

VAG MIB / MIB-2 Camera Video interface

Compatible with Audi vehicles with MMI Navigation Plus based on MIB

Bentley vehicles with MIB with 8" monitor

Lamborghini vehicles with MIB with monitor in instrument

Porsche vehicles with PCM 4.0

Seat vehicles with Media System Plus - MIB High/Standard

Skoda vehicles with MIB STD2 PQ/+NAV, Amundsen and Bolero

**VW vehicles with MIB/MIB2/MQB High/Discovery Pro and
Standard/Composition Media**



Video-inserter for rear view camera and two more video inputs

Product features

- Video-inserter for factory-infotainment monitors
- Back camera CVBS Input
- CVBS Video-Input for after-market Video sources (e.g. DVD-Player, DVB-T Tuner, ...)
- Automatic switching to rear-view camera input on engagement of the reverse gear
- Manual switching to front camera by keypad or factory button
- Activatable parking guide lines for rear-view camera (vehicle specific restrictions possible)
- Video-in-motion (ONLY for connected video-sources)
- Compatible with factory rear-view camera
- AV-inputs PAL/NTSC compatible

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Legal Information

By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. Apart from using this product in an unmovable vehicle, it should only be used to display fixed menus or rear-view-camera video when the vehicle is moving (for example the MP3 menu for DVD upgrades).

Changes/updates of the vehicle's software can cause malfunctions of the interface. Up to one year after purchase we offer free software-updates for our interfaces. To receive a free update, the interface has to be sent in at own cost. Wages for de-and reinstallation and other expenditures involved with the software-updates will not be refunded.

1. Prior to installation

Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources.

1.1. Delivery contents



Take down the serial number of the interface and store this manual for support purposes: _____

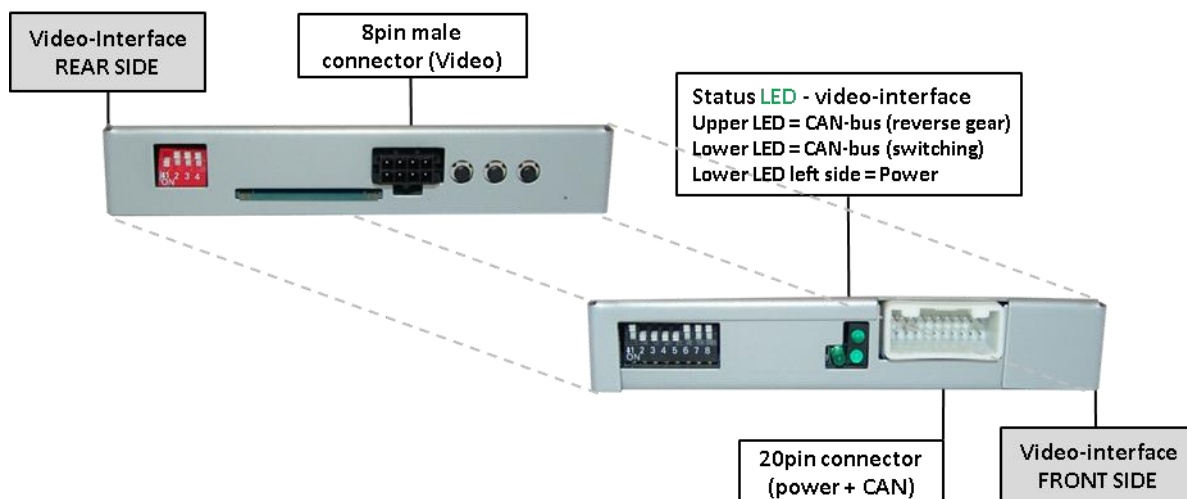
1.2. Checking the compatibility of vehicle and accessories

Requirements		
Brand	Compatible vehicles	Compatible systems
Audi	A3 (8V) since 05/2012-, A4 (8W) since 08/2015-, A5 (8T) since 07/2016-, A6 (4G) since 09/2014-, A7 (4G) since 05/2014-, Q2 (GA) since 09/2016-, Q5 since 2017-, Q7 (4M) since 03/2015-	MMI Navigation Plus with MMI Touch 7", 8" or 8.3" - MIB/MIB II Main-Unit
	A3 (8V) since 05/2012-, A4 (8W) since 08/2015-, A5 (8T) since 07/2016-, Q2 (GA) since 09/2016-, Q5 from 2017-, Q7 (4M) since 03/2015-	MMI Navigation 7" - MIB Std Nav/MIB Std Plus
	R8 (4S) since 05/2015-, TT (8S) since 07/2014-	MMI Radio Plus 5.8" or 7" - MIB Entry Plus/MIB Std
Bentley	Bentayga	MMI Navigation Plus - MIB II Main-Unit with monitor in instrument
Lamborghini	Huracan 2016-	MIB with 8" monitor
Porsche	911 (991.2 face-lift) from 12/2015-, Cayenne, Macan and other vehicles with	MIB with monitor in instrument
Seat	Ateca, Leon3 (5F) from 2013, Toledo	PCM 4.0
Skoda	Ateca, Leon3 (5F) from 2013, Toledo	Media System Plus - MIB High/Standard
	Fabia3 (NJ) from 11/2014, Octavia3 (A7) and other vehicles with	MIB High/Columbus und Standard/Bolero/Amundsen - 5.8inch, 6.5inch or 8inch monitor. NOT 2018 9.2inch
VW	Crafter about 2015-2016 Crafter 2017-, Golf7, Passat 2016, Polo5 (6C) and other vehicles with	MIB/MIB2/MQB High/Discovery Pro und Standard/Composition Media - 5.8inch, 6.5inch, 7inch or 8inch monitor. NOT 2018 9.2inch.
Limitations <i>Video only</i> The interface inserts ONLY video signals into the infotainment. For inserting Audio signals either the possibly existing factory audio-AUX-input or a FM-modulator can be used. <i>Factory rear-view camera</i> Automatically switching-back from inserted video to factory rear-view camera is only possible while the reverse gear is engaged. To delay the switch-back an additional electronic part is required.		

