Modification information 07/2022

Addendum to the Sprinter Body and Equipment Guideline
Sprinter - Model Designation

Mercedes-Benz
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1 Introduction to the modification information

Legal disclaimer

Mercedes-Benz AG does not warrant the accuracy of the information contained in this Addendum and reserves the right to modify or append this Addendum without prior notification. Mercedes-Benz AG disclaims all liability associated with the provision of this Addendum.

This Addendum is not intended to serve as a work instruction, but merely to provide some helpful information for upfitters to take into consideration before retrofitting or modifying a Mercedes-Benz Sprinter.

This Addendum does not in any way cancel the information provided in the Body and Equipment Guideline (BEG) for Sprinter Model Designation 907 publication date 05/2022, provided by Mercedes-Benz AG, but rather supplements.

All additional information provided in this Addendum and changes to specific chapters are intended to supersede and replace information found in Body and Equipment Guideline (BEG) for Sprinter Model Designation 907 publication date 05/2022.

Prior to making any modification to or installing any equipment in or on a Mercedes-Benz Sprinter, you should review and insure compliance with all applicable laws and regulations, consult with Upfitter Management Vans for additional and updated information, and review Body and Equipment Guideline (BEG) for Sprinter Model Designation 907 publication date 06/2022.

Upfitter Management Vans Contacts:

For information or upfitter inquiries please submit a request via our website:

www.upfitterportal.com
1 Introduction to the modification information

1.1 Scope of application

This Addendum 07/2022 is a supplement to the Sprinter Body and Equipment Guideline (BEG) of Mercedes-Benz Group AG. Upon publication, it becomes part of the following body and equipment guideline and must therefore be applied and complied with by the upfitters.

<table>
<thead>
<tr>
<th>Model series</th>
<th>Designation</th>
<th>Edition</th>
</tr>
</thead>
</table>

With the updating of the above-mentioned body and equipment guideline, the contents of this modification information will be transferred to the new edition.

1.2 Modification history 2022

<table>
<thead>
<tr>
<th>Edition</th>
<th>Description of modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/2022</td>
<td>Chapter 8.9.4: Addition of specification for painting the cover of the radar sensors for Pre-installation of Blind Spot Assist/Exit Warning for Cab-Chassis (code J1V)</td>
</tr>
<tr>
<td></td>
<td>Chapter 8.9.8: Additions to the special equipment Parking package for cargo and crew vans with rear attachment (code JB8) and Parking package pre-installation for cab-chassis (code JB1, JB2 or JB3)</td>
</tr>
<tr>
<td></td>
<td>Chapter 8.9.11: New content on the special equipment Digital inside rearview mirror (code F84) and Pre-installation for digital inside rearview mirror (code F85)</td>
</tr>
</tbody>
</table>
1.3 Concept of this modification information

1.3.1 General

The following content was created by Mercedes-Benz Vans Development and is provided for preliminary information purposes.

With the next update of the respective body and equipment guideline – for current editions see chapter 1.1 Scope of application (→ page 4) – these contents will be incorporated. This modification information will therefore no longer be required after publication of the new version of a body and equipment guideline for Sprinter.

The document may be used only as a complete document; excerpts are not permitted.

The facts and information described here apply exclusively in combination with the documents stated in chapter 1.1 Scope of application (→ page 4) and supplement them.

For information on matters not described here, refer to the current body and equipment guideline for the model series.

Vehicle modifications by the upfitter

- Before starting upfit work, the upfitter must check whether
  - the vehicle is suitable for the planned body,
  - the vehicle model and equipment are suitable for the operating conditions intended for the body.
- To plan bodies, 2D drawings (offer drawings), product information and technical data can be requested from the relevant department or retrieved via the Upfitter Portal.

