

	Installation Instruction NextGen E46	
<i>Document Reference #: 101921</i>	<i>Version:1.0</i>	<i>Zuletzt geändert: July 24, 2024</i>

Installation Instruction **AK-Motion DataDisplay NextGen E46**

!!! Installation only by qualified persons!!!

!!! Disconnect battery before installation !!!

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Document release notes

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1 Delivery Content



- Display-Unit
- Junction-Box
- Harness: Junctionbox > Car
- Display cable (That is not a standard USB Type C Cable!)
- 1x USB Cable (Display Update)
- 2x Housings for car connector
- Wire K-Line incl. connector
- Step drill

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2 Required Tools

- Torx T20
- Plastic Wedge (optional)
- Phillips screwdriver
- Small flat-head screwdriver or paperclip (for pin out the contacts)
- Drilling machine

3 Disassembly

3.1 Demontage trim

Tools: Possibly plastic wedge

Lift the strip on the passenger side and pull it off:



Then remove the strip in the middle.

3.2 Disassembly Air Vent

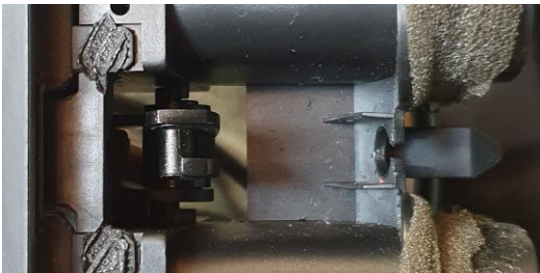
Tool: Phillips screwdriver

Remove the two screws:



Pull the fresh air grill out of the dashboard. It is very firmly in place. It is best to pull from the bottom and then pull upwards in a kind of twisting motion.

When adjustment wheel for temperature exist, unhook the cable (pull upwards). Then turn the fresh air grill so that the cable can be pushed sideways out of the adjustment.



3.3 Disassembly instrument cluster

Tool: Torx T20

Remove the two screws that secure the instrument cluster:



Put the steering wheel down and pull it out as far as possible.

Pull out the instrument cluster and unplug the two plugs at the back.

To do this, press the lock and fold the bracket over:



Put the instrument cluster aside.

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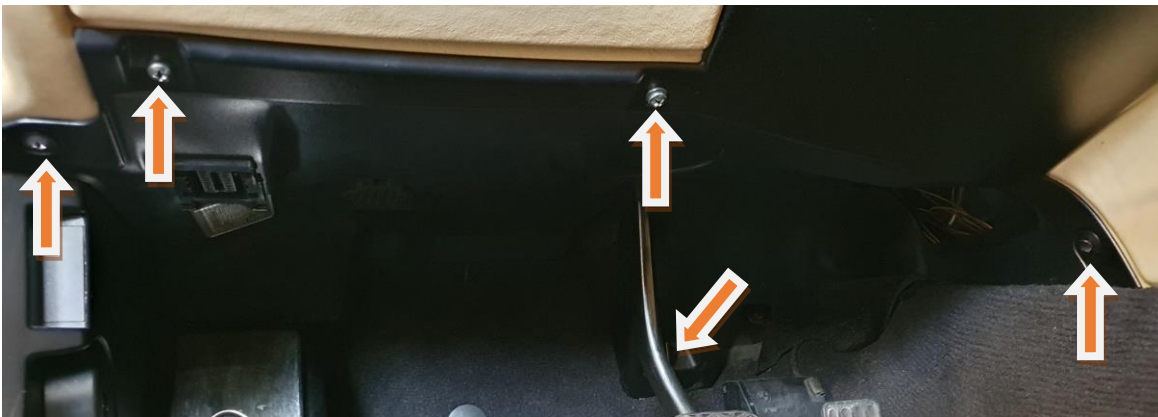
3.4 Removing the footwell trim on the driver's side

Tool: Phillips screwdriver

Remove the three screws.

Towards the passenger side, pull the pin out of the expanding rivet and remove the rivet.

