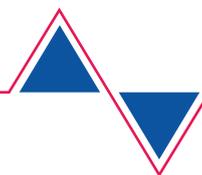




Operating manual

Low voltage adapter cable 9926

32.ST.2210.1405_BA_V01_EN



Version	Date	Reason
V00	11.06.2021	First edition
V01	17.12.2021	Transfer to Stodia

Legal notice

Legal notice

Manufacturer

Stodia GmbH
Battery & Diagnostics Technology
Im Freitagsmoor 45
38518 Gifhorn, Germany
Phone: +49 (0) 5373 92197-0
Fax: +49 (0) 5373 92197-88

info@stodia.de
www.stodia.de

Reproduction

Reproduction or reprinting, whether in whole or in part, always requires the written permission of the manufacturer.

Copyright

TRANSLATION OF THE ORIGINAL OPERATING MANUAL

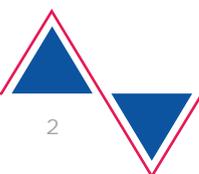
All rights reserved.

All text, images and graphics are subject to copyright and other intellectual property laws.

Copyright 2021 Stodia GmbH.

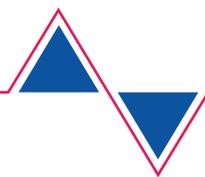
Image sources

Symbols for warnings, prohibitions, mandatory actions and standards are taken from publicly accessible sources, such as the Internet. CAD product images and product photos are provided by the manufacturer. Images showing the product in use are provided with a reference to the source.



Contents

Contents	3
1 Introduction	4
1.1 Preliminary information.....	4
1.2 Validity of the declaration of conformity	4
1.3 Manufacturer specifications	4
2 Safety	5
2.1 Warning levels.....	5
2.2 Important safety instructions.....	6
2.3 Intended use	7
2.4 Requirements for the target group.....	7
2.5 Duties of the operator.....	7
3 Product description	8
3.1 Scope of delivery	8
3.2 Design	8
3.3 Symbols and connections.....	9
3.4 China RoHS certificate	10
3.5 Wiring diagram	11
3.6 Technical data	12
4 Operation	13
4.1 Startup.....	13
4.2 Detaching the plug connections	16
4.2.1 Detaching the plug connection for the diagnostic cable (15-pin).....	16
4.2.2 Detaching the plug connection for the diagnostic cable (28-pin).....	17
4.2.3 Detaching the plug connection for the diagnostic cable (20-pin).....	17
4.3 Cleaning	18
4.4 Disposal	18
4.5 Maintenance	18
5 Help	19
5.1 Warranty.....	19
5.2 Customer service	19



1 Introduction

1.1 Preliminary information

Read through this operating manual carefully before using the product.

The product is delivered with a USB stick containing the operating manual in various languages. You can find the current version and additional languages on our homepage.

The operating manual is an essential part of the product and must be kept together with the product. If you sell or transfer ownership of the product, the operating manual must be handed over to the new operator.

In addition to this operating manual, you must observe all relevant regulations for diagnostics or fault finding of intrinsically safe high-voltage systems in road vehicles. This includes but is not limited to: instructions for the vehicle manufacturer's diagnostics systems, company-specific safety requirements and the state of the art for working with high-voltage systems.

1.2 Validity of the declaration of conformity

The declaration of conformity applies to the product described in the operating manual. Any changes, modifications or extensions shall void the declaration of conformity and the risk assessment.

1.3 Manufacturer specifications

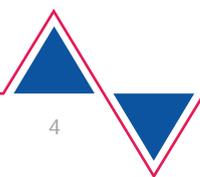


 **STODIA**_{GMBH}
SPEICHER & DIAGNOSETECHNIK

Since its founding, our company has focused on groundbreaking solutions for electromobility. Stodia GmbH develops and produces custom solutions for the automotive industry, the energy storage sector, repair shops and special vehicle fleets.

Our core products are innovative electrical storage systems, both stationary and mobile, which are essential technologies for advancing the energy revolution and energy autonomy. Stodia's portfolio also includes smart charging and battery technology, diagnostic systems, battery and cell management, and vehicle-wide measurement and diagnostic technology.

