VDO SmartTerminal

Operating Instructions

VDO

Legal notice

Described product

- VDO SmartTerminal

Manufacturer

Continental Automotive GmbH
P.O. Box 1640
78006 Villingen-Schwenningen
DEUTSCHLAND
www.fleet.vdo.de

Original operating instructions

© 11.2019
Continental Automotive GmbH

These operating instructions are protected by copyright. The rights arising from this copyright remain with Continental Automotive GmbH.

Reprinting, translations and reproductions are not permitted unless authorised in writing by the manufacturer.

This is an original document of Continental Automotive GmbH.

$C\mathcal{E}$

Trademark

Windows® is a brand of Microsoft® Corporation.

The above-mentioned brand is partly used below without special reference to the brand's proprietor.

Table of Contents

© Continental Automotive GmbH

© Continental Automotive GmbH

About this document

Function of this document

This document describes the correct handling of the VDO SmartTerminal.

Target group

These operating instructions are aimed at:

• Drivers and companies
  loading digital tachograph data onto the VDO SmartTerminal.

• System administrators
  installing the VDO SmartTerminal and related service programs onto PCs
  and, if required, integrate it into a company network

Please read the instructions carefully and familiarise yourself with the device.

Symbols and signal words

⚠ **ATTENTION**	The note ATTENTION contains important information to avoid data loss, prevent damage to the device and comply with legal requirements.
ⓘ **IMPORTANT**	A NOTE provides you with advice or information which, if not adhered to, could result in malfunctions.

Additional information

For more information, see www.smartterminal.vdo.com or www.fleet.vdo.com.

User Manual VDO SmartTerminal

Device description

General Information

The VDO SmartTerminal enables your drivers to download digital tachograph data even more efficiently and informatively. Furthermore, it provides drivers with a means to independently download their driver card data and vehicle memory data saved on a download key or a TIS-Compact download key.

The VDO SmartTerminal facilitates the download from the digital tachograph, especially for larger fleets.

To do this, the VDO SmartTerminal can be set up in the driver's rest area, for example, and is thus available even outside office hours.

Applications

The VDO SmartTerminal provides many flexible applications:

- Integration into the company network via network cable or wireless LAN.
- Direct connection to a computer using the USB cable supplied or a crossed network cable (crossover cable).
- Operation as a standalone device, i.e. independent use without a direct computer connection.

See also: ➔ *Application options [*▸ *15]*

The VDO SmartTerminal reads out the data of a driver card or of a download key and stores it in the internal memory until it is requested by a computer or transferred onto a USB stick.

In order to configure and manage the VDO SmartTerminal, you must install the VDO TerminalTools. Data is retrieved from the VDO SmartTerminal via the VDO TerminalService.

IMPORTANT

Only one VDO TerminalService may be installed in the network!

If several VDO TerminalService devices are installed, an error message appears when attempting to establish a connection with the VDO SmartTerminal.

Any mention of the download key in these instructions includes any variants of this product family, e.g. Inspectionkey or TIS-Compact.

Scope of delivery

1	VDO SmartTerminal	**5**	Quick Start Guide
2	Power line with mains adapter	**6**	Cleaning cloth
3	Network cable RJ-45	**7**	Cleaning card
4	USB cable		

Overview download terminal

Frontal view

1	Card reader	**2**	USB interface
3	Touchscreen display with RFID reader		
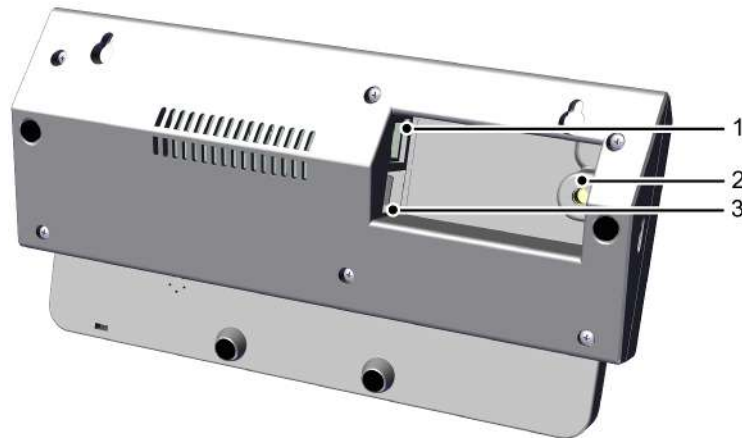
Rear view

1   Network connection   **2**   Connection for power sup-
                                            ply

3   2 USB connections

Card reader

When a driver, company or workshop card is inserted, the card data is read out via the card reader and stored as a file in the internal memory of the VDO SmartTerminal.

Once the data of a driver card has been read out, you can view it on the touch-screen display.

USB interface

The data is read out via the USB interface from a download key and stored in the internal memory of the VDO SmartTerminal.

Furthermore, you use this interface in standalone operation to transmit config-uration data via a USB stick into the VDO SmartTerminal or to download the stored data of the driver cards and download keys when there is no direct con-nection to a computer.

Touchscreen display with RFID reader

The coloured touchscreen display is used for guiding the user and for display-ing the data of the currently inserted driver card or the currently inserted down-load key.

Operation occurs via the touchscreen, just like with a smart phone or tablet. Touching the display enables you to navigate through the menu structure.

You can use the RFID reader to carry out a driver's license test.

Network connection (rear side)

You use the network connection to integrate the VDO SmartTerminal into the network or to connect it to a computer using a crossed network cable.

See also ➔ *Connection in a network [▸ 15]* and ➔ *Direct connection to a computer via network interface [▸ 16]*.

Connection for the power supply (rear side)

This is the connection that provides power to the VDO SmartTerminal.

IMPORTANT	The download terminal is exclusively powered by the power line with mains adapter.
	Supplying power via the USB cable is not possible.

USB connections

You connect the VDO SmartTerminal with a computer via one of these connections using the USB cable provided. See also ➜ *Direct connection to a computer via USB interface [▶ 15]*.

Technical data

Component/feature	Properties
Microcontroller	Broadcom BCM2837B0, Cortex-A53, 64-bit
Memory	1 GB SDRAM
Data memory	32GB with industrial SD card
Operating system	LINUX-based system
Network connection	Gigabit Ethernet via USB 2.0 (max. 300Mbps)
USB connections	2 × USB 2.0 interfaces
WLAN	WiFi 2.4GHz and 5GHz IEEE 802.11.b/g/n/ac wireless LAN
Card reader	Smart Card Reader, ISO/IEC 7816 cards
RFID reader	NTAG213
Display	7" TFT Touchscreen display, resolution: 800x480pxl
Clock	Hardware real-time clock with supercap buffer
Operating temperature	0 - 50°C
Protection class	IP 20
Dimensions (L x W x H)	244 x 129 x 48mm
Weight	575g
Power supply	5V, 3A

Internal memory

The VDO SmartTerminal is equipped with an internal flash memory. Of the memory capacity of 32 GB, approx. 1 GB is required for configuration and system data. The remaining 31 GB are available for storing download files. This ensures continuous storage of all data.

Service programs

To install and configure the VDO SmartTerminal, you require the following service programs:

- VDO TerminalTools
  You use the VDO TerminalTools to configure the VDO SmartTerminal.
  You install VDO TerminalTools on the PC or server which the
  VDO SmartTerminal is connected to via a USB or network connection.
  ➔ *VDO TerminalTools [▷ 10]*

- VDO TerminalService
  You use the VDO TerminalService to retrieve the data of all
  VDO SmartTerminals and to further process them.
  You install the VDO TerminalService on the PC from which the data is to be
  retrieved.
  Only one VDO TerminalService may be installed in the network.
  ➔ *VDO TerminalService [▷ 11]*

- USB driver
  The USB driver connects the VDO SmartTerminal to a PC via the USB
  cable.
  ➔ *USB driver [▷ 12]*

You can download the software from the internet on www.smartter-minal.vdo.com.

Depending on the scenario, you can choose the appropriate package for installation.

Our recommendation for the various connection options:

Connection option	VDO TerminalTools	VDO TerminalService	USB driver
Standalone	Workstation	Workstation	-
USB connection	Workstation	Workstation	Workstation
Network mode	Workstation	Server	-

The VDO TerminalTools should be installed on all workstations on which an employee is to have access to the system. If you do not have your own server, you can install the VDO TerminalService on a workstation. In this case, this workstation must be switched on if other workstations are to communicate with the terminals.

VDO TerminalTools

Functions of the VDO TerminalTools:

- Configuration of the VDO SmartTerminal

- Transferring a firmware (device software) update to the VDO SmartTerminal, irrespective of the usage type

- Preparing a USB stick for transferring the configuration onto a VDO SmartTerminal
  This is only required if the VDO SmartTerminal is operated independently of a computer or network.

- Preparing a USB stick for the retrieval of data from the VDO SmartTerminal if it is operated independently of a computer or network.

Configuring the VDO Terminal Tools: ➔ *Terminals [▷ 31]*

For all connection options – Standalone, USB stick or network operation – you must install VDO TerminalTools onto at least one PC.

The installation of the VDO TerminalTools depends on the connection type:

• On the PC to which the VDO SmartTerminal is directly connected via a USB or network connection.

• On any PC – in particular the server – within your network if the VDO SmartTerminal is connected directly in the network.

• On any PC within or outside of your network if the VDO SmartTerminal is to be used on a standalone basis.

Installation: ➔ *Installation of the software [▷ 19]*

The connection to the VDO SmartTerminal is automatically performed by the VDO TerminalService (➔ *VDO TerminalService [▷ 11]*).

IMPORTANT

You cannot operate any previous generation download terminals (download terminal I, II or Pro) via the VDO TerminalTools.

If you would like to use any additional older download terminals, you can simultaneously install the different versions.

IMPORTANT

You only need to start the VDO TerminalTools if you wish to modify the configuration or to prepare a USB stick for a data transfer.

VDO TerminalService

You need VDO TerminalService to retrieve the data from the VDO SmartTerminal.

For all connection options – Standalone, USB stick or network operation – you must install VDO TerminalService on at least one PC.

IMPORTANT

Only one VDO TerminalService may be installed in the network!

If several VDO TerminalService are installed, errors will occur when attempting to establish a connection with the VDO SmartTerminal.

The VDO TerminalService is automatically started when starting up the PC. It runs by default with the system account.

Function of the corresponding VDO TerminalService:

• Retrieval and decryption of the download data from all VDO SmartTerminals

Installation decision for the VDO TerminalService

• Computer to which the VDO SmartTerminal is directly connected via a USB or network connection.

• Computer/server within your network if the VDO SmartTerminal is connected directly in the network.

User Manual VDO SmartTerminal

- Any computer if the VDO SmartTerminal is to be used on a standalone basis.

VDO TerminalService performs the connection to the VDO SmartTerminal in order to check theVDO SmartTerminal for new data in regular intervals and to transfer these.

Access from a PC to the internal memory of the VDO SmartTerminal usually only occurs via this VDO TerminalService.

IMPORTANT	Access from a PC to the internal memory of the VDO SmartTerminal usually only occurs via this VDO TerminalService. Manual access to this data memory via Windows®-Explorer is only possible with a network connection.

Configuration options

- Changing the communication port used for the connection between VDO TerminalTools and VDO TerminalService.
- Importing the data encryption on the VDO SmartTerminal after a reinstallation.
- Adjusting the download directory for the data transfer from the VDO SmartTerminal.
- Restoring the access data of the administrators.
- Monitoring the communication between the VDO TerminalService and a VDO SmartTerminal.

To configure the VDO TerminalService: ➔ *VDO TerminalService [▷ 23]*

USB driver

You need the USB driver if you want to connect the VDO SmartTerminal to a PC using the USB cable supplied.

If selected, the USB driver is also loaded during installation: ➔ *Installation of the software [▷ 19]*.

System requirements

Software requirements

To use the VDO TerminalTools, the computer must meet the following requirements:

Component	Properties
Processor	Pentium or compatible CPU with 1 GHz and 32-Bit or 64-Bit architecture
Working memory	1 GB/ 256 MB free
Hard disk space	500 MB free for the installation and storage of the download data

Operating system	• Windows® 7 with current service pack
	• Windows® 8, 10, each with current service pack
	• Windows® Server 2012, 2016, 2019, each with current service pack

Hardware requirements

To connect the VDO SmartTerminal to a computer, the following requirements must be met:

Component	Requirement
Interfaces	• A free USB 2.0 or 3.x interface to connect a USB stick
	• A free USB 2.0 or 3.x interface to connect the VDO SmartTerminal via the USB cable
	• Network connection for connecting the VDO SmartTerminal via a network cable (for hub or crossover cable)

The direct connection of the VDO SmartTerminal to the network interface of a computer (without network hub or switch) is possible via a crossed network cable (crossover) which is not provided.

A computer only provides a limited number of USB interfaces.

If you want to connect a mouse, keyboard, printer, VDO SmartTerminal, scanner and possibly a dongle, you will require a so-called USB hub. When buying a device, make sure it has its own power supply to avoid loss of power.

Positioning the device

The VDO SmartTerminal can be positioned on a flat surface, for example on a counter.

It can also be mounted onto a wall.

| ⚠️ **ATTENTION**	When choosing a position for the VDO SmartTerminal, make sure that it is not exposed to any atmospheric influences, i.e. that it is protected from direct sunlight or humidity.

ⓘ **IMPORTANT**	If you want to use the VDO SmartTerminal via WLAN, make sure that the network coverage at the position of the VDO SmartTerminal is strong enough.

Wall mounting

For wall mounting, the VDO SmartTerminal can be directly mounted to the wall using the base plate.

Drilling pattern
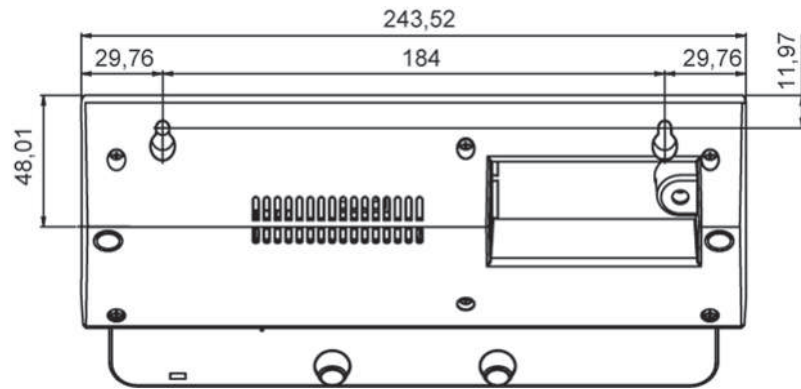
Application options

Before installation, determine how you want to operate the VDO SmartTerminal. You need to determine this to configure the VDO SmartTerminal and the corresponding transfer path of the data.

Connection in a network

You can use the network cable provided or wireless LAN to directly connect the VDO SmartTerminal with a network, configure it and retrieve the stored download files. In doing so, the connection is always established from the computer on which the VDO TerminalService is installed to communicate with the VDO SmartTerminal.

(i) **IMPORTANT**	The recommended mode is the network operation. Here, a consistent, fast communication between the terminal and the VDO TerminalService is ensured. In this mode, each terminal can also be monitored for failures by the administrator via network monitor software.