Turn the locking screw on the pedals by 90 degrees:



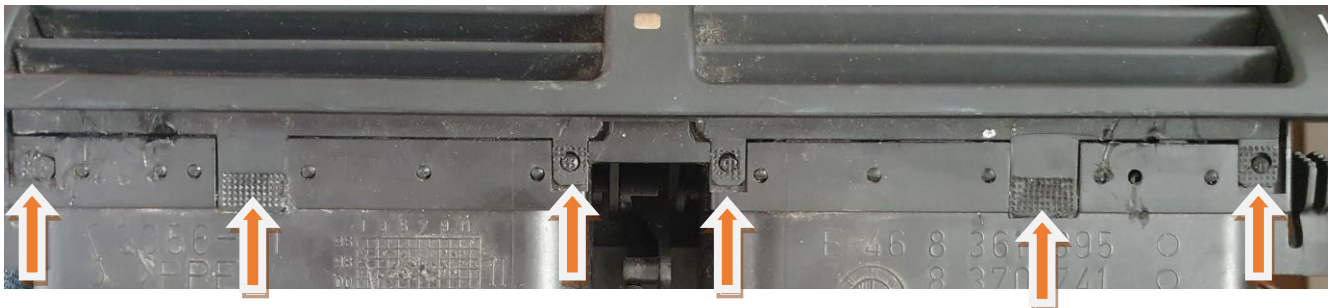
Pull the cover forward a little and lower it.

4 Assembly display - fresh air grill

There are two options:

- Remove the front panel from the fresh air grill housing to remove the slats
- Leave the front panel on the housing and "break out" the slats

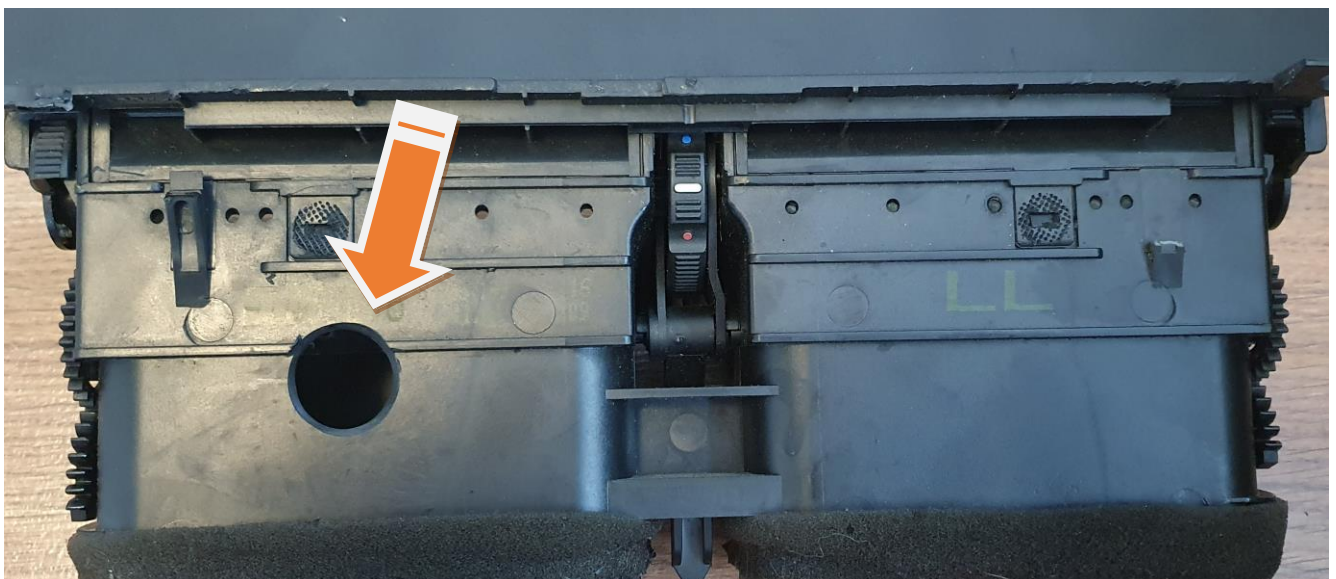
The front panel is fixed (welded) to the housing at 6 points on the top and at 2 points on the bottom. These must be broken open.



If the cover can be pulled off to the front, the slats (the horizontal ones at the front and the vertical ones behind them) on the side where the display is located must be removed.

The cover can then be put back on the housing. To do this, fix the broken areas with glue or, better still, "weld" the areas back together with an old soldering iron, for example.

Drill a sufficiently large hole in the place shown using the step drill provided:



Remove any sharp edges (deburr).

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Feed the display cable through the hole and connect it to the display.

CAUTION: The round side of the connector on the round side on the display and flat on flat.



Now first press the display into the fresh air grill on the right side and then press the left side in until it clicks into place.

