

REVERSING CAMERA- **BRAKEGUARD STAR**

USER MANUAL



USER MANUAL | MODE D'EMPLOI | MANUAL DE INSTRUCCIONES | MANUALE D'ISTRUZIONI



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VEGA SOLUTIONS GMBH
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TRANSLATED MANUALS AVAILABLE VIA QR CODE



ENGLISH 



FRANÇAIS 



ESPAÑOL 



ITALIANO 

Dear Customer,

Thank you for choosing the BRAKEGUARD STAR Reversing Camera from VSG24.com!

To ensure optimal performance and safety, please read this user manual carefully before using the device and keep it in a safe place for future reference. Make sure to follow all safety instructions and warnings related to this product.

The illustrations shown in this manual are for explanatory purposes only and are intended to help you understand the device's settings and features. This manual is designed to provide you with a quick and easy introduction to your new device.

If you have any further questions, please feel free to contact us by phone on +49 2241/2008040 or by email at info@vsg24.com.

You can also reach us by post at:
Vega Solutions GmbH – Belgische Allee 51A – 53842 Troisdorf – Germany

We hope you enjoy using your new device!

Your VSG24.com Team



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BRAKEGUARD STAR – Reversing Camera with Brake Light Design

With the Brakeguard Star, you're choosing a high-quality reversing camera that integrates seamlessly into your vehicle's existing brake light – with no drilling and no visible mounting brackets required.

Thanks to the included adapter cable, the camera is compatible with almost any monitor. The extra-wide 145° viewing angle provides excellent visibility and maximum safety when manoeuvring. Even in rain or dirt, the Brakeguard Star delivers clear images thanks to its robust IP69K protection rating, while the integrated night vision ensures reliable performance in the dark.

Featuring Full HD resolution, the Brakeguard Star delivers razor-sharp images – for comfortable and safe reversing, day or night.

Please read this manual carefully and in full before using the product.



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Cleaning, Maintenance and Repairs: Important safety information for the safe operation of your device

Cleaning the device

Always disconnect the device from the power supply before cleaning by unplugging it or switching off the power. As the housing is primarily made of plastic, do not use liquid cleaners, sprays, or chemical cleaning agents such as benzene. These may damage the material.

Recommended Cleaning Methods:

Light dirt: Simply wipe the device with a soft, dry cloth.

More stubborn dirt: Use a slightly damp cloth with a mild, neutral cleaning solution. Then wipe dry with a clean, dry cloth.

Important: Only clean the exterior surface of the device. Never open the housing – dangerous high voltages may be present inside that can pose a risk to life!



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**Commissioning the camera**

The reversing camera is designed for a variable voltage range of 12 to 30 volts. This means it can be used in passenger cars with a 12-volt electrical system as well as in trucks with a 24-volt system. A minimum supply of 12 volts and 1 ampere is required for proper operation.

Power supply for the camera

The VSG24 reversing camera can be easily connected to all VSG24 reversing monitors thanks to its waterproof 4-pin quick connector. To do this, insert the 4-pin cable into the camera input on the monitor, making sure the alignment markings match. Then secure the connection using the locking screw.

For monitors with an RCA input, an adapter cable is included in the set. The camera can be connected either to terminal 15 (ignition) for continuous operation or to the reversing light, so that it only activates when reverse gear is engaged.

Mounting the camera

The reversing camera is installed in place of the existing brake light cover. To do this, the light strip from the original brake light is removed and inserted into the housing of the brake light camera. This means no drilling into the vehicle body is necessary, as the existing cable entry points from the brake light can be used to conveniently route the wiring into the interior.

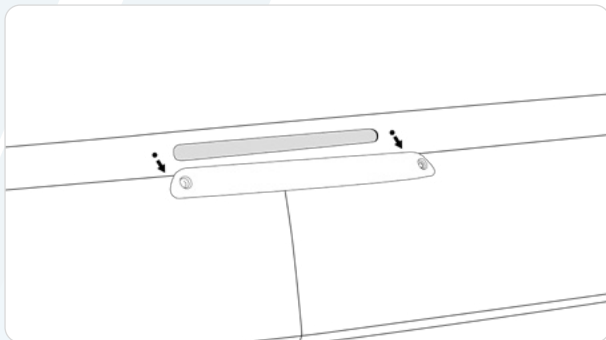
**AHD/CVBS Jumper****Your camera supports both analogue and HD resolution**

- If you are using an analogue monitor, remove the „AHD/CVBS“ cap to switch the camera to analogue resolution.
- If your monitor supports AHD 1080P video input, leave the cap in place to benefit from the maximum HD resolution.

If no image appears, check whether the jumper has been correctly removed or attached, and restart your monitor.

