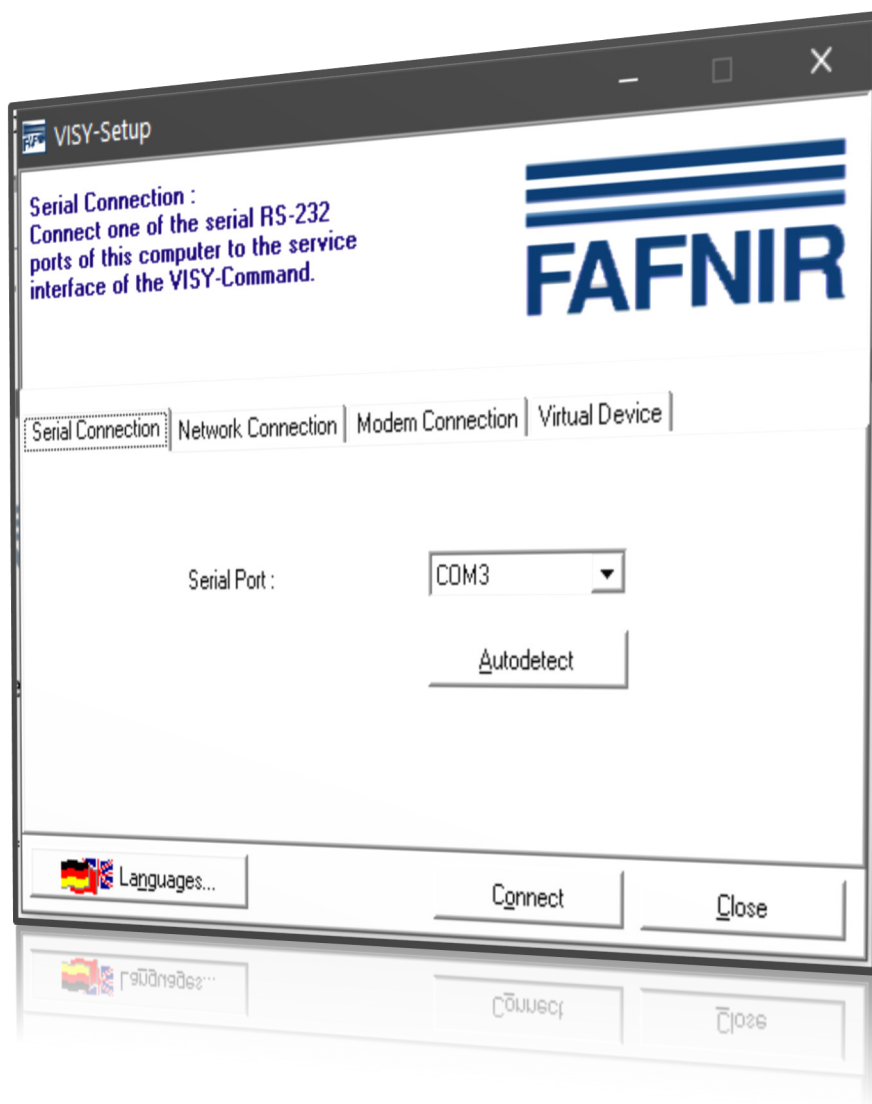


VISY-X

VISY-Setup



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A Introduction

The **VISY-Setup** configuration program is part of the VISY-X system (volume information system). With the VISY-X system, highly precise, continuous level measurements in up to 16 tanks are carried out directly at the petrol station. At the same time, the water level on the tank bottom and the product temperature are measured. The system includes:

- **VISY-Command, VISY-Command GUI or VISY-Command Web** (measurement evaluation, hereinafter referred to as VISY-Command)
- **VISY-Setup** (software for configuring the VISY-Command)
- **VISY-Stick** (measuring sensor VISY-Stick, VISY-Stick Advanced, VISY-Stick Flex, VISY-Stick LPG, ...)

Additional product and environmental sensors can be operated with the VISY-X system:

- **VISY-Stick/Reed Sump**
for monitoring of the manhole or dispenser sump
- **VISY-Stick/Reed Interstitial**
for monitoring the intermediate chamber in double-walled tanks
- **VISY-Stick Temp**
for temperature measurement with up to 31 integrated temperature sensors
- **VIMS sensors (vacuum monitoring system)**
from our system partner SBG GmbH
- **VISY-Stick Oil Separator and VISY-Sludge (COMS)**
for monitoring the oil and mud layer in oil separators
- **VPS** for monitoring pressures in tall tanks or LPG tanks

The measured values supplied by the VISY-Sticks are evaluated by the VISY-Command and stored temporarily. They can be forwarded to a higher-level system (e.g. central computer, BOS, POS). Depending on the system, the communication with a petrol station computer system or PC takes place via various interfaces (RS-232 or RS-485). Various protocols to communicate with the petrol station computers are available for the central evaluation unit.

1 These Instructions ...

... will guide you step-by-step through installation and use of the VISY-Setup configuration software and individual program functions. All the steps needed to prepare VISY-X for a connection to a host computer are documented. You must be trained and authorised to perform these required steps for the setup and configuration of the host computer.

These instructions assume that you are familiar with your computer and the basic working techniques in Windows.

B Configuration Software VISY-Setup

1 Prerequisites

- PC / notebook with the Windows operating system
- Windows administrator rights
- Available USB port (or COM port)
- When using the USB port, a USB / RS232 converter is required

2 Installation



If an older version of VISY-Setup is already installed on your PC, you should uninstall it first.

You can obtain the VISY-Setup configuration program on a USB flash drive or from our website www.fafnir.com.

- (1) Close all running Windows applications.
- (2) If available, insert the USB flash drive into an available USB port
- (3) In Windows Explorer, open the folder in which the "Install VISY-Setup" program is located
- (4) Start the "Install VISY-Setup" program and follow the instructions on the screen (German, English, Italian, or Spanish are available for installation).

3 Structure of the VISY-Setup Program

3.1 User Interface and Conventions

In this manual, references to the keys of the PC keyboard are enclosed in square brackets. Definitions, where required, follow in round brackets. Example: Key [↵] (Return). If you have to enter values, the permissible input format is specified. Example: "0 ... 99999" corresponds to a maximum of five digits (no letters).

The VISY-Setup program can be operated using either the mouse or the PC keyboard. This manual describes the preferred operation using the mouse.

To execute a function using the keyboard, simply press the corresponding function key or the letter underlined in the name together with the [Alt] key. Example: The function "Close" can be executed with the key combination [Alt] and [C] key. Submenus can be called up with the function keys [F1], [F2],

Some functions or menus are represented by buttons. They are enclosed in quotation marks in this manual. Example: "Close" button. You can activate buttons by clicking with the mouse.

To quit (acknowledge) messages, you can either click on the "OK" button or press the [↵] (Return) or [ENTER] key on the keyboard. The instruction "... click on ..." refers to clicking on it with the mouse.

The display windows vary depending on the configuration of the VISY-Command or the selected probes and can appear different from what is shown here. However, these differences have no impact on the operation. Black fonts indicate that parameters are available for editing and grey fonts that they are not. Functions shown in grey are not available in the current configuration or they are not supported by the current version of VISY-Command.

3.2 Menu Navigation

The VISY-Setup program is menu-driven. You can access the measured values and settings via the menus (current values F1, control unit F2, ...).

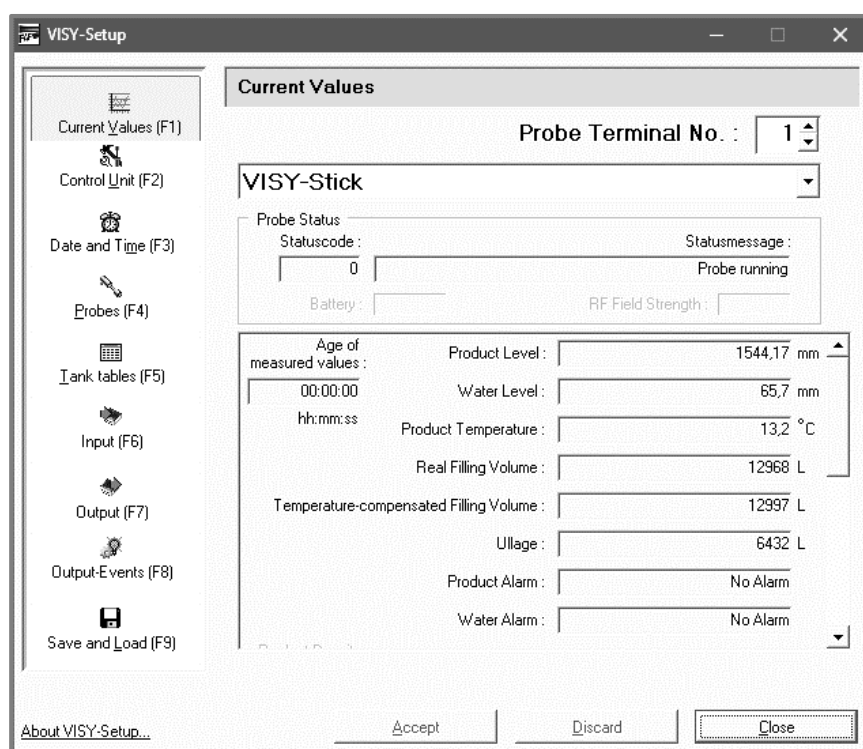


Figure 1: Menu navigation

Clicking on the "Accept" button transfers and saves to the central unit all values you have changed or entered.

Clicking on the "Discard" button undoes the changes to entries.

The "Close" button closes the currently open window.

C Connection to the Central Unit

1 Preparations

- (1) Turn on the central unit (VISY-Stick connections and power connection)
- (2) Connect the central unit with the PC or notebook (serial / network / modem connection), see also following instructions:



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If the central unit is equipped with an interface card VI-2 or higher, please make sure that the service port is set to service mode, adjustable via the DIP switch S1:

Switches S11 and S12 in "off" position.



If you only want to prepare a configuration, you can use VISY-Setup in simulation mode. The central unit does not need to be connected for this. The configured values can later be transferred to VISY-Command, see chapter C 2.1.5: "Virtual Device" Tab.

2 Starting the Program

Once you have connected the central unit to your computer (see chapter C 1: Preparations), start the program VISY-Setup. After starting VISY-Setup, a selection window in which you can select the connection for data transmission opens.

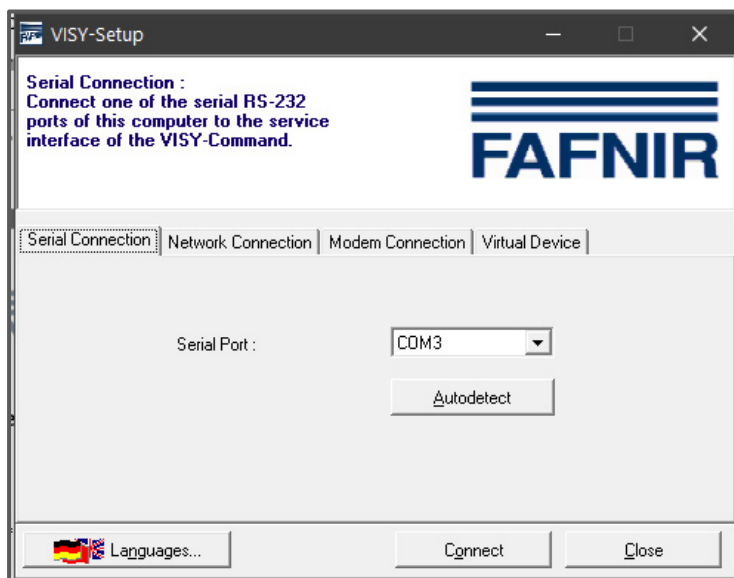


Figure 2: Selection window for communication with VISY-Command

2.1 VISY-Setup Start View

2.1.1 "Languages" Button

Clicking on the "Languages ..." button opens a submenu in which you can select the language for the display of VISY-Setup.

2.1.2 "Serial Connection" Tab

The COM port to which the service port of VISY-Command is connected can be selected from the "Serial Port" drop-down menu.

Serial port autodetection: Click on the "Autodetect" button to start autodetection of the serial port to which VISY-Command is connected.

2.1.3 "Network Connection" Tab

Enter the host name / IP address and the port number in the appropriate input fields.

2.1.4 "Modem Connection" Tab

The "Modem" selection tab displays all the available modems that have been installed on your PC and are working correctly under Windows. Select the one that you wish to use for communication with VISY-Command and enter the phone number in the appropriate input field.

2.1.5 "Virtual Device" Tab

You can enter and save your configuration here even if VISY-Command is currently not connected. The data can be transferred to a VISY-Command whenever necessary. Select the firmware version of the VISY-Command that you wish to simulate from the drop-down menu.

2.1.6 "Connect" Button

The "Connect" button establishes a connection to the VISY-Command using the currently selected connection type. First, VISY-Command is checked for new functions that are not supported by your version of VISY-Setup. In this case, the following message will appear on the screen:

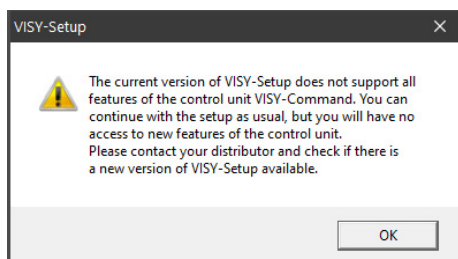


Figure 3: VISY-Setup version warning

Acknowledge this message by clicking on "OK". The configuration program starts and you can proceed to configure the central unit.

If you want to use the new functions of the central unit that are not supported by your version of VISY-Setup, you will need a program update. The current VISY-Setup version can be downloaded from the FAFNIR website (www.fafnir.com).