- In addition, observe the special equipment offered ex factory and select and use it as a priority when choosing the base vehicle.
- Vehicles from the factory comply with national and local regulations.
- The vehicles must still comply with EC regulations and national regulations after modifications have been carried out.
- If applicable, the upfitter must inform the officially recognized appraiser or inspector of any modifications to the base vehicle. The approval and inspection organizations will decide on compliance with legislation and regulations after any modifications made to the base vehicle, and therefore on the eligibility for registration of the complete vehicle.
- The upfitter must ensure that the vehicle meets the registration requirements with its modifications.

1.3.2 Conventions

The structure and the conventions used in this document correspond to those of the corresponding body and equipment guideline.

<table>
<thead>
<tr>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe all national and local laws, directives and registration regulations.</td>
</tr>
</tbody>
</table>
8.9 Driving assistance systems

8.9.4 Blind Spot Assist/Rear Cross Traffic Alert (RCTA)/Exit Warning

In addition to the contents in this chapter of the corresponding body and equipment guideline, the upfitter must observe the following note when painting the cover of the side radar sensor for the Blind Spot Assist pre-installation special equipment on open model designations (code J1V):

<table>
<thead>
<tr>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painting the cover of the side radar sensor with the paint color &quot;silver metallic&quot; is not permissible.</td>
</tr>
</tbody>
</table>

8.9.8 Parking packages

The heading for this chapter was changed. In the corresponding body and equipment guideline, this chapter is replaced with "Parking package with 360° camera (JB6)/Parking package with reversing camera (JB7)".

This chapter is completely replaced by the following content, which the upfitter must observe when using the following special equipment.

### Available special equipment

**Ex factory for cargo and crew vans**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JB6</td>
<td>Parking package with 360° camera for cargo and crew vans without rear attachments</td>
</tr>
<tr>
<td>JB7</td>
<td>Parking package with reversing camera for cargo and crew vans without rear attachments</td>
</tr>
<tr>
<td>JB8</td>
<td>Parking package with 360° camera for cargo and crew vans with rear attachments (Rear-end step code W75 or W75)</td>
</tr>
</tbody>
</table>

**Pre-installations for cab-chassis**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>JB1</td>
<td>Parking package with 360° camera for cab-chassis with body-manufacturer-specific body, cluster A&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>JB2</td>
<td>Parking package with 360° camera for cab-chassis with body-manufacturer-specific body, cluster B&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>JB3</td>
<td>Parking package with 360° camera for cab-chassis with body-manufacturer-specific body, cluster C&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

1) The description is intended as an explanation and is not the same as the code designation.
2) Cluster A, B, C see description in section 2 (*page 7*)

All variants of the parking package systems require vehicle equipment with the MBUX multimedia system. The views and visual warnings are displayed on the MBUX multimedia system screen.
1) Parking packages for closed model designations

The special equipment options of the Parking package with 360° camera (code JB6), Parking package with reversing camera (code JB7) and Parking package for vehicles with rear attachments (code JB8) are available ex factory for cargo and crew vans and are delivered fully assembled in the vehicle.

When ordering the ex-factory special equipment Wide step at rear end (code W75) and Spring-loaded rear-end step (code W76), the Parking package with 360° camera for rear attachments (code JB8) can be ordered at the same time on request, which does not include the ultrasonic sensors in the rear area. It is not possible to order code JB6/JB7 in this case.

If special equipment approved by Mercedes-Benz is subsequently installed at the rear end of vehicles with code JB6 or JB7, the appropriate parameter set for the respective parking system must be coded at a Mercedes-Benz service workshop.

<table>
<thead>
<tr>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not make any modifications to the sensor and camera systems installed at the factory. Observe the specifications for the ultrasonic sensors in section 3 (→ page 13).</td>
</tr>
</tbody>
</table>

For further information on the parking package, please refer to the relevant sales information and contact your Mercedes-Benz sales partner.

For use of the parking package, observe the information and specifications in the operator’s manual of your vehicle.

2) Parking packages for cab-chassis with aftermarket body

The special equipment codes JB1, JB2 or JB3 are available ex factory for cab-chassis that are going to be used for an aftermarket, partially integrated body (e.g. partially integrated camper van).