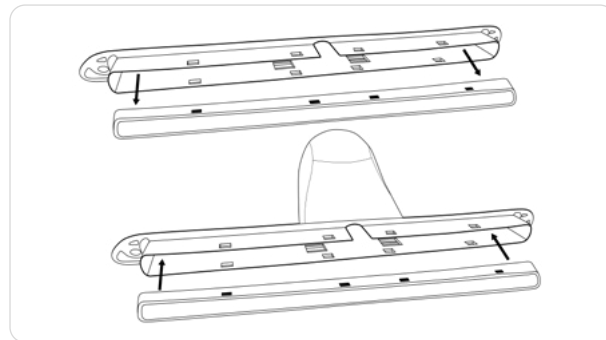
- Installation without drilling
- 145° viewing angle
- IP69K protection rating
- Full HD resolution

- Adjustable ball head
- With adapter cable for maximum compatibility
- Night vision function
- Suitable for all types of monitors



1. Remove the old brake light

Loosen the mounting screws, carefully remove the old brake light, and disconnect the existing wiring from the integrated light strip.



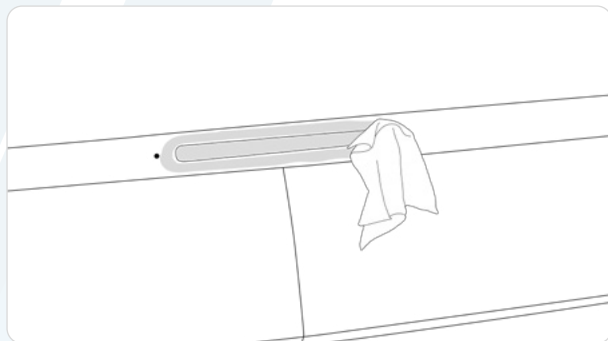
2. Insert the light strip into the camera housing

Remove the light strip from the original housing and insert it into the new reversing camera housing. Make sure the light strip clicks securely into place.



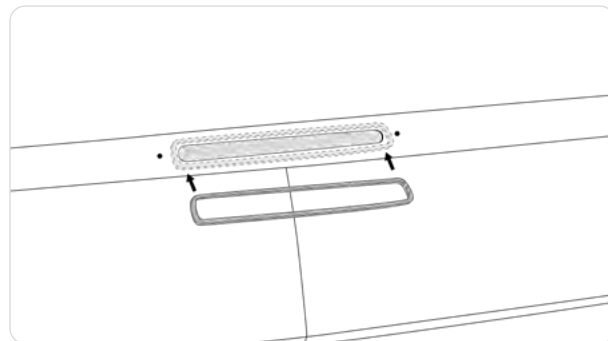
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3. Clean the mounting surface

Thoroughly clean the area around the brake light cut-out to remove dust, grease, and other contaminants, ensuring optimal adhesion.



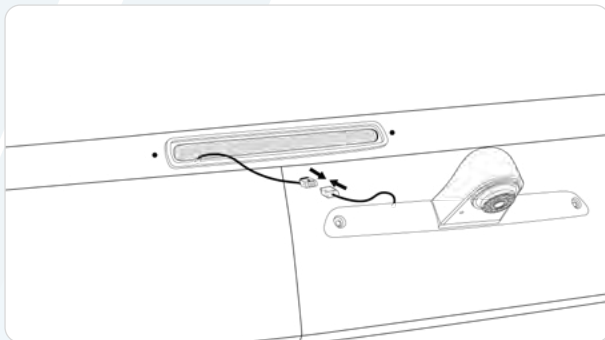
4. Attach the seal

Apply the supplied seal to the cleaned surface and press it down firmly until it is securely in place.



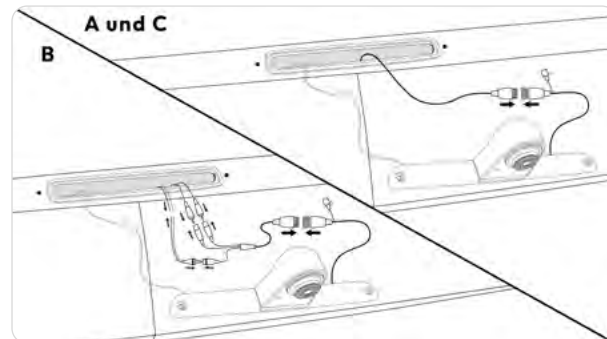
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5. Connect the brake light cable

Reconnect the brake light cables that were disconnected in Step 1 to restore the electrical connection properly.