With experience in both software and hardware development, Stodia GmbH is your dependable partner at every production stage, from prototyping to series production.



2 Safety

This safety chapter provides information about the following:

- The warning levels contained in this operating manual
- Important safety instructions for the product
- Intended use of the product
- Requirements for the target group
- Duties of the operator

This operating manual is only valid for the following product:

Item number 22101405

Designation Low voltage adapter cable 9926

2.1 Warning levels

This chapter provides information about the warning levels used in this operating manual.

DANGER

Failure to observe the safety instructions WILL result in death or serious injury!

WARNING

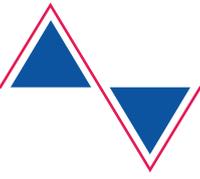
Failure to observe with the safety instructions CAN result in death or serious injury!

CAUTION

Failure to observe the safety instructions CAN result in minor physical injury!

CAUTION

Failure to observe the safety instructions can lead to damage to the product!



2.2 Important safety instructions

This chapter contains the safety instructions that must be observed when handling the product.



DANGER

Danger of fatal electric shock!

The electrical voltage in other systems is lethal and will cause death by electric shock!

- Do not use the product for measurements on utility power circuits!
- Never attempt to power other devices with the product!



WARNING

Danger of fatal electric shock!

The electrical voltage in high-voltage systems is lethal and can cause death by electric shock!

Liquids, condensation and high humidity can cause short circuits!

- Do not let the product come into contact with liquids!
- Use the product only in dry and enclosed spaces!

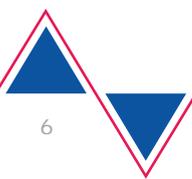


WARNING

Danger of fatal electric shock!

Defective and damaged products can no longer guarantee protection against electrical voltage!

- Do not let the product come into contact with chemicals!
- Replace a defective or damaged product immediately!
- Never attempt to repair or tamper with the product!



2.3 Intended use

Use the product only in accordance with this operating manual; otherwise electrical hazard protection cannot be guaranteed by the manufacturer.

The product is used to adapt the VAS 5581/VAS 5581A diagnostic box to the vehicle-side plug connection specified by the vehicle manufacturer in the guided fault finding.

The product may only be used on high-voltage systems that have been certifiably de-energized.

In this operating manual, vehicle manufacturers are exclusively defined as vehicle manufacturers in the Volkswagen Group.

Any use beyond what is listed here is prohibited.

2.4 Requirements for the target group

Only qualified personnel may work with this product!

In this operating manual, qualified personnel is defined as personnel meeting all requirements for working on high-voltage systems applicable in the country of operation, as defined by:

- Regulations applicable in the country of operation
- Qualification according to DGUV 200-005 level 2 or higher, or equivalent
- Specifications from the vehicle manufacturer and/or the operator.

In addition, the qualified personnel must be trained in the use of the product and all charging modes.

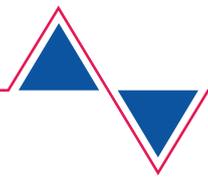
At all times while using the product, staff must wear the personal protective equipment prescribed by the vehicle manufacturer for work on high-voltage systems.

2.5 Duties of the operator

The operator is responsible for ensuring that all staff working with the low voltage adapter cable fulfills the requirements for the target group.

Furthermore, the operator is responsible for ensuring the following:

- The low voltage adapter cable is always in perfect working order.
- The regular inspection intervals for the low voltage adapter cable are observed and recorded.



3 Product description

3.1 Scope of delivery

Immediately check the condition of the product and the completeness of the delivery. If anything is missing or defective, please contact the manufacturer immediately.