Based on an analysis of possible vehicle configurations and installation situations of RV bodies, three specific key points were identified for the calibration of the parking package system, which were defined as clusters for the system software. Details of this are described in the 360 degree camera(JB1_JB2_JB3) technical bulletin found on the eXpert upfitter portal.

<table>
<thead>
<tr>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of this special equipment is therefore only permissible for these three specific vehicle configurations and installation situations (clusters A, B and C) in accordance with the specifications in the 360 degree camera(JB1_JB2_JB3) technical bulletin found on the eXpert upfitter portal for positioning the parking system cameras on the body. The parking system must not be used for other vehicle configurations and installation situations outside the specified system limits.</td>
</tr>
</tbody>
</table>

When the vehicle is delivered, the front ultrasonic sensors and the front camera are already installed in the area of the cab and their cable sets are routed up to the control unit in the driver seat frame.

The control unit is the connecting point for three additional parking system cameras (one rear camera and one side camera each on the left and right), which are delivered with the vehicle as accessory parts without camera holder and camera housing.

Ultrasonic sensors for the rear area are not available with this special equipment.
**NOTE**

Do not make any modifications to the sensor and camera systems installed at the factory.

Observe the specifications for the ultrasonic sensors in section 3 (→ page 13).

**NOTE**

The upfitter is solely responsible for attaching the rear and side cameras to the aftermarket vehicle body, connecting the cameras to the connecting point and commissioning the system.

The following information and specifications must be observed in this context.

**WARNING**

If specifications are not observed or the system limits are exceeded, there is a risk of accidents and danger to life and limb!

It is recommended that you coordinate the concept for integrating the parking system cameras into the aftermarket body. For any questions, please reach on the Upfitter Portal, see section 2.3.1 Upfitter Portal in the relevant body and equipment guideline.

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2a) Attachment to the vehicle body

To mount the three parking system cameras in the area of the left and right side walls and in the rear area in accordance with the specifications for positioning found in the 360 degree camera(JB1_JB2_JB3) technical bulletin located on the eXpert upfitter portal, the upfitter must design a suitable camera holder and camera housing to match the aftermarket vehicle body.

Only mount the cameras on a flat surface with sufficient rigidity. Installation on pivoting vehicle parts (e.g. flaps or similar) or soft, curved surfaces (e.g. trim elements or similar) is not permissible.

When mounting on laterally extendable "slideouts" of RVs or comparable bodies, select a sufficient length of video line and observe the manufacturer-specific specifications for the bending radius under alternating load.

Make sure that the cameras are already firmly connected with a short cable set (length 263 mm, diameter 4.6 mm, minimum bending radius 13.8 mm), for which a corresponding opening must be planned in the vehicle body.

Observe the manufacturer’s specifications for the camera and cable set, see drawing entries with the following item number.

Item number of the parking system camera at the time of publication of this information:
**A000 905 6206**

For details on the parking system camera, please refer to the available CAD data (see chapter 2.3.1 Upfitter Portal in the corresponding body and equipment guideline.)

If required, please obtain information on a successor item number through the Upfitter Portal (see chapter 2.3.1 Upfitter Portal) or your Mercedes-Benz service partner.
When attaching the cameras to the body or designing suitable camera holders and camera housings, observe the following:

- **Alignment of the camera** (rotation around the longitudinal axis of the camera or the center axis of the camera lens): The diaphragm opening 4 must point downward toward the roadway.
- **Horizontal rotation** (rotation around camera vertical axis no yaw and roll): 0°
- **Vertical tilt to the roadway** (rotation around camera transverse axis): 45°
- **Maximum angular deviation**: ±2.0°
- **Distance of center point of camera lens from vehicle body**: 40 mm, maximum deviation ±5 mm

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**Parking system camera on body (left) and with cable set (right)**

1. Vehicle body
2. Camera
3. Camera lens
4. Membrane opening
5. Camera-side cable set
6. Connecting point to vehicle-side cable set

Arrow: Direction to the roadway (downwards)
For trouble-free operation of the parking system cameras, pay attention to the viewing angle ranges and the immediate vehicle surroundings when designing a suitable camera holder and camera housing. The exact viewing angle cone is also available in the CAD data.