1.3. Boxes and connectors

1.3.1. Video Interface

The video-interface converts the connected after-market sources video signals into a LVDS signal which is inserted in the factory monitor using separate trigger options. Further it reads the vehicle's digital signals out of the vehicle's CAN-bus and converts them for the video interface.



1.4. Settings of the 8 Dip switches (black)

Some settings must be selected by the dip-switches on the video interface. Dip position down is ON and position up is OFF.



Dip	Function	ON (down)	OFF (up)
1	No function		set to OFF
2	CVBS Video 1-input	enabled	disabled
3	CVBS Video 2-input	enabled	disabled
4	Vehicle specific settings	For Audi TT vehicles	all other vehicles
5	Rear-view cam type	after-market	factory or none
6	Monitor adjustment	Try all 6 possible combinations of Dips 6, 7 and 8 to receive the best picture (quality and size) or see chapter "Monitor adjustment (Dip 6-8)"	
7			
8			

See the following chapters for detailed information.

1.4.1.1. Enabling the interface's video inputs (dip 2-3)

Only the enabled video inputs can be accessed by switching through the interface's video sources. It is recommended to enable only the required inputs. So the disabled inputs will be skipped while switching through the video interfaces inputs.

1.4.1.2. Vehicle specific settings (Dip 4)

Set Dip switch 4 to **ON for Audi TT vehicles**. For all other vehicles it has to be set to OFF.

1.4.1.3. Rear-view camera setting (dip 5)

If set to OFF, the interface switches to factory LVDS picture while the reverse gear is engaged to display factory rear-view camera or factory optical park system picture.

If set to ON, the interface switches to its rear-view camera input while the reverse gear is engaged.

1.4.1.4. Monitor selection (Dip 6-8)

Dips 6-8 customize the monitor-specific video settings which sometimes even vary within head units of the same version, caused by different monitor specifications. It is necessary to try all possible combinations while a working video source is connected to the chosen input of the interface. One of the six combinations will show the best picture size and quality (some may give no picture). It is possible to first hot plug through the dip combinations. If there is no change of picture visible after trying all 6 options, retry and disconnect the 10pin plug of the Quadlock connector between every change of the dip setting.

Empirical value:

Vehicle	Monitor	Dip 4	Dip 6	Dip 7	Dip 8
VW Golf7	8"	OFF	OFF	OFF	OFF
	5.8"	OFF	OFF	OFF	ON
Audi A3 (8V)	7"	OFF	OFF	ON	OFF
	5.8"	OFF	OFF	ON	ON
Audi A4 (8W), A5 (8T)	8.3"	OFF	ON	OFF	OFF
	7"	OFF	OFF	OFF	OFF
Audi A6/A7 (4G)	8"	OFF	OFF	ON	ON
Audi Q7 (4M) Touch	8.3"	OFF	ON	ON	OFF
Audi Q7 (4M) MMI	7"	OFF	OFF	OFF	OFF
Porsche		OFF	OFF	OFF	OFF
VW Touran		OFF	OFF	OFF	OFF
Audi TT (8S)		ON	OFF	OFF	OFF

1.5. Settings of the 4 Dip switches (CAN functions – red)

All 4 dip-switches of the CAN-box have no function for normal use except Porsche vehicles with PCM 4.0 and must be set to OFF.



Dip position down is ON and position up is OFF.

Vehicle/Navigation	Dip 1	Dip 2	Dip 3	Dip 4
All vehicles	OFF	OFF	OFF	OFF
Porsche with PCM 4.0	OFF	ON	OFF	OFF

After each Dip-switch-change a power-reset of the Can-box has to be performed!

2. Installation

To install the interface, first switch off the ignition and disconnect the vehicle's battery. Please read the owner's manual of the car, regarding the battery's disconnection! If required, enable the car's Sleep-mode (hibernation mode)

In case the sleep-mode does not succeed, the disconnection of the battery can be done with a resistor lead.

