using the turn-signal steering column stalk (axial button and rocker switch). Menu guidance appears on the LCD display on the instrument cluster.
On vehicles **with** M-ASK or CCC:
Personal Profile settings are made using the controller on the Central Information Display (CID).

If only specific doors on the vehicle have been unlocked, the central locking button can be used to unlock the remaining doors.