VISY-X
VISY-Monitor View V 3.1
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1 Introduction

VISY-Monitor is a software module that runs under Microsoft Windows and serves the purpose of recording and displaying data in tanks at petrol stations, fuel depots, etc. The VISY-Monitor View module is the display and report program within the VISY-Monitor software.

Figure 1: User interface VISY-Monitor View

2 Description of the standard display

2.1 Menu bar

The following submenus are displayed in the menu bar:

- File
- Current data
- History
- Extras
- Info

2.2 Station name

Here, the station name is displayed.
2.3 Object group
Each tank is displayed in its own object group.
Exception: Connected tanks with the same content are summarised in one object group.

2.4 Alarm message 1
Here, the alarm messages are displayed that cannot be assigned to a tank, e.g. a "PoS communication error".

2.5 Tendency arrow
The tendency arrow shows whether the filling volume has increased, decreased, or has not changed.

2.6 Ullage
The displayed ullage is equivalent to the volume which the tank can be filled up to the permissible level.

2.7 Alarm message 2
The alarm message shows that for this tank one or more of the following alarms/warnings were activated:

- for products
  - Alarm, high level
  - Warning, high level
  - Alarm, low level
  - Warning, low level
  - Leakage alarm

- for water
  - Alarm
  - Warning

To display the cause of the alarm message, see paragraph 3, Figure 3.

2.8 Volume
The volume is the filling quantity of the tank in litres.
3 Description of the tank detail display

To change over to the tank display, click on the desired tank symbol (e.g. tank 3):

Figure 2: Selection of tank 3

Then the corresponding tank detail display is opened:

Figure 3: Tank detail display

In the detail display additional information of the tanks are shown apart from the filling data. The existing volume consists of the product volume and water volume. Active alarms and the alarm configuration of the relevant tank are displayed at the right-hand side of the window.
4 Description of the tank group detail display

To change over to the tank group detail display, click on the underlined lettering "Group...":

![Tank Group Display](image)

Figure 4: Selection of the tank group detail display

Then the corresponding tank group detail display is opened:

![Tank Group Details](image)

Figure 5: Tank group detail display

The tank group detail display shows the data of all the tanks of the group together again in the form of a virtual tank. With delivery the following data are displayed:

- Date
- Time
- Delivery volume
For the total volume of a tank group the estimated operating range (up to the dead volume) is displayed for constant sales.

⚠️ The ullage volume of a tank group must **not** be used for the filling of individual tanks!

## 5 Menu bar

### 5.1 Main menu “File”

In the main menu “File”, you will find the following subitems:

- Language
- Exit

#### 5.1.1 Language

Menu selection: File → Language

Here, please select the language for the VISY-Monitor View module.

#### 5.1.2 Exit

Menu selection: File → Exit

⚠️ The VISY-Monitor View module can only be closed by entering a password. The password is the number: 3982070

### 5.2 Main menu "Current Data"

Menu selection: Current data → Print

In the main menu “Current data”, you will find the following subitems:

- Print

Current data can only be printed when the system is connected to an A4 printer.

⚠️ There are no data printed on the journal printer!
5.3 Main menu "History"

In the main menu “History”, you will find the following subitems:

- Inventory
- Deliveries
- Alarms
- Leak detection
- Reconciliation (if connected to PoS)
- Sales Data (if connected to PoS)
- Meter data (if connected to PoS)

5.3.1 Inventory

In the menu "inventory", the following historical data can be displayed or printed on an A4 printer (tabular and graphical):

- Product Volume History
- Product Level History
- Temperature History
- Water Level History
**Product Volume History**

Table: Table of product volumes for a selected month. Select the period in the format “yymm”.