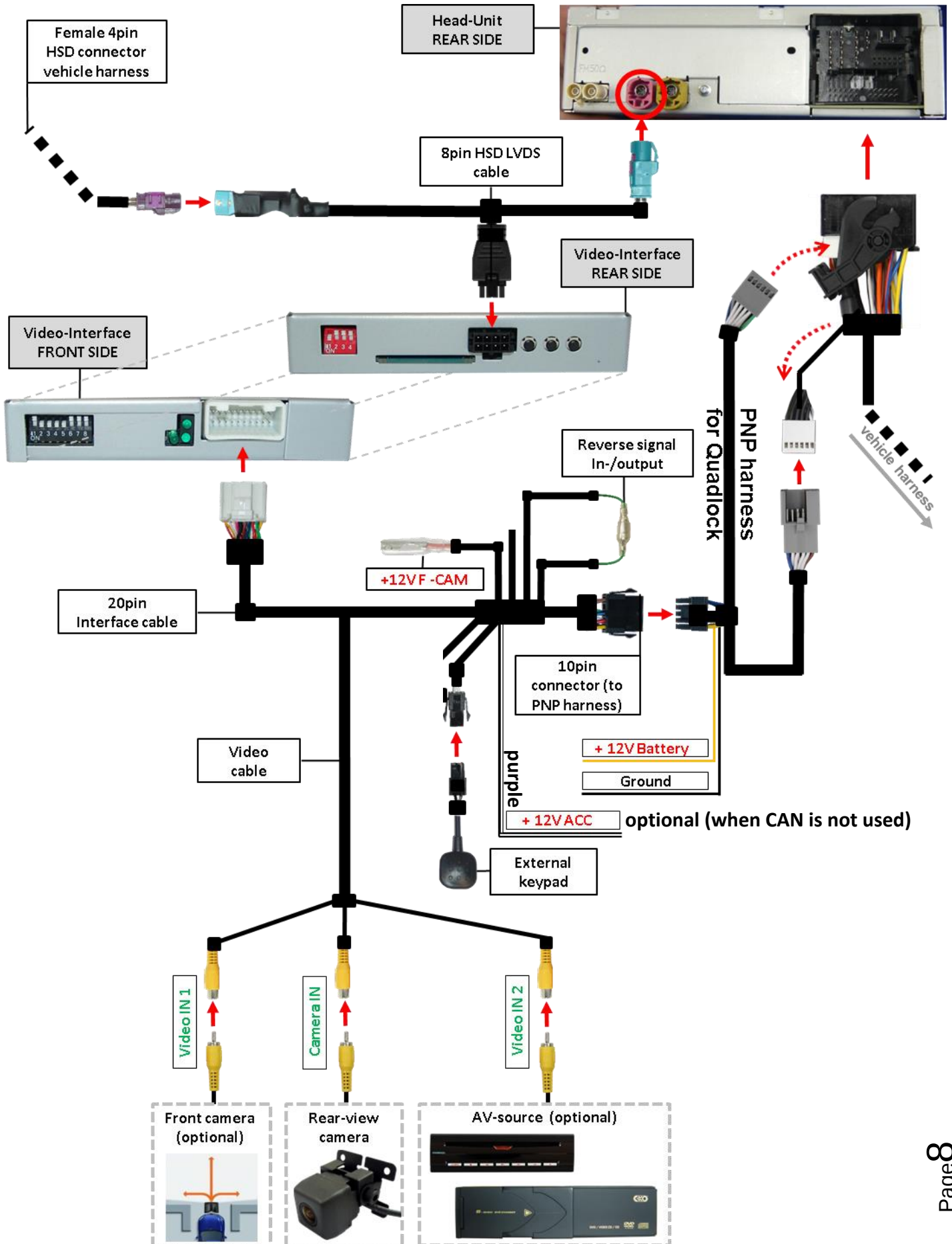
If the necessary stabilized power supply for the interface is not taken directly from the battery, the chosen connection has to be checked for being constantly stabile.

The interface needs a permanent 12V source!

2.1. Place of installation

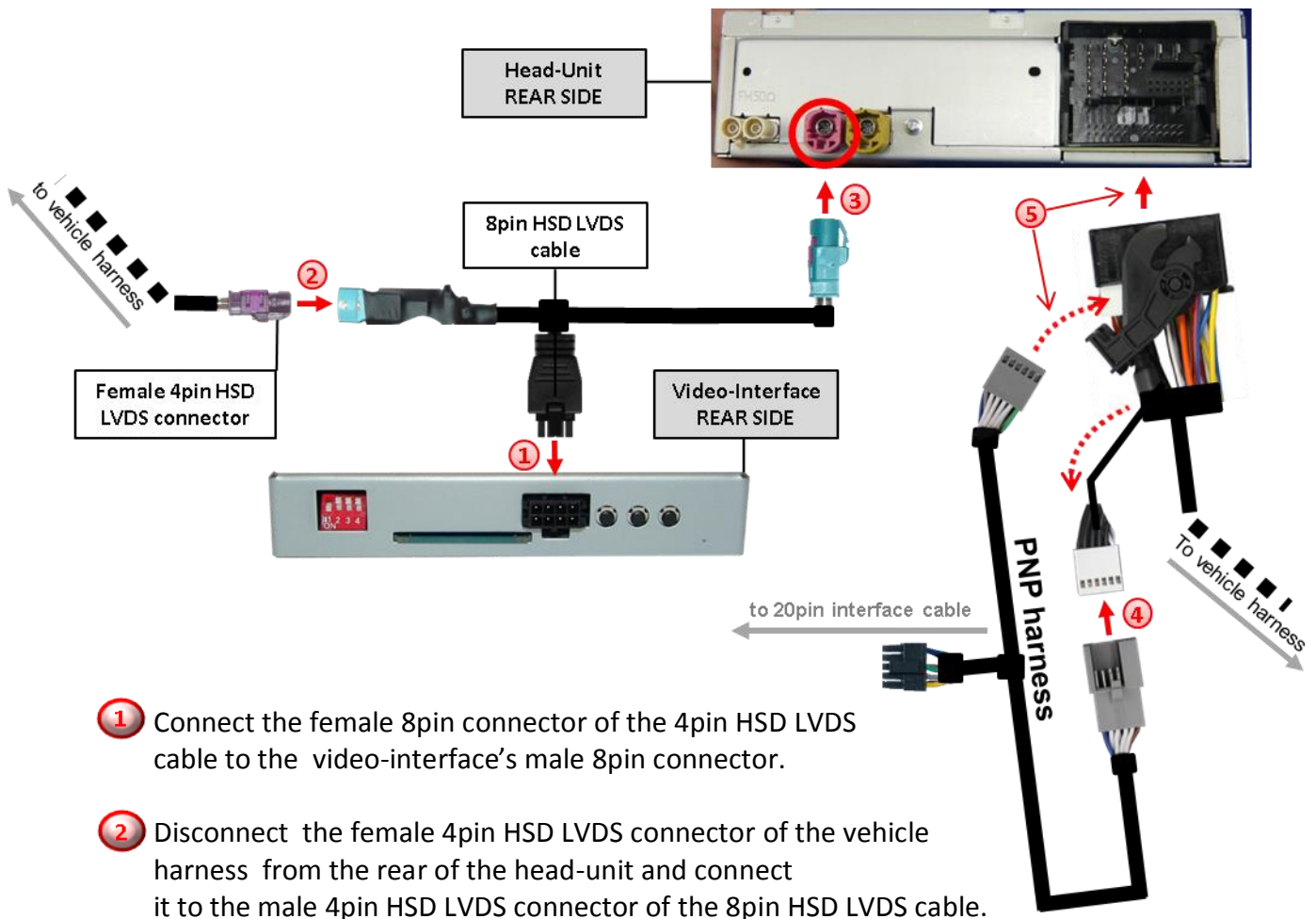
The interface is built to be connected behind the vehicle's head-unit.