Using a network cable, the network interface enables you to connect the VDO SmartTerminal in a network (network hub or switch). This enables you to control the VDO SmartTerminal from any network computer on which the VDO TerminalTools are installed. By default, the VDO TerminalService should be installed on a server in order to ensure a continuous data retrieval from the VDO SmartTerminal.

The VDO SmartTerminal must be configured with an IP address which is allocated by the competent network administrator. Please ask your network administrator to set up an appropriate network connection for you.

You may use several VDO SmartTerminals within a network. In this case, each VDO SmartTerminal must be configured with its own IP address (manually or DHCP).

Owing to the independent power supply, theVDO SmartTerminal will remain operation and able to store the data from driver cards and download keys even when the computer is shut down.

(i) **IMPORTANT**	Operating the device via WLAN requires the WLAN to be configured on the device itself. One the device has been connected to the network, the configuration via the network can be performed.

Direct connection to a computer via USB interface

The VDO SmartTerminal can be connected directly to a computer via USB or crossed network cable (crossover cable).

(i) **IMPORTANT**	The USB driver required for this connection option should be installed together with the other software components; see ➔ *Installing software [▷ 19]*.

The internal USB interface enables the direct connection of the VDO SmartTerminal to a computer, provided that the VDO TerminalTools and the related VDO TerminalService are installed on it. Operation via the USB interface also requires the USB driver to be installed. This applies to all operating systems specified in the system requirements.

It is not possible to supply power to the VDO SmartTerminal via USB cable. The power supply occurs exclusively via the mains adapter.

IMPORTANT

Please note that the maximum length of any USB cable is 5m. Any larger distances can only be achieved by interposing USB hubs with their own power supply.

Direct connection to a computer via network interface

Using the internal network interface, it is also possible to connect the VDO SmartTerminal directly to a computer. To do this, you will need a crossed network cable (crossover cable) which is not supplied.

The configuration of the network card must be manually adjusted by the administrator. If it turns out that the standard address from the terminal cannot be used, a fixed IP address must be set up in the terminal via the device configuration.

The computer's network adapter must be set up with the appropriate IP address. Please ask your network administrator to set up an appropriate network connection for you.

IMPORTANT

The terminal supports the Auto-MDI-X function so that a crossover cable is not essential for the operation. Thus, depending on the network card in the PC, the operation is also possible using a standard network cable (supplied). Nevertheless, we recommend using a crossover cable. However, this is not included in delivery.

Standalone operation

You can use the VDO SmartTerminal on a standalone basis, i.e. without any connection to a computer or network. In this case, you should insert neither a network cable nor the USB connection into the terminal.

For this mode, you will also require the VDO TerminalService and it is recommended to install it together with the VDO TerminalTools on the workstation.

In standalone mode, you transfer the configuration file which you create using the VDO TerminalTools onto a commercial USB stick. When you insert the USB stick into the USB interface of the VDO SmartTerminal, the configuration file is automatically transferred.

You also use a USB stick to read out the data stored from the driver cards or download keys in the memory of the VDO SmartTerminals. This data can then be decrypted by the VDO TerminalTools and made available for evaluation and archiving software, e.g. TIS-Web.

Connection terminal with PC or network

ℹ️ **IMPORTANT**	The power supply of the VDO SmartTerminal occurs exclusively via the power line with mains adapter. It is not possible to power it via the USB cable or network cable.

ℹ️ **IMPORTANT**	**The maximum length of a USB cable is 5m** For larger distances, you should interpose a USB hub with its own power supply.

Network mode

IP address

The VDO SmartTerminal must be configured with an IP address which is allocated by the competent network administrator.

When using several VDO SmartTerminals, each device must be given its own IP address.

Please ask your network administrator to set up an appropriate network connection for you.

The VDO SmartTerminal is configured once it has been connected to the network: ➔ *Connection [▷ 43]*.

The operation in the network can occur in three ways:

Network cable (wired LAN)

The standard network cable supplied can be used to connect the device via an existing network switch to the network.

Connection:

1. Connect the network cable supplied with the network interface of the VDO SmartTerminal.
2. Connect the other end of the network cable to a network switch.
   Once connected, the device is in the network and can be configured via the service programs:➔ *Connection [▷ 43]*.

WLAN (wireless LAN)

In order to operate the device via WLAN, this must be configured on the device itself.

Once connected, the device is in the network and can be configured via the service programs: ➔ *Connection [▷ 43]*.

Direct connection via crossover cable to PC

A crossover cable can be used to directly connect the VDO SmartTerminal to a PC.

In doing so, the configuration of the network card must be manually adjusted by the administrator.

User Manual VDO SmartTerminal

If the standard address cannot be used by the terminal, a fixed IP address must be manually set up in the terminal via the device configuration.

ⓘ **IMPORTANT**	The terminal supports the Auto-MDI-X function so that a crossover cable is not essential for the operation. Thus, depending on the network card in the PC, the operation is also possible using a standard network cable (supplied). Nevertheless, we recommend using a crossover cable. However, this is not included in delivery.

Connecting the VDO SmartTerminal to a PC via crosssover cable

1. Connect the crossover cable with the network interface of the VDO SmartTerminal.

2. Connect the other network cable end with the network interface on the PC. Once the **VDO SmartTerminal** is connected, the configuration can occur via the network; ➜ *Connection [▷ 43]*.

USB connection

In order to operate the VDO SmartTerminal in USB mode, you must connect the VDO SmartTerminal to a PC using a USB cable (included in delivery).

VDO TerminalService and VDO TerminalTools must be installed on the PC: ➜ *Installation of the software [▷ 19]*.

Connecting the USB cable:

ⓘ **IMPORTANT**	The cable has a mark for the terminal as well as for the PC. When inserting the cable, pay attention to the correct mark.

1. Connect the USB cable supplied with one of the two USB interfaces on the rear side of the VDO SmartTerminal.

2. Connect the other end of the USB cable with a free USB interface on the PC.
    Once connected, the VDO SmartTerminal can be configured via the service programs: ➜ *Connection [▷ 43]*.

Standalone

"Standalone" means: You operate the VDO SmartTerminal without a connection to a PC.

In standalone operation, you transfer the configuration file which you create using the VDO TerminalTools to a commercial USB stick: ➜ *Terminals [▷ 31]*.

Installation of the software

ⓘ **IMPORTANT**	You must have administrator rights or be authorised to install programs in order to install the software for the VDO SmartTerminal.

The installation includes both the VDO TerminalTools, the VDO TerminalService and the USB driver. Depending on the scenario, you can choose the appropriate package for installation.

Our recommendation for the various connection options:

Connection option	VDO TerminalTools	VDO TerminalService	USB driver
Standalone	Workstation	Workstation	-
USB connection	Workstation	Workstation	Workstation
Network mode	Workstation	Server	-

The VDO TerminalTools should be installed on all workstations on which an employee is to have access to the system. If you do not have your own server, you can install the VDO TerminalService on a workstation. However, in this case, this workstation must be switched on if other workstations are to communicate with the terminals.

Installing software

Install the software for the VDO SmartTerminal as follows:

1. Log into the operating system using a user account which has administrative rights.

2. Close any running applications, particularly a running virus scanner, as it might cause problems during installation.

3. Download the current installation file **setup.zip** from the internet (www.smartterminal.vdo.com).

4. Unzip the file.

5. Start the installation by double clicking onto **setup.exe**
   The installation assistant starts automatically with the language selection for the installation process.
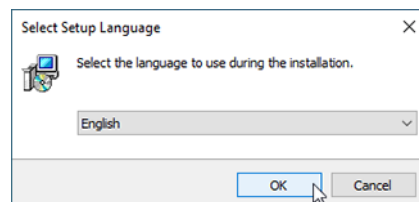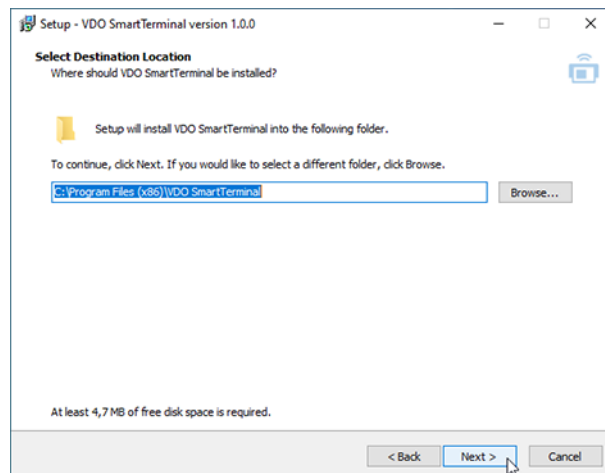

ⓘ **IMPORTANT**	The language selection only applies to the installation process. The VDO TerminalTools are started according to the language settings in the operating system.

6. Select the language.
   The license agreement is displayed.
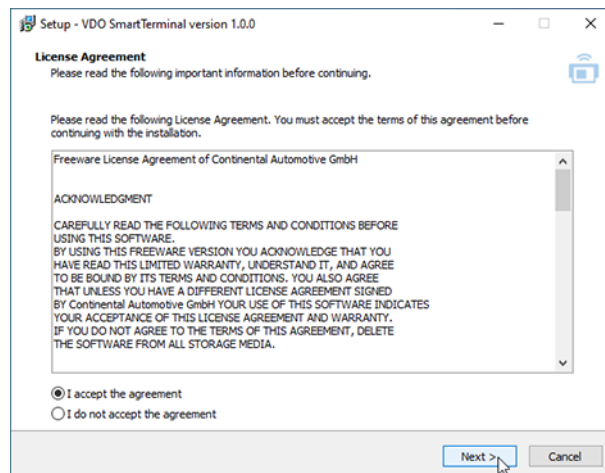
7. Selection the option **I accept the license agreement** and click on **[Next >]**.
   The dialog for selecting the target path follows.

8. Select the target path in which the VDO TerminalTools are to be installed. Click
    on

    –   **[Install]** if you want to keep the standard setting.

    –   **[Search...]**, select the new path and then click on **[Install]** if you want to
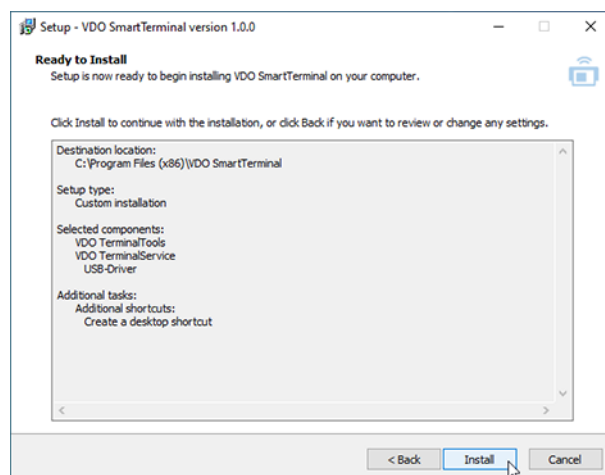   change the standard setting

    The dialog for selecting the software components is displayed.
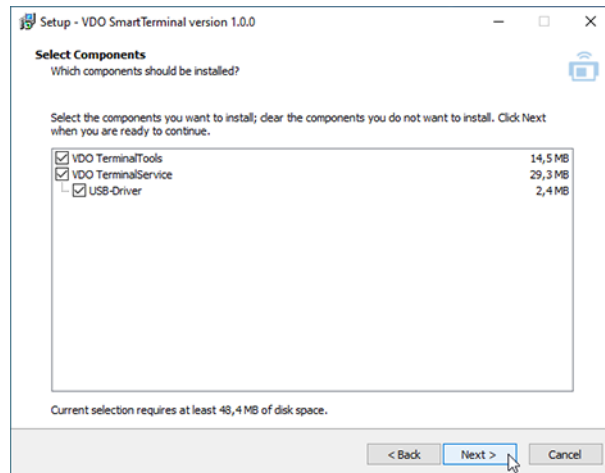
9. Select the desired components to be installed and click on **[Next >]**.
   The dialog for creating the desktop symbols is displayed.
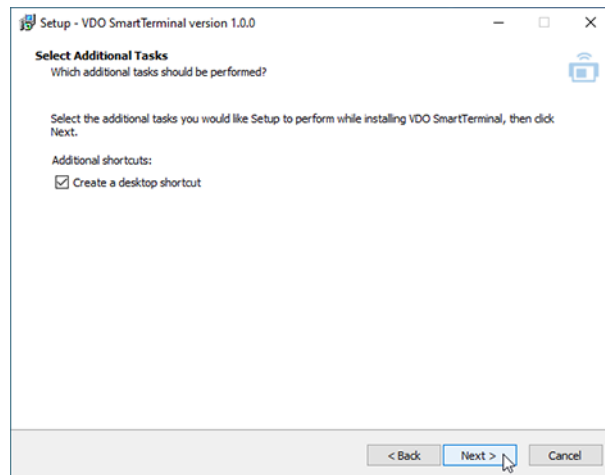
10. Decide if you want to have a desktop symbol created for the selected applica-
    tions and click on **[Next >]**.
    All selected parameters are listed.

11. Check the parameters again and click on **[< Back]**, if necessary, in order to
    edit your selections.

12. Click on **[Install]** if you do not wish to make any amendments.
    A progress bar shows the installation process of the VDO TerminalTools.

© Continental Automotive GmbH
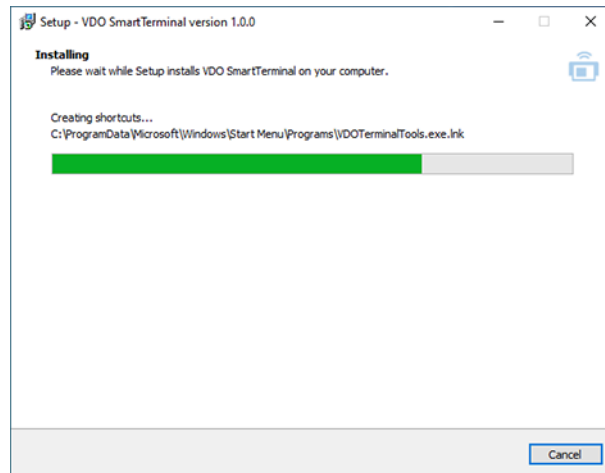
The dialog for closing the installation is displayed.
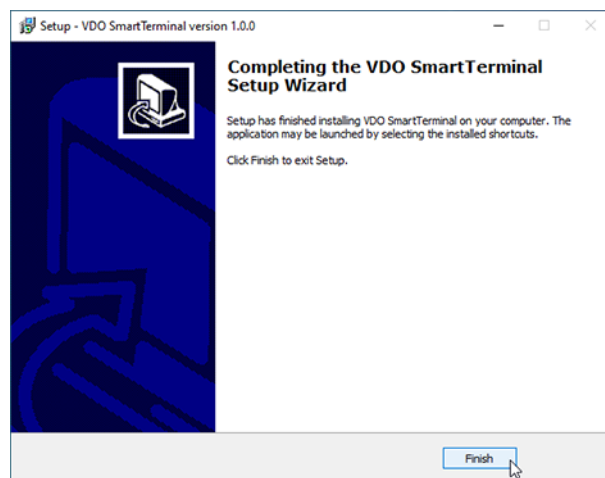
13. Click on **[complete]** to complete the installation.