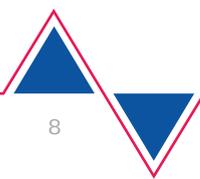
- (1) Low voltage adapter cable
- (2) USB stick with operating manual

3.2 Design

Product design:



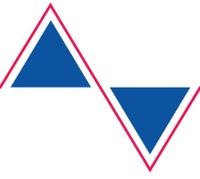
- (1) Plug for diagnostic box
- (2) Plug for battery housing
- (3) Plug for battery junction box (BJB)
- (4) Plug for battery management controller (BMC)
- (5) Ground clip



3.3 Symbols and connections

The following symbols are shown on the product:

Symbol	Meaning
	The manufacturer part number is used in conjunction with the serial number to identify the product.
	The disposal instructions prohibit disposal of the product with household waste. Always dispose of the product in accordance with all local disposal regulations.
	The CE marking certifies that the product complies with all applicable European regulations and has been subjected to the prescribed conformity assessment procedure.
	This marking certifies that the product contains substances regulated by SJ/T 11363-2006 ("China RoHS") which are safe for use over a period of 25 years. The list of regulated substances can be found on the supplemental sheet.
	The test seal identifies the product as having been approved for use in workshops and production facilities belonging to the vehicle manufacturer.



3.4 China RoHS certificate



CONFIDENTIAL

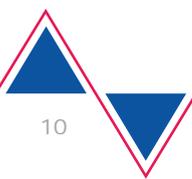
3.1 Table of Toxic and Hazardous Substances Adapter cable, Art. No. 72199260

Adapter cable, Art. No. 72199260 适配器电缆 产品序列号72199260	中國RoHS 透露報告 					
Assembly 部件名称	Toxic and Hazardous Substances or Elements 有毒有害物质或元素					
	Pb 铅	Cd 镉	Hg 汞	Cr6+ 六价铬	PBB 多溴联苯	PBDE 多溴联苯醚
Central cable junction and markers 中央电缆接头和标识	○	○	○	○	○	○
Cable grey and metal plug round 灰色电缆和圆形金属插头	X	○	○	○	○	○
Cable with slim braided sleeve and clamp 带有细编织套管和线夹的电缆	○	○	○	○	○	○
Cable with broad braided sleeve and rectangular black-white plug 带有宽编织套管和矩形黑白插头的电缆	○	○	○	○	○	○
Cable with broad braided sleeve and rectangular black-yellow plug 带有宽编织套管和矩形黑黄插头的电缆	○	○	○	○	○	○
Cable with broad braided sleeve and round plug 带有宽编织套管和圆形插头的电缆	○	○	○	○	○	○

This table is prepared in accordance with the provisions of SJ/T 11364.
 该报告是根据SJ / T 11364的规定出具的。