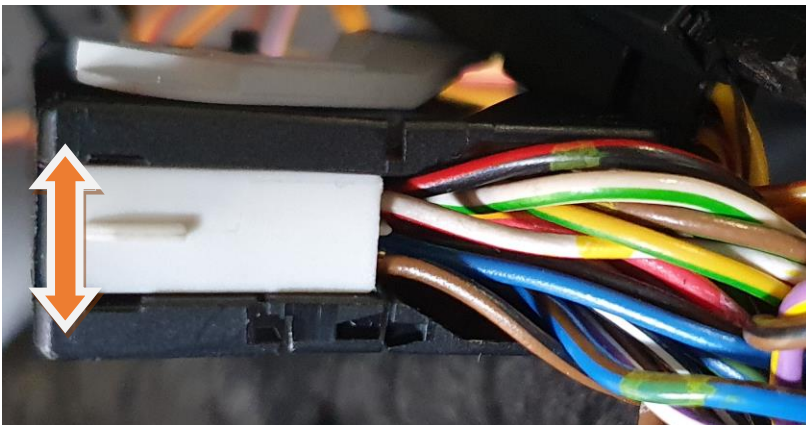


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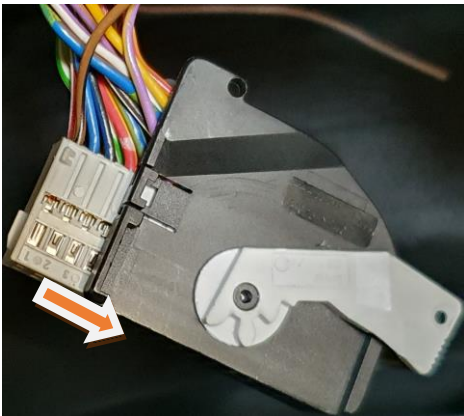
5 Wiring

5.1 Connecting the wiring harness to the instrument cluster

To remove the connector housing, the sides must be pulled apart. This can be done with your hands or by using a flat screwdriver.



Pull down the connector housing:



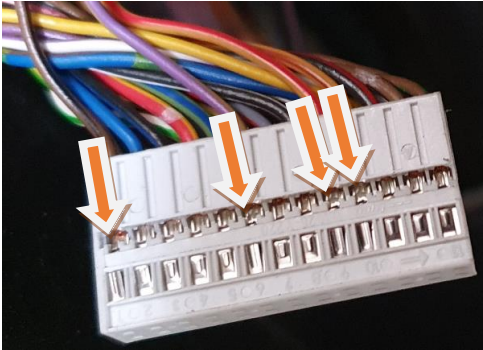
Here is the required assignment:

Pin 1: Brown/Black = Ground

Pin 6: Violet/Yellow = Power supply

Pin 9: Yellow/Red = Can-High

Pin 10: Yellow/Brown = Can-Low



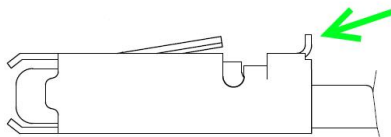
ATTENTION!

There are (unfortunately) two versions of the contacts that were used.

Re-pinning is only possible if the contacts look like this (a lateral guide):



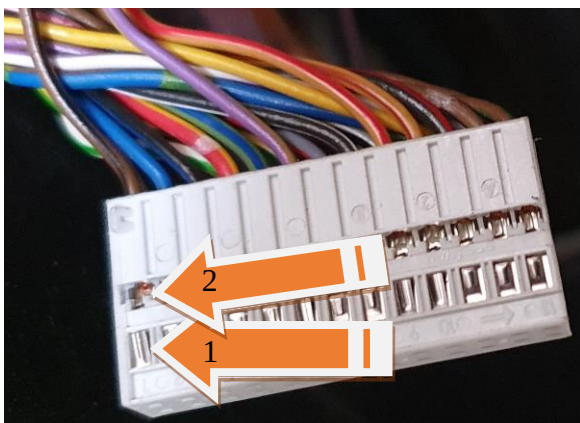
If these contacts (guided to the contact in the middle using a flag) are installed, the 4 cables of the wiring harness must be attached to the existing cables, e.g. by soldering:



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Now the cables are unpinned one after the other. To do this, use a very small flat screwdriver, a needle or something similar. The crimp contacts have a flag that works like a barb. This flag (1) must be pressed and the cable carefully pulled at the same time.

Attention: the flag can snap into the intermediate opening a second time. This must then be pressed again (2).

