Technical Documentation

VISY-X

VISY-View

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Content

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1 Characteristic features of the VISY-View

The VISY-View display is an optional component of the VISY-X system (volume information system).

The VISY-X system can be used to carry out precise, continuous filling level measurements of up to 16 tanks directly at the filling station. At the same time, the product temperature and the water level at the tank bottom are also measured. As an extension, several environmental measurement sensors can be connected.

The system includes:

- control unit VISY-Command
- up to 16 measurement sensors VISY-Stick
- up to 16 measurement sensors VISY-Stick/-Reed Interstitial
- up to 16 measurement sensors VISY-Stick/-Reed Sump Manhole
- up to 16 measurement sensors VISY-Stick/-Reed Sump Dispenser
- up to 8 VISY-Input 8 to connect external systems
- up to 8 VISY-Output 4
- configuration software VISY-Setup

VISY-View can be used to evaluate and show the tank data alternatively to the filling station computer.

The display VISY-View serves the purpose of indicating recent tank data, delivery data and various alarm messages provided by the control unit VISY-Command (see separate instruction manual "VISY-Stick and VISY-Command").

The appliance is equipped with a four line display screen. VISY-View makes use of an LED and a buzzer to signal alarm statuses, a serial interface to enable printing alarm and tank data via a printer, two potential-free outputs to control external devices when selectable alarm statuses are activated, and one remote input for the connection of a switch.

2 Safety instructions

The VISY-X system serves the purpose of measuring and evaluating the filling levels in filling station tanks for mineral oil fuels. Use the system for this purpose only. The manufacturer shall not be liable for any form of damage resulting from improper use of this system!

The VISY-View display was developed, manufactured and inspected in accordance with state-of-the-art technology and with recognised safety rules and regulations. Nevertheless, hazards may arise from the use of this unit. Therefore, observe the following safety instructions:

- Do not change or modify the system or add any equipment without the prior consent of the manufacturer.
- Only use the power supply unit included in the scope of supplies in order to connect the VISY-View display to the power supply system.
- Use original replacement parts only. These comply with the technical requirements specified by the manufacturer.
- The installation, operation and maintenance of the VISY-View display is only allowed to be carried out by expert, authorised personnel. Specialised knowledge must be obtained by undergoing regular training.
- Operators, installers and service personnel must observe all applicable safety regulations. This also applies to the local safety regulations and accident prevention regulations not mentioned in these operating instructions.
- The VISY-View display is not suitable for outdoor installation. It is intended for use within the VISY-X system only and the VISY-View unit must always be undamaged and clean. The safety instructions in this manual are labelled as follows:

⚠ **If you do not observe these safety instructions, risk of an accident exists or the VISY-View unit or the VISY-X system could be damaged.**

☞ *Helpful information that will guarantee proper function of the system or facilitate your work.*

3 Structure and mode of operation

The VISY-View display stands on two nonslip feet in order to ensure unproblematic operation of the buttons.

The front operator side is screwed at an angle with the feet so that user-friendly operation is ensured. The operator interface comprises the display screen (1) and five operator buttons (4–8). For the indication of operating statuses, the VISY-View unit is equipped with two LEDs (2–3) (see Figure 1)

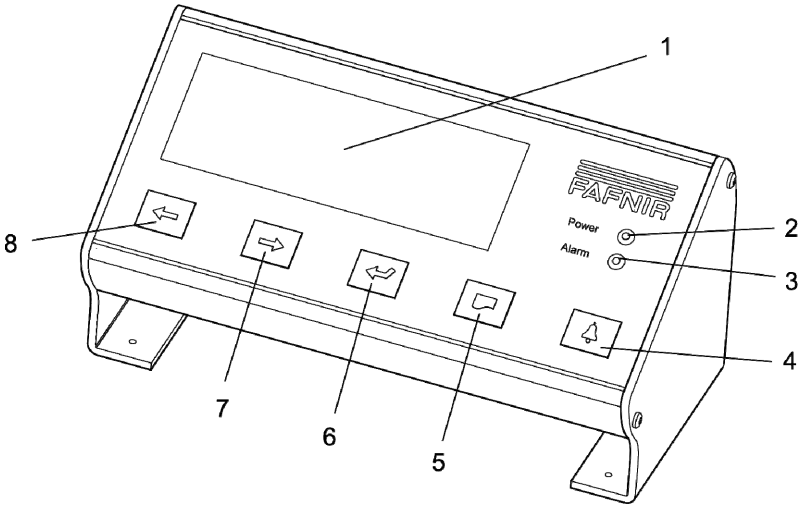

Figure 1: VISY-View front

1 Display screen	5 Print out
2 Power LED	6 Return
3 Alarm LED	7 Cursor right / down
4 Alarm	8 Cursor left / up

3.1 Display screen

The display screen (1) represents four lines each with 20 characters. The different data supplied from the control unit VISY-Command are generated in several submenus (see chapter "Menu structure") and are shown on the display screen (1). Except for the main and configuration menus the first line of the screen always shows the relevant tank respectively probe. The other three lines are used to display the relevant tank data or alarm messages. By using the two cursors you can recall the various menu functions to the display.

There are two different cursor forms:

- The Up-Down cursor „▒" which moves up and down on the left side in the display screen and marks specific lines.
- The Left-Right cursor "</>" which pages through the menu items at the beginning of a line.

The cursor is moved using the operator buttons (7 and 8). Regular blinking of the Up-Down cursor or changing between "<" and ">" indications show the properly running program.

☞ *VISY-View is provided with a protective function that switches off the display screen automatically following a configurable period of time (1–60 minutes) without any inquiry via the operator buttons. This function prevents the free view of data. The display screen is switched on again by pressing any button.*

3.2 Operation elements

3.2.1 On-Off switch

The on-off switch (9) is found on the underside of the device (see Figure 2). After installing and turning on the device by using the on-off switch, the "Power" LED lights up green (see section "Power LED" in this chapter).