3 Sensor Terminal and Tank Number

The term "probe terminal" is often used in the following. The relationship between probe terminal and tank number is defined as follows:

The probe terminals refer to the measuring transducer VP-... inside VISY-Command. Each probe terminal is clearly identified by a unique terminal number. The VISY-Stick sensors must be connected according to their tank number to the identical terminal number on the VP... measuring transducer.



Any terminal number can be selected for sensors below the dispensers and sensors in oil separators.

Example:

VISY-Stick for tank no. 1 is to be connected to probe terminal no. 1 of the VP-... board to ensure that the measurement values of tank no. 1 will be transferred to terminal number 1. VISY-Stick for tank no. 2 is to be connected to probe terminal no. 2 of the VP-... board, etc.



Up to three sensors of different sensor types can be connected to one probe terminal at the same time, e.g. one "VISY-Stick", one "VISY-Stick Interstitial" and one "VISY-Stick Sump Manhole". When using VIMS sensors, up to four sensors of different sensor types can be connected simultaneously.

The following sensors can be configured with VISY-Setup:

Measuring sensor	Measurement object
VISY-Stick (Density, Oil separator)	Level, temperature, density, oil layer thickness
VISY-Stick/Reed Interstitial	Intermediate chambers of double-walled tanks
VISY-Stick/Reed Sump Manhole (blue)	Manhole sump
VISY-Stick/Reed Sump Dispenser (red)	Dispenser sump
VIMS Tank/Product Pipe	Intermediate chambers of double-walled tanks and pipes
VISY-Sludge	Mud layer in oil separators
VPS Pressure	Pressure in tall tanks or LPG tanks
VISY-Stick Temp	Temperature measurement

D Menu Item "Current Values [F1]"

Select "Current Values [F1]" in the menu bar on the left to display the current tank data and measured values. The probe terminal no. 1 and the "VISY-Stick" sensor are shown first by default.

Select a probe terminal no. from 1 to 16 and the sensor type to display its data.

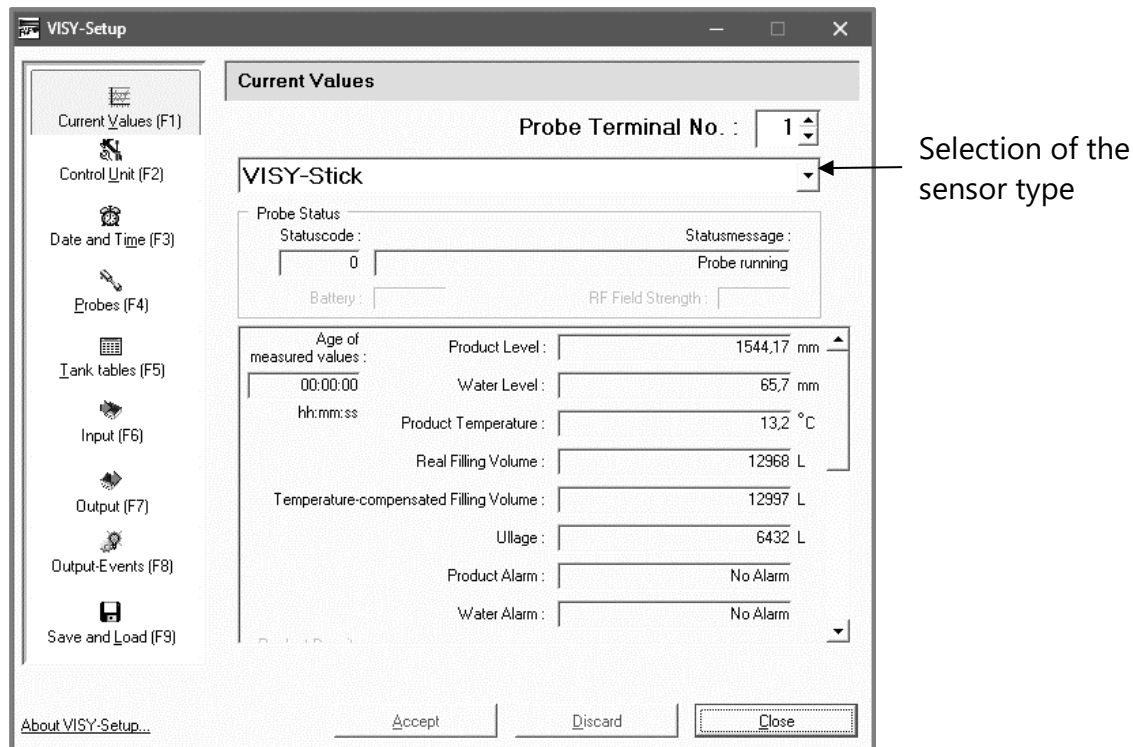


Figure 4: Example of available data

If available data are shown (see Figure 4), VISY-Command has already been configured. These measured values are available to the host computer. However, which measured values are retrieved from the central unit depends on the type of host computer.

 *The displayed measured values always depend on the selected transmitter type.*

1 General Values

1.1 Status Code and Status Message

The operating status of the sensors is indicated numerically as status code and explained in text form with a status message. You will find a list of status codes and their meaning in chapter M: "Status Messages".



*If a value other than "0" is displayed in the "Statuscode" field, the sensor is no longer working correctly and the field's background colour turns **red**.*

1.2 Battery

Displayed in wireless mode only and indicates the battery charge of the transmitter.

1.3 RF Field Strength

Displayed in wireless mode only and indicates the RF field strength.

1.4 Age of Measured Values

This field informs you how old the measured values are. In wireless operation, the age of the data is particularly interesting because in this operating mode the measured values are not sent continuously or may not have been received due to interferences.

2 Measured Values of the VISY Probes

2.1 Product Level / Level / Distance

Depending on the selected sensor, the measured values "Product level", "Level" or "Distance" are shown here.

- **VISY-Stick:** Product level as position of the upper float (product float) that is calculated by taking into account the installation offset of the sensor, the offset of the product float and the product-specific immersion depth of the float. In the COMS application with a VISY-Stick oil separator probe, the current position of the interface float is displayed.
- **VISY-Stick Interstitial (wet application):** Filling level in the test vessel (monitoring the intermediate chamber of double-walled tanks with leak detection fluid).
- **VISY-Stick/Reed Interstitial (dry application):** Filling level of a fluid at the lowest point of the tank (monitoring the dry intermediate chamber of double-walled tanks).
- **VISY-Stick/Reed Sump Manhole/Dispenser:** Filling level of a fluid in the manhole/dispenser sump.
- **VISY-Sludge:** Distance between the lower edge of the probe and the tank bottom or mud surface.

2.2 Water Level (mm)

This is the value calculated by the central unit for the lower float (water float) of the VISY-Stick level sensor. The installation offset of the sensor and the product-specific immersion depth of the float are taken into account here.



The filling level of water is shown as "0" whenever the float comes to rest on the circlip at the bottom end of the probe tube or if the value has fallen below the specified threshold with mud layer suppression activated.



If the water float cannot sink to the circlip, e.g. due to a mud layer on the tank bottom, it is possible to correct the displayed water level to 0 by activating the mud layer suppression (see chapter G 1.11: "Mud Layer Suppression Activated").

2.3 Product Temperature / Temperature (°C)

The currently measured product temperature is displayed.

2.4 Real Filling Volume (Litres)

This value indicates the filling volume in the tank for a product, provided that a tank table is stored in VISY-Command (see chapter H: Menu "Tank Tables [F5]"). The value is calculated from the product filling level.



If no tank table is available for the tank concerned, a value of "0" will be displayed here.

2.5 Temperature-Compensated Filling Volume (Litres)

This value indicates the filling volume in the tank for a reference temperature, provided that a tank table is stored in VISY-Command (see chapter H: Menu "Tank Tables [F5]"). The reference temperature is specified in the tank table. The temperature-compensated filling volume is calculated from the values "Real Filling Volume", "Product Temperature" and the reference temperature.



If no tank table is available for the tank concerned, a value of "0" will be displayed here.

2.6 Ullage (Litres)

This value indicates the size of volume available for filling the tank, provided that a tank table is stored in VISY-Command (see chapter H: Menu "Tank Tables [F5]"). This value is calculated from the "Real filling volume" and the permissible tank filling volume.



If this value is displayed with a negative sign, the tank has been filled higher than the permissible level. Please note that this does not necessarily mean that the product has reached the overfill prevention sensor (GWG) because the tank tables have only limited accuracy.



If no tank table is available for the tank concerned, a value of "0" will be displayed here.

2.7 Product Alarm / Water Alarm / Level Alarm / Pressure Alarm



The alarms are shown by the display modules VISY-Command GUI / Web, VISY-View Touch, or SECON and can be forwarded to external alarm devices, see chapter J: Menu "Output [F7]".



The alarms can be retrieved from the host computers if this function is supported.



Some host computers can generate alarms themselves. In this case, the alarm thresholds have to be set in the host computer. If alarm thresholds have been set in both the VISY-X system and in the host computer, please make sure that the alarm thresholds are identical in both systems.

As soon as the alarm thresholds have been exceeded, the corresponding alarms are triggered ...

- ... for VISY-Stick: **Product Alarm** "Very High, High, Low, Very Low";
- ... for VISY-Stick/Reed Interstitial (dry application): **Product Alarm** if fuel is detected in the intermediate chamber of a double-walled tank.
- ... for VISY-Stick/Reed Sump Manhole/Dispenser: **Product Alarm** if fuel is detected in the sump of the dispenser;
- ... for VISY-Stick: **Water Alarm** "Very High, High";
- ... for VISY-Stick/Reed Interstitial: **Level Alarm** "High / Low";
- ... for VISY-Stick/Reed Sump Manhole: **Level Alarm** "Very High, High";
- ... for VISY-Stick/Reed Sump Dispenser: **Level Alarm** "Very High, High";
- ... for VPS Pressure: **Pressure Alarm** "Very High, High, Low, Very Low"

3 Measured Values of the VISY-Density Module

3.1 Product Density / Sump Density

If a VISY-Stick Advanced/Flex probe is installed with a VISY-Density module, the product density or the sump density is displayed here, depending on the installation height of the density module.



At a distance less than 190 mm between the probe tube end and the lower edge of the VISY-density module, the sump density is determined. At a distance greater than 210 mm, the product density is determined automatically.



With VISY-Stick Advanced probes for LPG tanks, only the product density is determined regardless of the module position.

The following information of the product density is displayed:

- **Position:** Position of the VISY-Density module on the VISY-Stick Advanced
- **Density:** Measured density in the area of the VISY-Density module
- **Temperature-compensated Density:** Measured density in the area of the VISY-Density module converted to the previously defined reference temperature of the tank table (see chapter H: Menu "Tank Tables [F5]").
- **Temperature at the density meter:** Measured temperature in the area of the VISY-Density module
- **Density Alarm:** If the temperature-compensated density leaves the configured range of alarm thresholds, an alarm message will appear here.

4 Measured Values of the VIMS Probes

In preparation

5 Measured Values of the VPS Probes

The measured values of the pressure sensors VPS-T for tall tanks and VPS-L for LPG tanks are displayed.

5.1 Type

Display of the sensor type VPS-T or VPS-L

5.2 Pressure

Display of the current pressure

5.3 Temperature

Display of the current temperature in °C

5.4 Pressure Alarm

Display of a current alarm

6 Measured Values of the VISY-Stick Temp Probes

The system automatically recognises the number of temperature sensors and displays them in the "Sensor No." column. The corresponding position [mm] and the temperature [°C] measured there are displayed for each temperature sensor.

E Menu Item "Control Unit [F2]"

Select "Control Unit [F2]" in the menu bar on the left to display the configuration and to make changes.

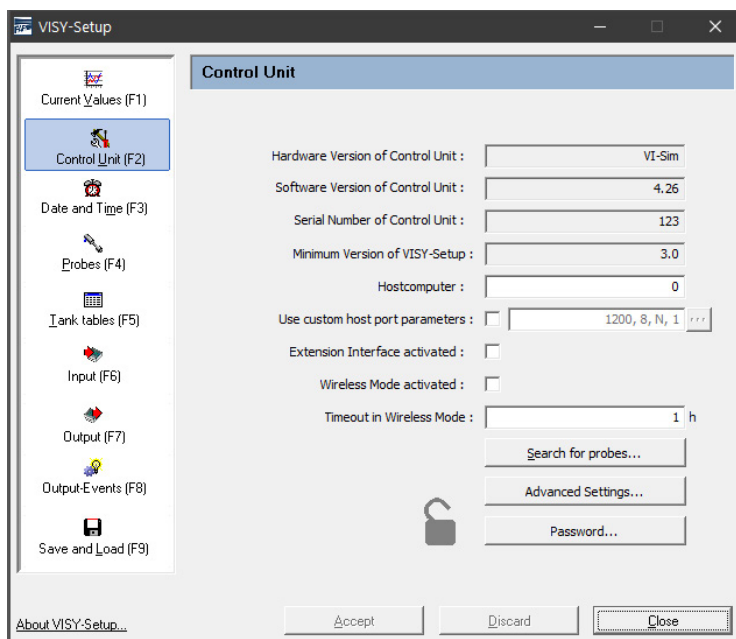


Figure 5: Menu "Control Unit [F2]"

1 Input Fields

1.1 Hardware Version of Control Unit

Displays the hardware version of the connected central unit.

1.2 Software Version of Control Unit

Displays the software version of the connected central unit.

1.3 Serial Number of Control Unit

Displays the serial number of the connected central unit.

1.4 Minimum Version of VISY-Setup

This is the minimum version of VISY-Setup that will support the functions of the central unit.