Horizontal (left) and vertical viewing angle ranges (right)

2b) Positioning on the vehicle body

When positioning the cameras on the vehicle body, the reference point is the center point of the camera lens or the reference line is the center axis of the camera lens (see illustration above).

The parking package system described is only approved for the three vehicle configurations and installation situations of Cluster A, B and C in compliance with the permissible deviations. Please refer to 360 degree camera(JB1_JB2_JB3) technical bulletin within eXpert upfitter portal for corresponding specifications and camera positions.

NOTE
Before planning a vehicle body, the upfitter must check whether all specifications can be complied with. If this cannot be guaranteed, the use of this special equipment is not permissible.

If you have any questions, please reach out on the Upfitter Portal, see section 2.3.1 Upfitter Portal in the relevant body and equipment guideline.

When positioning the cameras, note:

- The positions of the parking system cameras on the left and right sides of the vehicle must be symmetrical.
- It is recommended to place the vehicle on a level, horizontally leveled surface to measure the camera positions.
- The height of the camera position above the roadway must be measured on the vehicle with the complete body including a load typical for the body.
- The specifications in section 2a (→ page 10) on the viewing angle ranges of the cameras and the note on the vehicle surroundings must be observed.

NOTE
The tolerance for lens position is maximum ±50 mm, as related to the nominal values. Higher tolerance deviations are not allowed.
2c) Electrical connection

After installation, have a qualified electrician connect the parking system cameras directly to the control unit in the driver seat frame using one video line each, observing the following instructions.

An additional connecting point is not permissible along the entire length of the video line.

Of the four HSD video inputs on the control unit, input 6 is already occupied by the front camera. Connect the other three inputs 3, 4 and 5 with the video lines to the parking system cameras on the sides and rear of the vehicle.

<table>
<thead>
<tr>
<th>No.</th>
<th>Input</th>
<th>Use</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32-pin socket</td>
<td>Assigned at the factory, modification not permissible</td>
<td>–</td>
</tr>
<tr>
<td>2</td>
<td>Head unit Fakra socket</td>
<td>Assigned at the factory, modification not permissible</td>
<td>Curry</td>
</tr>
<tr>
<td>3</td>
<td>HDS video input</td>
<td>Camera, left side of vehicle</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>HDS video input</td>
<td>Camera, vehicle rear</td>
<td>White</td>
</tr>
<tr>
<td>5</td>
<td>HDS video input</td>
<td>Camera, right side of vehicle</td>
<td>Blue</td>
</tr>
<tr>
<td>6</td>
<td>HDS video input</td>
<td>Assigned at the factory (front camera), modification not permissible</td>
<td>Green</td>
</tr>
</tbody>
</table>

For the video line, use only cables of the following type and observe the maximum line length:

<table>
<thead>
<tr>
<th>Cable type</th>
<th>Maximum line length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leoni Dacar 535-2 HSD</td>
<td>115 m, 49.2 ft</td>
</tr>
</tbody>
</table>

360° camera parking package control unit with HSD video inputs
8 Electrics/electronics

Use the following sockets and pin assignments for the electrical connection:

<table>
<thead>
<tr>
<th>Socket</th>
<th>Description/type</th>
<th>Pin assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video line to driver seat frame connecting point (ParkMan ECU)</td>
<td>Female Rosenberger D4Z001-DC0 Codings: - Camera, left side: A (black) - Camera, rear: B (white) - Camera, right side: C (blue)</td>
<td>Pin 1: GND Pin 2: LVDS- (TX-) Pin 3: POWER Pin 4: LVDS+ (TX+)</td>
</tr>
<tr>
<td>Video line to camera-side cable set</td>
<td>Female Rosenberger D4Z005-DC0 Coding: F (brown)</td>
<td>Pin 1: LVDS+ (TX+) Pin 2: POWER Pin 3: LVDS- (TX-) Pin 4: GND</td>
</tr>
</tbody>
</table>

A watertight connection of the video line to the camera must be ensured by the upfitter.