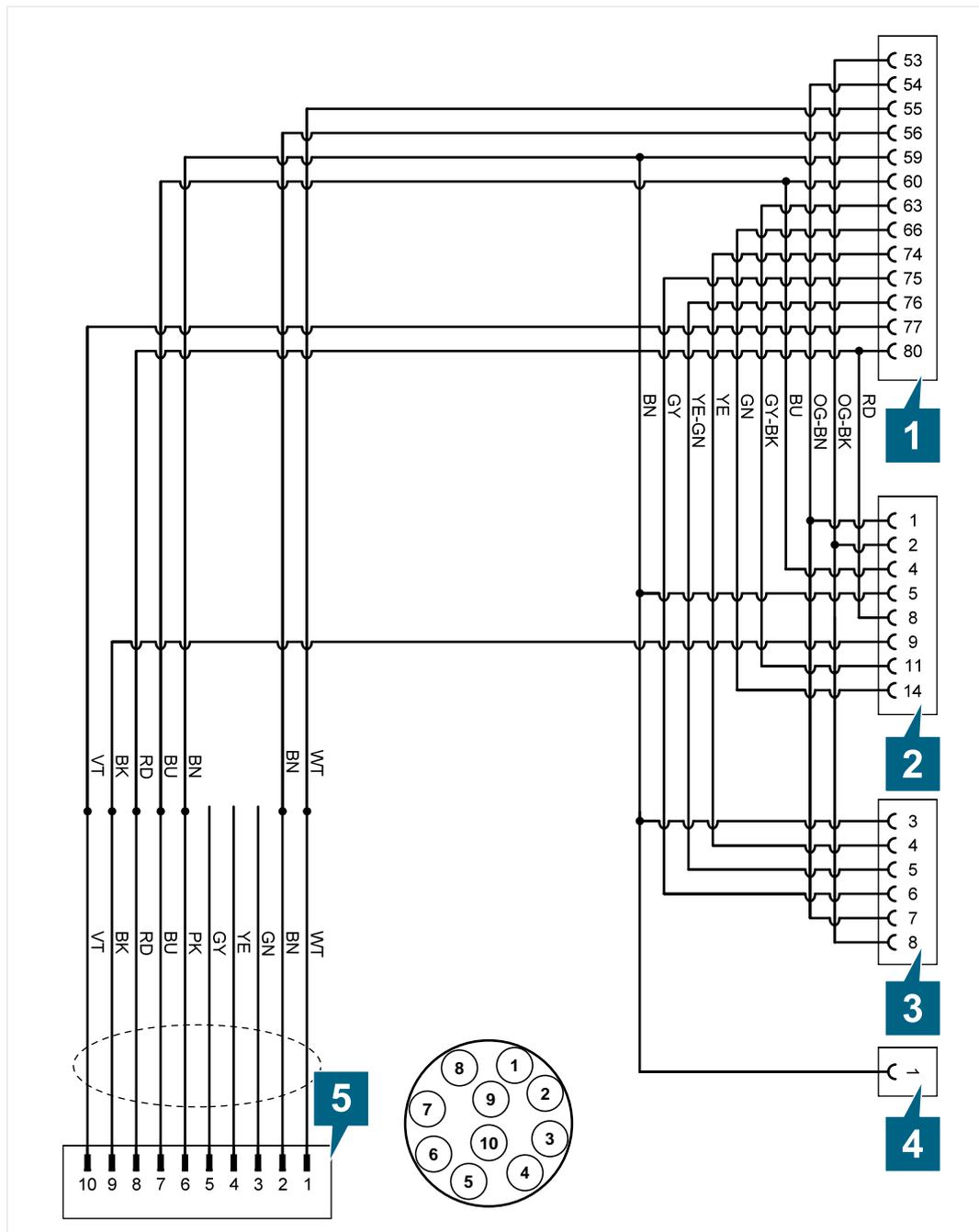
O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572
 O: 表示该部件所有均质材料中所含的上述有害物质低于GB / T 26572的限值要求

X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572
 X: 表示该部件使用的至少一种均质材料中所含的上述有害物质超过了GB / T 26572的限值要求

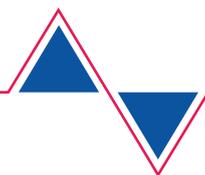


3.5

Wiring diagram



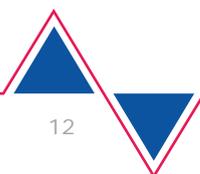
- (1) Plug for battery management controller (BMC)
- (2) Plug for battery junction box (BJB)
- (3) Plug for battery housing
- (4) Ground clip
- (5) Plug for diagnostic box



3.6 Technical data

Rated data	Values
Manufacturer number	22101405
Maximum rated voltage	DC 14V
Maximum rated current	5A
Weight	~ 560g
Cable length	~ 2600mm

Ambient conditions	Operation	Storage	Transportation
Temperature	5°C to 40°C	-20°C to 60°C	-20°C to 60°C
Elevation above sea level	Max. 2000m	No limitation.	
Humidity	Max. 80% up to 31°C, decreasing linearly to 50% at 40°C	Max. 85%	
Condensation not permitted. Maximum permissible relative humidity: 60% in environments with corrosive gas/air.			



4 Operation

This chapter provides information about the following activities:

- Startup
- Detaching the plug connection
- Cleaning
- Storage
- Disposal
- Maintenance

4.1 Startup

This section provides you with information about starting up and operating the product.



WARNING

Danger of fatal electric shock!

The electrical voltage in high-voltage systems is lethal and can cause death by electric shock!