1.5 Host Computer

Enter the code for your host computer here (e.g. petrol station controller or cash register system). The host code can be found in the supplied VISY-Setup configuration table. Certain interface parameters are automatically preset with the host code. The respective interface parameters are listed in the configuration table.

1.6 Use Custom Host Port Parameters

If required, the default interface parameters of the host code can be changed here. You can enter your own interface parameters by clicking on the check box:

☐: The default interface parameters of the host code are used

☒: The default interface parameters of the host computer can be changed:

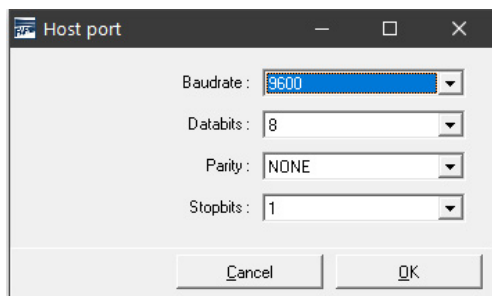


Figure 6: Drop-down lists for custom host port parameters

To change these parameters, click on the drop-down list "▼". Select the desired value and click on "OK" to confirm.

1.7 Extension Interface Activated

Data can be transmitted to the display in VISY-Command (GUI) and to additional devices (e.g. VISY-View Touch, VISY-TD Truck Driver Display) via the extension interface of the central unit. To activate this option, click in the "Extension Interface Activated" check box. If no peripheral equipment is connected, the extension interface does not need to be activated.

1.8 Wireless Mode Activated

This function must be enabled for use of VISY-Command in wireless mode. To do this, click in the "Wireless Mode Activated" check box.

Depending on the build type, the central unit is preconfigured to work in wired or wireless mode, which means that this option must be changed only after modification.



Please note that the central unit carries out an internal reset whenever this option is enabled or disabled and sets all measured values to zero (0) until new data are supplied by the sensors.

1.9 Timeout in Wireless Mode

An error message is displayed automatically if VISY-Command does not receive any data from a sensor within the number of hours entered here.

The time until an error message is triggered can be entered only in full hours (permissible values 1 ... 99).



To maximise the battery life of the transmitters in wireless mode, the data from the sensors are sent only periodically every few minutes and are stored by the central unit. To avoid outdated data in the event of disruptions, e.g. radio path interrupted by a vehicle parked over the manhole, the data are erased by the central unit automatically after a specific period of time. The error is signalled by the setting of the sensor status to code 11.



The time until the last received data is automatically deleted is determined by the "Timeout" and can be set to 1 ... 99 hours. Under favourable transmission conditions (permanently unobstructed view between transmitter and receiver antenna), a timeout value of a few hours should be sufficient. Under unfavourable conditions (e.g. high-traffic stations with manholes in the carriageway or parking area), it is advisable to increase the timeout to suppress unnecessarily frequent error messages.

1.10 "Search for probes..." Button

Use the "Search for probes" button to search automatically for sensors connected to VISY-Command and to determine their device numbers. A new search must be started for each sensor type. Clicking on "Accept" transfers the found data to the VISY-Command.



The automatic "Search for probes" works for firmware version 2.02 and higher for VISY-Stick probes.



The automatic "Search for probes" works for firmware version 4.02 and higher for environmental sensors if the Multi Probe protocol has been set. Otherwise, only the tab for VISY-Stick probes will be shown.



The Multi Probe protocol must be set only if the probes have a device number from 20000.



RF version probes (wireless) cannot be automatically detected for technical reasons.

To start the search for probes, proceed as follows:

- (1) Click on the "Search for probes" button. A window containing blank fields appears on the screen.
- (2) Select the tab of the desired type of sensor (e.g. VISY-Stick)
- (3) If you now click on the "Start search" button, the central unit begins to search for the sensors of the selected type.
- (4) Once the search is complete, the following data will be displayed for terminals 1...16:
 - Serial number
 - Software version
 - Length in mm
 - Number of floats (for VISY-Stick)

Search for probes

Terminal No.	Serial number	Version	Length / mm	Floats
1	5000	1.0.0	1800	2
2	5001	1.0.0	1800	2
3	5002	1.0.0	1800	2
4	5003	1.0.0	1800	2
5	5004	1.0.0	1800	2
6	5005	1.0.0	1800	2
7	5006	1.0.0	1800	2
8	5007	1.0.0	1800	2
9	5008	1.0.0	1800	2
10	5009	1.0.0	1800	2
11	5010	1.0.0	1800	2
12	5011	1.0.0	1800	2
13	5012	1.0.0	1800	2
14	5013	1.0.0	1800	2

Start search Accept Close

Figure 7: Result of an automatic search for probes (example)



If no working probe is found on one or more terminals, the corresponding line in the table is filled with zeros.



Before transferring the data, check whether the device numbers found actually match the terminals of the corresponding probes or whether there has possibly been an incorrect assignment.

- (5) Click on "Accept" to save the serial numbers of the discovered sensors directly to the central unit. While the serial numbers are being saved, "Writing serial numbers ..." is displayed in the status bar at the bottom.
- (6) Click on "Close".



If the sensor's serial number is directly saved to the central unit, the configuration step "Serial Number of the Probe" can be skipped.

1.11 Tab "Advanced Settings..."

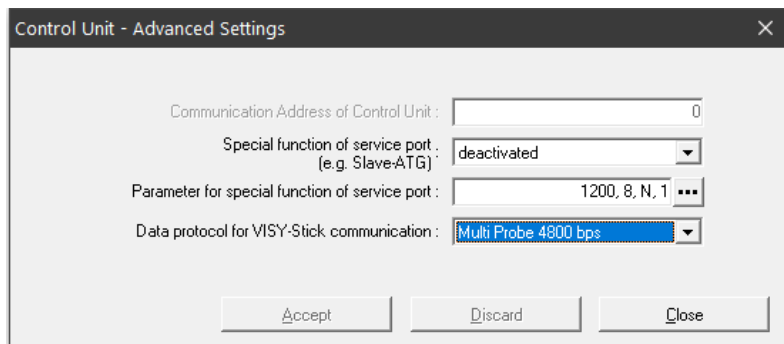


Figure 8: Control Unit – Advanced Settings

- **Communication address of the central unit**
If one of the host codes 123 to 125 (all MODBUS) is selected, a base address in the range 0 to 99 can be assigned for the VISY-Command. This makes it possible to connect several VISY-Command (host interfaces) in parallel in an RS-485 network and to query up to 112 tanks ($7 * 16$) via MODBUS by one communication line, see also the following instructions:



Technical documentation VISY-Command Modbus, art. no. 350253

- **Special function of service port**
The VISY-Command is able to communicate with a slave automatic tank gauging (slave ATG) to retrieve filling level and temperature data. The data protocol to be set can be determined using the "FAFNIR Serial Monitor" program or a terminal program; see also the following instructions:



Technical documentation VISY-X Slave Automatic Tank Gauging (ATG), art. no. 350024

- **Parameter for special function of service port**
Clicking on the "..." button (see Figure 8) allows you to modify the parameters for data transmission of the service port (see Figure 9). After changing the required settings, click on "OK" to save the values.

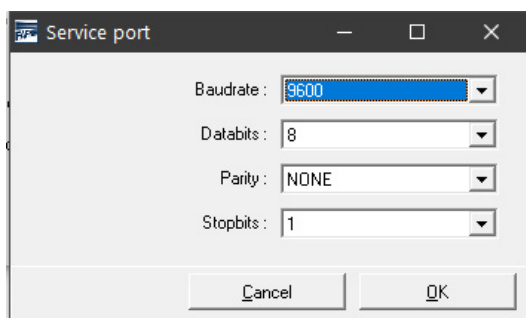


Figure 9: Parameters for the data transmission of the service port

- Data protocol

Three data protocols are available

- Standard VISY TLG
- Multi Probe 1200 bps
- Multi Probe 4800 bps (factory setting)



The data protocol depends on the serial number:

1. Data protocol for sensors with a serial number lower than 20,000:
 - VISY TLG
2. Data protocol for sensors with a serial number of 20,000 or above:
 - Multi Probe 4800 bps (recommended),
 - Multi Probe 1200 bps (alternative)
 - VISY-TLG, if only VISY-Sticks are connected (alternative)



Setting Multi Probe is mandatory:

- if VISY-Input 8 or VISY-Output 8 is used or
- if VISY-Density modules are used or
- if 2 or 3 sensors are connected to one probe terminal.



Owing to the faster data transmission, the data protocol Multi Probe 4800 bps should be selected.



When using the VISY-RF transmitter version III, the data protocol "Multi-transmitter 4800 bps" cannot be used.

1.12 "Password ..." Button

The password function is used to protect the configuration parameters.



The factory setting for write protection is "Not activated".

1.12.1 Activation of Write Protection

Write protection can be activated with the "Change Password" function (see Figure 10).

A numerical value of 1 ... 9999 is permitted as password. It can be displayed "readable".

Clicking on the "Accept" button saves the password and write protection will be activated after 15 minutes; see chapter E 1.12.3: "Access Permissions".

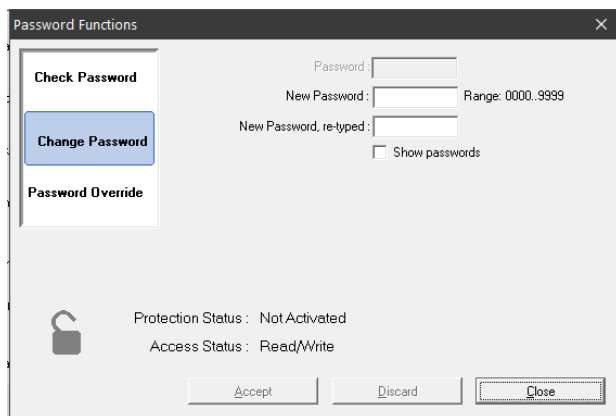


Figure 10: Password Functions

1.12.2 Deactivation of Write Protection

The password can be deleted in the "Change Password" function. To do this, enter zero ("0") as password and confirm the entry with the "Accept" button. In addition, a security question must be confirmed.

1.12.3 Access Permissions

- "Read/Write" (write protection after 15 minutes)




After activating the "Read/Write" protection, changes can be made for the next 15 minutes without having to enter a password. This time is automatically extended as long as there is communication on the Setup interface. After this limit, the permission changes to "Read-Only".

- "Read-Only"

The "Read-Only" permission will automatically be activated after the time limit has expired. The password must always be entered for any change of the read-only parameters. The "Read-Only" permission can also be activated manually in the "Check Password" function.

1.12.4 Access Status

The current Access Status is shown by a padlock icon:

Symbol	Meaning
	Write Protection Status: Not activated (password = 0) Access permission: Read/Write
	Write Protection Status: Activated (password = 1 ... 9999) Access permission: Read/Write (15 minutes)
	Write Protection Status: Activated (password = 1 ... 9999) Access permission: Read-Only

1.12.5 Login Attempts

The login with password is limited to 5 failed attempts. The login waiting time is extended by 1 minute for each further unsuccessful attempt. The waiting time cannot be interrupted.

1.12.6 Super Password

If you have forgotten your password, contact our technical support and request a super password that you can use to generate a new password.

To do this, request a configuration key in the "Password Override" function.

Send this configuration key to the FAFNIR GmbH technical support.

You will receive a super password from FAFNIR; it is valid for 1 day after it is entered in the designated field.

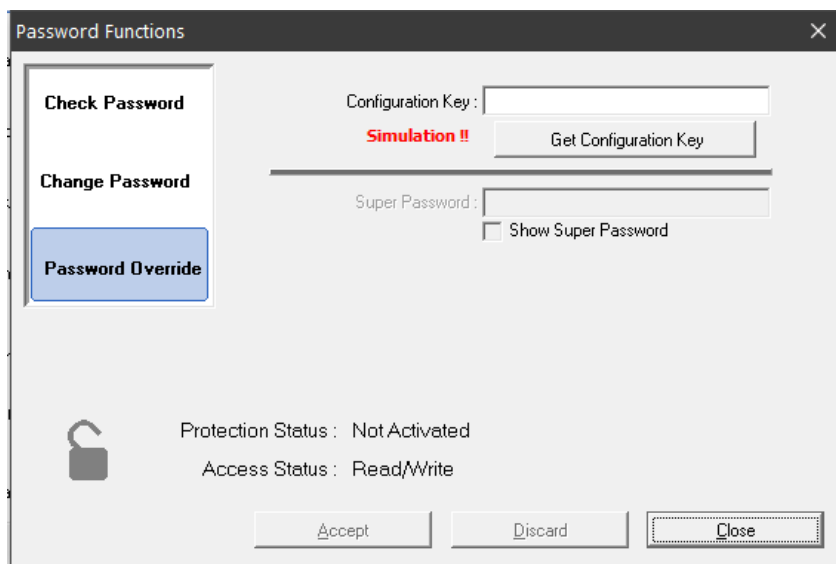


Figure 11: Super Password

You can then create a new password in the "Change Password" function; see chapter E 1.12.1: Activation of Write Protection.



If VISY-Setup is running in device simulation, "Simulation !!" is shown in the Password Override function, and it is not possible to enter a super password.

F Menu "Date and Time [F3]"

Newer interface cards (VI-2 and higher) of the central unit have a built-in clock with calendar. This function enables you to set the time and date of the central unit. Select "Date and Time [F3]" in the menu bar on the left to display the current data and to make changes.