VDO TerminalService

For the configuration of the VDO TerminalService, an additional application, the VDOTerminalServiceConfig, was installed on your computer on which the VDO TerminalService was also installed.

By default, however, all parameters for the VDO TerminalService are configured such that the settings do not require any amendments.

Starting the application VDOTerminalServiceConfig requires administrative rights. This ensures that no unauthorised access occurs.

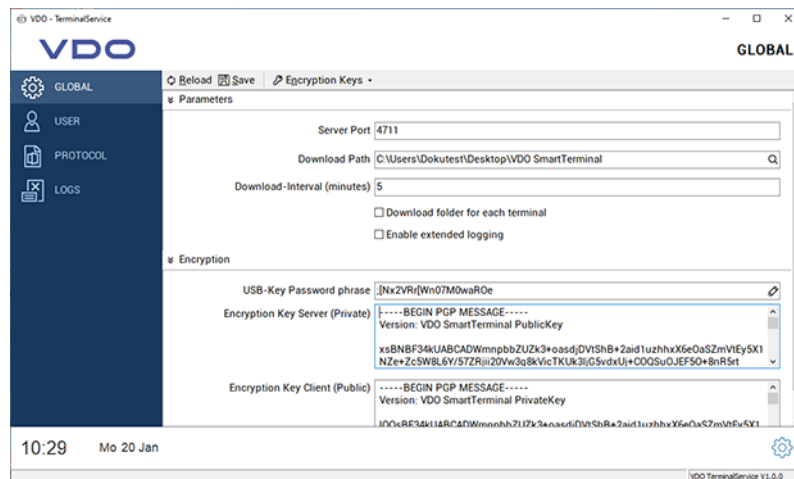If the VDO TerminalService does not run: ➔ *Troubleshooting [▶ 70]*.

You start the VDO TerminalService via the VDO TerminalService.exe in the installation directory or via the symbol on the desktop.

Main window
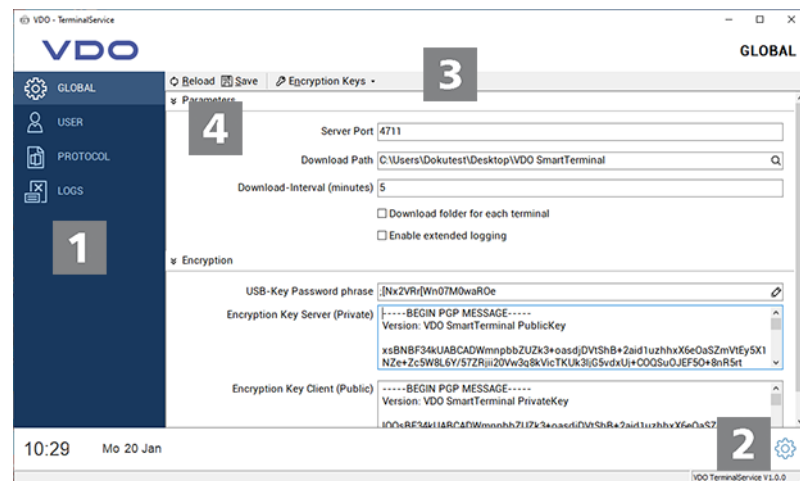
Position	Description
1	Menu tree Through the menu tree and clicking on the mouse, you will reach the main functions of the application.
2	Options menu for changing the language setting
3	Menu bar Through the menu bars, actions in the currently selected area can be started.
4	Dropdown menus The dropdown menus contain information and setting options for each menu.

Global settings

Under **Global Settings**, you can configure the following parameters:

Information	Description
Serverport	This port is used for the communication between the VDO TerminalTools on the workstations and the VDO TerminalService.
	In order for the VDO TerminalService to be able to communicate with the VDO SmartTerminals in a network, appropriate rules must be specified in the firewall on the server which allow an external connection with the PC.
	If the port is in use or is to be changed, it can be adjusted here.
Download directory	By default, the VDO TerminalService stores al data downloaded from a VDO SmartTerminal in its own directory.
	If the data is to be stored in another location, this can be changed here.

IMPORTANT

IMPORTANT

After changing the directory, transfer all data from the old path into the new path. This task is not performed by the application.

Information	Description
Download interval in minutes	The download interval specifies the interval in which the VDO Terminal Service retrieves data on the VDO SmartTerminal. If you do not want to use an automatic data retrieval, you can switch off the function with "0".
Separate download folder for each terminal	Stores the downloaded data of each VDO SmartTerminals in a separate folder

Activate extended logging	Stores all log data of the last 30 days
USB stick password	Exporting the data from one VDO SmartTerminal to a USB stick requires a password. This password is automatically entered when creating a USB stick. Before the export of its data, the VDO SmartTerminal checks if the correct password is present on the USB stick. This ensures that data cannot be downloaded by unauthorised persons.
Encryption server / encryption client	The VDO SmartTerminal stores the downloaded information on the device in encrypted form so that no information is disclosed to third parties in case of theft. The pairing service / client contains the keys for encrypting or decrypting this data.

IMPORTANT

It is not possible to encrypt the data without the key pair.
Therefore, you should store the key pair created during installation securely via the function **Export encryption** in the **Key pair** menu at a safe place to prevent data loss in the case of a reinstallation.

User

Under **User**, all users created in the system from **VDO TerminalService**, **VDO Terminal Tools** and **VDO SmartTerminals** can be managed.

Each user has a unique user ID, a unique name and either the role of administrator or normal operator. Only administrators can change settings in the system.

The **Last login** column displays when the user last logged into the VDO TerminalTools.

The following functions are available to you:

Information	Description
Refresh	Reloads the data from the database. This may be necessary if an operator simultaneously changes the users via the VDO TerminalTools.

New user	Creates a new user in the system. During installation, two users are automatically created in the system.
Edit user	Allows the user name to be edited or to store a new password. An existing password cannot be restored but only replaced with a new password.
Delete user	Permanently deletes the selected user from the system.

During installation, two users are automatically created in the system:

User	Description
Administrator	The administrator has the user name and password **admin**.
Normal user	The normal user has the user name and password **demo**.

ⓘ IMPORTANT	Please note that both the user name and the password are case-sensitive.

Protocol

The **Protocol** contains the last messages of the VDO TerminalService. All connections between the terminals and the VDO TerminalService are entered into the protocol. You can also display the messages in the VDO TerminalTools. The messages are automatically adjusted.

Logs
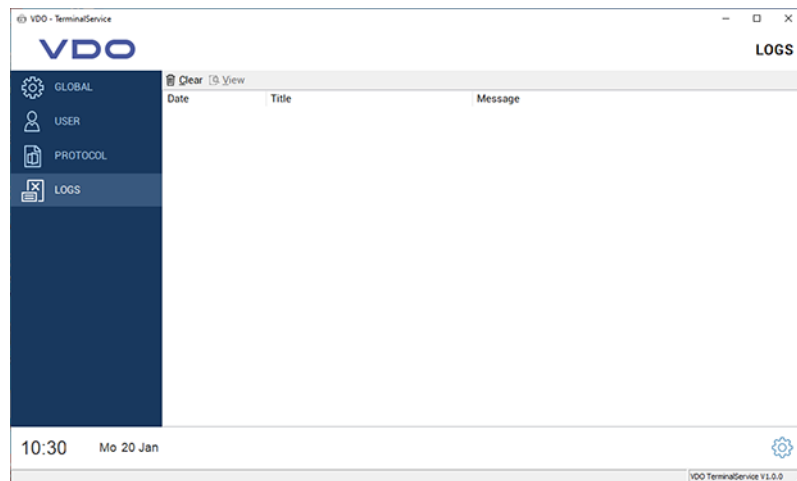
All messages occurring in the configuration program are stored in the **Logs**. These messages can include errors in communication with the **VDO TerminalService** or in relation to the amendment of data. The logs are not archived and are automatically deleted after completion of the configuration program.

VDO TerminalTools

The configuration and administration of the VDO SmartTerminal is performed through the VDO TerminalTools.

The application is used both by the fleet manager (administrator) and operators with fewer user rights. You can assign the appropriate rights to an operator via a user control; ➔ *User [▷ 25]*.

The VDO TerminalTools should be installed on all operator workstations so that each operator has his/her own work area.

You start the VDO TerminalTools via the VDO TerminalTools.exe in the installation directory or via the symbol on the desktop.

Log-on

After starting the application, you will be prompted to log into the VDO TerminalTools. To do this, you will receive the appropriate access data from your administrator.

If the VDO TerminalTools do not start: ➔ *Troubleshooting [▷ 70]*.

IMPORTANT	During installation, the users admin and demo are created with identical passwords. You need to change this access information after the first log-on in order to prevent unauthorised third party access.
IMPORTANT	You can adjust the language setting via **Language** in the top right corner.

Information	Description
User name	Entry field for your user name
Password	Entry field for your password
Server	IP address or name of the computer on which the VDO TerminalService is installed If you have installed both the VDO TerminalTools and the VDO TerminalServices on the same computer, you can address it via the IP address 127.0.0.1.

|	
Port	Entry field for the connection port to the VDO TerminalService (right side next to the server information) By default, this is 4711 and can only be changed on the server via the VDO TerminalService configuration program.
[Login]	Starts the VDO TerminalTools, provided all the information is correct
[Cancel]	Cancels the login operation

IMPORTANT	With every successful connection, the VDO TerminalTools automatically store the user name as well as the server and port. This means there is no need to re-enter this information with every request.

Main window
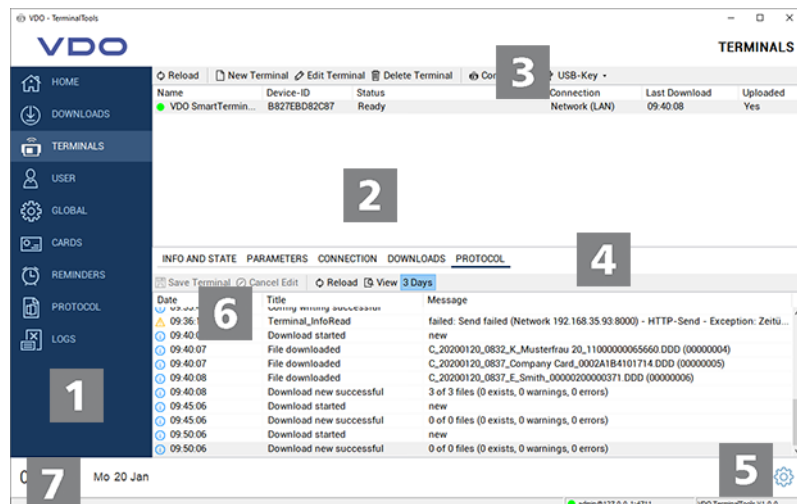
Position	Description
1	Menu tree You are directed to the main menus of the application via the menu tree.
2	Terminal list List of VDO SmartTerminals which are stored in the system.
3	Menu bar You can start actions in the currently selected main menu via the menu bars. By a right mouse click in the lists, a pop-up menu is available in which all important actions can be requested.
4	List Settings and information for a selected **VDO SmartTerminal**
5	Selection menu to change the language setting.

| 6 | Dropdown menus
The dropdown menus contain information and setting options for each menu.
If you want to open several dropdown menus at once, hold down the control key and click on the double arrows of the desired menus. |
| 7 | Status display for the VDO Terminal Service |

Home (overview)
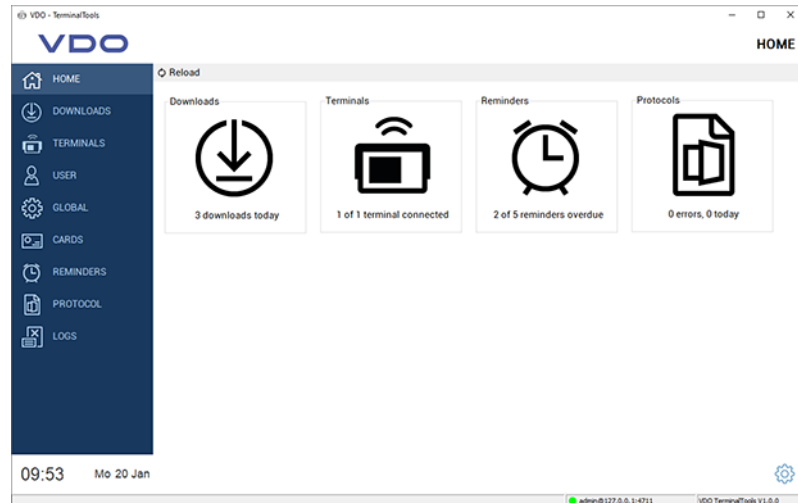
After starting the VDO TerminalTools, the overview page will display all important information at a glance. Clicking onto one of the symbols opens one of the areas described below.

Information	Description
Downloads	Displays the number of downloads which were downloaded today from theVDO TerminalService from all VDO SmartTerminals configured in the network; ➔ *Downloading data [▶ 60]*.
Terminals	Displays both the total number of all VDO SmartTerminals configured in the network and the number of devices currently accessible. Here, all devices should normally be connected.
Reminders	Displays how many download reminders are currently present; ➔ *Reminders [▶ 50]*.
Protocol	Displays any error messages currently present in the protocol area. Normally, no errors should be present here if the system is running problem-free; ➔ *Protocol [▶ 50]*.

Downloads
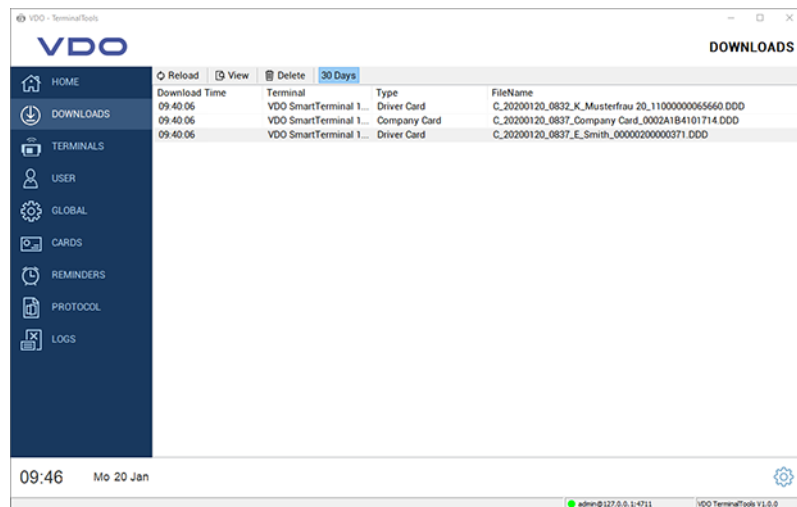
All downloads are displayed centrally under **Downloads**, regardless of which terminal they were downloaded from. After (successful) download of a driver card or mass memory file, it is decrypted (see also) ➔ *Downloading data [60]*) und analysed.

Information	Description
Refresh	Reloads all downloads from the data base.
Displays	Once you have chosen a file, you can select to display the analysed information on the screen.
Deletion	Deletes all selected downloads. The control key enables multiple selections. Please note that the delete operation also deletes the files from the data base. The data in the download folder in the program directory remain unaffected. The system does not automatically adjust the download. You can manually delete the downloads from time to time in order to free up the required memory in the data base.
30 days	Indication that only the downloads of the last 30 days are shown. If you deactivate the function, all stored downloads are displayed. This may take a while, depending on the data volume.