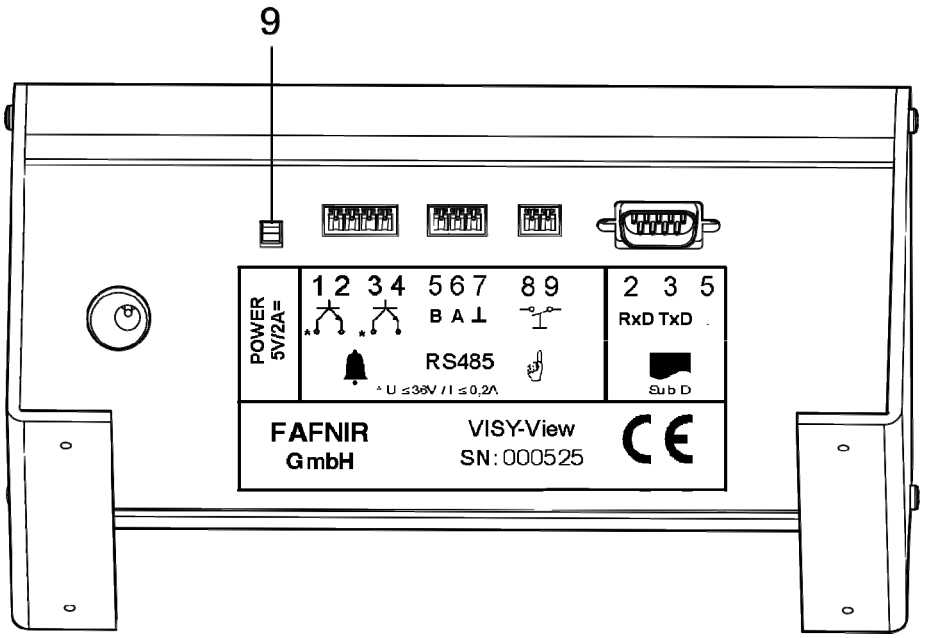

Figure 2: VISY-View rear

3.2.2 Operator buttons

To page through the various menu items and call up the desired tank data, five operator buttons (4–8) are available (see Figure 1):

Cursor left / up (8) depending on the cursor form with two functions:

1. By this button the Up-Down cursor is moved upwards. You can select a sub-menu of the main menu or individual menu items of the submenu. If the cursor is already positioned in front of the top line, you can go to the superimposed menu by pressing this button.

2. The Left-Right cursor pages via this button through the various menu items of the submenus.

Cursor right / down (7) depending on the cursor form with two functions:

1. By this button the Up-Down cursor is moved downwards. You can select a submenu of the main menu or individual menu items of the submenu.

2. The Left-Right cursor pages via this button through the various menu items of the submenus.

Return button (6) has four functions:

1. With the Return button you can change between the two cursor forms.
2. In the main menu only the Up-Down cursor exists. Here you will use the Return button to confirm the selection of a submenu.
3. In the alarm menu, only the Left-Right cursor exists. Here the Return button is used to acknowledge an alarm message (the "!" will no longer be shown, the red Alarm LED changes from flashing to constantly on and the buzzer is switched off).
4. In case of acknowledged alarm messages, you can also use the Return button to toggle between the indication "alarm status" and "alarm time".

Print (5)

This button can be used to initiate a data output operation via the printer. It is possible to print out all data available in the submenus “Tank data”, “History”, “Configuration” and maybe other submenus that might exist. More information about the different printouts can be found in the chapters of the individual sub-menus.

This operator button will only initiate printing operations if the connected printer has been configured (see section "Printer" within chapter "Configuration").

With the printer activated, the printing-out of alarm messages and filling operations is carried out automatically in case of an alarm activation or a filling operation.

A thermal printer with 32 columns and serial interface has to be used. This printer is available as an optional equipment unit from FAFNIR.

Alarm (4)

By pressing this button, the alarm menu is called up. In the case of a new alarm, the alarm initiating tank or probe appears on the display screen, (the red Alarm LED flashes and the buzzer sounds). Pressing the button repeatedly will display all the alarm messages that have not been acknowledged yet in successive order. When all the alarm messages have been acknowledged with the Return button (5) (see above), the red Alarm LED changes from flashing to permanently on and the buzzer is switched off. To exit the alarm menu, press the alarm button once again.

3.2.3 Key switch

Through connection 13 (see Figure 3) an accessible key switch can be mounted for use by tanker drivers in case the filling station has already closed. Before refilling, a repetitive turning of the key switch will bring the relevant data of all the tanks one after another onto the display screen. Which three Tank data for a tank should be displayed are selected in sub menu "Configuration" under "DspTruck" menu point (see section "Truck display" in chapter "Configuration").

3.3 Power LED

The green Power LED (2) lights up as soon as the unit is connected to the power supply system and is switched on by means of the on-off switch (9) (see Figure 2).

3.4 Interfaces

The VISY-View display is equipped with the following interfaces:

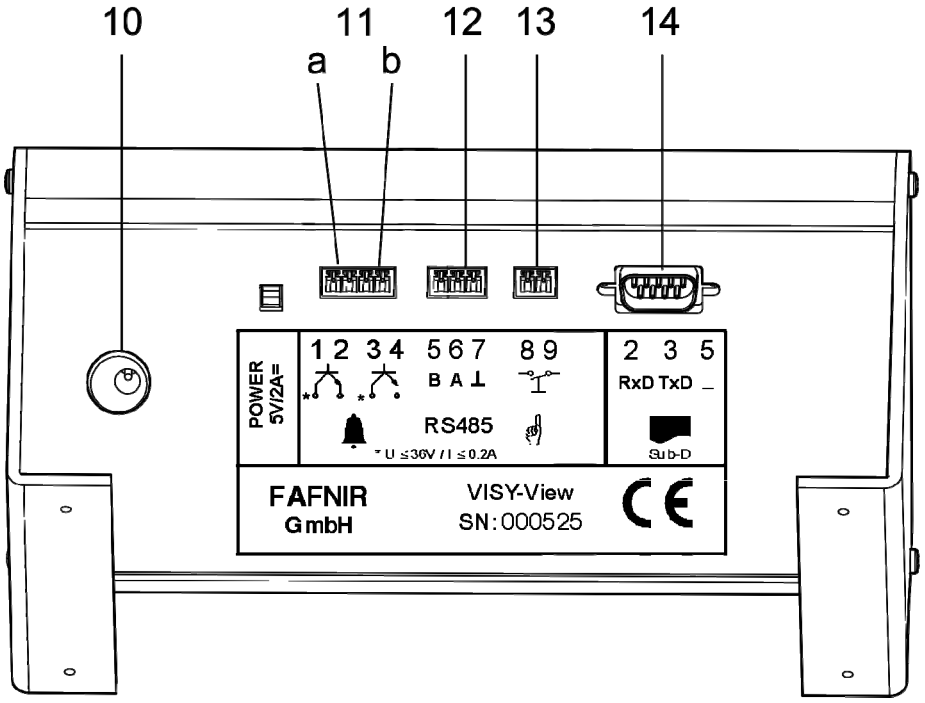

Figure 3: VISY-View interfaces

(10) Connection to appropriate power supply unit included in the scope of supplies

(11) Alarm outputs (11a = output 1, 11b = output 2)

The two alarm outputs can be configured so that a potential-free transistor is closed for a specific alarm status (see chapter "Configuration" and load limits in chapter "Technical data").

⚠ **When connecting the alarm outputs the correct polarities must be observed ("+" for connections 1 or 3). If the poles are confused then the contact is always closed!**

(12) RS-485 interface for connection to the control unit VISY-Command

(13) Remote input for a key switch (see section "Key Switch" in this chapter) or input for an external alarm (see section "Alarm input" within chapter "Configuration")

(14) Sub-D socket (9-pin) for connection to a printer

☞ *A thermal printer with 32 columns and serial interface has to be used. This printer is available as an optional equipment unit from FAFNIR.*

3.5 Alarm signalizing

The VISY-View display is equipped with a red Alarm LED (3) and a buzzer in order to indicate alarms optically and acoustically. All detected alarms of the VISY-X system are displayed. Alarms are either coming directly form connected probes or are the result of exceeding or dropping below alarm thresholds of the control unit VISY-Command, set via the software VISY-Setup.

The buzzer is switched off as soon as all alarms have been acknowledged in the alarm menu, using the Return button ↵ (see section "Operator buttons" in this chapter). When acknowledging an alarm the operator confirms that he/she has noticed the alarm. The alarm menu can only be left after all alarms have been acknowledged. The volume of the buzzer can be adjusted in the submenu "Configuration" (see section "Loudness buzzer" in chapter "Configuration").

The alarm signalisation can be in one of the following states depending on the current alarm situation:

Alarm signalisation	Alarm situation
Alarm LED is flashing Buzzer is on	There is at least one unacknowledged alarm, in this case it is insignificant if the alarm is still active or not.
Alarm LED is on Buzzer is off	There is at least one active alarm and all alarms have already been acknowledged.
Alarm LED is off Buzzer is off	There is no alarm.

☞ *When turning the device on the red Alarm LED lights up for approx. 1 second.*

☞ *A new alarm is indicated by a flashing Alarm LED while an acknowledged alarm is indicated by an Alarm LED that is constantly on.*

4 Putting into operation

In order to put the VISY-View display into service, proceed as follows:

(1) First choose which RS-485 interface of the control unit VISY-Command will be used to connect the display VISY-View.

- The display VISY-View is connected to the host interface of the VISY-Command when no other host system (e. g. POS system) will be connected.
- If the host interface of the VISY-Command is already used by another device VISY-View must be connected to the extension interface of VISY-Command.

Interface connection

1	2	3	4	5	6	7	8	9
RxD	TxD	⊥	A+	B-	⊥	A+	B-	PE
RS-232			RS-485		RS-485			⏚
Host					Expansion			

Figure 4: Interface connections of VISY-Command

(2) Use the configuration software VISY-Setup to configure the interfaces of VISY-Command (see separate operating instructions for VISY-Setup). If the host interface is used to connect VISY-View, enter "108" as host computer. If the extension interface is used, activate the function "External display" when using VISY-Setup version up to V2.10, or activate the function "Extension interface" with version V3.00 and higher.

☞ *The required protocol configurations for the VISY-View are described in section "Protocol", chapter "Configuration".*

(3) Connect the RS-485 interface of the VISY-View display to the RS-485 interface of the control unit VISY-Command using the terminal clamps 5 (B) and 6 (A) of the VISY-View (see rating plates in Figure 5 and Figure 6).

☞ *With devices from no. 525, terminal 7 can be used, if required, to apply a cable screening or for potential equalisation with the RS-485 interfaces of connected devices. Terminal 7 may not be connected to earth potential, as there is the danger of potential equalisation currents which are too high and could damage the interface.*

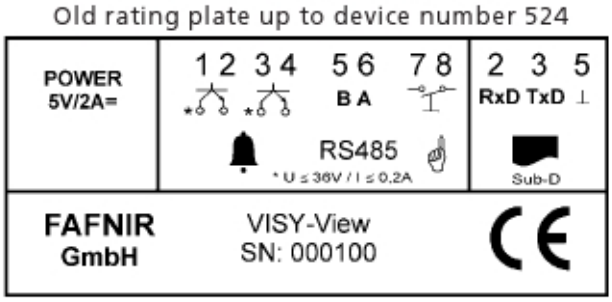

Figure 5: Name plate up to serial number 524

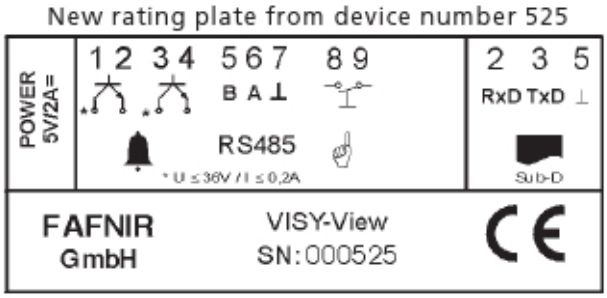

Figure 6: Name plate beginning with serial number 525

(4) Connect a printer as required to the 9-pin D-Sub socket.