2.2. Connection schema



2.3. Connections to the head-unit

Remove the head-unit.

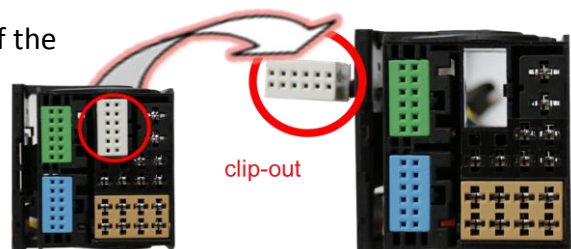


- 1 Connect the female 8pin connector of the 4pin HSD LVDS cable to the video-interface's male 8pin connector.
- 2 Disconnect the female 4pin HSD LVDS connector of the vehicle harness from the rear of the head-unit and connect it to the male 4pin HSD LVDS connector of the 8pin HSD LVDS cable.

Note: If required, the marked lug of the female 4pin HSD LVDS connector has to be cut off! Further, the colour of the female 4pin HSD LVDS connector may vary between pink and grey, depending on the installed monitor.

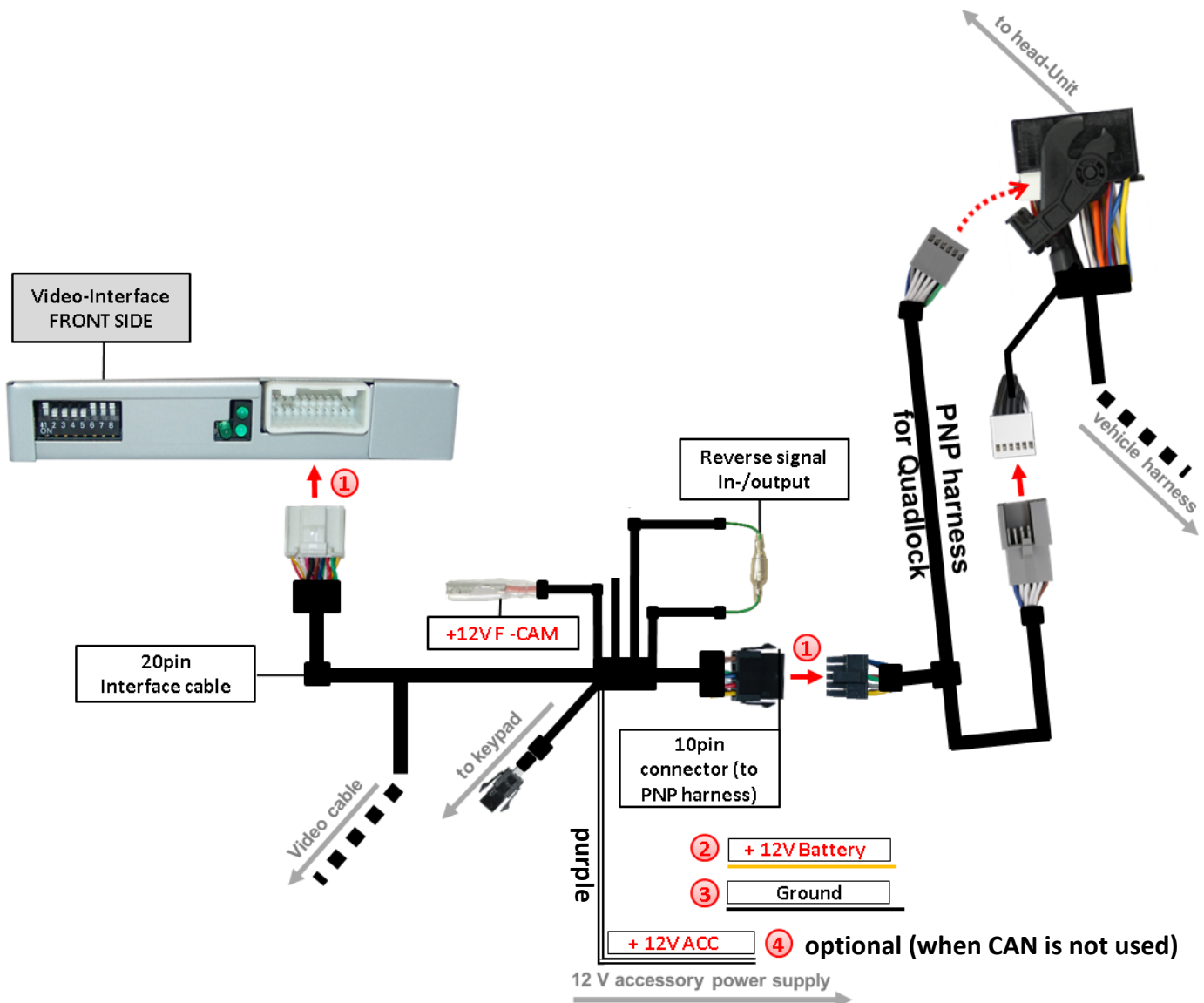


- 3 Connect female 4pin connector of the 8pin HSD LVDS interface cable to the male 4pin HSD LVDS connector of the head-unit (**colours may vary!**).
- 4 Remove the female Quadlock connector of the vehicle harness from the rear of the head-unit and connect the previously clipped out white female 12pin connector (see graphic) to the male 12pin connector of the PNP harness.