Terminals

Under **Terminals**, all VDO SmartTerminals and their status are displayed.

The symbols in front of the terminal name indicate if the VDO TerminalService can establish a connection with the VDO SmartTerminal or if there is a problem.

The following symbols are possible:

– A green symbol signals that a connection exists.

– A red symbol indicates that the VDO TerminalService cannot establish a connection to the terminal.

– An orange symbol signals that the terminals is currently performing an action – e.g. a download or firmware update.

– A warning symbol signals that there is a problem with the connection which may need to be rectified manually.

– A USB symbol signals that the terminal is being used via USB stick. Here, no further information is displayed as no direct access to the terminal is possible.

To analyse an existing problem, you can call up the point "protocol" in the terminal properties.

IMPORTANT	To analyse an existing problem, you can call up the **Protocol** function in the terminal properties.

Information	Description
Name	Displays the unique name of the VDO SmartTerminal. Here, you can select a name of up to 256 characters for the device.
Device ID	Displays the unique device ID of the VDO SmartTerminal. This is firmly integrated into the device and cannot be changed. You can also display this via the user surface on the VDO SmartTerminal.

	If it essential that you have this information if you wish to integrate a new VDO SmartTerminal into the system in standalone mode.
status	Displays brief information to the terminal connection or to the current terminal activity.
Connection mode	Indicates how the communication between VDO TerminalService and VDO SmartTerminal is established.
Last download	Indicates the last time that a file was downloaded from the VDO SmartTerminal.
Transfer configuration	Indicates if after a configuration change, this configuration was transferred to the VDO SmartTerminal. If the configuration has not yet been transferred, the date of the last change of the configuration is displayed. The transfer can occur both via network, USB cable or USB stick. If the configuration was transferred, the date of the configuration is displayed. A transfer onto a USB stick can occur at any time and is thus protocolled. However, the VDO TerminalTools cannot indicate whether the configuration was entered on the device. By default, it is activated in the **Options for Upload** that the configuration is automatically sent to the device if it is permanently connected via network or USB cable.

The menu bar provides the following functions which are available via a popup menu for the functions **Connection** and **USB Stick**:

Information	Description
Refresh	Reloads all terminals from the data base
New terminal	Stores a new terminal in the system
Edit terminal	Unlocks the terminal data for a selected terminal for editing You can now perform any desired changes on the terminal and then transfer the configuration via network, USB cable or manually via USB stick onto the VDO SmartTerminal.
Delete terminal	Permanently deletes a selected terminal from the system If required, you can later reintegrate the terminal as a new device.

Connection	Provides further functions for a selected terminal:
	
	• Download data from terminal
	  With this command, you manually start a download of the data from the terminal.
	
	• Download archive data from terminal
	  With this command, you manually start a download of all data already downloaded from the terminal. During the download it is, however, checked if the file was already downloaded. If this is the case, the download is skipped. If you wish to repeat the download, you must first delete it from the downloads; ➔ *Downloads [▶ 30]*.
	
	• Download log data from terminal
	  With this command, you can download the log files from the terminal. These may be necessary for the search for

a problem on the VDO SmartTerminal.
The log files are stored in the VDO TerminalService in-
stallation folder under **DB** > **Logs**. A display in the VDO
TerminalTools is not possible.

- Send configuration to terminal
  If the VDO SmartTerminal is connected to the system
  via network or USB cable, you can use this to send the
  current configuration to the VDO SmartTerminal. It is
  generally also possible to set in the terminal options
  whether the transmission is to be performed automatic-
  ally.
  You can see in the main window if the current configur-
  ation was transferred to the terminal.

- Send software update to terminal
  If the VDO SmartTerminal is connected to the system
  via network or USB cable, you can use this to transfer a
  new software version onto the device which you have
  downloaded under www.smartterminal.vdo.com.

- Update the terminal status
  This command allows you to manually retrieve the ter-
  minal status. Usually, the VDO TerminalService inde-
  pendently updates this status every five seconds.
  Should this not be the case, you can perform the up-
  date via this command.

- Restart terminal
  This command allows you to remotely manually restart
  the terminal.

IMPORTANT

The functions for the connection are also available to you via a context menu
by right-clicking on the entry of a terminal.

USB stick	Provides you with functions to prepare a USB stick for the communication with the VDO SmartTerminal.
	Usually, these functions are only used for standalone devices or if a device can no longer be found in the network.
	The following functions are available:

- Prepare USB stick for download
  In order to download the data from a
  VDO SmartTerminal which runs in standalone mode, you will need a USB stick. For safety reasons, you cannot insert just any USB stick into the VDO SmartTerminal but only USB sticks which were prepared for the download. After inserting a prepared USB stick, the VDO SmartTerminal transfers any data which has not yet been downloaded onto the USB stick.
  As this data is encrypted, they still need to be entered into the system via the VDO TerminalTools.
  If the data cannot be entered into the system from the USB stick due to a problem, it cannot be reloaded from the terminal. However, the data can be downloaded later via an archive download from the VDO SmartTerminal.

- Prepare USB stick for archive
  As with function **Prepare USB stick for download**, this can be used to download data from the VDO SmartTerminal. In contrast, only data which was already downloaded is transferred onto the USB stick. This may be necessary if the USB stick has a fault after the first data download or if it is lost or if it was simply forgotten to enter the data via the VDO TerminalTools.

- Prepare USB stick for log download
  With this command, you can download the log files from the terminal.
  These may be necessary for the search for a problem on the VDO SmartTerminal.

- Import data from USB stick
  This function allows you to import the data of a VDO SmartTerminal which were transferred to a prepared USB stick. Hereby, it is irrelevant if the data is normal data or archive data.
  A USB stick can contain data from several VDO SmartTerminals. During importing, all data present on the USB stick are transferred and assigned to the appropriate terminals.

- Store configuration on USB stick
  Standalone devices receive their configuration by transferring it via USB stick to the VDO SmartTerminal. Any change of configuration must at once be transferred to a USB stick and entered into the device.
  This function may also be necessary if the device is no longer found in the network.

- Transfer software update onto USB stick
  In order to transfer a new software version onto a VDO SmartTerminal, you can either perform this via the permanent connection or you load the update onto a USB stick. Regardless of whether the VDO SmartTerminal runs in the network, on a USB cable or in standalone mode, it can receive an update via USB stick at any time.

- Create USB stick for factory settings
  This function allows you to create a USB stick to reset a terminal back to factory settings. Please note that afterwards, all data on the terminal have been deleted.

IMPORTANT

The functions in relation to the USB stick are also available to you via a context menu by right-clicking on the entry of a terminal.

Add new terminal

IMPORTANT

If the VDO TerminalTools find a new device which was connected via network or USB cable, you will be prompted if you want to create the VDO SmartTerminal.
If you choose **[Yes]**, creating and configuring also follows the procedure described below.

To create and configure a new terminal, proceed as follows:

1. Click onto **New Terminal**.
   A dialog is opened in which you must first determine a unique designation for the VDO SmartTerminal.

2. Enter the unique designation for the VDO SmartTerminal in the entry field.

3. Select how the new basic configuration is to be created.
Here, you may choose from three options:

– Configure with default settings
Creates the new terminal with the default settings.

– Import settings from terminal
Imports the current settings from the terminal. This may be useful if, for example, you have accidentally deleted a VDO SmartTerminal from the list of terminals.

– Duplicate settings
Applies the settings from a previously configured terminal.

4. Determine how the initial contact to the device is to occur.

The VDO SmartTerminal automatically transmits its attached connections to the VDO TerminalService. To do this, it sends a small message with the serial number and the connection type via a connected USB cable to the VDO TerminalService.
The message in the network is realised via a UDP broadcast from port 4711 to port 4711.

If the VDO TerminalService was able to receive this message, the VDO SmartTerminal is automatically displayed in a dialog. It can then be selected for the configuration.

If the automatic detection does not work (e.g. in case of different locations, which are connected via a VPN), the connection to the device must be selected.

In this case, a device operated in the network should not have a dynamic IP address but should either be assigned a fixed address via DHCP or an address should be manually deposited. For details, please contact your network administrator.

The following options for initial contact to the terminal are possible:

Information	Description
Automatically	In this case, the configuration is simply completed by selecting the appropriate entry from the list, and you can continue by making your selection in the "Settings" area.
Network mode	Select the network mode if your device is connected via LAN cable or wireless LAN. To connect the device, check the currently used IP address on the VDO SmartTerminal; ➔ *IP settings [▷ 58]*. In this mode, the VDO TerminalService attempts to contact the device via a network connection at the IP address entered. When finishing the dialog, it is tested whether a connection is created. If a connection is possible, the serial number of the device is determined and entered into the communication protocol.
USB cable (COM)	Select the USB cable mode if your device is connected to the workstation via USB cable and it is not automatically detected. Next, select the appropriate port through which the device is connected with the PC. When finishing the dialog, it is attempted to created a connection to the device.

User Manual VDO SmartTerminal

	If the connection was created successfully, the serial number of the device is transmitted and entered into the communication protocol.
USB stick (offline)	Select this mode if you have not connected the device. This is the case, for example, if you want to use the device in standalone operation. Since we always have to identify the device by its serial number, we need this information to manage the device. In this case, check the serial number directly on the VDO SmartTerminal and enter it into the appropriate field.

5. Click on **[OK]**, to apply the settings.

6. Check all settings and adjust them, if necessary.

7. If all settings are correct, click on [store terminal]; ➜ *Terminal properties of the VDO SmartTerminal [▶ 38]*. The following chapters contain detailed descriptions to the individual configuration options.

Terminal properties of the VDO SmartTerminal

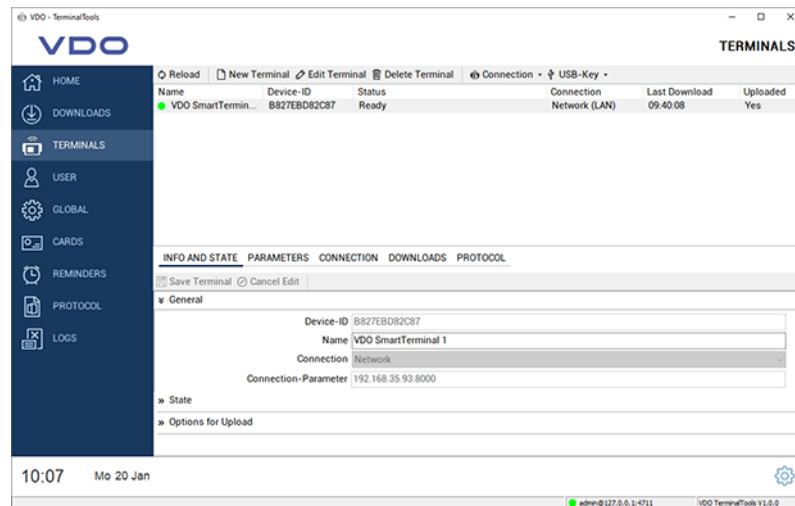The following chapters describe the individual settings of the VDO SmartTerminal.

As soon as a terminal is selected from the terminal list, the screen is split and the appropriate configuration of the selected terminal is shown in the lower part of the screen. Here, you will find all settings options as well as a list of all downloads from the terminal and the current communication protocol between VDO TerminalService and VDO SmartTerminal.

By activating the button **Edit terminal**, the settings are released for editing.

By using the bottom menu bar, you can store or reject configuration amendments:
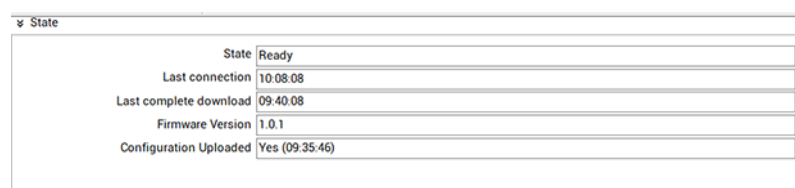
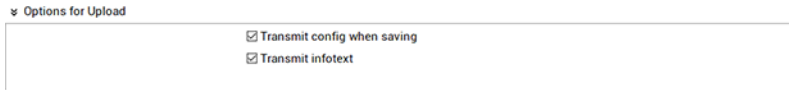| Function	Description
Store terminal	Stores the edited configuration of the VDO Terminal. If you do not have the option **Transfer configuration when storing** activated for this terminal, you will have to manually carry out the configuration transfer afterwards.
Cancel editing	Cancels the performed edits.

Info and Status

The **Info and Status** list is split into the following areas:

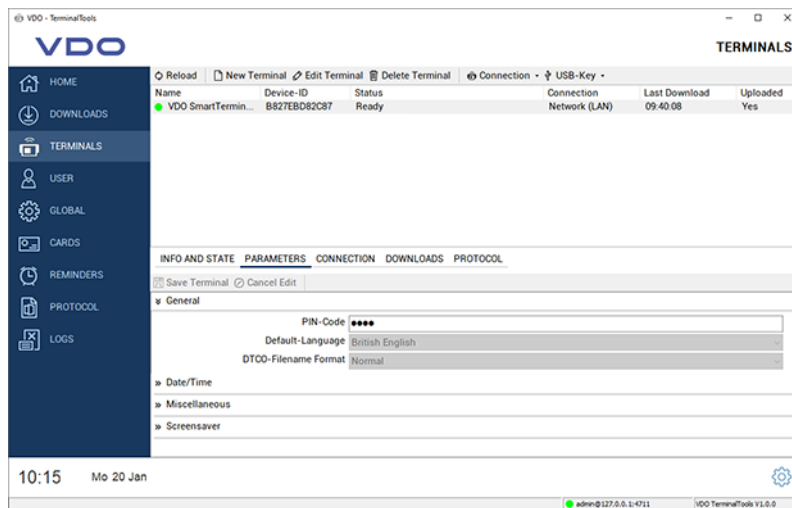| Information	Description
General Information	General information to the VDO SmartTerminal which are also shown in the terminal list: • Device ID Unique ID of the device • Name Name of the device You can change this at any time. • Connection Information to how the VDO TerminalService is to establish a connection to the VDO SmartTerminal. • Connection parameters Indicates the current connection to the terminal.

Information	Description
status	• Status Like the terminal list, indicates the status of the terminal and possibly which tasks are still in the queue. • Last connection Indicates when the last connection to the terminal was created. • Last complete download Indicates when data was last downloaded from the terminal. • Firmware version Indicates the status of the software on the VDO SmartTerminal.

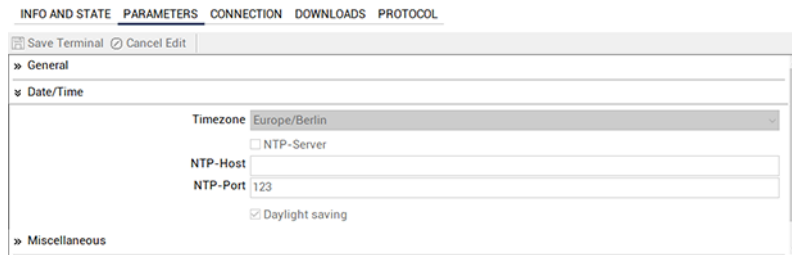| Information	Description
Options for upload	• Transfer configuration during storage If this option is activated, changes to the configuration of a terminal are immediately transferred to the terminal. Deactivate this function if you wish to manually perform the transfer of the configuration. • Transfer info text If this option is activated, the global info text is transferred onto the VDO SmartTerminal. If this option is deactivated, the info text is removed from the device.