As printer is a thermal printer with 32 columns and serial interface intended to be used. This printer is available as an optional equipment unit from FAFNIR. The required printer configurations are explained in section "Printer" of chapter "Configuration".

(5) Connect a key switch if required via remote input 13 (see Figure 3).

(6) Connect the VISY-View display via connection 10 (see Figure 3) and the enclosed power supply unit to the power supply system.

Only use the power supply unit included in the scope of supplies in order to connect the VISY-View display to the power supply system.

(7) Turn the VISY-View display on using the on-off switch (9) (see Figure 2).

The VISY-View display is ready for operation now and can be configured as described in the chapter "Configuration"

5 Operation

From the main menu one of the submenus can be chosen. Normally the submenus “Tank data", "History" and "Configuration" exist. If more submenus are available (e.g. “Wireless”) this will be indicated by an down directed arrow „⇩“ at the beginning of the lowest line.

The menu "Wireless" is only available, if the connection of the measurement sensors VISY-Stick to the control unit VISY-Command is done wireless.

For the use of the device some basic settings must be carried out via the submenu "Configuration".

5.1 Configuration

The following configuration may be carried out on the VISY-View display:

- Date and time
- Language
- Protocol
- Printer
- Loudness buzzer
- Switching off – display screen
- Disabling alarm signalisation
- Alarm selection – alarm output 1
- Alarm selection – alarm output 2
- Electrical behaviour of alarm outputs
- Resetting alarm outputs
- Protection of configuration data
- Alarm input
- Number of history entries
- Truck display

All settings (variable menu items), with exception of "Date and time", are not permanently represented on the display screen but can be made visible by using the button ⇦ or the button ⇨.

The following described settings are configured within the menu “configuration”, which you can enter as written below:

(1) In the main menu use the button ⇦ or the button ⇨ to select the submenu "Configuration".

(2) Confirm your selection by pressing the Return button ↵.

The submenu "Configuration" appears on the display screen. To quit the submenu, use the button ⇦ to move the Up-Down cursor to the top line and then back to the main menu.

☞ *All changed configurations are stored upon leaving the submenu "Configuration" and are kept also, if the device is switched off.*

5.1.1 Date and time

In order to set the date and time, proceed as follows beginning in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select line 1 with the date and time.

(2) Confirm your selection by pressing the Return button ↵. At the left edge of the display screen, the Left-Right cursor and an additional cursor will then appear in the line. During the time adjustment procedure the clock remains stopped.

(3) Use the button ⇦ or the button ⇨ to position the additional cursor on the number to be set. The cursor marks the adjustable time data continuously from left to right.

(4) Press the Return button ↵. At the left edge of the display screen the Up-Down cursor will then appear.

(5) Use the button ⇦ or the button ⇨ to set the new time.

(6) Use the Return button ↵to switch over to the Left-Right cursor. Repeat steps 3 to 6 as required until all the time input operations have been carried out.

If applicable repeat step 3 up to step 6, until all required changes are done.

(7) Use the button ⇦ or the button ⇨ to move the additional cursor to the left or to the right out of the line. The time data are then accepted by VISY-Command.

☞ *If the extension protocol is used to communicate with VISY-Command (VISY-View is connected to the extension interface of VISY-Command) date and time cannot be changed via VISY-View.*

5.1.2 Language

In order to set the language, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item Language

(2) Press the Return button ↵. On the left side of the display screen the Left Right cursor will now appear.

(3) Use the button ⇦ or the button ⇨ to set the desired language.

☞ *Due to the language selection, the representation of the date and time as well as the decimal point or comma is automatically set according to each language.*

5.1.3 Protocol

In order to set the protocol, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item Protocol.

(2) Press the Return button ↵. On the left side of the display screen the Left Right cursor will now appear.

(3) Use the button ⇦ or the button ⇨ to set the desired protocol.

The following table shows which protocol must be set in accordance with the used VISY-Command interface:

Connection to VISY-Command	**via Protocol to be set**
Host interface	Host-108
Extension interface	Ext. Prot.

5.1.4 Printer

In order to set the printer, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item Printer.

(2) Press the Return button ↵. At the left edge of the display screen the Left-right cursor will then appear.

(3) Use the button ⇦ or the button ⇨ to activate the printer function.

5.1.5 Loudness buzzer

In order to set the volume of the buzzer, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item Buzzer.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will then appear.

(3) Use the button ⇦ or the button ⇨ to adjust the desired length of buzzer tone. With each press of a button the newly set length of buzzer tone is sounded by the buzzer.

⚠ **Please act with caution when disabling the buzzer as from a safety point of view the signalisation of alarms is strictly required in the majority of cases.**

5.1.6 Switching off – display screen

In order to set a time period after which the display screen should automatically switch off, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item DispOff.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will then appear.

(3) Use the button ⇦ or the button ⇨ to adjust the desired period of time after which the display screen is to be switched off (1–60 minutes).

5.1.7 Disabling alarm signalisation

By selecting menu item Alarm it can be configured if alarms are signalised or not. Normally the alarm signalisation has to be enabled, especially if environmental sensors are connected to the VISY-X system.