Ensure that the video line is routed correctly in the vehicle, see information in section 8.4.3 of the corresponding body and equipment guideline.

2d) Commissioning of the parking system

After installation of the three cameras and their electrical connection to the connecting point in the driver seat frame, a service calibration must be performed via the XENTRY Kit Mercedes-Benz diagnostic tool before the vehicle is put into circulation.

ℹ️ For information on XENTRY, refer to chapter 2.3.3 in the corresponding body and equipment guideline.

ℹ️ It is recommended to have the service calibration performed by a Mercedes-Benz service partner.

NOTE

For service calibration, all detachable parts on the vehicle in the area surrounding the side and rear cameras must be completely removed. Please refer to 360 degree camera(JB1_JB2_JB3) technical bulletin within upfitter portal for further service calibration instructions.

ℹ️ For further information on the parking package, please refer to the relevant sales information and contact your Mercedes-Benz sales partner.

ℹ️ For use of the parking package, observe the information and specifications in the operator’s manual of your vehicle.
3) Ultrasonic sensors

NOTE
Detachable parts fitted in the detection range of the ultrasonic sensors may impair operation of the Park Assist system (e.g. trailer coupling, overhangs of bodies, wheel carriers, steps, brush guards).

The bumper must not be subsequently painted with ultrasonic sensors installed. The coat of paint impairs the emission and reception of the ultrasonic signals.

NOTE
Sensors which are already painted must not be repainted or touched up.
Unpainted sensors and sensors painted in a range of colors are available from your Mercedes-Benz partner.

The maximum thickness the paint coat on the diaphragm can be is 120 µm without impairing sensor operation. This also includes repeated paint applications and the coat from cathodic electrodeposition (KTL coat). The KTL coat thickness is between 12 µm and 25 µm.

To ensure proper functioning of the sensors, check the coating thickness at random points.

It is essential that not only the diaphragm itself but also the cylindrical edge of the sensor diaphragm be coated with paint evenly all the way round and covering at least 2 mm.

NOTE
The coat of paint may not be ground off mechanically. This could damage the cathodic dip coating or the sensor diaphragm.

NOTE
If the surface has been KTL primed, the paint must not be removed by chemical means. This could damage the KTL coat and a new coating cannot be applied afterward. Nor is it permitted to touch up damaged areas chemically or mechanically.
8.9.11 Rearview camera for digital inside rearview mirror

The content of this chapter is completely new. The upfitter must observe this content when using the following special equipment.

### Available special equipment

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F84</td>
<td>Digital inside rearview mirror for cargo and crew vans</td>
</tr>
<tr>
<td>F85</td>
<td>Pre-installation of digital inside rearview mirrors for digital rearview mirror</td>
</tr>
</tbody>
</table>

1) Digital inside rearview mirror

The digital inside rearview mirror (code F84) is available ex factory for cargo and crew vans with normal roof (standard) and is delivered fully assembled in the vehicle.

**NOTE**

Do not make any changes to the camera systems installed at the factory.

The digital inside rearview mirror can be combined with the optional reversing cameras (code FR3 or FR8), parking packages (code JB6 or JB7) or parking package with 360° all-round camera (code JB8).

**NOTE**

For further information on the digital inside rearview mirror, please refer to the relevant sales information and contact your Mercedes-Benz sales partner.

**WARNING**

If specifications are not observed or the system limits are exceeded, there is a risk of accidents and danger to life and limb!

2) Digital inside rearview mirror pre-installation

The digital inside rearview mirror pre-installation special equipment (code F85) is only available ex factory for cab-chassis.

This special equipment is not suitable for bodies with detachable parts in the rear area that restrict the field of view of the rearview camera or that require a deviation in positioning from the specifications below.

**NOTE**

If you have any questions about this special equipment, please reach out on the Upfitter Portal, see section 2.3.1 Upfitter Portal in the relevant body and equipment guideline.