Parameter

List **Parameter** includes general setting options.

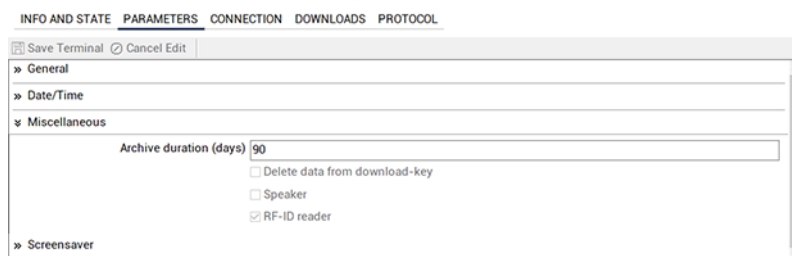| Information	Description
General Information	• PIN number The PIN number is required on the VDO SmartTerminal in order to carry out settings on the device. The PIN number protects the device from unauthorised access and ensures that the configuration cannot be changed on the device. The standard PIN is 0000. • Default language Specifies the default language on the device. The default language is always active when no driver card or download key is inserted. If an appropriate medium is inserted into the VDO SmartTerminal, the device changes the language according to the information on the medium. As soon as the medium is removed from the device, the default language is reset. The preset default language is English.

- DTCO filename format
  This option specifies the DTCO file format in which the data is to be stored on the VDO SmartTerminal. Normal mode is activated as default.

Dropdown menu Date/Time

INFO AND STATE   PARAMETERS   CONNECTION   DOWNLOADS   PROTOCOL

Save Terminal ⊘ Cancel Edit

» General
¥ Date/Time

Timezone Europe/Berlin
☐ NTP-Server
NTP-Host
NTP-Port 123
☑ Daylight saving

» Miscellaneous

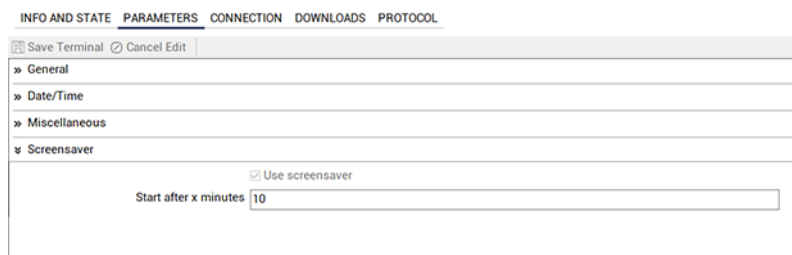| Information	Description
Date / Time	• Time zone Specifies the time zone for the location of the VDO SmartTerminals. • NTP server If this option is activated, the terminal attempts to synchronise the time with the NTP server specified under the NTP host name and NTP port. If this option is deactivated, the time must be set manually on the VDO SmartTerminal. • NTP host name Name or IP address of the NTP server • NTP port Port of the NTP server. By default, NTP uses the UDP port 123. • Automatic summer / winter time switch Specifies if the terminal should automatically switch between summer and winter time.

Dropdown menu Miscellaneous

INFO AND STATE   PARAMETERS   CONNECTION   DOWNLOADS   PROTOCOL

Save Terminal ⊘ Cancel Edit

» General
» Date/Time
¥ Miscellaneous

Archive duration (days) 90
☐ Delete data from download-key
☐ Speaker
☑ RF-ID reader

» Screensaver

| Information	Description
Miscellaneous	• Archiving time Specified how long data is to remain stored on the VDO SmartTerminal after it was downloaded from the VDO TerminalService or via USB stick. Data which is older than the time stated in the archive is automatically removed from the VDO SmartTerminal. The default time is 90 days. • Delete data from download key if this option is activated, the VDO SmartTerminal automatically deletes the data on the download key after transferring the data from the download key to the

device.

If this option is deactivated, no data is removed from the download key.

By default, no data is removed from the download key.

- Loudspeaker
Activates / deactivates the loudspeaker on the VDO SmartTerminal
The loudspeaker is active by default.

- RFID reader
Activates / deactivates the RFID reader on the VDO SmartTerminal
If the RFID reader is activated, the driver is requested to scan his/her driver's license after insertion of a medium into the device.
The RFID reader is activated by default.

Dropdown menu screen saver

Information	Description
Screen saver	• Start screen saver Activates / deactivates the screen saver on the device The time to activation can be set under option **Start after X minutes**. The screen saver is activated by default and starts after 10 minutes. • Start after X minutes This option specifies after how many minutes the screen saver starts on the VDO SmartTerminal. The option is only available when option **Start screen saver** is activated.

Connection
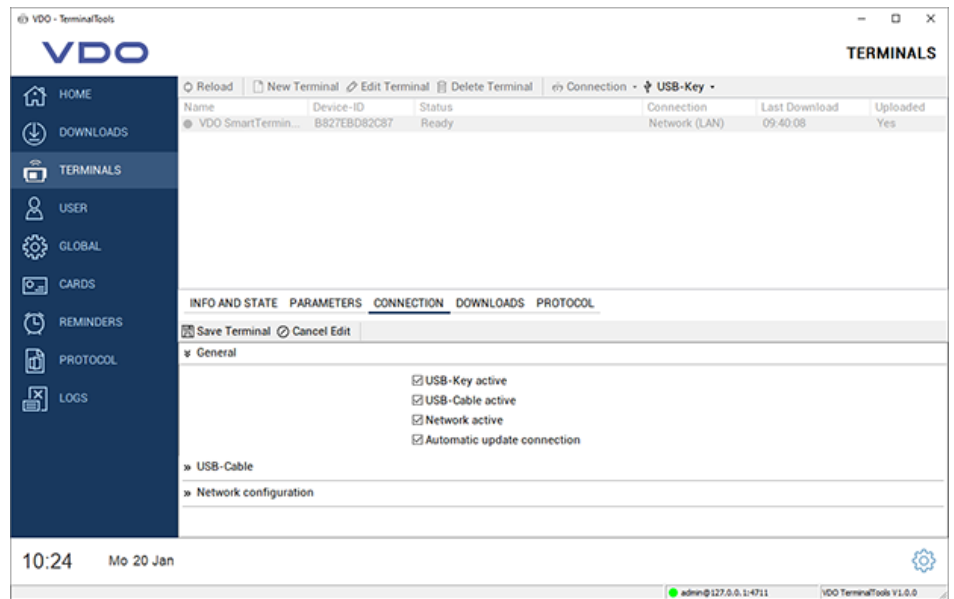
In the connection settings, you configure the settings for all 3 communication types. You may also carry out several settings. Which connection path the VDO TerminalService uses to communicate with the VDO SmartTerminal, is configured via the option **Connection mode** in list **Info and Status**.

Information	Description
General Informa-tion	Selection via the control boxes which connection should be active on the VDO SmartTerminal. The current connection type is specified under **Info and Status**.

IMPORTANT	Leave all connections active in order to be able to reach the device via an-other connection in an emergency. If access to the device is no longer possible, the only option is using a USB stick to reset the device to factory settings.

IMPORTANT	If the option **Automatically update connection types** is activated, the VDO TerminalService automatically changes the connection to the device if it replies on another address. This is useful during operation via DHCP, for example, as it means that the service always finds the device again. In case of a connection via USB cable, the service automatically exchanges the appropriate COM port if the operating system changes it, e.g. due to hardware changes. Note that in doing so, the connection type is not switched. If you wish to change the connection of network to USB cable, this must be done manually.

Dropdown menu USB cable

Information	Description
USB cable	• COM port Indication at which COM port the VDO SmartTerminal is connected.

IMPORTANT

If you are unsure at which COM port the terminal is connected, select **Not connected** and in the **General** area, activate **Automatically update function connection data**. **Info and Status** displays the current COM port.

Dropdown menu Network configuration

Information	Description

Network Configuration	• DHCP
	  Control box in the event that a DHCP service is available.
	  The settings from the IP address to the data port are automatically set.
	  Deactivate this function if you wish to configure the network settings manually.
	
	• IP address
	  IP address for the VDO SmartTerminal
	  If you wish to operate the terminal in DHCP mode via a VPN connection or if the UDP broadcast is blocked by the terminal, the VDO TerminalService cannot receive any messages from the VDO SmartTerminal in order to update the connection parameters.
	  In this case, you must assign a fixed IP address to the terminal via your DHCP server and enter it under IP address.

- Subnet mask
  Subnet mask, compatible with the IP address
  In a Class-C net, this is usually 255.255.255.000.

- Standard gateway
  Router address
  If you do not want to specify a router, enter
  000.000.000.000.

- DNS server
  Indication of the DNS server
  This is required if you wish to use an NTP server and
  the name of the NTP server was entered instead of an
  IP address.

- Data port
  Port for the communication between VDO TerminalSer-
  vice and VDO SmartTerminal
  Communication with the terminal occurs via this port.
  This must be activated in the firewall of the operating
  system.
  If you have any questions, please contact your network
  administrator.
  By default, port 8000 is used.

- WLAN
  Control box for activating the WLAN mode

- SSID
  Name of the WLAN network
  Indication for the connection of a VDO SmartTerminal
  with the WLAN router

- Password
  Password for the WLAN network with which the VDO
 SmartTerminal is to connect itself.

Downloads

Under **Downloads**, all downloads which were downloaded onto this terminal
are displayed. After downloading of a file, it is stored in the central download
directory; ➔ *Global settings [▸ 23]*.

After selecting this area, the following functions will also be available in the
lower menu bar:

Information	Description
Refresh	Reloads all downloads from the data base
Displays	After you have selected a file, you can request the ana-lysed information to be displayed in a dialog.

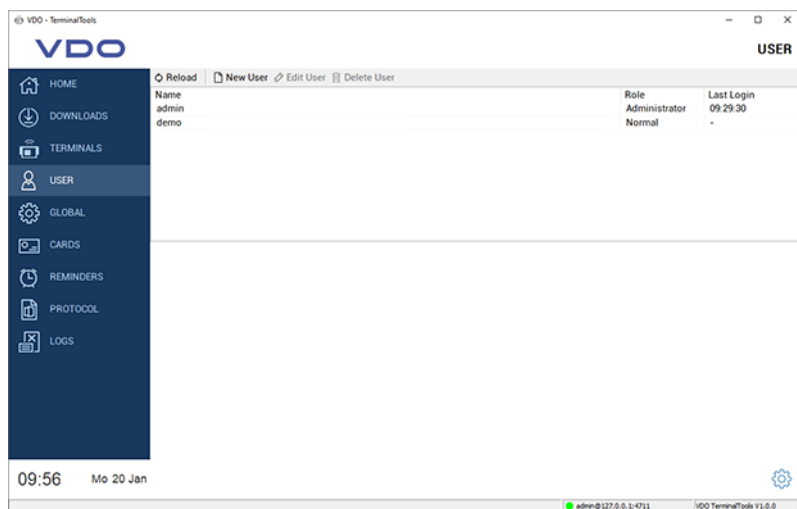| 30 Days	Indication that only the downloads of the last 30 days are displayed If you deactivate the function, all stored data is displayed. Depending on the data volume, this may take longer.

Protocol
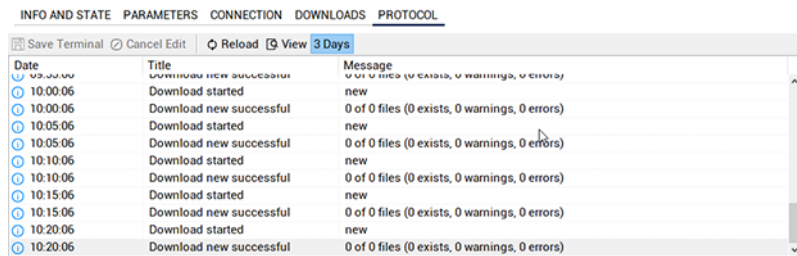
Protocol contains the entries for communication between VDO TerminalService and VDO SmartTerminal. Contrary to the global protocol, all last activities of the terminal are protocolled here.

After selecting this area, the following functions will additionally be available in the lower menu bar:

Information	Description
Refresh	Reloads all protocol entries from the data base
Displays	Displays more detailed information for a selected protocol entry in a dialog
3 Days	Indication that only the protocol entries of the last 3 days are displayed If you deactivate the function, all stored Protocol entries are displayed. This may take a while, depending on the data volume.

User

Under **User**, all users known to the system may be managed.

This area is only visible to administrators. For any other users, this area is hidden.

IMPORTANT

Each user has a unique user ID, a unique name, is administrator or user with restricted user rights. Only administrators can change settings in the system.

IMPORTANT

The column **Last Login** indicates when a user has last logged into the system via the VDO TerminalTools.

The following options are available to the user:

Information	Description
Refresh	Reloads the data from the data base
	This may be necessary if an operator edits the users via the VDO TerminalTools.
New user	Creates a new user in the system
Delete user	Permanently deletes the selected user from the system User with the same name may be recreated.

During installation, two users are automatically created in the system:

User	Description
Administrator	The administrator has the user name and password **admin**.
Normal user	The operator with restricted user rights has the user name and password **demo**.

IMPORTANT

Please note that both the user name and the password are case-sensitive.

After installation, please change the standard password for the administrator.

As soon as a user is selected from the user list, the screen is split and the corresponding configuration of the selected user is shown in the lower section.

By activating the **Edit user** button, the display of the settings switches to the edit mode.

By using the bottom menu bar, you can store or reject configuration amendments:

Information	Description
Store user	Stores the edited user configuration
Cancel editing	Cancels the performed edits

User Manual VDO SmartTerminal

The following settings are available to a user:

Information	Description
User name	Unique user name This can only be present once in the system. The combination of user name and password is required to log into the VDO TerminalTools.
Password	Password of the user A stored password cannot be displayed again. If you wish to store a new password for the user, click on the button on the right in the entry field. Next, you can store a new password for the user. Note that this change is only adopted when you store the user.
Role	User role of the operator
	You can split the user into two groups via the **Administrator** selection box. Users with restricted user rights – where the selection box is not selected – can only view data in the system. Furthermore, certain areas are hidden for users with restricted user rights. A user with administration rights has full access to the system.

IMPORTANT

Should it ever occur that no access data is known for an administrator or a user with administration rights no longer exists, the problem may be resolved via the VDO TerminalService configuration program.
Here, you can either allocate a new password for an administrator or create a new administrator.