Under the following conditions it could however be reasonable to disable the alarm signalisation:

- there is more than one VISY-View connected to the VISY-Command control unit and the alarm signalisation should only be done on one VISY-View
- the VISY-View is used as a truck display only and alarms can not be acknowledged by the user because of the mounting position (e.g. directly behind a glass panel)

The following configurations are possible:

- enabled alarms will be signalised
- disabled alarms will not be signalised

In order to enable or disable the alarm signalisation, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item Alarm.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will appear.

(3) Use the button ⇦ or the button ⇨ to enable or disable the alarm signalisation.

⚠ **Please act with caution when disabling the alarm signalisation as from a safety point of view the signalisation of alarms is strictly required in the majority of cases.**

5.1.8 Alarm selection – output 1 / output 2

By selecting AlrOutp1 and AlrOutp2 menu points the following alarm may be selected, for which the corresponding alarm output is connected:

- disabled no alarm selected, the output is always in the none-active state
- ErrorGauge Sensor not connected or defective
- ProdctXLOW Product level very low
- ProductLOW Product level low
- ProdctHIGH Product level high
- ProdtXHIGH Product level very high
- ProductAll Any alarm concerning the product level
- Water HIGH Water level high
- WaterXHIGH Water level very high
- Ext Alarm External alarm (via key switch input)
- All Alarms Any alarm listed above

In order to select the alarm, for which alarm output 1 or 2 should be connected, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item AlrOutp1 or AlrOutp2 as required.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will then appear.

(3) Use the button ⇦ or the button ⇨ to select the alarm to be connected to the corresponding alarm output (1/2).

☞ *Alarms configured for the alarm outputs will only be handled when coming from sensors of type VISY-Stick mounted in a tank. The alarm outputs can not be activated by alarms coming from environmental sensors. If alarm outputs for environmental sensors are also needed or a higher voltage or current has to be switched the component VISY-Output 4 has to be used.*

5.1.9 Electrical behaviour of alarm outputs

By selecting menu item OutLevel the electrical behaviour of the alarm outputs can be configured.

The following configurations are possible:

- NO **N**ormally **O**pen, in the none-active state the contact of the alarm output is open
- NC **N**ormally **C**losed, in the none-active state the contact of the alarm output is closed

In order to configure the electrical behaviour of the alarm outputs, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item OutLevel.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will appear.

(3) Use the button ⇦ or the button ⇨ to select the desired function.

☞ *Selecting NC offers the advantage that a signalisation via the alarm outputs is also done if the power to the VISY-View is interrupted.*

5.1.10 Resetting alarm outputs

By selecting menu item OutReset it can be configured under which condition the alarm outputs will be reset (set back to the none-active state).

The following configurations are possible:

- ack. the alarm outputs will be reset after the user has acknowledged the alarm
- solved the alarm outputs will be reset after the alarm has been solved

In order to configure under which condition the alarm outputs will be reset, proceed as follows once in submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item OutReset.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will appear.

(3) Use the button ⇦ or the button ⇨ to select the desired function.

5.1.11 Protection of configuration data

By selecting menu item Protect you have the possibility to protect all configuration data against manipulation. To change the status of the protection a 4 digit pass code of 3982 has to be used.

In order to enable/disable the protection of the configuration data, proceed as follows once in the submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item Protect. The current protection status will be displayed.

(2) To be able to change the protection status press the Return button ↵. On the left side of the display screen the Left-Right cursor will now appear.

(3) Use the button ⇦ or the button ⇨ to select the value of the highest digit of the pass code and confirm the selected digit value by pressing the Return button ↵. Now the next lower digit value can be input.

(4) Repeat step 3 until the complete 4 digit pass code has been entered. After all digits have been selected and confirmed the Up-Down cursor will appear at the left edge of the display screen.

(5) If the right pass code has been entered the protection status is changed from enabled to disabled or from disabled to enabled.

When the protection function has been enabled a selected and protected menu item is marked with a key on the left side of the display.

5.1.12 Alarm input

By selecting menu item AlrInput you have the possibility to configure the input of VISY-View to be an alarm input for an external device. Normally the input is used to connect a key switch that activates the Truck Display.

The following configurations are possible:

- disabled — the function alarm input is disabled, the input of VISY-View can be used fort he function truck display
- enabled NC — the function alarm input is enabled, the input of VISY-View can be used as alarm input for an external alarm, the alarm will be signalised from the external device via a relay contact (or several relay contacts wired in series) of type **N**ormally **C**losed (**NC**)
- enabled NO — the function alarm input is enabled, the input of VISY-View can be used as alarm input for an external alarm, the alarm will be signalised from the external device via a relay contact (or several relay contacts wired in parallel) of type **N**ormally **O**pen (**NO**)

In order to enable or disable the function alarm input, proceed as follows once in the submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item AlrInput. The current configuration of the function alarm input will be displayed.

(2) Press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will appear.

(3) Use the button ⇦ or the button ⇨ to select the desired function.

☞ *If the function alarm input is enabled this does automatically disable the function Truck Display. The menu item DspTruck to configure the Truck Display will show the text disabled.*

☞ *An alarm signalised via the alarm input will show up as "External Alarm" in the menu Alarm and on the automatic alarm printout (if a printer is connected and configured).*

☞ *If more than one alarm from external systems has to be handled (e.g. oil layer and overfill alarm from multiple systems monitoring oil separators) the component VISY-Input 8 should be used instead of the alarm input of VISY-View. Using VISY-Input 8 has the advantage that detailed information about the alarm reason and the system that has detected the alarm are available in the menu Alarm.*

5.1.13 Number of history entries

In order to change the number of filling operation data per tank that are shown in the submenu History, proceed as follows once in the submenu "Configuration":

(1) Use the button ⇦ or the button ⇨ to select the menu item History. The current selection for the number of filling operation data will be displayed.

(2) To change the current configuration press the Return button ↵. At the left edge of the display screen, the Left-Right cursor will appear.

(3) Use the button ⇦ or the button ⇨ to select the desired number (1-5) of filling operation data per tank.