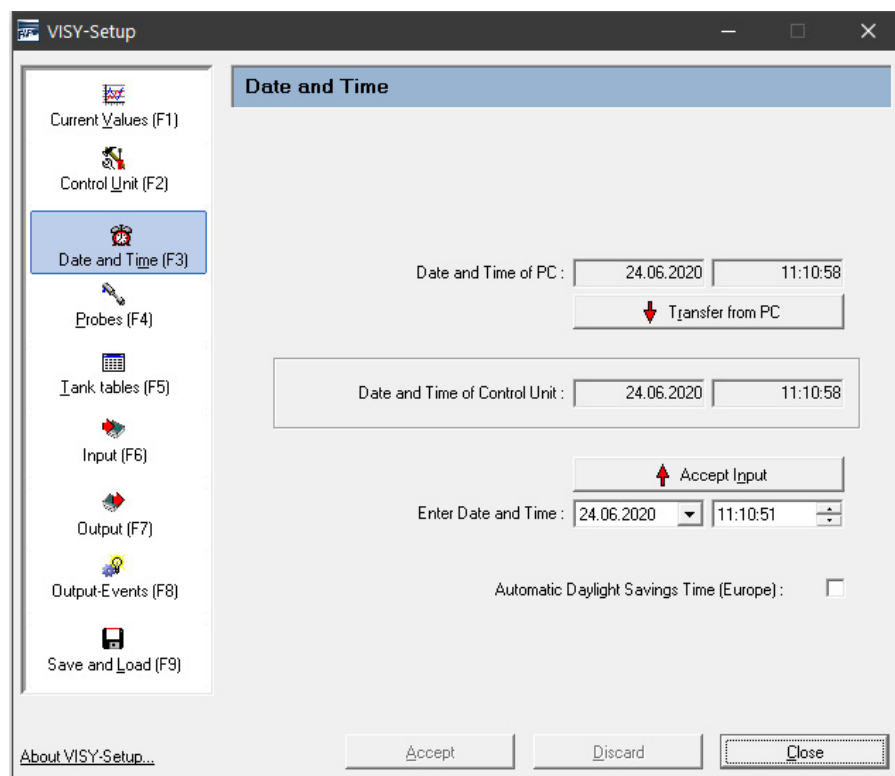


Figure 12: Menu "Date and Time [F3]"

1 Input Fields

1.1 Date and Time of PC

To save the date and time from the PC to the central unit, click on the "↓ Transfer from PC" button.

1.2 Date and Time of Control Unit

Displays the time of the central unit.

1.3 Enter Date and Time

Enter the date and time manually in the fields provided and accept the data by click on the "↑ Accept entry" button.

1.4 Automatic Daylight Savings Time (Europe)

The central unit supports the automatic changeover to Central European Summer Time and back (every last Sunday of March and October). This function can be enabled and disabled using the check box.

G Menu "Probes [F4]"

1 Configuration of the Probes

Select "Probes [F4]" in the menu bar on the left to display the configuration and to make changes.

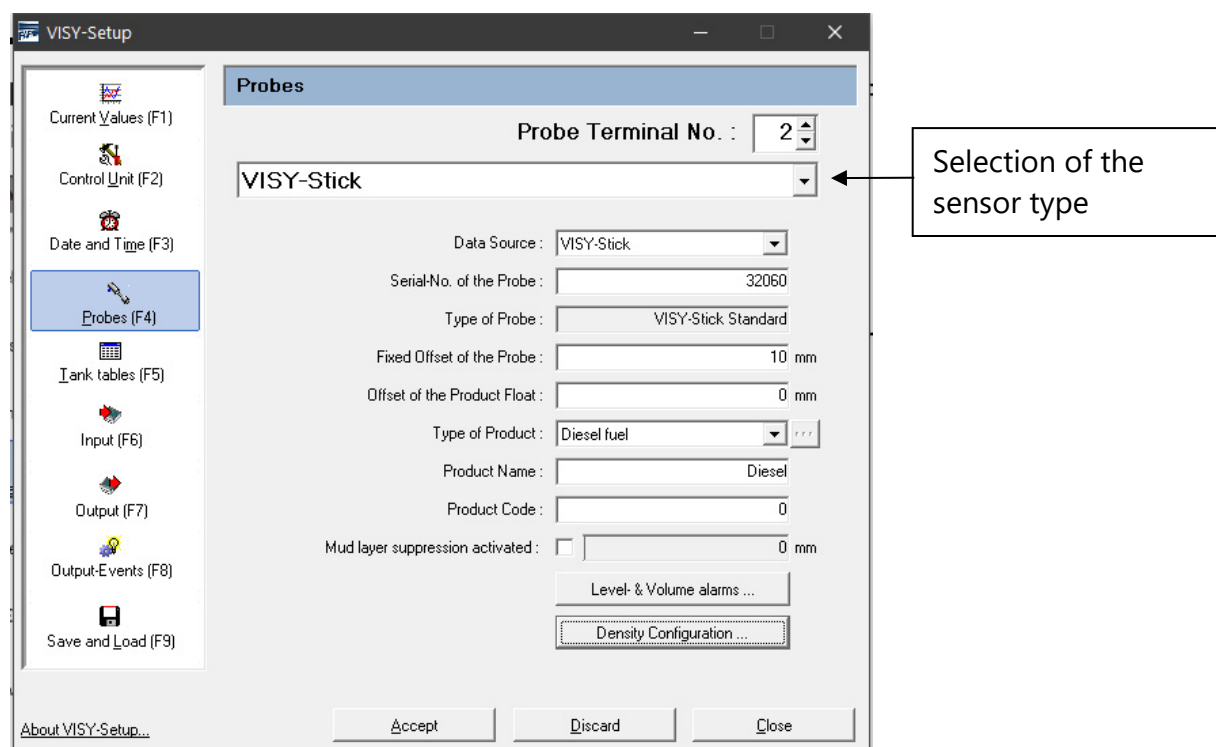


Figure 13: Menu "Probes [F4]"



Depending on the sensor type, different data fields are displayed or only certain data fields are active.

Before you can enter or change the configuration for the sensors, you must have the following information:

- Serial numbers of the sensors (on the sensors' type plate)
- Assignment of the sensors to the test vessels (tank 1, ...)
- Installation offset (VISY-Stick level sensors)
- Product quality in the respective tanks
- The product code if requested by the host computer

The configuration data that you may enter or modify are as follows:

1.1 Probe Terminal No.

Select a Probe Terminal No. (1 ... 16) and a sensor type. The Probe Terminal No. should match the number of the tank to be monitored.



Any Probe Terminal No. can be selected for sensors below the dispensers and sensors in oil separators.

1.2 Data Source

Choice between VISY-Stick sensors or Slave-ATG (slave automatic tank gauging).

1.3 Serial Number of the Probe

Enter the associated device number of the sensor, which must be noted by the technician when installing the sensor.



Entering the serial number is mandatory. If you do not enter a correct serial number, the central unit will fail to recognise the sensor and no data will be evaluated.

If "Slave-ATG" is selected under "Data Source", please enter the appropriate tank number. Normally, it should be the same tank number as in VISY-Command.

1.4 Type of Probe

The type of Probe is automatically displayed here:

- VISY-Stick Standard
- VISY-Stick Advanced

1.5 Fixed Offset of the Probe (mounting offset)

The fixed offset (mounting offset) is the height difference between the lowest point of the tank bottom and the end of the probe tube. The exact calculation of the mounting offset is described the following instructions:



Technical Documentation VISY-Stick VISY-Reed, art. no. 207194



The installation offset is required for the VISY-Stick level sensor only.



For VISY-Stick Flex, 114 mm must always be entered as installation offset.

1.6 Offset of the Product Float

Entering an offset for the product float is required only for special applications outside the petrol station. For petrol station applications, this value can always be set to 0 mm because appropriate corrections for the product float are automatically made in VISY-Command by selecting the Type of Product (see following chapter).

An offset of ± 999 mm can be entered for the product float and is added to the product fill level in the VISY-Command.

1.7 Type of Product

Selection of the product type (e.g. normal fuel, diesel fuel, ...) filled in the tank.



Selection of a product type is mandatory because the products differ in their density and temperature coefficients, an important factor for the evaluation process.



*If you do not make any selection here (i.e. Type of Product = "-not configured-"), the data from the sensor will not be evaluated. In this case, the status of the sensor is displayed in the "Current Values [F1]" menu with status code **99** and the message "Probe / tank not configured".*



The "Light fluid" product type is intended exclusively for the use of sensors in oil separators.

1.7.1 Type of Product – Freely Configurable



If you intend to freely configure the product type, you must know exactly the correct product density and temperature coefficient of your product and enter them in the system. If these parameters are wrong, your VISY-X system will show incorrect results!

To specify the freely configurable product type, you will need to enter the following required information:

- (1) Select the "-freely configured-" item from the drop-down list.
The following warning is displayed on the screen:

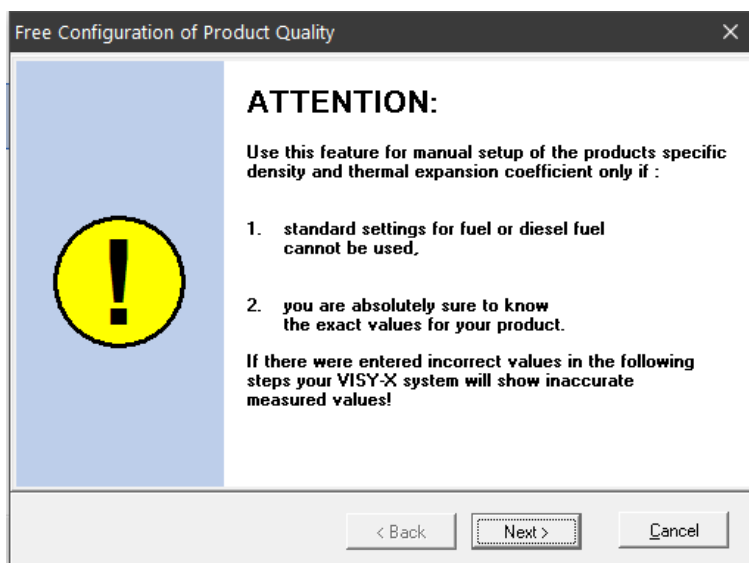


Figure 14: Warning if product quality is configured manually

- (2) If you have the exact data for the product density and temperature coefficient, click on "Next >". If you wish to cancel, click on "Cancel" and select one of the predefined product types.
- (3) In the window that opens, enter the product density at 15 °C in g/litre. The value must be between 600 and 1200. Then click on "Next >".

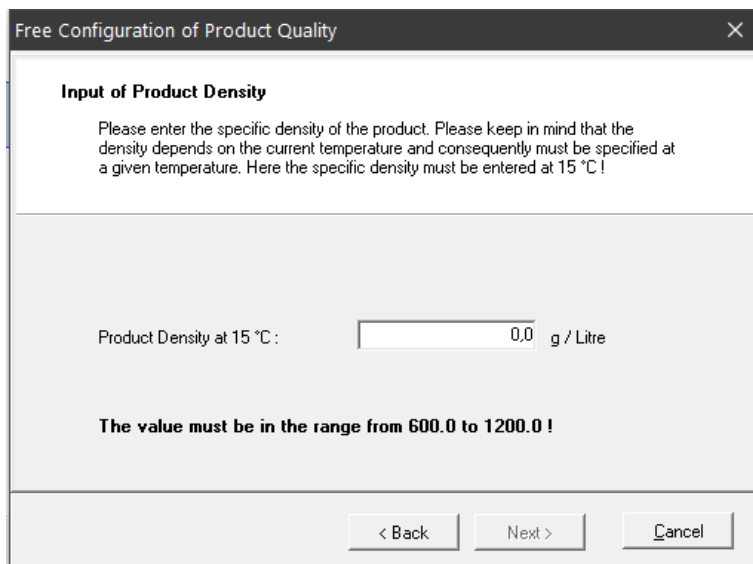


Figure 15: Enter the product density

- (4) If the density of your product is ≥ 900 g/litre, no water detection is possible and the water float must be removed. In addition, you will receive the following warning:

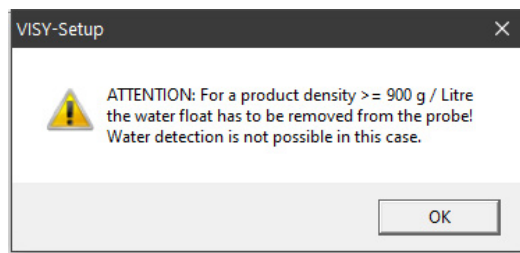


Figure 16: Warning – no water detection possible

- (5) Click on "OK". In the window that opens, enter the temperature coefficient for the volume expansion of your product in thousandths per degree Celsius. The value must be between 0.0000 and 1.9999. Then click on "Finish".

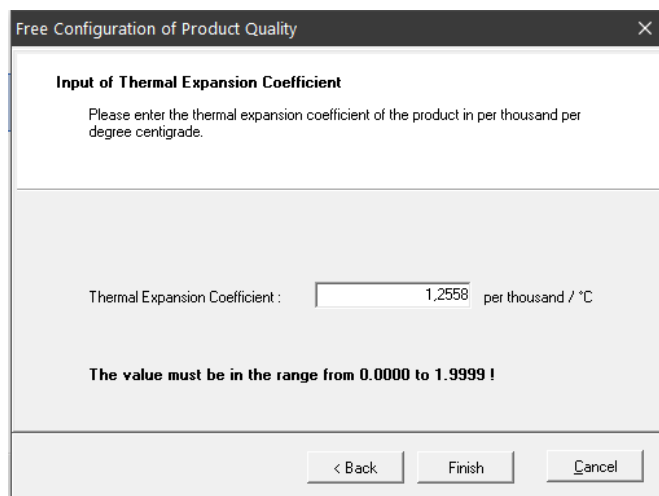


Figure 17: Enter the temperature coefficient

- (6) Click on "Accept" to save your input in the central unit or change the input by clicking on the "..." button next to the Type of Product field.