Global
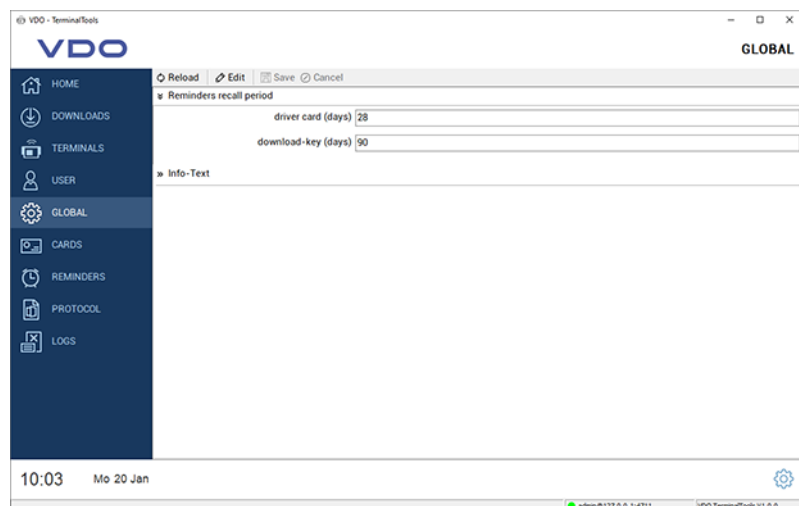
Global contains settings which are applicable for all configured terminals.
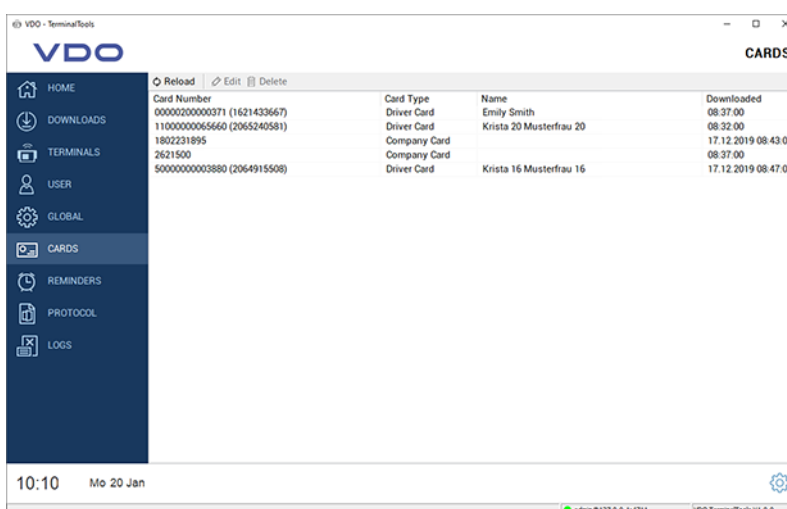
The menu bar contains the following functions:

Information	Description
Refresh	Reloads all global settings from the data base
Edit	Activates the settings for editing
Saving	Saves the edits made
	The **[Save]** button becomes active when you are in edit mode. It allows you to adopt the edits into the data base. After you have edited a setting, you must manually send the configuration to the VDO SmartTerminal if you have not activated automatic transfer.
Cancel	Cancels the performed edits

The following settings can be made via the **Global** area. You can change these after clicking on the **[Edit]** button.

Information	Description
Reminder time card download	Defines if and when a reminder for the card download is created in the system
	Entering 0 days will deactivate the function.
	• Driver card in days Enter the number of days here after which a download reminder is to occur. By default, this is 28 days.
	• Download key in days Here, you enter the number of days after which a download reminder is to occur, By default, this is 90 days.
Info text	General information for the driver on the VDO SmartTerminal
	This is displayed while data are transferred onto the VDO SmartTerminal. The driver may also have this information displayed later via the "info test" navigation point.

Cards

Cards automatically lists the company cards from all downloads.

This area is only visible to administrators. This area is hidden for users with restricted user rights.

The following functions are available via the menu bar:

Information	Description
Refresh	Reloads all cards from the data base
Edit	Activates the card name for editing
Deletion	Deletes the selected driver cards
	This may be necessary due to a driver retiring or a vehicle being eliminated, for example.

Reminders

Reminders automatically records download reminders in the system.

For each transmission of a driver card or from a download key, the system automatically creates a download reminder; see also ➔ *Global [▸ 48]*. The system automatically holds all downloaded data from a VDO SmartTerminal and memorises when a driver has last performed a download or when a download was last performed for a vehicle.

You can delete any drivers or vehicles which are no longer part of your company from the list of download reminders.

All reminders are displayed in a list:

Information	Description
Name/ vehicle registration number	Unique identification of the driver card / of the download key
Type	Indicates if it is a driver card or a download key
Date	Date of the last download of this medium
Due	Calculated date when the dates of the driver card / download key need to be downloaded next
Overdue	Indicates of the reminder is already overdue

The following functions are available via the menu bar:

Information	Description
Refresh	Reloads all reminders from the data base
Deletion	Deletes the marked reminders
	Multiple selections are possible via the control key. This may be necessary due to a driver retiring or a vehicle being eliminated, for example.

Protocol

Protocol contains the current communication between VDO TerminalService and all VDO SmartTerminals as well as direct messages from the service which are not allocated to any terminal.

Information	Description
Refresh	Reloads all protocol entries from the data base

Displays	Displays more detailed information for a selected protocol entry in a dialog
3 Days	Indication that only the protocol entries of the last 3 days are displayed
	If you deactivate the function, all stored protocol entries are displayed. This may take a while, depending on the data volume.

Logs

The protocol records all error messages which occurred in the current session of the VDO TerminalTools. The protocol does not show any messages between the VDO TerminalService and the VDO SmartTerminal. These can be found under **Logs**.

Information	Description
Date	Date on which the error message occurred
Title	Title of the error message
Message	Description of the error that has occurred

Service VDO SmartTerminal

The Service VDO SmartTerminal runs in the background on your computer. This is automatically performed when starting the computer and therefore permanently maintains the connection to the terminals.

The service runs as user "system account" and can be adjusted by your administrator in the service management of the operating system.

To store all data, the service uses a local data base which is located in the "data" folder.

Configuration via USB stick

IMPORTANT	You will require knowledge in the area of networks and setting up networks if you wish to configure the VDO SmartTerminal for a network connection. Contact your network administrator to carry out the settings.

Alternatively, the configuration can be transferred at any time using a USB stick if the device is no longer accessible by the VDO TerminalTools or if you run it it standalone operation; ➔ *Data transfer [▶ 67]*.

The transfer of the configuration with a USB stick is necessary if you

- are configuring the VDO SmartTerminal for the network operation and are changing the settings of the TCP/IP connection.
- are changing the settings of the TCP/IP connection in the running network operation.
- are running the VDO SmartTerminal independently (standalone).

User Manual VDO SmartTerminal

Working with the VDO SmartTerminal

The display of the VDO SmartTerminal is split into three areas. At the top, you always find the current position in the navigation of the device. At the bottom, the terminal shows the current time and date and through the symbol on the right enables switching to the settings. The work area is located in the middle.

The operation of the device is done via the display.

Initial installation

Before you can use the VDO SmartTerminal, you must transfer an encryption onto the device. This is necessary for data protection reasons as it is a portable device.

You can perform the initial installation of the device via the VDO TerminalTools.

Afterwards, you can download data onto the device.

Settings

Some of the settings which are made via VDO TerminalTools can also be made directly on the device. However, for most of the settings the operator needs to enter an administration PIN in order to be able to make changes. This can be set in the VDO TerminalTools per device.

Click on the gearwheel in the bottom right to access the settings at any time.

Information
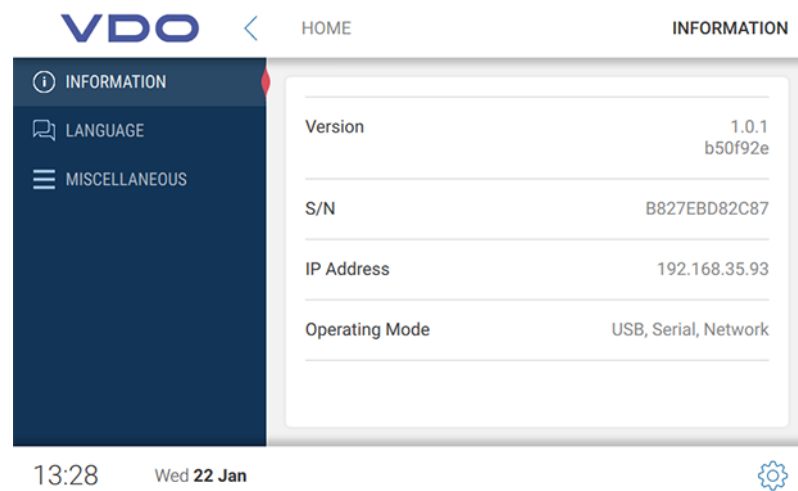
The area **Information** contains all important information which you require, e.g. for initial installation.

The following information is displayed:

Information	Description
Version	Displays the current firmware version, including update level

| S/N	Displays the unique serial number of the device
	This is required for a standalone installation, for example, in order to create a USB stick with the configuration for the device.
IP address	Shows the current IP address if the VDO SmartTerminal is connected with the network
	This is required for a network installation, for example, if the automatic configuration is not working.

Select

You can change the current language on the device using the language setting.
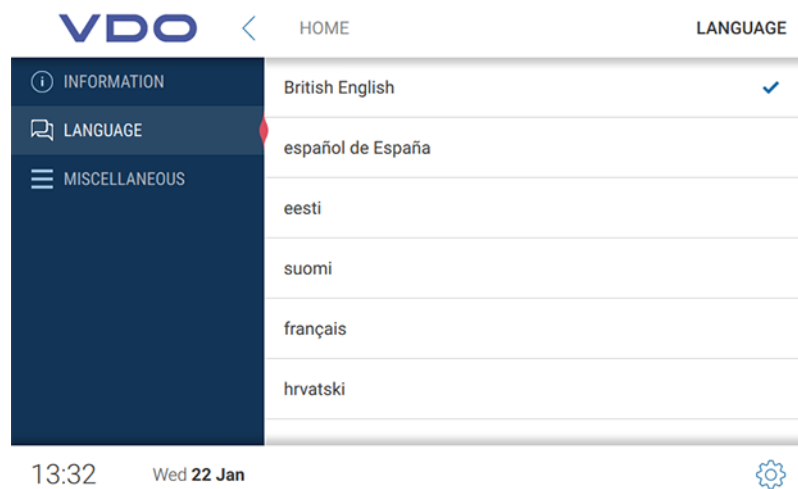
Generally, the VDO SmartTerminal switches the language as soon as a driver card is inserted, so that the driver can use the corresponding language which is stored on his/her driver card. However, if the driver wishes to change the language while his/her driver card is inserted, he/she can do so via this setting.

As soon as the driver card was removed on the VDO SmartTerminal, the VDO SmartTerminal switches back to the language which was originally set.

Miscellaneous
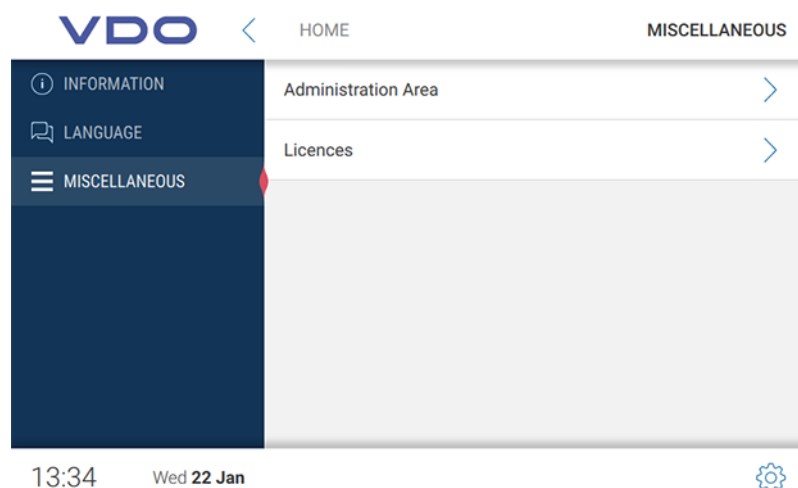
You can reach the administration area via **Miscellaneous**.

In order to activate the administration area, you must enter the corresponding PIN which was set via the VDO TerminalTools. This is **0000** by default.

In addition to this access to the administration area, you are able to view the licensed packages.

Administration area

To get to the administration area, you will need to enter the appropriate PIN. By default, this is **0000**.

Miscellaneous (administration area)

Information	Description
Loudspeaker active	Option to switch on/off the loudspeaker at the VDO SmartTerminal
Communicator Busy	Indication if the VDO SmartTerminal is currently busy with a task
Licences	Libraries and packages used to program the software

Date and time (administration area)
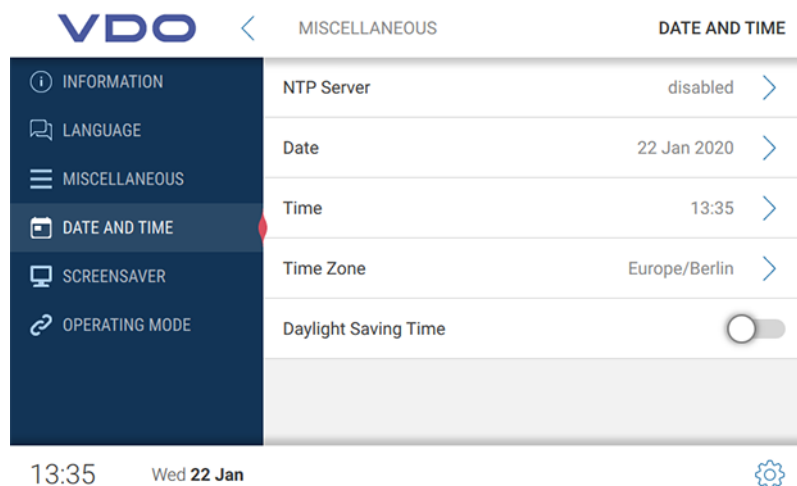
Under **Date and time**, you can set the current date, time as well as the time zone and activate the automatic switch between summer and winter time.

If you want the VDO SmartTerminal to synchronise the time with a time server, you can activate the function of the NTP-Server.

| Information	Description
NTP Server	Option for the automatic synchronisation of the time with an NTP server If this option is deactivated, the time must be set manually on the VDO SmartTerminal.
NTP server name	Displays name or IP address of the NTP server
Date	Displays the entered date
Time	Displays the entered time
Time zone	Displays the entered time zone

Summer/winter time	Option for automatically switching between summer and winter time

### Screen saver (administration area)
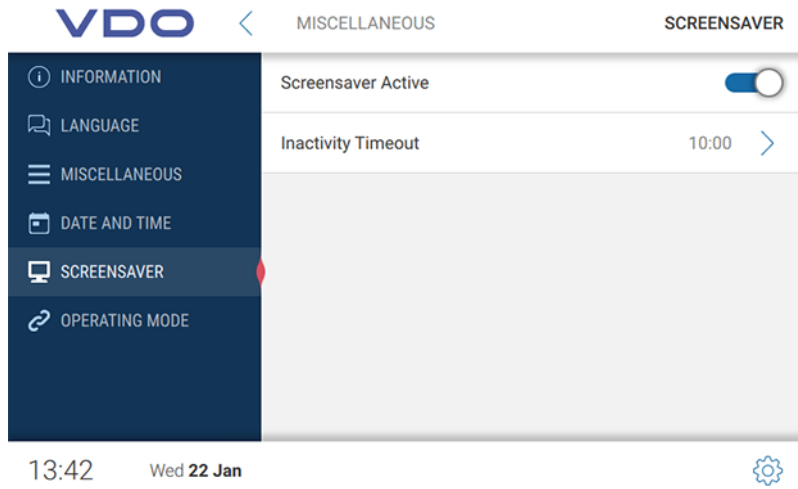
Information	Description
Screen saver active	Option to activate/deactivate the screen saver on the VDO SmartTerminal The time to activation can be set under the **Inactivity timeout** option.
Inactivity timetout	In minutes, the time after which the screen saver starts on the VDO SmartTerminal if no action is performed on it. This setting is only available when the **Screen saver active** option is activated.