5.1.14 Truck display

By activating the switch contact on connection 13 (see section "Key switch" in chapter "Structure and mode of operation") a configurable display is created independent from submenu "Tank data". Besides tank number and a description of the product, three further tank data can be selected for the display, proceeding from submenu "Configuration" (see section "Retrieving tank data" in this chapter):

(1) Use the button ⇦ or the button ⇨ to select the menu item DspTruck.

(2) Press the Return button ↵. You proceed to a further submenu "Truck display".

(3) Use the button ⇦ or the button ⇨ to move the Up-Down cursor to the lines (2–4) in which you wish another value to be displayed.

(4) Press the Return button ↵. At the left edge of the display screen the Left-Right cursor will then appear.

(5) Use the button ⇦ or the button ⇨ to select the desired value (press the button as many times as necessary).

(6) Press the Return button ↵. At the left edge of the display screen the Up-Down cursor will then appear. Repeat steps 3–6 as necessary.

(7) Use the button ⇦ to move the cursor to the top line and then back to the submenu "Configuration".

☞ *In wireless mode the activated truck display will show additional text messages to inform the truck driver about the age of the displayed data.*

☞ *If the alarm input has been enabled the truck display is not available. In submenu "Configuration" the possibility to configure the truck display is disabled.*

5.1.15 Printing out configuration data

If you would like to print out a list of the settings done in submenu "Configuration" use the button ⇦ or the button ⇨ to move the Up-Down cursor in the main menu to the menu item "Configuration" and press the Print button.

☞ *Wait until the printer has finished the paper feed before tearing off the printout.*

5.2 Retrieving tank data

Using submenu "Tank data" you have the possibility of calling up all available measured values configured in the control unit VISY-Command, and to set which three menu items the display screen should display together with the tank number and product description in the first line.

If a value is not displayed, VISY-Command cannot make it available since it is not configured in the VISY-Setup software.

The following tank data may be selected:

- Capaci — Tank capacity
- Ullage — Free tank volume up to permissible tank content
- ProdNC — Non-compensated product volume
- PrdMax — Permissible tank content
- PrdCmp — Temperature-compensated product volume
- Temp — Product temperature
- CmpTmp — Compensation temperature
- Prodct — Product filling level
- Water — Water filling level

The selection of the above listed tank data is to be found in submenu "Tank data", and is reached as follows:

(1) Use the button ⇦ or the button ⇨ to move the Up-Down cursor in the main menu to menu item "Tank data".

(2) Confirm your selection with the Return button ↵. The submenu "Tank data" will then appear on the display screen.

(3a) In order to view the data of another tank press the Return button ↵.On the left side of the display screen, the Left-Right cursor will then appear. Use the button ⇦ or the button ⇨ to select the required tank (press the button as many times as required).

(3b) In order to view another value use the button ⇦ or the button ⇨ to move the Up-Down cursor to the corresponding line (2–4) and confirm with the Return ↵ button. On the left side of the display screen, the Left-Right cursor will then appear. Use the button ⇦ or the button ⇨ to select the menu item that should be displayed in the chosen line (press the button as many times as required).

(4) Press the Return button ↵. On the left side of the display screen, the Up-Down cursor will then appear.

(5) Repeat steps 3–4 as necessary, until all the desired menu items have been selected for all three lines.

To quit the submenu, use the button ⇦ to move the Up-Down cursor to the top line and then back to the main menu.

5.2.1 Printing out tank data

If you would like to print out a list of the tank data selected in submenu "Tank data" (see above) for all the connected tanks, use the button ⇦ or the button ⇨ to move the Up-Down cursor in the main menu to the menu item "Tank data" and press the Print button.

In order to print out all the data for one specific tank select the tank from submenu "Tank data" (see above) and press the Print button .

☞ *Wait until the printer has finished the paper feed before tearing off the printout.*

5.3 Retrieving filling operation data

For accounting purposes, in submenu "History" you have the possibility of retrieving the data (listed below) relating to the last filling operation since switching on the VISY-Command control unit. Within this submenu it can also be programmed which three menu items are to be displayed, along with the tank number and product description on the first line.

The following tank data may be selected:

- FilSta Start of filling operation
- FilEnd End of filling operation
- Delive Delivered product volume, temperature-compensated
- PrdSta Temperature-compensated product volume at the start of the filling operation
- PrdEnd Temperature-compensated product volume at the end of the filling operation

The selection of the filling operation data proceeding from the main menu is carried out as follows:

(1) Use the button ⇦ or the button ⇨ to move the Up-Down cursor to the menu item "History".

(2) Confirm your choice with the Return button ↵. The submenu "History" will appear on the display screen.

(3a) In order to view the data of another tank press the Return button ↵.At the left edge of the display screen the Left-Right cursor will then appear. Use the button ⇦ or the button ⇨ to select the required tank (press the button as many times as required).

(3b) To view another value, use the button ⇦ or the button ⇨ to move the Up-Down cursor to the corresponding line (2–4) and then press the Return button ↵. On the left side of the display screen the Left-Right cursor will then appear. Use the button ⇦ or the button ⇨ to select the menu item that should be displayed in this line (press the button as many times as required).

(4) Press the Return button ↵.On the left side of the display screen the Up-Down cursor will then appear.

(5) Repeat steps 3–4 as necessary, until the desired menu items have been selected for all three lines.

To quit the submenu, use the button ⇦ to move the Up-Down cursor to the top line and then back to the main menu.

5.3.1 Printing out the tank filling operation data

If you would like a print out of the delivery amount and time period of every filled tank use the button ⇦ or the button ⇨ to move the Up-Down cursor in the main menu to the menu item "History" and press the Print button.

In order to print out all selectable data for one specific tank, select the correspondent tank in submenu "History" (see above) and press the Print button.