1.8 Product Name

This field is for entering an optional product designation that will be shown on a display (e.g. VISY-View). Free text (max. 16 characters) can be entered here.

1.9 Product Code

Some host computers work with product codes. You can see in the provided configuration table whether a product code must be entered. The product codes depend on the host computer concerned.

Normally, the product code is numerical. Alternatively, however, some host computers (e.g. host 105, 111, 112, 115) allow the use of letters for the product code. In this case, the product code must be entered in form of the decimal ASCII value that corresponds to the desired letter (example: A = 65, B = 66, C = 67, .../a = 97, b = 98, c = 99, ...)

1.10 Dispenser Sump ID

Enter the number of the dispenser under which the VISY-Stick Sump Dispenser or VISY-Reed Sump Dispenser was installed.



If more than one number for a fuelling point of a dispenser exist, the smaller number should be entered in this field.

1.11 Mud Layer Suppression Activated

If there is a mud layer on the bottom of the tank, the water float may be raised and a water alarm may be triggered constantly even though there is no water in the tank. It is possible to compensate for this by enabling the mud layer suppression function. This function suppresses all measured values for water below the current float position. Measurement values for water will be transmitted and an alarm will be triggered only if the water float rises above the current position.

Before this function is enabled, measures must be taken to ensure that there is no water in the bottom of the tank and that the water float is resting on the mud layer. This function cannot be enabled if

- the water float is resting on the end of the probe tube or
- the mud layer is too high (limited to 30 mm above the bottom end of the probe tube so that water or mud is not sucked in undetected) or
- the communication with the VISY-Stick level sensor is interrupted.



The status of the mud layer suppression is not transferred whenever a configuration is saved or loaded (see chapter L: Menu "Save and Load [F9]") because the unchecked transfer of the status to another central unit would not be useful or might even be dangerous. For this reason, the mud layer suppression must always be activated manually when required.

1.11.1 Enable Mud Layer Suppression

- (1) Activate this option by clicking on the "Mud layer suppression activated" check box.

The following warning appears:

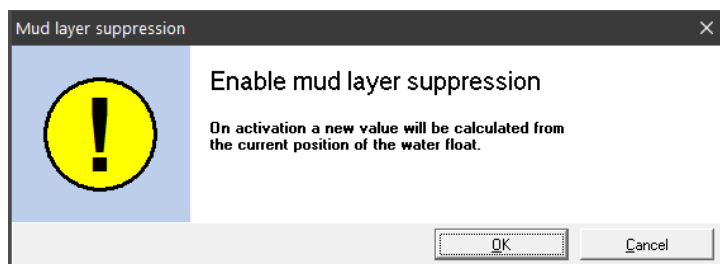


Figure 18: Enable mud layer suppression

- (2) Click on "OK". The mud layer suppression is enabled and the limit value is displayed in the text field if no error has occurred. In the event of an error, the following window appears:

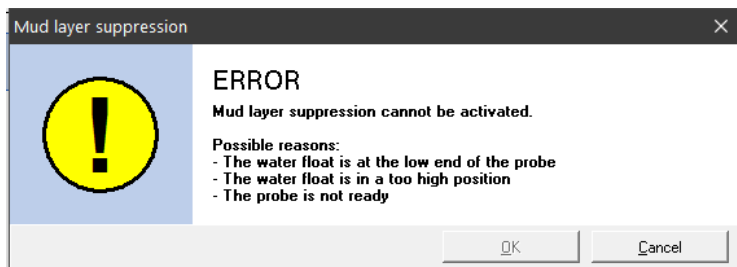


Figure 19: ERROR – Mud layer suppression cannot be activated

- (3) Click on "Cancel" and correct the error. Start over again.

1.11.2 Disable the Mud Layer Suppression

- (1) Click on the "Mud layer suppression activation" check box to remove the tick. The following warning appears:

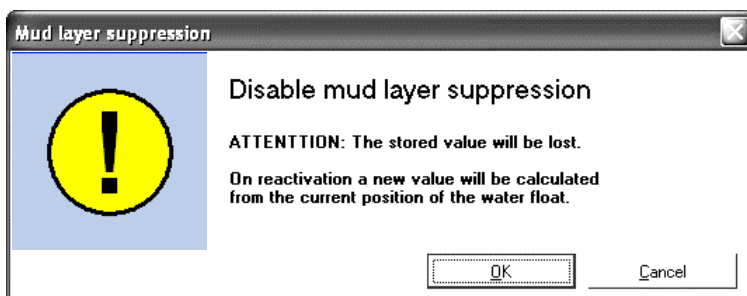


Figure 20: Disable mud layer suppression

- (2) Click on "OK" if you are sure that you want to delete the saved value. The value 0 mm is displayed in the field next to the check box for mud layer suppression.

2 Configuration of the Alarms (Level & Volume Alarms)

The "Level & Volume Alarms" button opens a window in which up to four products and two water alarm values can be entered in millimetres or litres depending on the probe type. Whenever these alarm values are reached, the appropriate alarm messages will be generated. For large tanks, the volume unit litres (l) can be changed to cubic metres (m³) if required.



An alarm value of zero ("0") disables the corresponding alarm.

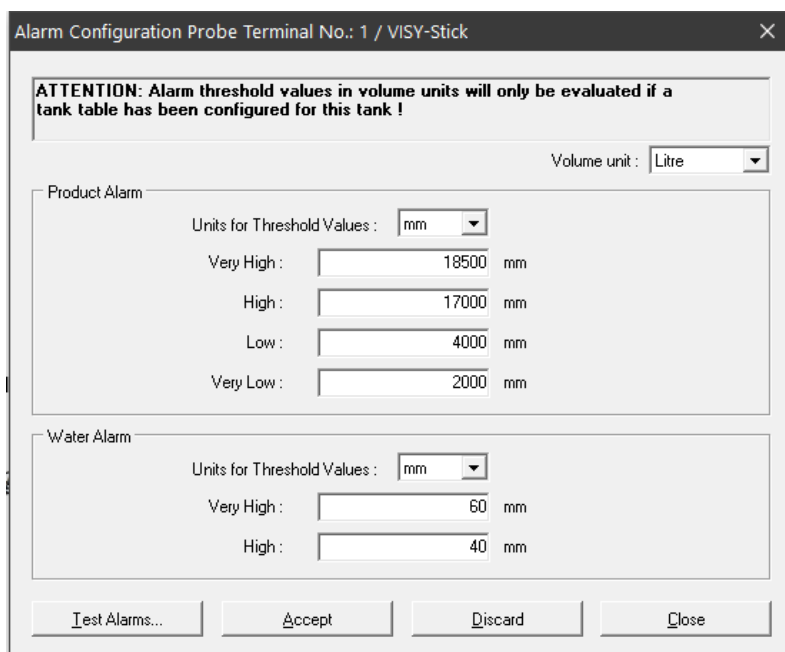


Figure 21: Example of a product and water alarm configuration

2.1 Product Alarm

- (1) Select the unit for the alarm (mm, litres, m³) from the drop-down list "▼".



Alarm values in litres or m³ are evaluated only if a tank table has been configured for the tank.

- (2) Enter the desired values for the four possible alarms ("Very High", "High", "Low", "Very Low").



When using a VISY-Stick product float and a VISY-Density module at the same time, the values for the product alarms "Low" and "Very low" must be higher than the mounting height of the top of the VISY-Density module. Otherwise, these alarms are triggered automatically as soon as the product float has come close to the VISY-Density module.

2.2 Water Alarm

- (1) Select the unit for the alarm (mm, litres, m³) from the drop-down list "▼".



Alarm values in litres or m³ are evaluated only if a tank table has been configured for the tank.

- (2) Enter the desired values for the two possible alarms ("Very High", "High").

2.3 Test Alarms ...

The "Test Alarms ..." button opens a window to check whether downstream alarm evaluations are working.



Use this function with caution, particularly if the downstream alarm evaluations trigger audible alarms or automatic notifications to a head office.

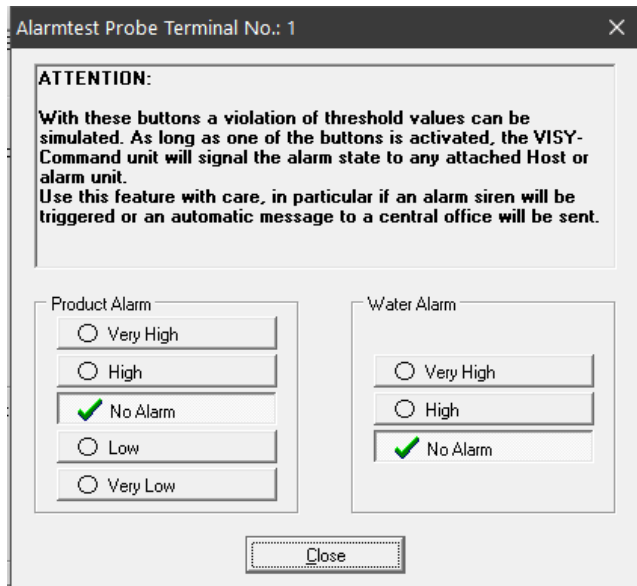


Figure 22: Window to test the six alarms

To test a product or water alarm, click on the corresponding button. As long as one of the buttons is active, VISY-Command sends alarm messages to all downstream alarm evaluations with the selected protocol. Clicking on the "Close" button stops all simulated alarms and closes the window.

2.4 Alarm Configuration VISY-Stick Interstitial and VISY-Reed Interstitial Dry

There are two different types of application for VISY-Stick/Reed Interstitial sensors:

- **Wet application (VISY-Stick Interstitial Wet)**
In this application, the interstitial probe monitors the level of a safety fluid in the intermediate chamber of a double-walled tank.
A meaningful "low" alarm value should be entered to warn of possible damage if the level of the safety fluid drops. An additional "high" alarm value is optional.
- **Dry application (VISY-Stick/Reed Interstitial Dry)**
In this application, the interstitial probe monitors the dry intermediate chamber in a double-walled tank and measures the height of any liquid flowing in.
A meaningful "High" alarm value should be entered to warn of possible damage if the liquid level in the intermediate chamber rises. An additional "low" alarm value does not make sense here and should be deactivated by entering a zero (0).



For VISY-Reed Interstitial Dry, 0 mm must be entered for the "Low" alarm value and 10 mm for the "High" alarm value.

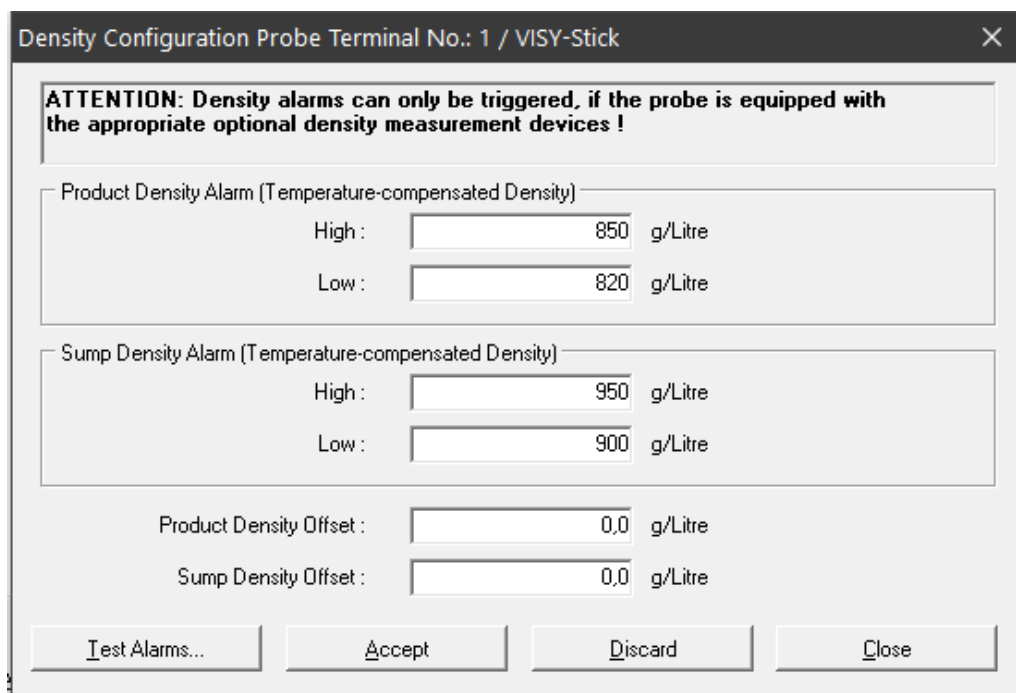
2.5 Alarm Configuration VISY-Stick/Reed Sump Manhole/Dispenser



For VISY-Stick/Reed Sump Manhole or VISY-Stick/Reed Sump Dispenser sensors, 10 mm must be entered for the alarm values "Very High" and "High".

3 Density Configuration VISY-Stick

The "Density configuration ..." button opens a window to enter the alarms and the offset for the VISY-Density Module.



Density Configuration Probe Terminal No.: 1 / VISY-Stick

ATTENTION: Density alarms can only be triggered, if the probe is equipped with the appropriate optional density measurement devices !

Product Density Alarm (Temperature-compensated Density)

High : g/Litre

Low : g/Litre

Sump Density Alarm (Temperature-compensated Density)

High : g/Litre

Low : g/Litre

Product Density Offset : g/Litre

Sump Density Offset : g/Litre

Figure 23: Example for a configuration of the product density and sump density alarm

The alarm thresholds can be entered for temperature-compensated product density and/or sump density in the unit g/litre. Whether the product density or sump density is measured depends on the position of the density module on the probe tube. If two VISY-Density modules are mounted on a VISY-Stick Advanced, both the product and the sump density are measured. An alarm value of zero ("0") disables the corresponding alarm. The "High" alarm is triggered when the value entered here is exceeded. The "Low" alarm is triggered when the value entered here falls below.