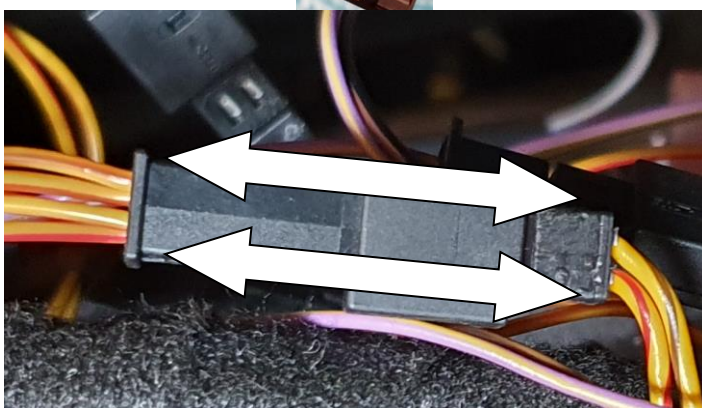


Plug the unpinned cables into the socket housings provided. Make sure that they are plugged in at the right place. If the socket housing is later connected to the plug housing, the colors must match!

When both cables are plugged into a socket housing, close the locking bracket and allow it to snap into place.



Here as an example:

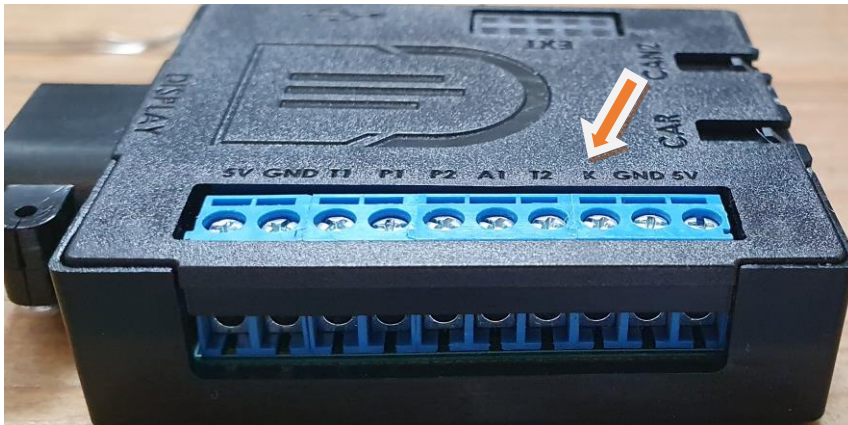


Insert the open ends of the display wiring harness into the correct position on the instrument cluster.

5.2 Connecting the K-Line cable

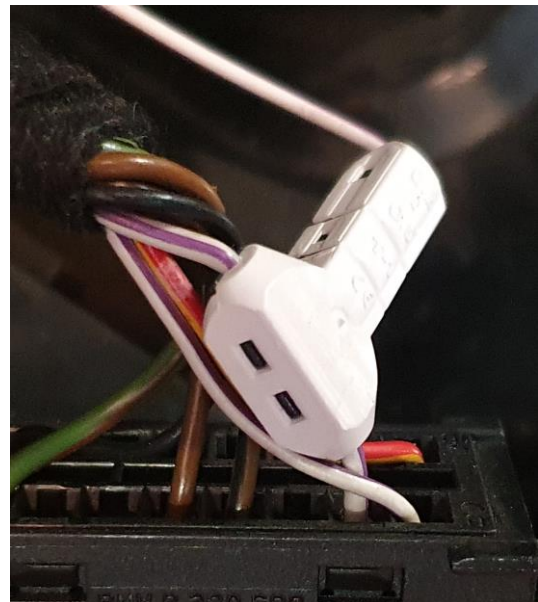
Next, the “K-Line” cable must be connected.

Plug the supplied cable into the side of the connection box (K) and screw it tight:



Lay the cable through the dashboard down to the diagnostic socket (OBD2).

Connect it there to pin 7 (white/violet). Shorten the cable if necessary and connect it to the connector provided (a pair of pliers for locking is useful) and connect it to the cable pin 7 of the OBD2 socket:



5.3 Connect the display cable, cable harness and USB

Pull the cable that is connected to the display through the opening in the dashboard to the opening in the instrument cluster and plug it into the connection box. Also plug in the plug with the power supply and CAN bus as well as the USB cable (this should be placed so that it can be reached at any time for an update - e.g. in the storage compartment in the dashboard).



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6 Assembly

Now everything can be reassembled.

Reattach the footwell cover, tighten the lock on the pedals by 90 degrees, press the expanding rivet back in and lock it with the pin and attach the 3 screws.

Insert the plugs at the back of the instrument cluster and lock them.

There is little space behind the instrument cluster, the connection box should be carefully stowed away so that it does not get in the way. Insert the instrument cluster and secure it with the 2 screws.

Insert the fresh air grill with the display, screw it tight and reattach the trim strips.

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The DataDisplay by AK-Motion is now ready for use.

We hope you enjoy it

7 Technical Data

- Working voltage 7V - 36V
- Max. current 0.2A@12V
- Power consumption 12W
- Temperature range -40°C bis +85°C
- Weight approx. 200g