

Information on installing the VRS in ADR/SDR vehicles

Fundamentals:

- This information is intended solely as an aid for the installation of the cable options (#NAT-A0102 and NAT-A0104) in ADR-compliant vehicles. Under no circumstances does it replace the statutory provisions (Ordinance on the Carriage of Dangerous Goods by Road/SDR 741.621) or the provisions of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR 0.741.621). In the event of inconsistencies or discrepancies between this information and the ADR/SDR regulations, the provisions of the ADR/SDR regulations shall always be binding.
- The connection of the cable options (#NAT-A0102 and NAT-A0104) may only be carried out by qualified specialist personnel. All installations and work must always comply with the applicable ADR/SDR regulations and the requirements of the relevant authorities.
- ADR vehicles are equipped with a battery disconnect switch in accordance with the statutory provisions (Ordinance on the Carriage of Dangerous Goods by Road/SDR and European Agreement concerning the International Carriage of Dangerous Goods by Road/ADR 2023, Chapter 9.2 ff, Regulations for the Construction of Vehicles). When connecting the cable options (#NAT-A0102 and NAT-A0104) in ADR/SDR vehicles, the cable must be connected after the battery disconnect switch. This ensures that the power supply to the connected devices (e.g. HVC-III devices, EETS devices or NATRAS VRS) is reliably interrupted when the battery disconnect switch is activated.
- This is particularly important to ensure safety in accordance with ADR/SDR regulations

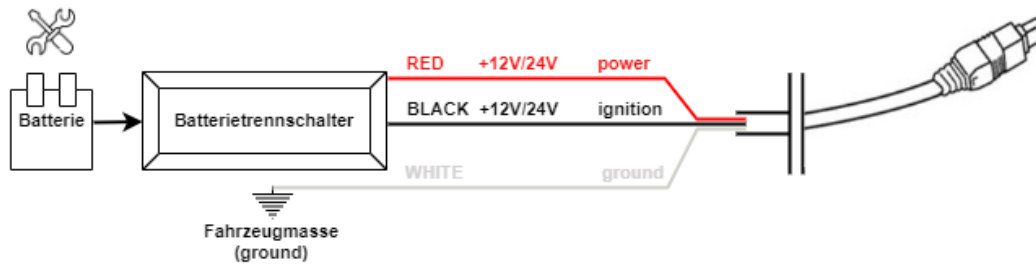
Prerequisites:

Before connecting a cable option to the vehicle, ensure that the red and black cables are protected with a 5 amp fuse (if the selected vehicle circuit already has such a fuse, this can be omitted).



Installation sketch:

Here is a simple sketch of how the wiring could be done after the battery isolating switch:



Procedure:

1. ensure that the battery isolator switch is switched off:

Before starting the wiring, the battery disconnect switch must be switched off to prevent any power supply and to ensure a safe installation.

2. connection of the red cable:

- The red cable should be connected to the positive terminal (*power*) of the battery (+12V/24V), but after the battery isolator switch. This means that the current flow is only activated after the battery disconnecter has been switched on.
- When the battery disconnect switch is in the "Off" position, there must be no voltage on the red cable.

3. connection of the black cable:

- The black cable is connected to the *ignition* starter switch (*ignition*), which means that the cable should only carry voltage when the ignition is switched on.
- Here, too, it must be ensured that the battery isolating switch controls the current flow.

4. connection of the white cable:

- The white cable is connected to the vehicle earth (-12V/24V) (*ground*). This should be done at a suitable point in the vehicle chassis where there is a good electrical connection to ground.
- An ADR/SDR-compliant workshop will ensure safe earthing to avoid electrical faults.



Notes on ADR/SDR conformity:

- 1. safety and disconnection:** ADR/SDR requires that the battery disconnect switch must be able to completely cut off the power supply, which means that all cables must be installed behind the battery disconnect switch to ensure complete disconnection in an emergency.
- 2. check the wiring:** After installation, the correct function of the cables must be checked by measuring the voltages at various switch positions (battery isolator switch "on" and "off", ignition "on" and "off").
- 3. cable protection:** All cables should be well insulated and protected against mechanical damage and short circuits by protective conduits or sheaths
- 4. documentation and test logs:** After installation, the cabling should be documented and the conformity recorded in a test log.