Offset of product density and sump density:

- Density offset for the selected density module (product density or sump density) in g/l with a resolution of 0.1 g/l
- 0.0 g/l if no offset is desired (factory setting)

H Menu "Tank Tables [F5]"

The real filling volume of a tank is determined with the help of value pairs of the tank table (filling height in mm and filling volume in litres). The calculations are based the tank dimensions and the total volume.



The entry of tank tables is required only for VISY-Stick sensors.

Select "Tank tables [F5]" in the menu bar on the left to display the configuration and to make changes.

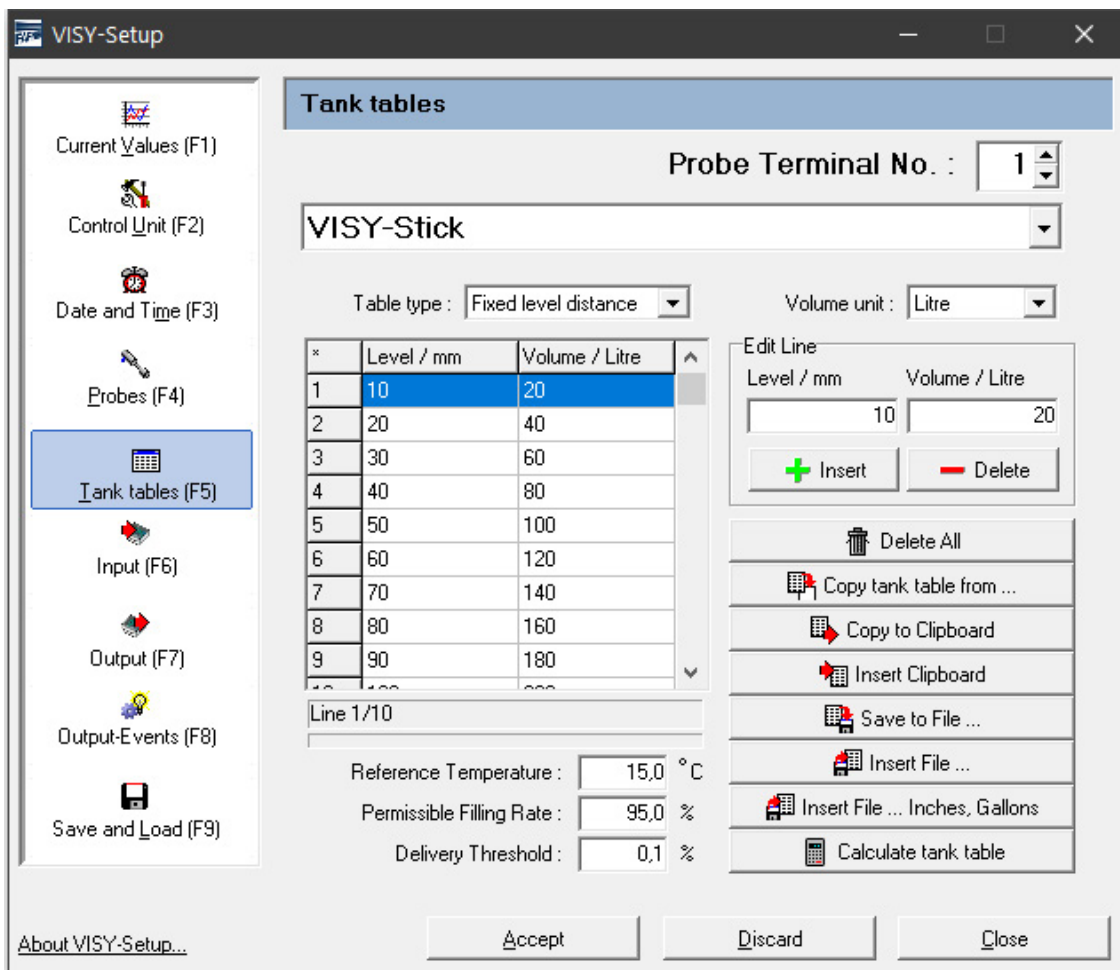


Figure 24: Menu "Tank tables [F5]"

1 Input Fields

1.1 Probe Terminal No.

Select a probe terminal number or tank number from 1 to 16 to display its data and to make any changes.

1.2 Table Type

The following table types can be selected:

- "128 Elements" for max. 128 pairs of values, any desired distance between the filling levels
- "Fixed level distance" for max. 2200 pairs of values, constant distance of 10 mm between the filling levels

At least 10 pairs of values are required. The accuracy of the calculations increases with the number of pairs of values.

1.3 Volume Unit

In this selection menu, the volume unit can be chosen between litres or cubic metres (m³).

1.4 Reference Temperature

As petroleum products have a high thermal expansion coefficient, it is useful to calculate the real filling volume (the actual filling volume in litres present in the tank) to a reference temperature. The temperature-compensated filling volume indicates how many litres would be present in the tank if the product temperature were equal to the reference temperature. The range of values is between -19.9 and 59.9 °C.



The tank table is not affected by the reference temperature. It always refers to the real filling volume.



The calculation of a temperature-compensated filling volume is deactivated if the reference temperature of -19.9 °C is entered. The temperature-compensated filling volume would then correspond to the real filling volume.

1.5 Permissible Filling Rate

You can enter the permissible filling degree as a percentage of the total capacity of the tank in this field. The permissible filling degree corresponds to the value set for the overfill prevention sensor (GWG). The central unit uses this value to determine the ullage up to the overfill prevention sensor.

1.6 Delivery Threshold

You can enter the threshold for recognition of a delivery as percentage of the total capacity of the tank in this field. This means that any increase in the filling volume is only recognised from the central unit as fuel delivery if the value set here is exceeded. Volume increases below this threshold (e.g. caused by a thermal expansion of the product) are discarded. Allowed values are from 0.1 ... 99.9%.

2 Input of Tank Tables

It is possible to enter the pairs of values manually, to copy a tank table from a different tank, to insert a table from the clipboard/file or to have the table calculated.



The last pair of values must always correspond to the maximum fill level and tank capacity.



The current table type is relevant for entering the value pairs. When importing data into the table type "Fixed Level Distance", the value pairs are converted if necessary.

2.1 Manual Tank Table

Before editing a tank table, you will need to have the following information:

- Height and diameter of the tank
- Total capacity of the tank
- Shape of the tank

Enter the value pairs Level [mm] and Volume [l/m³] of the tank table in the "Edit Line" frame. Use the "+ Insert" button to transfer the pairs of values to the table. Use the "- Delete" button to delete the selected row in the table.

The pairs of values can be entered in any order. They are sorted in ascending order automatically as soon as they are entered in the tank table.

2.2 Delete Tank Table

Use the "Delete All" button to delete all pairs of values in the tank table.

2.3 Copy Tank Table from ...

If tanks have identical dimensions, you can enter the tank tables of previously created tanks. Click on the "Copy tank table from ..." button. The following window appears:

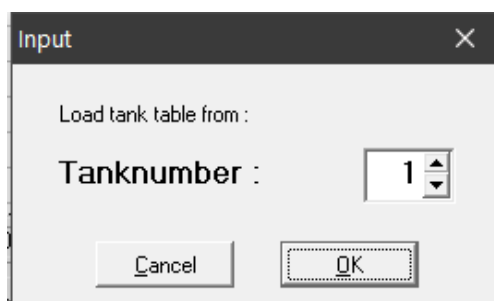


Figure 25: Input of a tank table from another tank

Select the tank from which you would like to copy the tank table. Confirm your selection with "OK". The tank table is loaded.

2.4 Copy to Clipboard

Click on the "Copy to Clipboard" button to copy the current tank table to the clipboard for further use.

2.5 Insert Clipboard

Click on the "Insert Clipboard" button to paste a previously copied tank table from the clipboard.

2.6 Save to File ...

Click on the "Save to File ..." button to save the current tank table of your choice. You can save the tank tables on your PC to use them later again.

2.7 Insert File ...

Click on the "Insert File ..." button to select and insert a saved tank table as long as it exactly matches the tank you are currently configuring.

2.8 Calculate Tank Table



Please note that the tank tables calculated by VISY-Setup do not have the accuracy of tank tables provided by the tank manufacturer because, among other reasons, VISY-Setup does not take any tank fittings into account.

- (1) Click on the "Calculate tank table" button to open the following window:

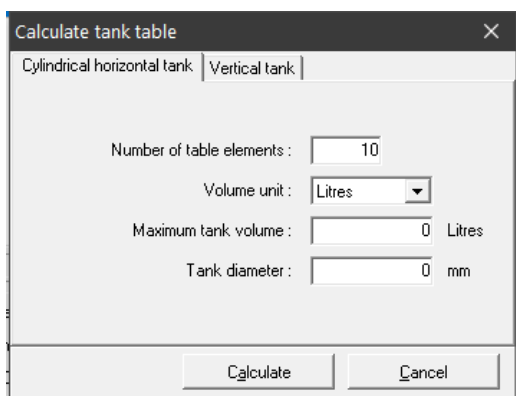


Figure 26: Calculate tank table

- (2) Select the design of the tank (Cylindrical horizontal tank or Vertical tank).
- (3) Enter the number of paired values (min. 10, max. 128), the maximum tank volume in litres and the tank diameter or tank height in millimetres.
- (4) Now click on the "Calculate" button.



The calculation for the vertical tank assumes that the tank has the same cross section at every height.

- (5) The calculated value pairs are now shown in the table.

I Menu "Input [F6]"

Open this menu for configuration of the VISY-Input modules. Additional information about VISY-Input can be found in the following instructions:



Technical Documentation for VISY-Input 8, art. no. 207166

Click on "Input [F6]" in the menu bar on the left to display the configuration and to make changes. Each VISY-Input module has eight (8) inputs. Input events can be configured for each input for the collection of switching signals supplied by external units. The configuration for each selected VISY-Input module is displayed when this function is opened:

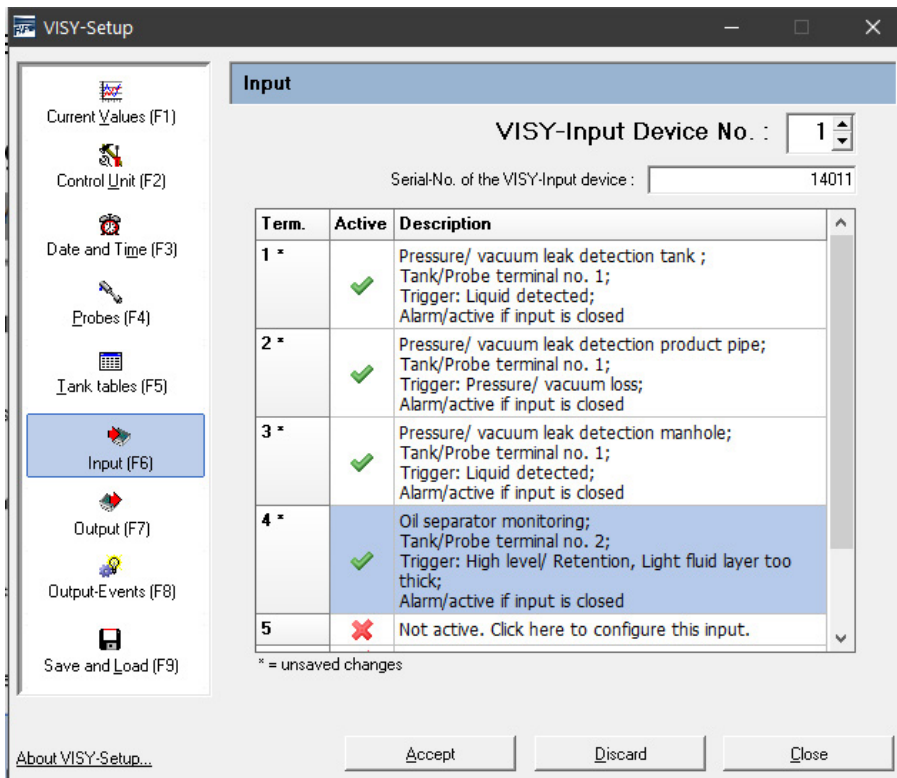


Figure 27: Configuration of the VISY-Input module

1 Terminal Selection

1.1 VISY-Input Device No.

Select the VISY-Input module No. 1 to 8 that you wish to configure.

1.2 Serial No. of the VISY-Input Device

The device number is shown on the board of the VISY-Input. Enter the value into this field.

2 Table of Input Events

The table has the columns "Terminal", "Active" and "Description".

2.1 Terminal

Terminals 1 to 8 of the selected VISY-Input module. The terminal number is supplemented by an asterisk "*" if the configuration for this input has not yet been transferred to the central unit after a change.

2.2 Active

This field indicates whether an event has been assigned to the corresponding input.

2.3 Description

This field displays the event configuration assigned to the corresponding input.

3 Input Event Editor

Clicking on a "Description" field of terminal 1... 8 opens the input event editor for configuring the corresponding input.