☞ *Once the filling operation is complete, and as soon as the fluid level has settled in the tank, all selectable filling operation data (see above) are automatically printed out.*

☞ *Wait until the printer has finished the paper feed before tearing off the printout.*

5.4 Retrieving wireless data

Using submenu "Wireless" you have the possibility of calling up all available wireless data of all connected tanks. The following wireless data will be shown:

- Age Age of data in hh:mm
- Field Receiver field strength
- Bat. Battery status (VISY-RF Transmitter)

5.4.1 Selecting another tank

In order to see the wireless data of another tank press the Return button ↵ while having the Up-Down cursor placed in the first line of the submenu "Wireless". At the left edge of the display screen the Left-Right cursor will then appear. Use the button ⇦ or the button ⇨ to select the required tank (press the button as many times as required).

5.4.2 Printing out wireless data

If you would like to print out a list of wireless data for all connected tanks, use the button ⇦ or the button ⇨ to move the Up-Down cursor in the main menu to the menu item "Wireless" and press the Print button.

In order to print out wireless data for one specific tank select the tank from submenu "Wireless" (see above) and press the Print button.

☞ *Wait until the printer has finished the paper feed before tearing off the printout.*

5.5 Alarm messages

⚠ **Whenever alarms are signalised this can mean that there is a potential hazard for the safety or the environment. In such a case please take the actions needed to avert any danger. In order to do this, the operating company has to create a detailed action plan that describes the required reactions for the different alarms.**

5.5.1 Retrieving and acknowledging of alarms

If the control unit VISY-Command recognises the exceeding or falling short of one of the limits programmed using the VISY-Setup configuration software, or an alarm that is directly reported by a probe, VISY-View signals it flashing the red Alarm LED, and also when configured, by the sounding of the buzzer.

☞ *New, acknowledged and solved alarms are printed automatically if a printer is connected and configured. The print-out contains information about the origin (tank number or probe type and probe terminal number), the type and the date of the alarm.*

In order to retrieve and acknowledge an alarm message change to the alarm menu by pressing the Alarm button.

Line 1 of the display shows the origin of the alarm (tank number or probe type and probe terminal number). In lines 2-4 the type of alarm (e.g. product alarm XHIGH) can be found. Unacknowledged alarm messages are marked with an "!" placed after the alarm message. If the cause of the alarm is eliminated or reduced (e.g. from XMAX to MAX), the current status will be seen in first place and the activating status in second place.

Acknowledge the alarm by pressing the Return button ↵. If there are no more unacknowledged alarms the Alarm LED is now permanently on and the buzzer is switched off.

If the alarm has been acknowledged (no "!" any more) use the Return button ↵ to toggle the display between "Alarm status" and "Alarm time".

By pressing the Alarm button you proceed to the next unacknowledged alarm. If there are no more unacknowledged alarms you return to the menu you were in prior to opening the alarm menu.

5.5.2 Alarm messages of connected probes

This can be:

- VISY-Stick mounted in the tank (text in line 1: Tank)
- VISY-Stick/-Reed Interstitial (text in line 1: Interstitial)
- VISY-Stick/-Reed Sump Manhole (text in line 1: Sump Manhole)
- VISY-Stick/-Reed Sump Dispenser (text in line 1: Sump Dispenser)

The following alarm messages are shown in lines 2-4. Please note that not all probes can generate all listed alarms.

Alarm message	Alarm cause	Stick	Interstitial	Manhole	Dispenser
Gauge: O.K.	Gauge is ok	●	●	●	●
Gauge: ErrXX	Gauge is defect or mounted wrong	●	●	●	●
AlrPrd: ----	Product alarm not configured	●			
AlrPrd: none	No Product alarm	●	●	●	●
AlrPrd: Alarm	Product alarm		●	●	●
AlrPrd: XHIGH	Product level very high	●			
AlrPrd: HIGH	Product level high	●			
AlrPrd: LOW	Product level low	●			
AlrPrd: XLOW	Product level very low	●			
AlrWat: ----	Water alarm not configured	●			
AlrWat: none	No Water alarm	●			
AlrWat: XHIGH	Water level very high	●			
AlrWat: HIGH	Water level high	●			
AlrLev: ----	Level alarm not configured		●	●	●
AlrLev: none	No Level alarm		●	●	●
AlrLev: XHIGH	Level very high			●	●
AlrLev: HIGH	Level high		●	●	●
AlrLev: LOW	Level low		●		

5.5.3 Alarm messages of external systems

If external systems are connected to the VISY-Input 8, detected alarms of these systems can be displayed with the VISY-View. These alarms can be:

- Leak Detection Tank (text in line 1: LD Tank)
- Leak Detection Product Pipe (text in line 1: LD Prod. Pipe)
- Leak Detection Fill Pipe (text in line 1: LD Fill Pipe)
- Leak Detection Manhole (text in line 1: LD Manhole)
- Oil Separator Monitoring (text in line 1: Oil Separator)

Line 2 of the display shows the alarm state.

Alarm state	**Alarm cause**
State: O.K.	The external system has not detected an alarm
State: Err	The external system has detected an alarm

In the case of an alarm line 4 of the display shows the alarm cause as a text. If at the same time more than one alarm cause is active, line 4 will show the different alarms alternately.

Text	**Alarm cause**
System Error	The connected system has detected an internal error or is out of order
Press/Vacuum Alarm	The Leak Detection system has detected a loss of pressure or vacuum in the interstitial space
Liquid -Alarm	The Leak Detection system has detected liquid in the interstitial space
High Level Alarm	The Oil Separator Monitoring system has detected that the liquid level has reached or exceeded the high level set point
Oil Layer Alarm	The Oil Separator Monitoring system has detected that the oil layer thickness has reached or exceeded the set point

5.5.4 Alarm messages of VISY-Input 8 and VISY-Output 4

If VISY-Input 8 and / or VISY-Output 4 are connected to the control unit VISY-Command, their alarm states can be displayed:

- VISY-Input 8 (text in line 1 : VISY-Input)
- VISY-Output 4 (text in line 1: VISY-Output)

Line 2 of the display shows the alarm state.