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Group 1: 97</th>
<th>Group 2: 93</th>
<th>Group 3: 90</th>
<th>Group 4: Diesel</th>
<th>Group 5: BID-Dk</th>
<th>1: 97</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-05-01 00.00</td>
<td>424.0</td>
<td>995.5</td>
<td>1049.6</td>
<td>1356.3</td>
<td>2911.7</td>
<td>424.0</td>
</tr>
<tr>
<td>2010-05-01 00.00</td>
<td>424.5</td>
<td>995.5</td>
<td>1049.6</td>
<td>1356.4</td>
<td>2911.7</td>
<td>424.5</td>
</tr>
<tr>
<td>2010-05-02 00.00</td>
<td>424.5</td>
<td>995.5</td>
<td>1049.9</td>
<td>1356.4</td>
<td>2911.7</td>
<td>424.5</td>
</tr>
<tr>
<td>2010-05-03 00.00</td>
<td>424.5</td>
<td>995.5</td>
<td>1049.9</td>
<td>1356.4</td>
<td>2911.7</td>
<td>424.5</td>
</tr>
<tr>
<td>2010-05-04 00.00</td>
<td>427.5</td>
<td>9513.7</td>
<td>964.7</td>
<td>12475.8</td>
<td>2607.4</td>
<td>3679.5</td>
</tr>
<tr>
<td>2010-05-05 00.00</td>
<td>3333.4</td>
<td>8173.6</td>
<td>9486.3</td>
<td>11094.6</td>
<td>2309.5</td>
<td>3333.4</td>
</tr>
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<td>2010-05-06 00.00</td>
<td>2986.5</td>
<td>7814.7</td>
<td>1001.0</td>
<td>10055.0</td>
<td>1899.4</td>
<td>2986.5</td>
</tr>
<tr>
<td>2010-05-07 00.00</td>
<td>2925.6</td>
<td>7968.6</td>
<td>1002.4</td>
<td>10001.1</td>
<td>1694.4</td>
<td>2925.6</td>
</tr>
<tr>
<td>2010-05-08 00.00</td>
<td>2154.7</td>
<td>7942.9</td>
<td>8855.5</td>
<td>7891.7</td>
<td>1311.6</td>
<td>2154.7</td>
</tr>
<tr>
<td>2010-05-09 00.00</td>
<td>1996.6</td>
<td>6828.1</td>
<td>8610.3</td>
<td>7543.2</td>
<td>825.9</td>
<td>1996.6</td>
</tr>
<tr>
<td>2010-05-10 00.00</td>
<td>1097.0</td>
<td>6511.6</td>
<td>8417.3</td>
<td>5935.3</td>
<td>1395.7</td>
<td>1097.0</td>
</tr>
<tr>
<td>2010-05-11 00.00</td>
<td>724.9</td>
<td>6119.2</td>
<td>8083.3</td>
<td>3773.8</td>
<td>937.4</td>
<td>724.9</td>
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<tr>
<td>2010-05-12 00.00</td>
<td>5473.3</td>
<td>5780.8</td>
<td>7805.4</td>
<td>4554.6</td>
<td>7081.3</td>
<td>5473.3</td>
</tr>
<tr>
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<td>5021.4</td>
<td>5204.4</td>
<td>7427.0</td>
<td>16115.2</td>
<td>6861.8</td>
<td>5021.4</td>
</tr>
<tr>
<td>2010-05-14 00.00</td>
<td>4795.3</td>
<td>5160.3</td>
<td>6849.9</td>
<td>13857.8</td>
<td>6458.9</td>
<td>4795.3</td>
</tr>
<tr>
<td>2010-05-15 00.00</td>
<td>4309.9</td>
<td>4715.9</td>
<td>6395.8</td>
<td>11360.2</td>
<td>5942.5</td>
<td>4309.9</td>
</tr>
<tr>
<td>2010-05-16 00.00</td>
<td>3970.0</td>
<td>3946.1</td>
<td>6100.0</td>
<td>8261.1</td>
<td>5595.5</td>
<td>3970.0</td>
</tr>
<tr>
<td>2010-05-17 00.00</td>
<td>3558.9</td>
<td>3511.4</td>
<td>5733.3</td>
<td>6810.0</td>
<td>5394.8</td>
<td>3558.9</td>
</tr>
<tr>
<td>2010-05-18 00.00</td>
<td>3299.8</td>
<td>3113.4</td>
<td>5280.3</td>
<td>7446.6</td>
<td>4741.3</td>
<td>3299.8</td>
</tr>
<tr>
<td>2010-05-19 00.00</td>
<td>2982.5</td>
<td>2694.3</td>
<td>5805.5</td>
<td>6661.1</td>
<td>4446.9</td>
<td>2982.5</td>
</tr>
<tr>
<td>2010-05-20 00.00</td>
<td>2578.9</td>
<td>2421.8</td>
<td>4688.0</td>
<td>4557.5</td>
<td>3927.1</td>
<td>2578.9</td>
</tr>
<tr>
<td>2010-05-21 00.00</td>
<td>2101.9</td>
<td>2076.3</td>
<td>4331.4</td>
<td>3298.0</td>
<td>3481.5</td>
<td>2101.9</td>
</tr>
<tr>
<td>2010-05-22 00.00</td>
<td>1614.6</td>
<td>1792.2</td>
<td>4382.0</td>
<td>3487.8</td>
<td>3212.9</td>
<td>1614.6</td>
</tr>
</tbody>
</table>