- Use the product only for the applications intended by the vehicle manufacturer!



CAUTION

Risk of damage!

Plug connections lock into place when attached.

- Unlock the plug connections before you detach them! (See chapter “Detaching the plug connections”)

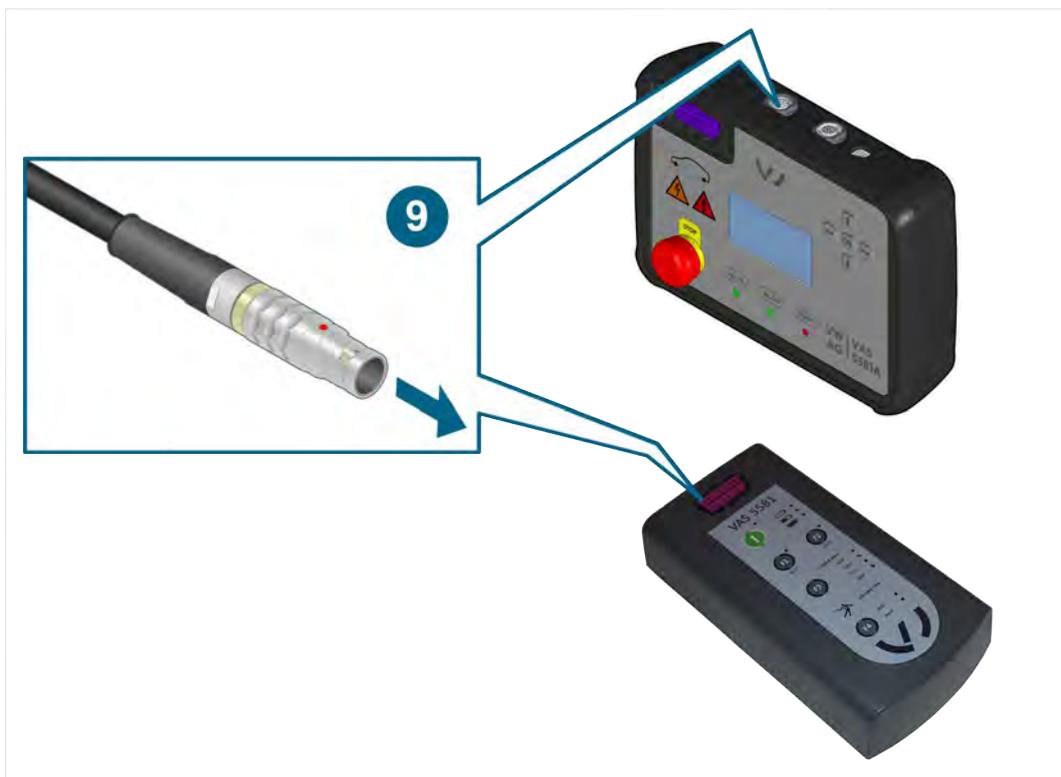
1. Follow the safety instructions.



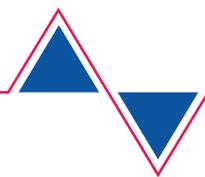
2. Connect the ground clip to a conductive part of the vehicle body.
3. Connect the plug for the battery management controller (BMC) to the correct disconnected socket.
4. Lock the connection.
5. Connect the plug for the battery junction box (BJB) to the correct disconnected socket.
6. Lock the connection.
7. Connect the plug for the battery housing to the correct disconnected socket.
8. Lock the connection.



9. Connect the plug to the diagnostic box.



✓ You can now perform measurements in accordance with the guided fault finding.



4.2 Detaching the plug connections



WARNING

Risk of explosion!