6. Camera connection and wiring

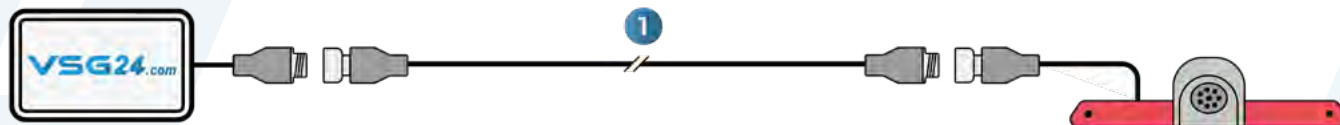
In this step, the camera is connected to the monitor and the power supply. The connection options are described on the following pages. For the adapter cable, installation at the rear of the vehicle is recommended.

The diagram above shows the rear wiring layout for the three different installation scenarios.



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Connection Guide – A: Connecting the 4-pin extension cable

NOTE: Before starting the camera wiring, please read and follow the explanation regarding the „AHD/CVBS“-Jumper on **Page 7**.

1 4-pin extension cable

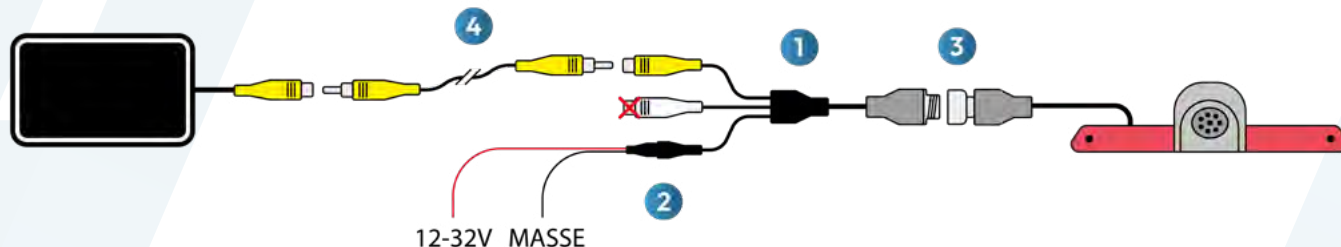
When using a VSG24 reversing monitor, the pin assignment for inputs and outputs is identical. This allows the camera to be connected directly using a 4-pin extension cable. The monitor supplies power to the camera via this cable while simultaneously transmitting the video signal.

For optimal performance, we recommend using the VSG24 Elite extension cable.



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Connection Guide – B: Connecting the adapter cable (rear)

NOTE: Before starting the camera wiring, please read and follow the explanation regarding the „AHD/CVBS“-Jumper on **Page 7**.

1 Adapter cable

For use with third-party monitors or head units, a 4-pin to RCA adapter cable is included in the scope of delivery. With this installation option, the adapter cable is installed at the rear of the vehicle.

2 Power connection

Connect the AC/DC cable (plug with black and red wires) to the adapter cable.

- Black → Vehicle ground
- Red → 12–30 V power source

If the red wire is connected to the reversing light, the camera will only be active when reverse gear is engaged.

NOTE: Secure all cable connections with heat shrink tubing to ensure reliable insulation and protection against moisture.

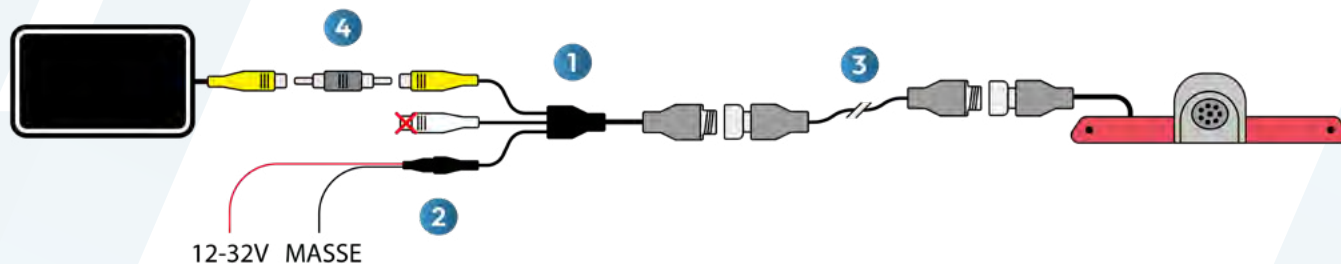
3 Camera wiring

Connect the adapter cable directly to the 4-pin output of the camera. No additional cable is required.

4 Monitor wiring

Route an RCA extension cable from the adapter cable at the rear of the vehicle to the monitor in the driver's area. The monitor is connected via the yellow RCA plug (video signal).

As the camera does not have a microphone, the white RCA plug remains unused.