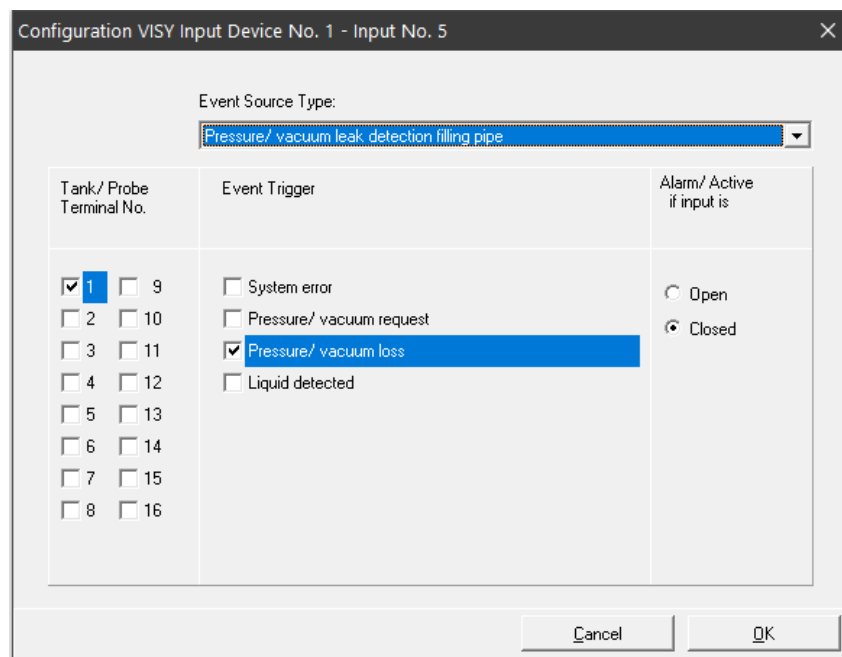


Figure 28: Input event editor for configuration of a single input

An input event consists of four elements.

3.1 Event Source Type

This field describes in general terms which external unit is supplying the monitoring signal. One of the following options can be selected:

- Not active (deactivates the input)
- Leakage monitoring for tank, product pipe, filling pipe, manhole or oil separator

3.2 Tank / Probe Terminal No.

Selection of the tank or probe connections that are monitored by external units assigned to this input.

3.3 Event Trigger

External monitoring units can report several different events. The options listed depend on the monitoring unit selected in the "Event Source Type" field. The options describe which single events are detected by the input to be configured.

3.4 Alarm / Active if Input Is

Enter in this section whether the signal delivered by the external unit is supplied by an open or a closed switching contact.

3.5 Close the Input Event Editor

Clicking on "OK" opens the main menu and displays the new configuration in the table; clicking on "Cancel" simply closes the input event editor and displays the main menu without any changes.

If an input event has been modified, it is indicated by an asterisk next to the terminal number. At this point, the changed configuration has not yet been saved in the central unit.

- (1) "Accept":
Click on "Apply" to transfer and save the configuration of the input events to the central unit. The progress of transmission is shown in the status bar below the table. After successful transfer, the asterisk next to the terminal number is no longer displayed.
- (2) "Discard":
Click on "Discard" to reject any modification of the configuration; the previously saved settings are displayed.

J Menu "Output [F7]"

Open this menu for configuration of the VISY-Output modules. Additional information about VISY-Output can be found in the following instructions:



Technical Documentation VISY-Output 8, art. no. 350072

Click on "Output [F7]" in the menu bar on the left to display the configuration and to make changes.

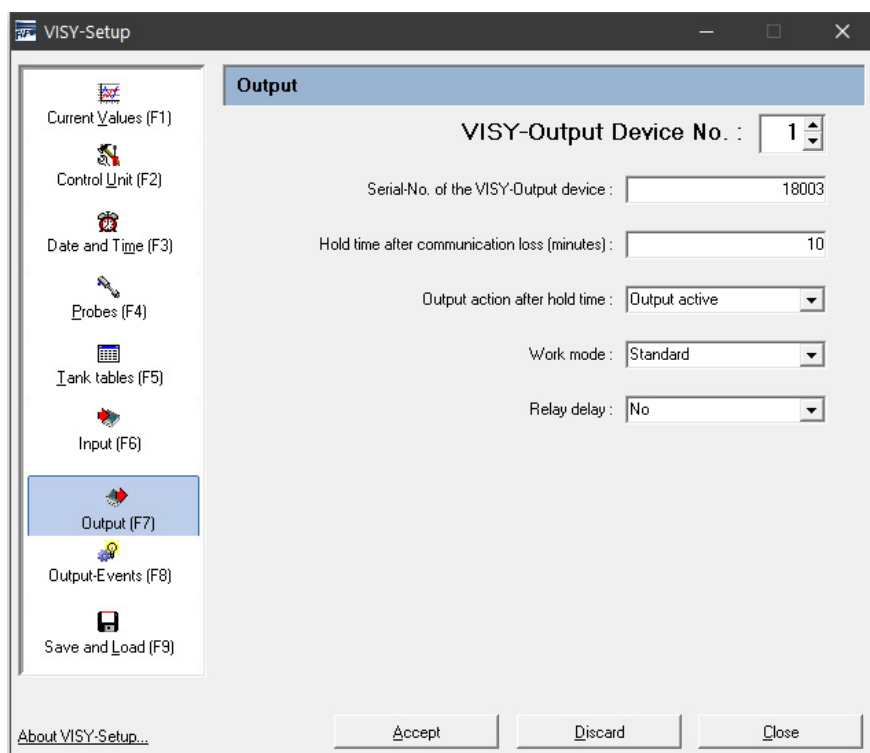


Figure 29: Configuration of the VISY-Output modules

1 Configuration

1.1 VISY-Output Device Nr.

Select the VISY-Output Device No. 1 to 8 to be configured.

1.2 Serial No. of the VISY-Output Device

The device number is shown on the board of the VISY-Output. Enter the value in this field.

1.3 Hold Time After Communication Loss (Minutes)

The hold time defines how long the outputs retain a certain status after a communication failure.

Hold time = 0 (minutes): The hold time is deactivated. The outputs retain their last state.

Hold time =1 ... 240 (minutes): The hold time is activated for the set time.

The status of the outputs after the holding time has expired is configured in the following menu item.

1.4 Output Action After Hold Time

Outputs may be either activated or deactivated upon expiration of the hold time in the event of a communication failure.



If a hold time of "0" is configured, the outputs do not change their state.

1.5 Work Mode

You can select either "Standard" or "Failsafe" for the work mode.

1.5.1 "Standard" Work Mode

In the Standard work mode, a relay is generally de-energised (passive), and is energised (active) when the corresponding output is activated.

1.5.2 "Failsafe" Work Mode

In the fail-safe work mode, a relay is generally energised (active) and is de-energised (passive) when the relevant output is activated.



The fail-safe mode offers the advantage that even if the power for VISY-Output 8 fails an alarm will be signalled via the relay that becomes passive.

1.6 Relay Delay

If the relay delay is activated, the relay status (passive/active) changes as soon as the (alarm) event for activating the output has been active for at least 1 minute.



*The relay delay occurs only when an output is activated.
If the output is deactivated, the relay status changes without delay.*

The (alarm) events are described in the following chapter (see below).

K Menu "Output-Events [F8]"

Open this menu for configuration of the events that activate the outputs of VISY-Output. The events (e.g. alarm messages) may be reported by FAFNIR sensors or external units connected via VISY-Input.

Click on "Output-Events [F8]" in the menu bar on the left to display the configuration and to make changes.

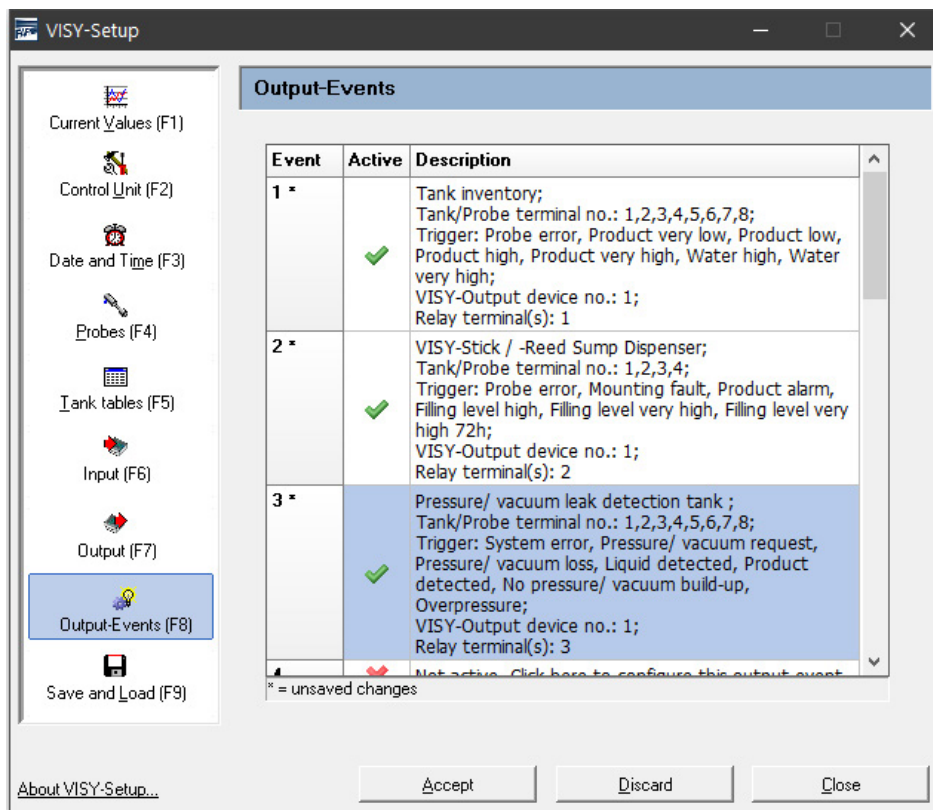


Figure 30: Configuration of output events

As soon as you click on this menu item, the output events stored in the central unit are displayed in a table. The table contains up to 64 saved events. The first events are normally visible directly, the others can be displayed by using the arrow keys on the keyboard, the scroll bar, or the mouse wheel.

The output events have the columns "Event", "Active" and "Description".

1 Table of Output Events

1.1 Event

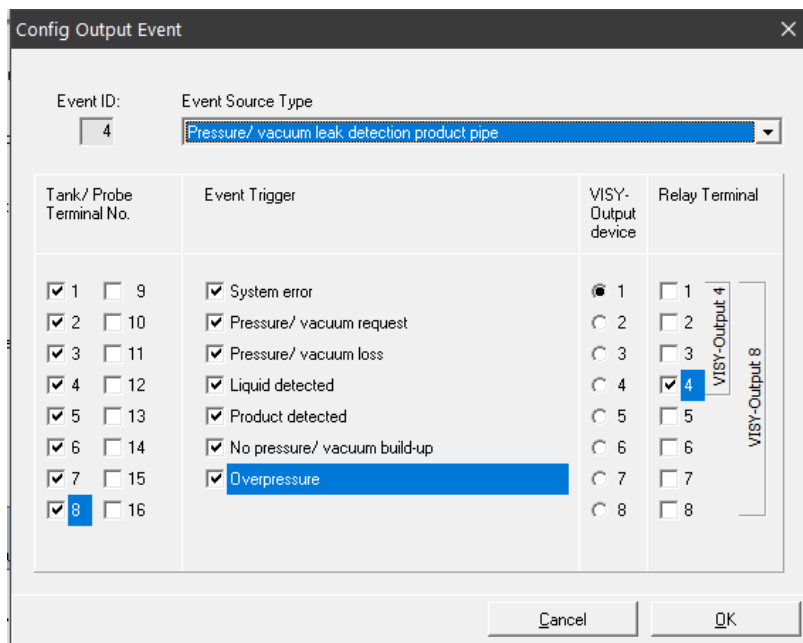
Each output event is identified by a unique event number (1... 64). The event number is supplemented by an asterisk "*" if the configuration for this output event has not yet been transferred to the central unit after a change.

1.2 Active

This field indicates whether the output event has been activated.

1.3 Description

Clicking on a "Description" field of event 1 ... 64 opens the Output events editor for configuring the corresponding Event.



Tank/ Probe Terminal No.	Event Trigger	VISY- Output device	Relay Terminal
<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 9	<input checked="" type="checkbox"/> System error	<input checked="" type="radio"/> 1	<input type="checkbox"/> 1
<input checked="" type="checkbox"/> 2 <input type="checkbox"/> 10	<input checked="" type="checkbox"/> Pressure/ vacuum request	<input type="radio"/> 2	<input type="checkbox"/> 2
<input checked="" type="checkbox"/> 3 <input type="checkbox"/> 11	<input checked="" type="checkbox"/> Pressure/ vacuum loss	<input type="radio"/> 3	<input type="checkbox"/> 3
<input checked="" type="checkbox"/> 4 <input type="checkbox"/> 12	<input checked="" type="checkbox"/> Liquid detected	<input type="radio"/> 4	<input checked="" type="checkbox"/> 4
<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 13	<input checked="" type="checkbox"/> Product detected	<input type="radio"/> 5	<input type="checkbox"/> 5
<input checked="" type="checkbox"/> 6 <input type="checkbox"/> 14	<input checked="" type="checkbox"/> No pressure/ vacuum build-up	<input type="radio"/> 6	<input type="checkbox"/> 6
<input checked="" type="checkbox"/> 7 <input type="checkbox"/> 15	<input checked="" type="checkbox"/> Overpressure	<input type="radio"/> 7	<input type="checkbox"/> 7
<input checked="" type="checkbox"/> 8 <input type="checkbox"/> 16		<input type="radio"/> 8	<input type="checkbox"/> 8

Figure 31: Output events editor

Example:

Output event "4" occurs if the leakage detection of the product pipes from tanks 1 ... 8 reports one of the marked events. In this case, the relay terminal "4" of VISY-Output device "1" will be activated.