Alarm state	**Ursache**
State: O.K.	VISY-Input 8 or VISY-Output 4 is ok
State: ErrXX	VISY-Input 8 or VISY-Output 4 is not ok

5.5.5 Printing out the alarm overview

If you want to print-out an overview of the current alarm situation as a list press the button "Print" while being in the alarm menu.

Wait until the printer has finished the paper feed before tearing off the printout.

6 Menu structure

Main menu		
Line 1	VISY-View Vx.xx	Title
Line 0*/2	Tank data	Submenu
Line 2...3	History	Submenu
Line 3...4	Configuration	Submenu
Line 0*/4	Wireless	Submenu
*This line is not permanently represented via the display screen but can be called onto the display screen by using the operator buttons (see chapter "Operation").		

Submenu "Tank data"		
Line 1	Tank12: ABCD…	Product designation, ≤ 12 characters
Line 1	12: ABCD…	Product designation, 13–16 characters
Line 2...4	Capaci: 12345678,9l	Tank capacity, variable menu item
Line 2...4	Ullage: 12345678,9l	Free tank volume up to permissible tank content, variable menu item
Line 2...4	ProdNC: 12345678,9l	Non-compensated product volume, variable menu item
Line 2...4	PrdMax: 12345678,9l	Permissible tank content, variable menu item
Line 2...4	PrdCmp: 12345678,9l	Temperature-compensated product volume, variable menu item
Line 2...4	Temp: +12,3°C	Product temperature, variable menu item
Line 2...4	CmpTmp: +12,3°C	Compensation temperature, variable menu item
Line 2...4	Prodct: 1234,5mm	Product filling level, variable menu item
Line 2...4	Water: 1234,5mm	Water filling level, variable menu item

Submenu "History"		
Line 1	Tank12: ABCD…	Product designation, ≤ 12 characters
Line 1	12: ABCD…	Product designation, 13–16 characters
Line 2...4	FilSta: 25.10 12:45	Start of filling operation, variable menu item
Line 2...4	FilEnd: 25.10 12:47	End of filling operation, variable menu item
Line 2...4	Delive: 12345678,9l	Delivered product volume temperature-compensated, variable menu item
Line 2...4	PrdSta: 12345678,9l	Temperature-compensated product volume at the start of the filling operation, variable menu item
Line 2...4	PrdEnd: 12345678,9l	Temperature-compensated product volume at the end of the filling operation, variable menu item

Submenu "Configuration"		
Line 1	25.10.09 15:30	Date and time
Line 0*/2	Language: English	Language
Line 0*/2…3	Protocol: Host-108	Protocol
Line 0*/2…4	Printer: 32 columns	Printer
Line 0*/2…4	Buzzer: 1%	Loudness buzzer
Line 0*/2…4	DispOff: 5min	Switching off display screen
Line 0*/2…4	Alarm: enabled	Disabling alarm signalisation
Line 0*/2…4	AlrOut1: disabled	Alarm selection output 1
Line 0*/2…4	AlrOut2: disabled	Alarm selection output 2
Line 0*/2…4	OutLevel: NO	Electrical behaviour of alarm outputs
Line 0*/2…4	OutReset: ack.	Resetting alarm outputs
Line 0*/2…4	Protect: disabled	Protection of configuration data
Line 0*/2…4	AlrInput: disabled	Alarm Input
Line 0*/3…4	History: 1	Number of history entries
Line 0*/4	DspTruck: Selection	Configuration of truck display
*This line is not permanently represented via the display screen but can be called onto the display screen by using the operator buttons (see chapter "Operation").		

Submenu "Wireless"		
Line 1	Tank12: ABCD…	Product designation, ≤ 12 characters
Line 1	12: ABCD…	Product designation, 13–16 characters
Line 2	Age: 0:04	Age of data
Line 3	Field: 5	Receiver field strength
Line 4	Bat.: 4	Battery status

Submenu "Alarm"		
Line 1	Tank12: ABCD…	Product designation, ≤ 12 characters
Line 1	12: ABCD…	Product designation, 13–16 characters
Line 2	Gauge: O.K.	Gauge is free of defects
Line 2	Gauge: O.K. ErrXX!	Gauge is free of defects, was defective, not yet acknowledged
Line 3	AlrPrd: none	No product alarm
Line 3	AlrPrd: LOW	Product low, already acknowledged

Submenu "Alarm"		
Line 3	AlrPrd: XLOW!	Product very low ,not yet acknowledged
Line 3	AlrPrd: LOW XLOW!	Product low, was very low, not yet acknowledged
Line 3	AlrPrd: HIGH	Product high, already acknowledged
Line 3	AlrPrd: XHIGH!	Product very high, not yet acknowledged
Line 3	AlrPrd: ----	Product alarm not configured
Line 4	AlrWat: None	No water alarm
Line 4	AlrWat: HIGH	Water high, already acknowledged
Line 4	AlrWat: XHIGH!	Water very high, not yet acknowledged
Line 4	AlrWat: ----	Water alarm not configured

7 Technical data

Ambient temperature:	0 °C ... +40 °C
Auxiliary power:	5 V / 2 A DC, AC/DC adapter included in the scope of supplies
Operation indicator:	Green LED
Alarm signalisation:	Red LED and buzzer
Alarm outputs:	Transistor (open-collector), load limits ≤ 36 V / ≤ 200 mA DC, galvanically isolated
Switch / Alarm input:	Open-circuit voltage about 4,5 V, short-circuit current about 5 mA, galvanically isolated
RS-485 interface:	2-wire, galvanically isolated, 3-pole connector, for connection to VISY-Command
RS-232 interface:	3-wire, not galvanically isolated, 9-pole D-Sub connector, for connection to printer
Dimensions [mm]:	210 x 105 x 110

8 Table of figures