Connection Guide – C: Connecting the adapter cable (front)

NOTE: Before starting the camera wiring, please read and follow the explanation regarding the „AHD/CVBS“-Jumper on **Page 7**.

1 Adapter cable

For use with third-party monitors or head units, a 4-pin to RCA adapter cable is included in the scope of delivery. With this installation option, the adapter cable is installed at the rear of the vehicle.

2 Power connection

Connect the AC/DC cable (plug with black and red wires) to the adapter cable.

- Black → Vehicle ground
- Red → 12–30 V power source

With this installation option, the red wire is connected directly to ignition power / terminal 15.

NOTE: Secure all cable connections with heat shrink tubing to ensure reliable insulation and protection against moisture.

3 Camera wiring

Route a 4-pin extension cable from the adapter cable at the front to the camera at the rear of the vehicle.

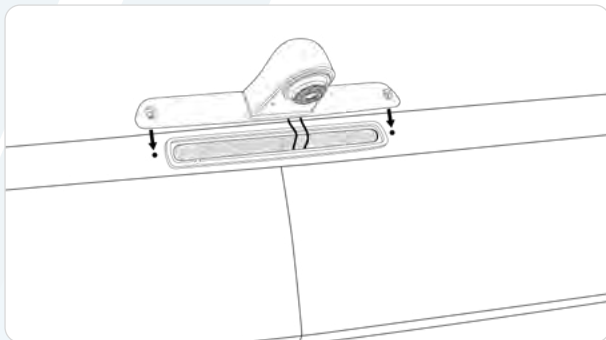
We recommend using the VSG24 Elite extension cable for this purpose.

4 Monitor wiring

Connect the adapter cable to the monitor using the included RCA adapter.

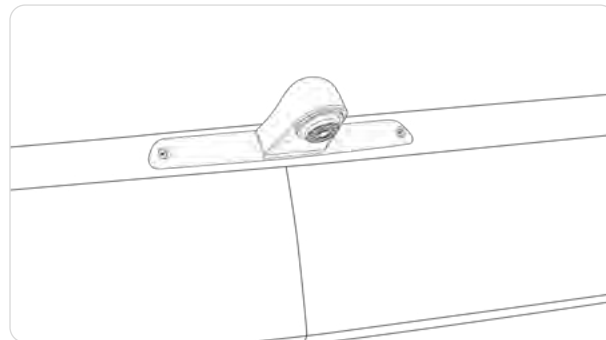
The monitor is connected via the **yellow** RCA output (video signal).

As the camera does not have a microphone, the white RCA plug remains unused.



7. Mount the brake light camera

Tuck away the camera's connection cables neatly and reattach the reversing camera brake light to the vehicle using the screws removed in **Step 1**.



8. Commissioning

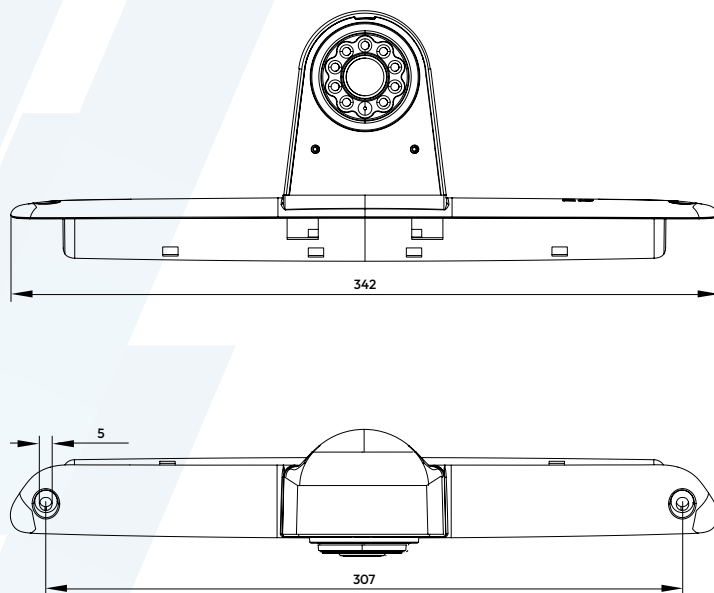
The reversing camera has now been successfully installed.

IMPORTANT: Before driving on public roads, always check that the brake light is functioning correctly.



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Technical specifications	Details
Protection rating	IP69K
Viewing angle	145°
Image sensor	CMOS 1/4"
Night vision function	8 IR-Dioden
Resolution	HD 1080P CVBS 700 TVL
Connection	4-Pin
TV-System	PAL
Power supply	DC12-30V
Operating temperature	-20°C to + 70°C
compatible vehicle types	Mercedes Sprinter (2006-2023), VW Crafter (2007-2017)



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