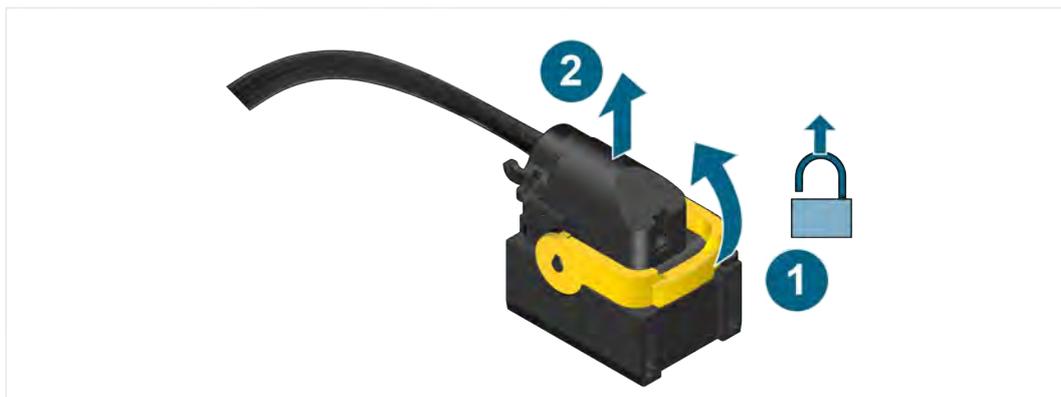
Product components may produce sparks and electric arcs.

- Do not use the product in potentially explosive atmospheres!

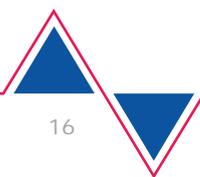
4.2.1 Detaching the plug connection for the diagnostic cable (15-pin)

The plug connection has a manual locking mechanism. To release the plug connection:

1. Swing the lever up.
2. Pull the plug connection apart.



- ✓ The plug connection is now detached.



4.2.2

Detaching the plug connection for the diagnostic cable (28-pin)

The plug connection has a locking mechanism. To release the plug connection:

1. Pull the locking mechanism out of the plug.
✓ The plug connection is unlocked.
2. Pull the plug connection apart.



- ✓ The plug connection is now detached.

4.2.3

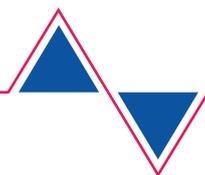
Detaching the plug connection for the diagnostic cable (20-pin)

The plug connection has a bayonet locking mechanism. To release the plug connection:

1. Twist the socket housing to unlock the connection.
2. Pull the plug connection apart.



- ✓ The plug connection is now detached.



4.3 Cleaning



DANGER

Danger of fatal electric shock!

The electrical voltage in high-voltage systems is lethal and will cause death by electric shock!

- Disconnect the product from all power sources before cleaning the product!

Observe the safety instructions!

Use only a dry cloth to clean the product.

4.4 Disposal

Observe the safety instructions!

Always dispose of the product in accordance with all local disposal regulations.

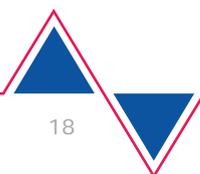
4.5 Maintenance

Observe the safety instructions!

National and local requirements for regular testing must be observed!

Test the product for proper function at intervals of no more than 24 months.

Contact the manufacturer to have a professional function test performed.



5 Help

5.1 Warranty

Stodia GmbH grants a warranty period of 24 months from the date of purchase. The warranty is valid for demonstrable defects in functional material and workmanship.

Further information on the warranty conditions can be found in the terms and conditions on the manufacturer's website.

5.2 Customer service

Always include the item number and, if available, the serial number with any product queries. Both numbers are found on the product.

Stodia GmbH
Im Freitagsmoor 45
38518 Gifhorn, Germany

Phone: +49 (0) 5373 – 92197-0

Fax: +49 (0) 5373 – 92197-88

service@stodia.de

www.stodia.de

Stodia GmbH
Battery & Diagnostics Technology

Im Freitagsmoor 45
38518 Gifhorn, Germany

Phone: +49 (0) 53 73 / 92 197 – 0
Fax: +49 (0) 53 73 / 92 197 – 88

info@stodia.de
www.stodia.de

Translation of the original operating manual.
Subject to technical changes.



STODIA_{GMBH}
SPEICHER & DIAGNOSETECHNIK