Operating mode (administration area)
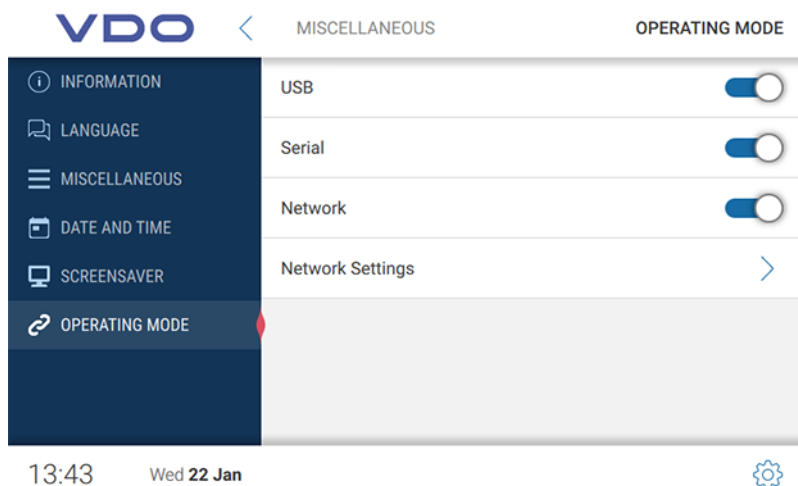
Under **Operating mode**, you can specify which communication paths the terminal allows. If a connection possibility is deactivated, a connection can no longer be established via this channel.

Network settings
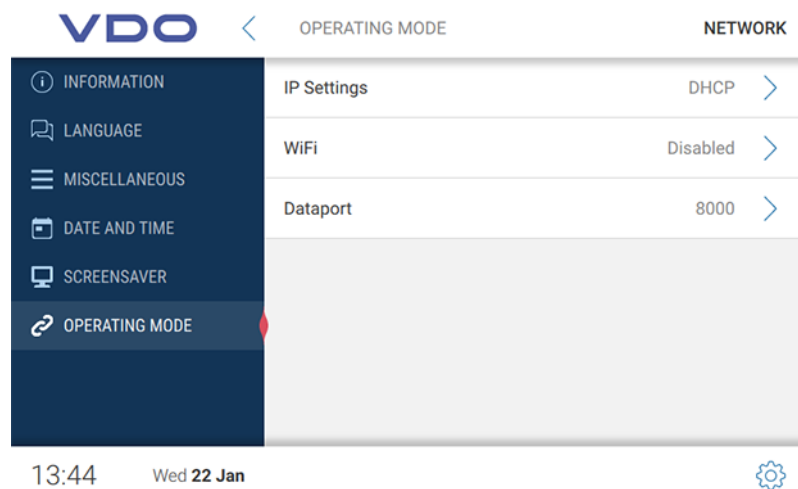
In the **Network settings**, you obtain access to the submenus for the IP settings as well as the WLAN settings.

The data port is required for the communication between VDO TerminalService and VDO SmartTerminal. The communication with the terminal occurs via this port. The port must be activated for the communication in the firewall of the operating system. For any questions, please contact your network administrator. By default, port 8000 is used.
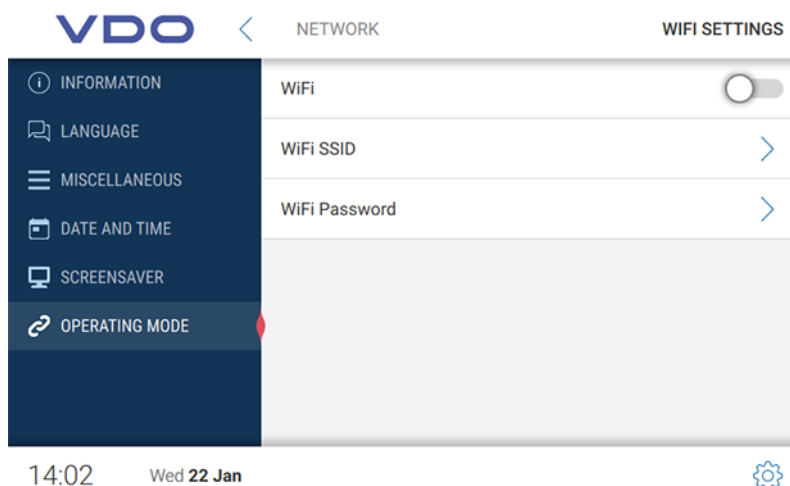
IP settings
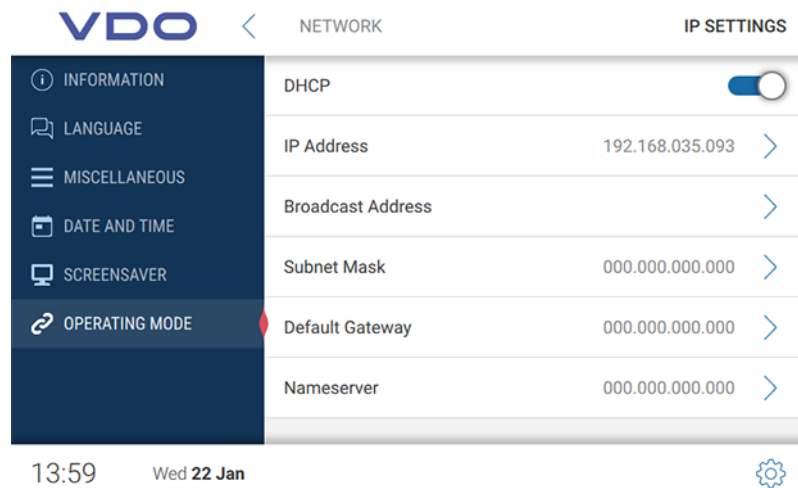
If you wish to run the VDO SmartTerminal via network, you can make the settings for this.

Information	Description

DHCP	Option to use a DHCP Server
	By activating, the DHCP option, all other settings are searched automatically. Deactivate this option if you wish to manually configure your network setting. In this case, you must fill in the fields below.
IP address	Possibility to enter a free IP address for the VDO SmartTerminal from your network
Broadcast address	Address to which the VDO SmartTerminal sends broadcasts
	The VDO SmartTerminal sends these messages in order to display that it is in the network. Hence, it can be detected by the VDO TerminalService.
Subnet mask	Possibility to enter the subnet mask suitable for the IP address This is usually 255.255.255.000 in a class C network.
Default gateway	Possibility to enter your router's address
	This creates internet access for the VDO SmartTerminal. If you do not wish to specify a router, please enter 000.000.000.000.
Nameserver	Possibility to enter the DNS server
	The Nameserver is required to enable the VDO SmartTerminal to cancel names. This is required, for example, if you wish to use an NTP server and the name of the NTP server was entered instead of an IP address. It is also required for other services in the VDO SmartTerminal which are to communicate with your network.

WLAN settings

Information	Description
WiFi	Option to activate/deactivate the WLAN function
WIFI SSID	Possibility to enter the name of your WLAN network This is required to establish a connection with the WLAN router. If you do not operate a public access point, you will need a password to establish a connection.

WIFI password	Possibility to enter the password suitable for the SSID

Downloading data

Downloading data from a driver card

![i] **IMPORTANT**	If the device has not yet been configured, you receive an error message when you insert a driver card or a download key.

|	
![i] **IMPORTANT**	This function for driver's license control is only available when the RFID reader is activated in the settings of the terminal; ➔ *Parameter [▷ 40]*.

This is how you enter the data of a driver card into the VDO SmartTerminal:

1. Insert the driver card chip down and forward into the card reader.
    During the transmission of the data of a driver card, the progress of the down-load is shown on the display.

|	
![i] **IMPORTANT**	If an info text is stored in the VDO TerminalTools (➔ *Global [▷ 48]*), it is displayed above the progress display. Here, the operator can scroll the screen using his/her finger if the text is longer than the field provided.
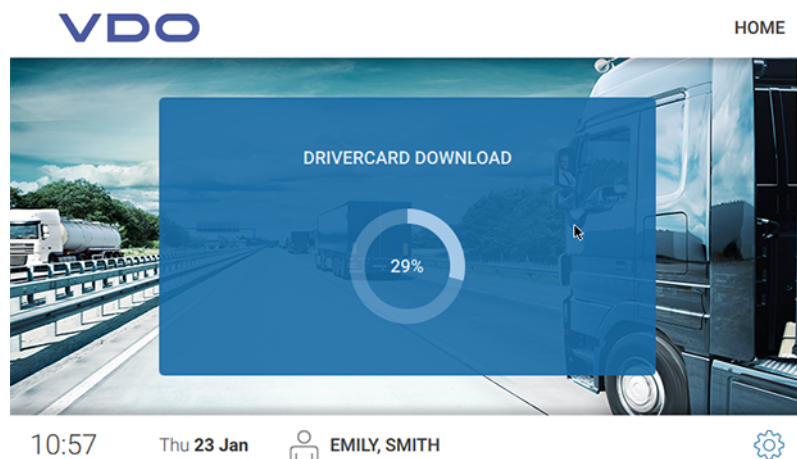
After the download of the data, the driver's license control dialog is displayed.
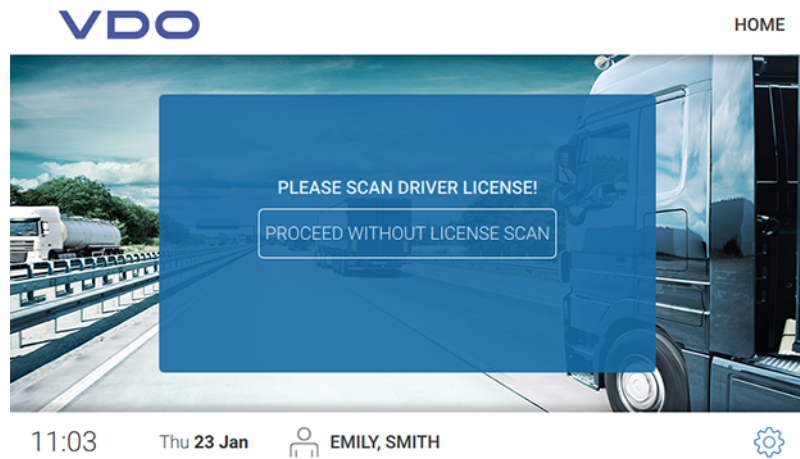
2. Proceed as follows:

– Hold the RFID chip on the driver's license on the RFID reader.
The successful reading of the RFID chip is shown on the display.
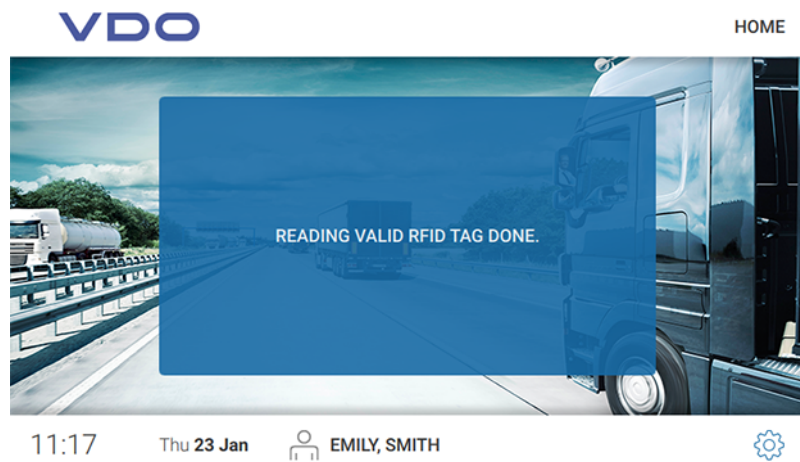
– Tap on **[CONTINUE WITHOUT DRIVER'S LICENSE SC..]** if you wish to continue without driver's license control.

The Data are stored on the VDO SmartTerminal.

You will automatically proceed to the next dialog with the following areas:

Information	Description
Driver information	Displays current information to driving times etc.
Driven vehicles	Lists which vehicles (vehicle registration number) the driver used
Events	Chronologically lists the events and faults with symbol, start and end of the recording
Calendar	Displays all recorded information as a calendar
Information	Redisplays the info text already shown during the download

IMPORTANT

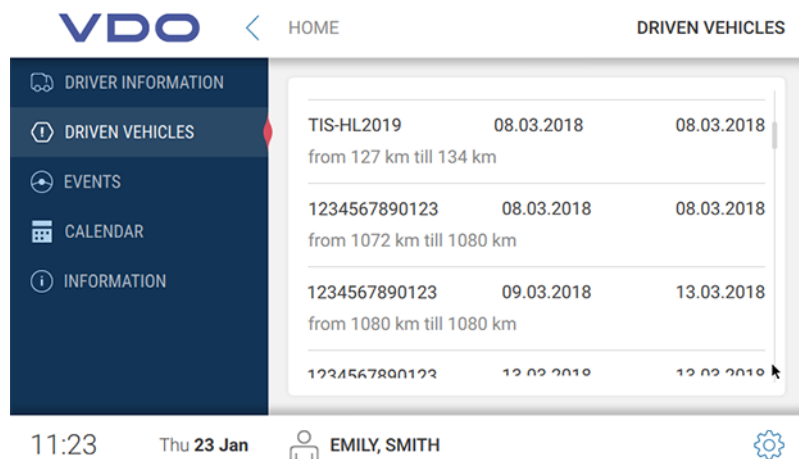This information is shown until the driver card is removed.

Driver information

IMPORTANT	The driver information is only active when a driver card or download key with driver data is inserted.

| Information	Description
Last download	Date on which the last download occurred
Next download	Date on which the next download must occur
Next break	Time (hours:minutes) until the next break must be taken
Available driving time (day)	Driving time still available to the driver on this day
Available driving time (week)	Driving time still available to the drive in this week
Available driving time extensions	Number of remaining driving time extensions
Available daily rest time reductions	Number of remaining reductions of daily rest time
Total rest time	Total rest time taken
Total driving time	Total driving time
Total working time	Total working time
Last activity	Date of last activity

Driven vehicles

Under Driven vehicles, you will see all vehicles used by the driver.