- 5 Clip in the female 12pin connector of the PNP harness in the previously become free position of the female Quadlock connector before finishing the Quadlock reconnection at the rear of the head-unit

2.4. Connection and power supply for the video interface



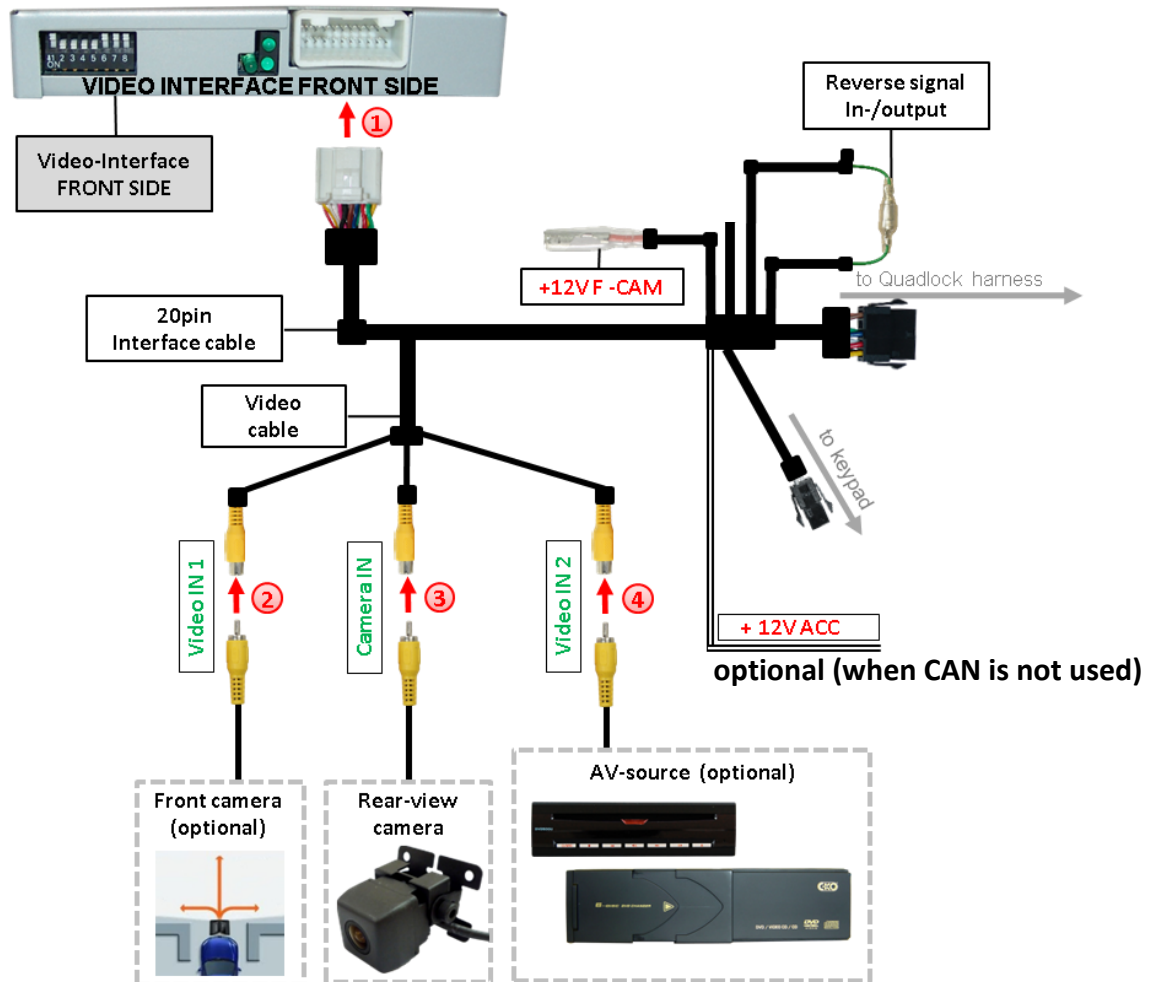
- ① Connect the interface cable's female 20pin connector to the 20pin connector of the interface and connect the interface cable's male 10pin connector to the female 10pin connector of the PNP harness
- ② Connect the single, yellow wire "BATT" of the PNP harness to +12V permanent and stabile power supply.
- ③ Connect the single, black wire "GND" of the PNP harness to the vehicle's negative ground.
- ④ In case of a missing CAN communication between the vehicle and the interface, the single, purple wire of the 20pin interface cable has to be connected additionally to a stabile +12V accessory power supply.