When the vehicle is delivered, the digital inside rearview mirror is installed in the vehicle in the same position as other inside rearview mirrors (windshield centered at the top) and the necessary cable set is already installed in the vehicle up to the connecting point in the driver seat frame. The rearview camera is delivered with the vehicle as an accessory without camera housing.

**NOTE**

The upfitter is solely responsible for attaching the rearview camera to the upfitter-specific vehicle body using a suitable camera holder and housing, connecting the camera to the connection point and commissioning the system.

The following information and specifications must be observed in this context.
The digital inside rearview mirror pre-installation can be combined with the optional pre-installations of the reversing camera (code FV1 or FR7), parking packages for cargo and crew vans (code JB6, JB7 or JB8) or pre-installations for parking packages with 360° all-round camera for cab-chassis with aftermarket box bodies (code JB1, JB2 or JB3).

2a) Mounting on the rear of the vehicle

For correct image display in the digital inside rearview mirror, attach the camera to the body so that none of the three screw points are at the top, and instead the camera is positioned as shown in the following illustrations. Please note here:

- Horizontal alignment (rotation around camera longitudinal axis or center axis of camera lens 3):
  Maximum deviation ±0.5°
- Alignment in longitudinal direction of vehicle (rotation around camera vertical axis 4):
  Maximum deviation ±1.0°
- Inclination to the roadway and viewing angle (rotation around camera transverse axis 5):
  See section 2c (→ page 17)

For fastening – depending on the respective body situation – select suitable screws with a diameter matching the screw hole in the camera housing.

**NOTE**

Modification of the camera (e.g. machining of the screw holes) is not permissible.

For trouble-free operation of the rearview camera, pay attention to the viewing angle ranges and the immediate vehicle surroundings when designing a suitable camera holder and housing. The exact viewing angle cone is also available in the CAD data.

Rearview camera for digital inside rearview mirror

1 Camera
2 Camera lens
3 Horizontal alignment
4 Alignment in longitudinal direction of vehicle
5 Inclination to the roadway and viewing angle

Camera with screw holes (marked blue)

Arrow Direction to the roadway (downwards)
**NOTE**

Possible detachable parts or other interfering contours of the body that protrude into the viewing angle range influence the picture area and can impair the function of the digital inside rearview mirror. Therefore, ensure the necessary viewing angle range without restrictions.

The camera housing must be designed in such a way that there is a protrusion of 5 mm or 0.2 in above the camera lens to limit direct sunlight from above and thus minimize stray light, see the following example.

Example of camera housing with protrusion

1 Camera
2 Camera lens
3 Protrusion of camera housing of 5 mm or 0.2 in

Item number of rearview camera at the time of publication of this information:

A910 905 3500

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For details on the rearview camera, please refer to the available CAD data (see section 2.3.1 Upfitter Portal in the relevant body and equipment guideline).

If you require information on a successor item number, please each out on the Upfitter Portal, see section 2.3.1 Upfitter Portal in the relevant body and equipment guideline.

**2b) Positioning at the rear of the vehicle**

When positioning and tilting the rearview camera at the rear of the vehicle, the reference point is the center point of the camera lens or the reference line is the center axis of the camera lens (see illustration above).

**NOTE**

Before planning an upfit, the upfitter must check whether all specifications can be complied with. If this cannot be guaranteed, the use of this special equipment is not permissible.

For correct display of the image in the digital inside rearview mirror, the rearview camera is coded at the factory to a nominal installation position.
Observe the values specified in the following table for the maximum permissible deviations when positioning the camera at the rear of the vehicle.

<table>
<thead>
<tr>
<th>Height above roadway</th>
<th>[mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal installation height $H_z$</td>
<td>2732</td>
</tr>
<tr>
<td>Maximum vertical deviation $O_z$</td>
<td>±400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position to center of vehicle</th>
<th>[mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal position</td>
<td>0</td>
</tr>
<tr>
<td>Maximum horizontal deviation $O_y$</td>
<td>±200</td>
</tr>
</tbody>
</table>

2c) Inclination to the roadway and viewing angle

The viewing angle $\alpha$ i.e. the inclination of the camera to the roadway, depends on the height above the roadway $H_z$ and is calculated as follows:

$$\alpha = \frac{H_z}{1000 \text{ mm}} + 1.65^\circ$$

Positioning of camera at rear of vehicle (schematic)

The height of the camera position above the roadway must be measured on the vehicle with the complete body including a load typical for the body.