In addition, the following information is displayed:

- Time of insertion and removal of driver card
- Kilometer reading at insertion and removal of driver card
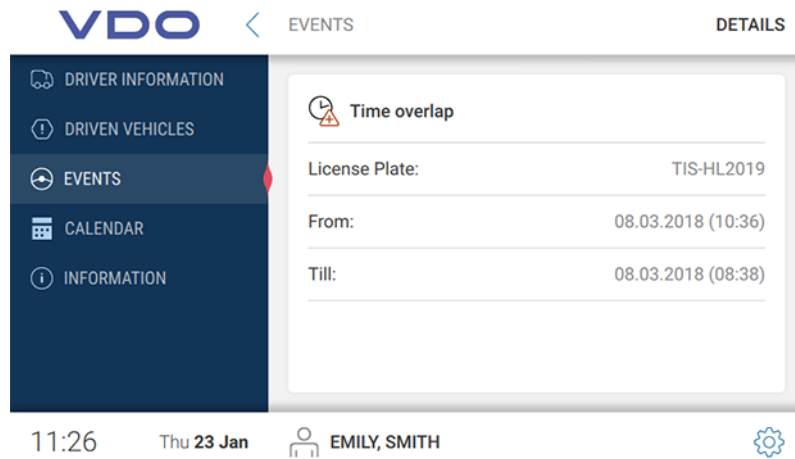
Events
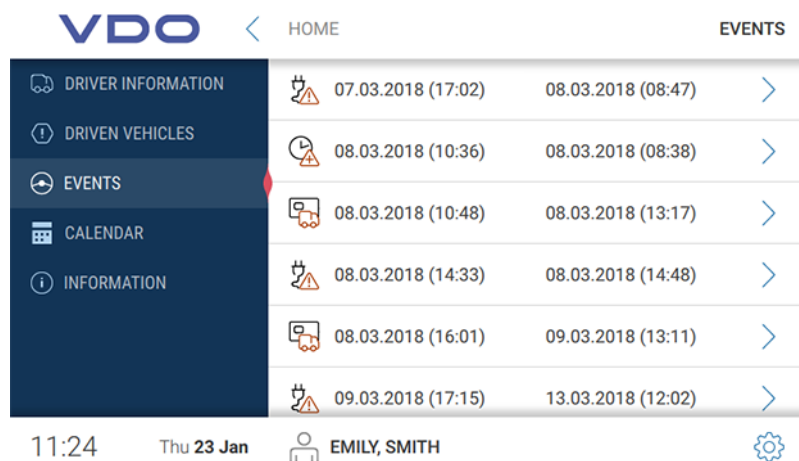
| IMPORTANT	The function Results and faults is only active when a driver card or download key with driver data is inserted.

Via the events, you can display driver-related events and faults stored on the driver card.

The overview sorts all events and faults by date and displays them with the corresponding time. Tap on an entry to view further corresponding details.

In addition to the time of the event or the fault, the detail view also includes the detailed designation and the vehicle used at each respective time.

Calendar
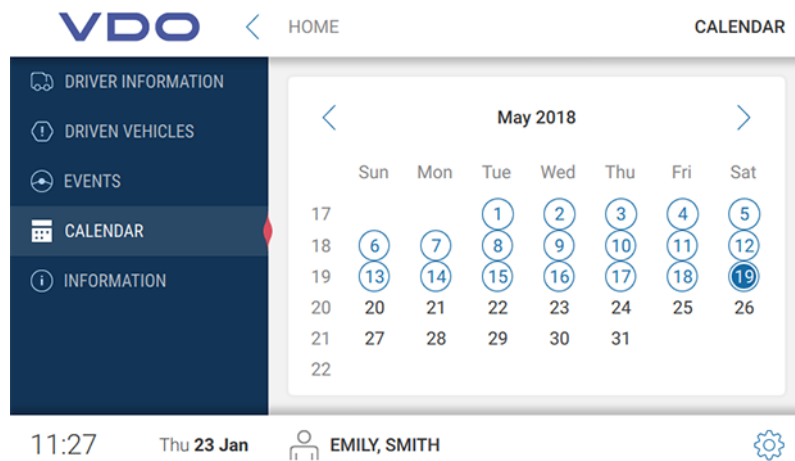
(i) IMPORTANT	The calendar function is only active when a driver card or download key with driver data is inserted.

Use the calendar function to display the driver activities relating to one date as well as detail information on the individual activities.

Driver activities

Any days on which an activity was recorded are marked in blue in the calendar overview. In addition, today's date is highlighted in blue.

If you wish to retrieve the activities of a certain day, tap on the respective date.

The totals of activities on this day are displayed. By clicking on the arrow rightwards inside the row showing the date you will be shown further details.

The details include each individual activity with the corresponding time.

Information
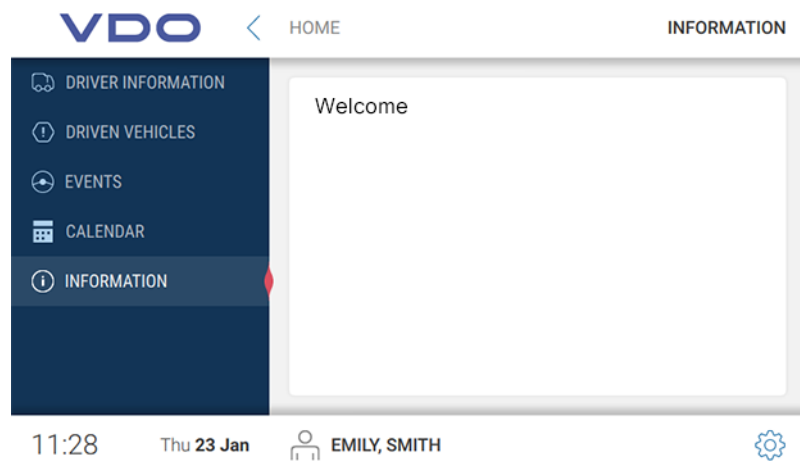
Under Information, the info text is displayed – provided it is stored in the Ter-minalTools (➔ *Global [▷ 48]*).

Downloading data of a workshop card

Proceed as follows to enter the workshop card data into the VDO SmartTer-minal:

1. Insert the workshop card with the chip down and forward into the card reader. During the transfer of data on a workshop card, the display will show you the download progress.
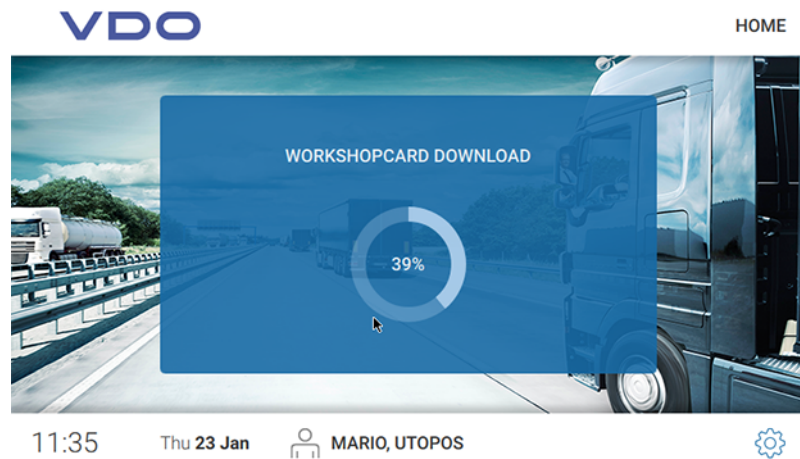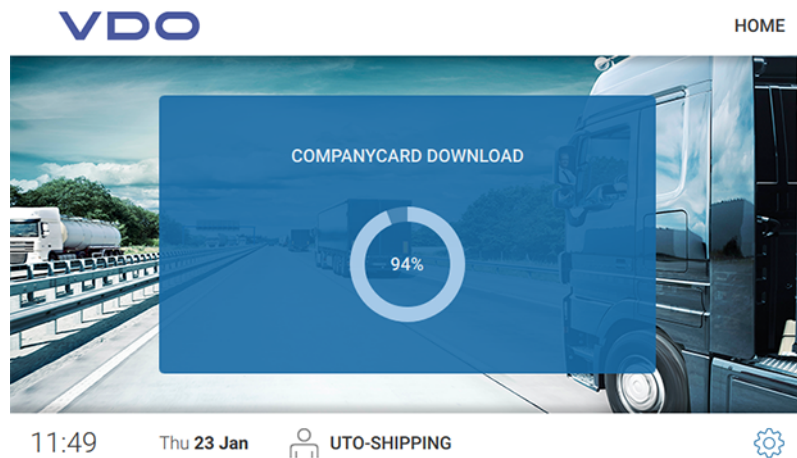

2. Remove the workshop card from the VDO SmartTerminal after the progress is at 100%
The data is now visible under Cards in the VDO TerminalTools .

Downloading company card data

Proceed as follows to enter the data of a company card into the VDO SmartTerminal:

1. Insert the company card with the chip facing downwards and forward into the card reader.
   During the transfer of the data of a company card, you will see the progress of the download on the display.

2. Remove the company card from the VDO SmartTerminal after 100% progress has been reached.
   The data is only visible under **Cards** in the VDO TerminalTools .

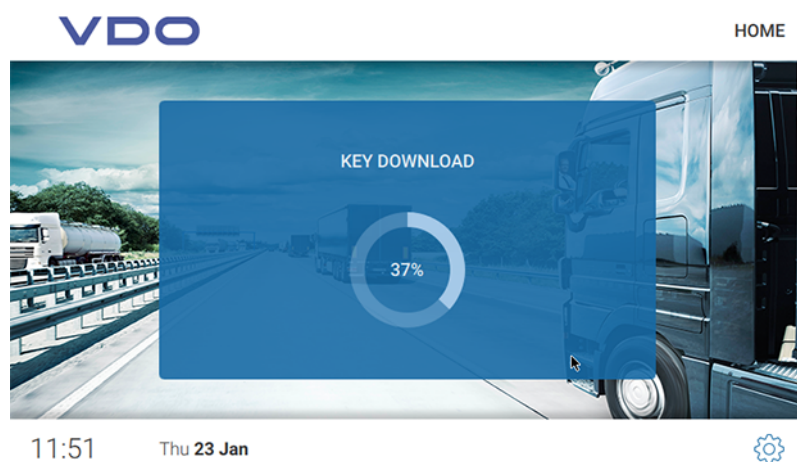## Downloading data from a download key

Proceed as follows to enter the data of a download key into the VDO SmartTerminal:

1. Insert the download key into the USB connection on the side.
   During the transfer of data from the download key, you will see the progress of the download on the display.
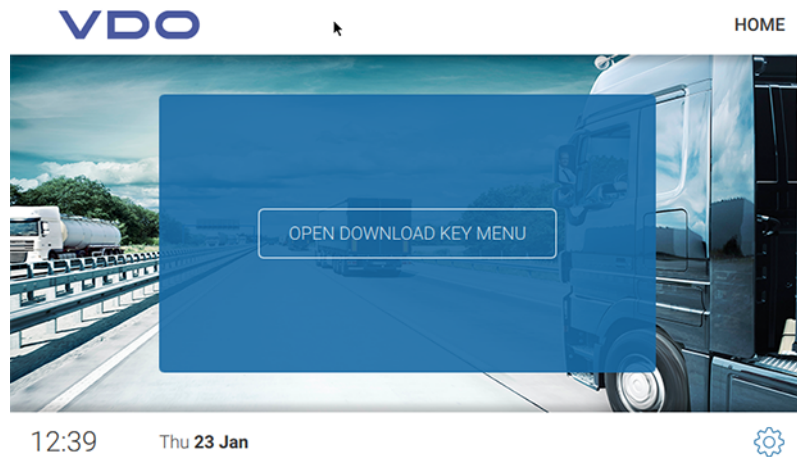
i **IMPORTANT**	If an info text is stored in the VDO TerminalTools (➔ *Global [▷ 48]*), it is displayed above the progress display. Here, the operator can scroll the screen using his/her finger if the text is longer than the field provided.

After downloading the data from the download key, the dialog to open the download key menu is displayed.

2. Proceed as follows:

   – Remove the download key from the VDO SmartTerminal if you do not wish to view any further information.
   The data is stored on the VDO SmartTerminal.

   – Tap on **[OPEN DOWNLOADKEY MENU]** if you wish to receive further information to the downloaded data.
   The data is stored on the VDO SmartTerminal and automatically moves to the next dialog with the following areas:

Information	Description
Driver	Displays current information to driving times etc. This is only displayed if the download key contains data from driver cards.
Vehicle information	Lists the drivers that have used each vehicle

Data transfer

Data transfer in the network or with local connection to a computer

If the VDO SmartTerminal is integrated into a network (via LAN or WLAN) or directly connected to a computer via USB cable/crossed network cable, the downloaded data is automatically retrieved and stored in the specified download directory; see ➔ *Global settings [▷ 23]*.

Data transfer with USB stick

If you are using the VDO SmartTerminal in standalone mode, you must use a USB stick to transfer the stored data onto a PC.

The USB stick must be configured for data transfer: ➔ *Terminals [▷ 31]*.

• When you insert the USB stick into the VDO SmartTerminal, the data is automatically transferred onto the USB stick.

Maintenance

The VDO SmartTerminal is maintenance-free.

- Clean the screen with a lightly dampened cloth or a microfiber cleaning cloth.

![ATTENTION warning triangle] **ATTENTION**	**Avoid damage** • Do not use any abrasive cleaning agents and not solvents or petrol.

Decommissioning

- Disconnect the VDO SmartTerminal from the power supply.
- Dispose of the terminal according to local regulations.

Troubleshooting

The VDO TerminalService is not running

If the VDO TerminalService is running, the VDOTerminalServiceConfig connects itself via network with the service. If the service is not running, the data access occurs directly to the data base. If neither is possible, the VDOTerminalServiceConfig reports an error and terminates. In this event, you should restart the computer and check if the problem persists. If necessary, you can switch the start of the VDO TerminalService to manual via the service administration of the operating system in order to solve the problem.

The VDOTerminalServiceConfig provides you with the following problem solving options:

• The communication port used for the connection between VDO TerminalTools and VDO TerminalService must be changed.

• After a reinstallation, the data encryption must be imported onto the VDO SmartTerminal.

• The download directory for the transfer of data from the terminal is to be adjusted.

• The access data of all administrators are no longer known.

• The communication between the VDO TerminalService and a VDO SmartTerminal is to be monitored.

VDO TerminalTools do not start

The following error situations can occur when accessing the system:

• Connection cannot be established.

• The connection between VDO TerminalTools and VDO TerminalService is not possible.

• Possible reasons include:

– The specified server or port is incorrect

– If the computer on which the VDO TerminalService runs, was not specified correctly, no connection can be established. Please ask your network administrator for the correct IP address or the computer name and check in the VDO TerminalService configuration software if the entered port matches the stored port.

– The computer is not fully booted up
The Computer on which the VDO TerminalService runs is not switched on or shuts down or boots up. Switch on the computer or have it switched on or wait for the computer to be fully booted up.

– The service is deactivated
The VDO TerminalService is deactivated on the computer. Do do this, start the VDO TerminalService via the service administration of the operating system.

– The network connection between the computers does not work.
Due to configuration or hardware problems, it is not possible to establish a connection between the two computers. In this case, contact your administrator or service partner and get them to check if both computers can work in the network.

– Missing port activations in the firewall
These may be both on the computer of the VDO TerminalTools and on the computer of the VDO TerminalServices. These problems may be resolved by your network administrator.

70

      – Virus scanner or malware scanner
        Current software products can cause a blockage as they believe the connection is an attack. In this case, please contact the software manufacturer in order to resolved this blockage.

- Username or password is incorrect.
  If the combination of user name and password is incorrect, you cannot access the system. In this event, check your entries and observe upper and lower case.

- Version does not match
  The error situation occurs when there is a version conflict between the version of the VDO TerminalTools and the VDO TerminalService. This is usually the case when one of the two components was updated by a software update, but not the other. In this event, check the version of all installations within the network.

User Manual VDO SmartTerminal

Appendix

Declaration of conformity

You can download the declaration of conformity for the VDO SmartTerminal in the download area under www.fleet.vdo.com/downloads.

Index

Edition 12/2019