2.5. Connecting video sources

It is possible to connect an after-market rear-view camera, an after-market front camera and an AV source to the video-interface.

Before a final installation of the peripheral devices, we recommend a test-run to ensure the compatibility of vehicle and interface. Due to changes in the production of the vehicle manufacturer there's always a possibility of incompatibility.

Note: The interface cable's grey coloured IR cable and the audio switch cable are out of function and should be isolated.



- ① Connect the female 20pin connector of the interface cable to the male 20pin connector of the video-interface.
- ② Connect the video RCA of the Front camera to the female RCA connector "Video IN 1" of the 20pin interface cable.
- ③ Connect the video RCA of the Rear-view camera to the female RCA connector "camera IN" of the 20pin interface cable (refer also to chapter "Video signal connection of the rear-view camera")
- ④ Connect the video RCA of the AV source to the female RCA connector "Video IN 2" of the 20pin interface cable.

2.5.1. Audio-insertion

This interface is only able to insert video signals into the factory infotainment. If an AV-source is connected, the audio insertion has to be done by the factory audio AUX input or an FM-modulator. The inserted video-signal can be activated simultaneously to each audio-mode of the factory infotainment.

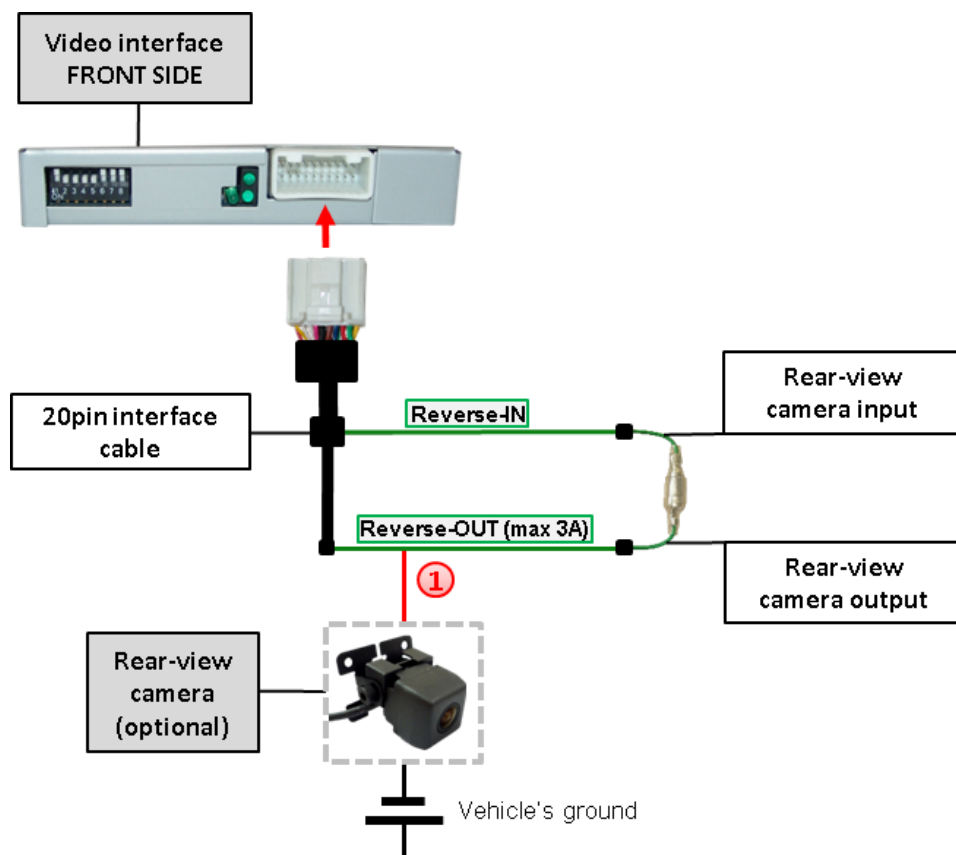
2.5.2. After-market rear-view camera

Some vehicles have a different reverse gear code on the CAN-bus which the video-interface is not compatible with. In this case there are two different ways of installation. If the video-interface is able to detect an enabled vehicle's reverse gear, the green wire of the 6pin to 12pin cable should carry +12V while the reverse gear is engaged.

Note: Do not forget to set video interface's dip5 to ON before testing.