1.4 Output Events Editor

The output events editor displays the data fields "Event ID", "Event Source Type", "Tank/ Probe Terminal No.", "Event Trigger", "VISY-Output device" and "Relay Terminal":

- (1) Event ID:
Displays the output event number selected. Read only.
- (2) Event Source Type:
This field describes which signal source is supplying the monitoring signal. The following options can be selected: Not active (deactivates the output event), Tank inventory, VISY-Stick Interstitial, VISY-Stick/Reed Sump Manhole, VISY-Stick/Reed Sump Dispenser, Pressure/vacuum leak detection tank, ... product pipe, ... filling pipe, ... manhole, Oil separator monitoring.
- (3) Tank / Probe Terminal No.:
This field indicates the tanks or sensors connected to the probe terminals that are monitored by the selected event source type.
- (4) Event Trigger:
The probes connected to the central unit provide different alarm signals; external monitoring units can also report several different events via their switching outputs. The options listed in this "Event Trigger" section are therefore dependent on the option selected in the "Event Source Type" field. The options selected in the "Event Trigger" section describe specifically which (alarm-triggering) events the output event you are configuring should respond to.
- (5) VISY-Output Device:
The three criteria "Event Source Type", "Tank/ Probe Terminal No." and "Event Trigger" define the event that is used to switch the outputs of a particular VISY-Output module. Use this section to select the VISY-Output module concerned.
- (6) Relay Terminal:
Select in this section the output or outputs of the VISY-Output module that should be activated whenever the defined event occurs.

1.5 Closing the Output Events Editor

Clicking on "OK" opens the main menu and displays the new configuration in the table; clicking on "Cancel" simply closes the output event editor and displays the main menu without any changes.

If an output event was modified, this is indicated by an asterisk next to the event number. At this point, the changed configuration has not yet been saved in the central unit.

- (1) "Accept":
Click on "Apply" to transfer and save the configuration of the output events to the central unit. The progress of transmission is shown in the status bar below the table. After successful transfer, the asterisk next to the Event number is no longer displayed.
- (2) "Discard":
Click on "Discard" to reject any modification of the configuration and display the previously saved settings.

1.6 Relationship Between an Input Event and an Output Event

The following input fields are available for an input and output event:

- Event Source Type
- Tank / Probe Terminal No.
- Event Trigger

An input event cannot prompt a response with VISY-Output module unless a corresponding output event has been defined.

An output event becomes active when the input event has been triggered and the output event meets the following criteria:

- (1) Event Source Type and
- (2) At least one of the specified tank / probe terminal numbers and
- (3) At least one of the specified event triggers

In this case, the configured relay outputs of the specified VISY-Output modules will be activated.

1.7 Special Case Oil Separator

In the "Tank / Probe Terminal No.", at least one number must be selected for the oil separator monitoring.

L Menu “Save and Load [F9]”

Click on “Save and Load [F9]” in the menu bar on the left to load or to save the configuration.



If the write protection is activated (shown by a yellow padlock), the password must be entered before loading the configuration.

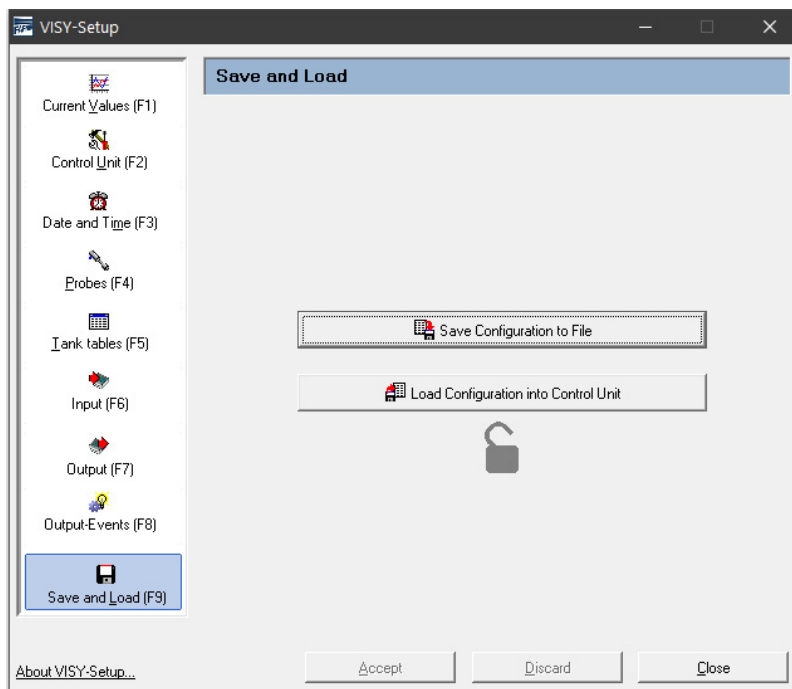


Figure 32: Menu “Save and Load [F9] Without Write Protection”



The status of the mud layer suppression (see chapter G 1.11: “Mud Layer Suppression Activated”) is not transferred whenever a configuration is saved or loaded because transferring the status to another central unit without review would not be useful or might even be dangerous. For this reason, the mud layer suppression must always be activated manually when required.

1.1 Saving the Configuration to a File

After you have completed your configuration, you can save the configuration data to a file on your hard disk or a mobile data medium. If the system fails, you can load the configuration from this file and send it to the central unit.



If you want to be able to use the “Station import” function in the “VISY-Tank” software application, the data must be saved with a specific file name (see item (3) in the following list).

Once you have reviewed or corrected your configuration, proceed as follows to save the configuration data:

- (1) Click on the "Save Configuration to File" button.
- (2) With the help of the "Save As" dialogue window that opens, you can save your configuration data to your hard disk or a mobile data medium.
- (3) To save the configuration data, click on the "Save" button.
- (4) The "Save and Load" submenu is then displayed again on the screen.
- (5) After the configuration has been saved successfully, select a different submenu or click on "Close" to close the VISY-Setup application.

1.2 Load Configuration into Control Unit

Proceed as follows if you want to transfer your saved configuration data to the central unit:

- (1) Click on the "Load Configuration into Control Unit" button.
- (2) In the "Open" dialogue window that opens, you can now import the desired configuration data to the central unit from your hard disk or a mobile data medium.
- (3) Click on "Open" to load the configuration data,.

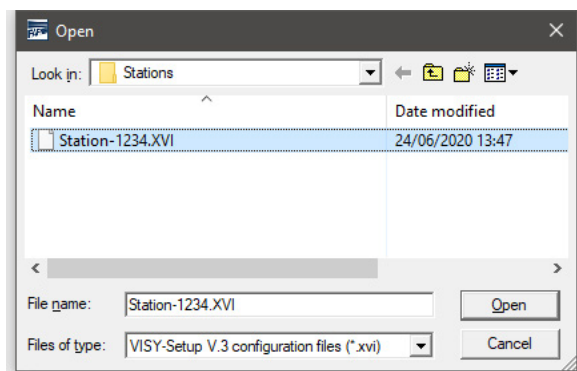


Figure 33: Loading a configuration

- (4) The configuration data are loaded

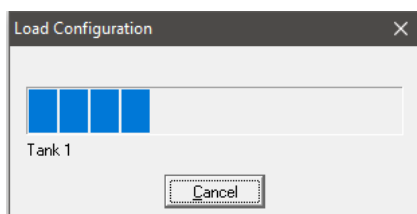


Figure 34: Progress bar for the loading process

- (5) The "Save and Load" menu is displayed again on the screen.

M Status Messages

The "Probe Status" field in the "Current Values [F1]" menu displays a status code and a status message.

The table below lists all possible status codes and explains their meaning and effect, the possible cause, and the measures that can be taken to restore normal operation.

The status codes 0 to 9 are generated by the VISY-Stick sensor (and, in wireless mode, by the RF transmitter), the status codes 10 to 99 are generated by the central unit.



If a status code from 0 to 7 is displayed, the data transmission between the sensors and the central unit is working correctly. Status codes are forwarded to the host computer only if a corresponding status message is provided from the host.

Status Code	"Message" ▷ Description	► Possible cause ☑ Troubleshooting
0	"Probe running"	☑ No measures required.
1	"Probe not running" ▷ The measured values are no longer being recorded and have been set to "0" by the central unit.	► If this status is displayed permanently, it must be assumed that the sensor is defective. ☑ The sensor must be replaced.
5	Probe cannot determine temperature ▷ The central unit is no longer capturing the temperature and has set the value to 0.0 °C. The temperature compensation of the filling volume is no longer being carried out. The product and water level continue to be processed.	► If this status is displayed permanently, it must be assumed that the sensor is defective. ☑ The sensor must be replaced.
6	"Probe cannot determine filling level" ▷ The product level and water level have been set to "0" by the central unit, the temperature will continue to be transmitted.	► If this status is displayed permanently, it must be assumed that the sensor is defective. ☑ The sensor must be replaced.

Status Code	"Message" ▷ Description	► Possible cause ☑ Troubleshooting
7	Reduced measuring accuracy ▷ All measured values are being processed normally. However, it must be assumed that total measurement accuracy is not being achieved.	► Powerful fluid movements prevent a fully accurate measurement. This can happen, for example, when the tank is being filled. ☑ No measures required.
8	Relevant for wireless mode only: "Checksum error: Probe - RF-transmitter" ▷ The VISY-RF transmitter is reporting an error communicating with the sensor. The central unit is not receiving data from the sensor.	► Dirty or damaged plugin connection, loose connection, strong interference radiation or VISY-RF transmitter defective. ☑ Check cable and plugin connection, replace VISY-RFT transmitter, replace sensor, check surrounding area for powerful sources of radiation (e.g. three-phase supply cables, motors).
9	Relevant for wireless mode only: "RF-transmitter has no communication with probe" ▷ The VISY-RFT transmitter is reporting that the sensor is no longer responding.	► Dirty or damaged connection, connection cable defective, sensor or VISY-RFT transmitter defective. ☑ Check cable and plugin connection, replace VISY-RFT transmitter, replace probe.
10	"Checksum error: Probe – central unit" ▷ The central unit displays an error message when communicating with the sensor or the RF receiver.	► In wired operation, the cable connection (and/or connectors and terminals) to the sensor is loose, dirty or damaged or there is severe interference. ► In wireless mode, the cable connection (also connectors and terminals) between RF receiver and VI-4 interface is loose or damaged or there is severe interference.

Status Code	"Message" ▷ Description	► Possible cause ☑ Troubleshooting
		☑ Check cables, plugin connections and terminal connections. ☑ In wired mode, replace sensor, VP... measuring transducer, VI... interface. ☑ In wireless mode, replace RF receiver, VI... interface. Check surrounding area for powerful sources of radiation (e.g. three-phase cables, power switches etc.).
11	"No communication with probe" ▷ The central unit is no longer able to establish data communication with the sensor. The measured values are not being captured and have been set to "0" by the central unit.	► Sensor not connected / not available / defective, wiring incorrect, incorrect serial number configured for the sensor, central unit (VI interface VI... or VP... measuring transducer) defective ☑ Take the necessary measures as appropriate to the possible causes.
12	Incompatible data ▷ There are no transmission errors in the data communication with the sensor, but the central unit cannot interpret the data. The measured values are not being captured and have been set to "0" by the central unit.	► The sensor or the particular version of the sensor is not supported by the central unit. ☑ Ask the manufacturer whether the sensor and the central unit are compatible and whether any updates are available. When doing so, please have the type and version number of the central unit, and the type, serial number and/or version number and possibly the model of the sensor (e.g. number of floats or density measurements installed) to hand.

Status Code	"Message" ▷ Description	► Possible cause ☑ Troubleshooting
13	Relevant for wireless mode only: "Waiting for first wireless transmission" ▷ After switching on or resetting, the VISY-Command RF reports that no data have been received from the sensors.	► Data from the sensors is being transmitted only periodically. ☑ Not required because of normal reset/switch-on behaviour. If data are still not being received following expiry of the configurable timeout in VISY-Command (1 – 99 hours), the status automatically changes from 13 to 11.
99	"Probe or tank not configured" ▷ The central unit assumes that the sensor is not connected. No data communication is taking place via the relevant connection point (tank 1 ... 16). All the measured values for this connection have been set to "0".	► When the central unit is delivered, all the connected sensors/tanks show this status initially. In order to set up communication with a sensor via a connection point, the serial number of the sensor and the product quality must be input. If this status is displayed, either one or both of these items of data have not been entered. ☑ The central unit must be configured using the VISY-Setup.
--	"Reset central unit." ▷ The central unit is not working. During a reset, there is no communication with the sensors, host and VISY-Setup. Here, the VISY-Setup is reporting that the central unit is no longer responding.	► The central unit is reset by switching it on or pressing the reset button. If this status continues to be displayed even after you have pressed the reset button, it should be assumed that the central unit (VI... interface) is defective. ☑ Replace the VI... interface inside the central unit.

N Error Messages

If communication between VISY-Setup and the central unit is disrupted during configuration, the central unit will send an error message that is displayed in VISY-Setup.

Acknowledge an error message by pressing the [↵] (Return) key. If the error message continues to be displayed, close the VISY-Setup program. Press the reset button on the central unit again and relaunch the VISY-Setup program. If the error message continues to be displayed, please contact the technical support department of your distribution partner.

Error message	Meaning
ERROR 1	The central unit was unable to interpret the data received.
ERROR 2	The central unit was able to interpret the data received, but an invalid tank number was sent.
ERROR 3	The central unit was able to interpret the data received, a valid tank number was sent, but the parameter to be transmitted to the tank is invalid.
ERROR 4	The parameters to be transmitted to VISY-Command are valid, but VISY-Command is unable to save them.
ERROR 5	VISY-Command is unable to execute the desired function.

O VISY-Setup Version Index



Changes and additions to the individual VISY-Setup versions can be found in the Release Notes provided in this program's installation folder.

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