NOTE

If the specified system limits are exceeded, the picture will no longer be transmitted without errors. Therefore, ensure compliance with the specifications for positioning.

Installation height and viewing angle for camera positioning at the rear of the vehicle

1 Camera
2 Center line of camera lens
Arrow Direction of travel

<table>
<thead>
<tr>
<th>Installation height and viewing angle</th>
<th>Height $H_z$ [mm]</th>
<th>Angle $\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum installation height</td>
<td>3132</td>
<td>4.8°</td>
</tr>
<tr>
<td>Nominal installation height</td>
<td>2732</td>
<td>4.4°</td>
</tr>
<tr>
<td>Minimum installation height</td>
<td>2332</td>
<td>4.0°</td>
</tr>
</tbody>
</table>

Observe maximum deviations of the viewing angle of ±0.5° when installing the camera.

NOTE

If the specified system limits are exceeded, the picture will no longer be transmitted without errors. Therefore, ensure compliance with the specifications for the viewing angle.
2d) Electrical connection
After installation, have a qualified electrician connect the rearview camera directly to the connecting point in the driver seat frame using a video line, observing the following specifications.
An additional connecting point is not permissible along the entire length of the line.
For the video line, use only cables of the following type and observe the maximum line length:

<table>
<thead>
<tr>
<th>Cable type</th>
<th>Maximum line length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leoni Dacar 302-4</td>
<td>10 m, 32.8 ft</td>
</tr>
<tr>
<td>RG58 LowLoss Stranded</td>
<td>12 m, 39.4 ft</td>
</tr>
</tbody>
</table>

Use the following plugs, sockets and pin assignments for the electrical connection:

<table>
<thead>
<tr>
<th>Position</th>
<th>Description/type</th>
<th>Pin assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plug</td>
<td>Male</td>
<td>Pin 1 (inside): SIGNAL/POWER Pin 2 (outside): GND</td>
</tr>
<tr>
<td>Driver seat frame</td>
<td>Rosenberger 59Z064-DC0-A Coding: A (black)</td>
<td></td>
</tr>
<tr>
<td>connecting point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video line to camera-side</td>
<td>Female</td>
<td>Pin 1 (inside): SIGNAL/POWER Pin 2 (outside): GND</td>
</tr>
<tr>
<td>cable set</td>
<td>Watertight</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rosenberger 59Z061-DC0-A Coding: A (black)</td>
<td></td>
</tr>
</tbody>
</table>

A watertight connection of the video line to the camera must be ensured by the upfitter.

Ensure that the video line is routed correctly in the vehicle, see information in section 8.4.3 of the corresponding body and equipment guideline.

2e) Commissioning of the rearview camera and the digital inside rearview mirror
After the rearview camera has been electrically connected to the digital inside rearview mirror via the connecting point in the driver seat frame, the system performs an auto-calibration during driving operation. For this purpose, the horizon must be visible in the digital inside rearview mirror when the driving terrain is level.

If blurred, dark areas can be seen at the side of the image, check whether there are any detachable parts or other interfering contours in the viewing angle range. Such restrictions of the rear viewing angle range must not be visible. Therefore, make sure that the above-mentioned specifications for the unobstructed viewing angle range are observed.

ⓘ If you have any questions about commissioning or require further support, please reach out on the Upfitter Portal, see section 2.3.1 Upfitter Portal in the relevant body and equipment guideline.

ⓘ For further information on the digital inside rearview mirror, please refer to the relevant sales information and contact your Mercedes-Benz sales partner.

ⓘ When using the digital inside rearview mirror, observe the information and specifications in the operator’s manual of your vehicle.