2.5.2.1. Case 1: CAN-box receives the reverse gear signal

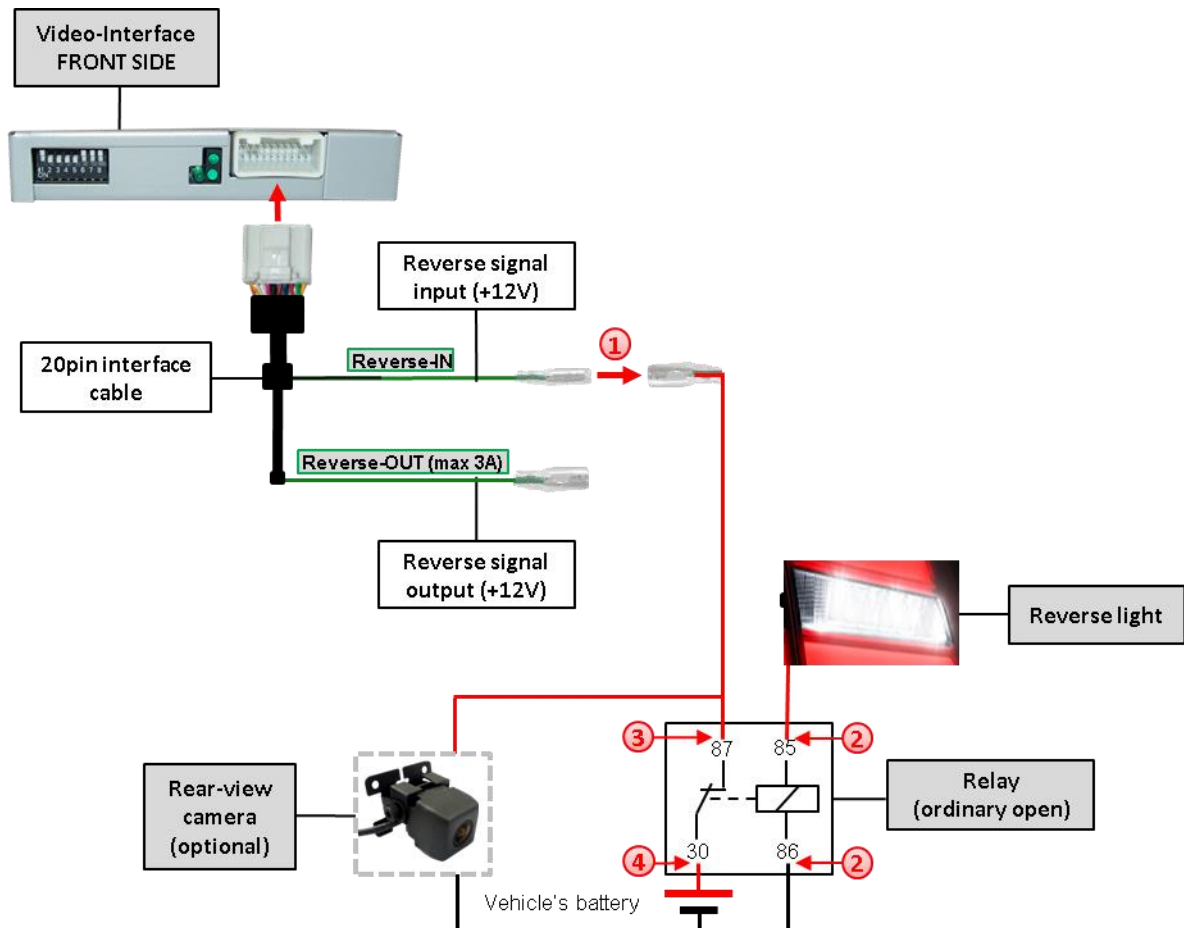
If the interface delivers +12V on the green output wire of the 20pin interface cable while reverse gear is engaged, the video interface will automatically switch to the rear-view camera input "Camera IN" while the reverse gear is engaged.



1 Additionally, the +12V power supply for the rear-view camera can be taken from the red ACC-out wire of the interface connection cable.

2.5.2.2. Case 2: CAN-box does not receive the reverse gear signal

If the video interface does not deliver +12V on the green wire of the 20pin cable when reverse gear is engaged (not all vehicles are compatible), an external switching signal from the reverse gear light is required. As the reverse gear light's power supply isn't voltage-stable all the time, an ordinary open relay is required. The diagram below shows the connection type of the relay.

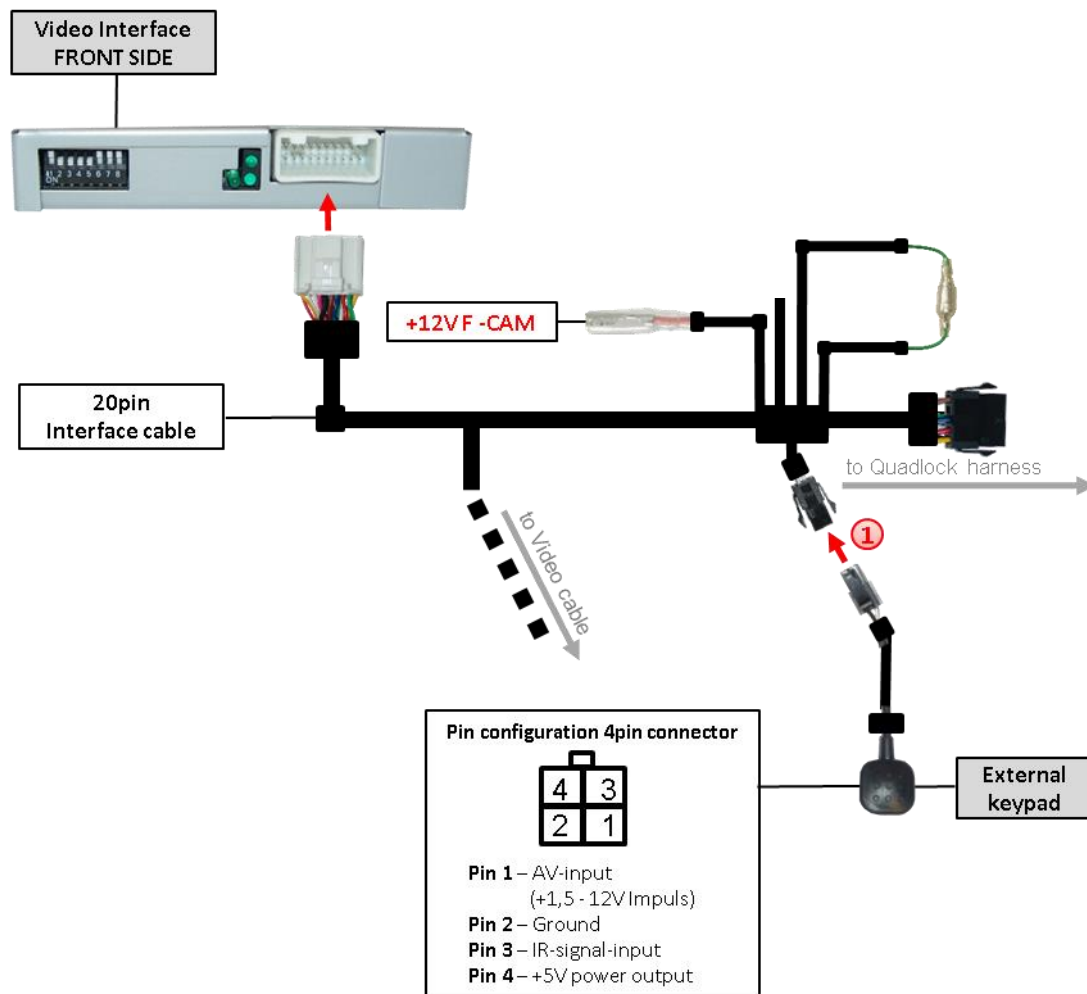


- 1 Disconnect the green cable's preconnected male- and female connectors of the 20pin cable and connect the green input cable "Reverse-IN" to the output connector (87) of the relay.

Note: Not least to avoid short circuits, the best solution should be, to crimp a male 4mm connector to the relay's output cable and connect it to the green cable's female 4mm connector. The output-cable "Reverse-OUT" remains disconnected as it's out of function.

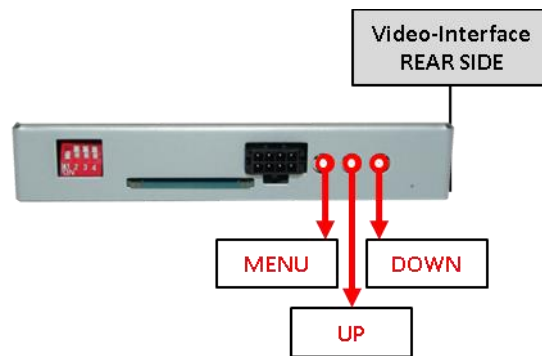
- 2 Connect the Reverse light's power-cable to coil (85) and the vehicle's ground to coil (86) of the relay.
- 3 Connect the output connector (87) of the relay to the rear-view camera's power-cable, like you did it to the green "Reverse-IN" cable before.
- 4 Connect permanent power / 12V to the relay's input connector (30).

2.6. Connecting video-interface and keypad



- 1 Connect the female 4pin connector of the keypad to the male 4pin connector of the 20pin interface cable.

2.7. Picture settings and guide lines

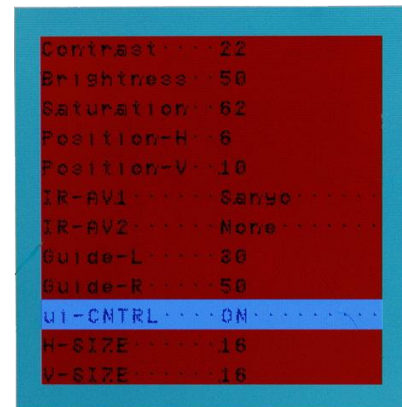


The picture settings are adjustable by the 3 push-buttons on the video-interface. Press the MENU button to open the OSD settings menu or to switch to the next menu item. Press UP and DOWN to change the selected value. The buttons are placed inside in the housing to avoid accidental changes during or after the installation. Picture settings must be done separately for AV1 and AV2 while the corresponding input is selected and visible on the monitor.

Note: The OSD menu is only shown when a working video source is connected to the selected video-input of the interface.

The following settings are available:

Contrast
Brightness
Saturation
Position H (horizontal)
Position V (vertical)
IR-AV1/2 (no function)
Guide L/R (no function)
UI-CNTRL (guide lines ON/OFF) -



adjustments:

“All ON/All OFF”-Guide lines + PDC ON/OFF

Guide on -only guide lines

PDC on -only PDC

Size H/V (picture size horizontal/vertical)

Note: If there is no communication between the CAN box and the vehicle's CAN-bus (several vehicles aren't compatible), the reverse gear guide-lines can't be shown during the vehicle's operation, even if they once appear after having switched the system to powerless!

3. Interface operation

3.1. By factory infotainment button

One of the factory infotainment buttons can be used to execute interface functions.

For Skoda/Volkswagen/Audi vehicles

Press **MENU button** to switch the video-source

For Audi A3 vehicles

Press **NAVI** button to switch the video-source.

For Porsche vehicles

Press **NAV** button to switch the video-source.

Each press will switch to the next enabled input. Inputs which are not enabled will be skipped.

Switchover by vehicle buttons isn't possible in all vehicles. In some vehicles the external keypad has to be used.

3.2. By keypad

Alternatively or additionally to the factory infotainment buttons the interface's external keypad can be used to switch the enabled inputs.

4. Specifications

BATT/ACC range	7V - 25V
Stand-by power drain	<30mA
Power	0.3A @12V
Video input	0.7V - 1V
Video input formats	PAL/NTSC
RGB-video amplitude	0.7V with 75 Ohm impedance
Temperature range	-40°C to +85°C
Dimensions video-box	122 x 22 x 85 mm (W x H x D)

CE  12V DC