**Diagram:** Graphical representation of product volumes for a selected month. By clicking on the individual products in the product legend, the related product diagrams can be fade in and out.

**Figure 7:** Product volume history table

**Figure 8:** Product volume history diagram
Product Level History

Table: Table of product levels for a selected month. Select the period in the format "yymm".

Figure 9: Product Level history table

Diagram: Graphical representation of the product levels for a selected month. By clicking on the individual products in the product legend, the related product diagrams can be fade in and out.

Figure 10: Product level history diagram
Temperature History

Table: Table of product temperatures for a selected month. Select the period in the format “yymm”.

Figure 11: Temperature history table

Diagram: Graphical representation of product temperatures for a selected month. By clicking on the individual products in the product legend, the related product diagrams can be fade in and out.

Figure 12: Temperature history diagram
Water Level History
Tabular and graphic overview of water levels for a selected month. Select the period in the format "yymm".

At best, this table is without values.

5.3.2 Deliveries
In the submenu "inventory", the historical delivery data can be displayed or printed on an A4 printer. Select the period in the format "yymm".

In the column "Volume" the volume of delivery is specified.

In the column "Sales" the selling during the time of delivery is specified. If PoS is not connected the sales are represented with "0". But that is not the actual sales during the deliveries.

In the column "temperature" the temperature of the delivered volume is specified.

In the column "Net Volume" the temperature-compensated volume of the delivery is specified.

![Figure 13: Table of deliveries](image-url)
5.3.3 Alarms

In the submenu "alarms", the following alarm data can be displayed or printed on an A4 printer:

- Tank Alarms
- Environmental Alarms

**Tank Alarms**

Tabular display of the tank alarms with start and end times. Further, the alarm sources and the type of alarm are displayed. During an active alarm, the end time is represented by three dashes (---).

![Tank alarms](image1)

**Environmental Alarms**

Tabular display of the environmental alarms with start and end times. Further, the alarm sources and the type of alarm are displayed. During an active alarm, the end time is represented by three dashes (---).

![Environmental alarms](image2)
5.3.4 Reconciliation

The reconciliation is an ongoing process. VISY-Monitor collects the necessary data and writes it, depending on configuration, e.g. every hour in a reconciliation report. In the submenu "Reconciliation" these reports for a selected month and for individual products can be displayed and printed on an A4 printer. Select the period in the format "yymm".

![Figure 16: Reconciliation table](image)

**Legend of the reconciliation report (see figure 17)**

1. Start of the reconciliation
2. End of the reconciliation
3. Sales during this period (temporarily pro rata calculation, if periods are spreading)
4. Change of the tank volume by sales (Calculation: ATG delivery minus PoS sales)
5. Tank volume at the beginning (start) and at the end (stop) of the period measured from the ATG system
6. Deliveries within the period measured from the ATG system (temporarily pro rata calculation, if periods spanning)
7. Change of the tank volume during the period (stop volume minus start volume)
8. Difference between the ATG volume change and the PoS volume change
9. Cumulative values:
   - continuous cumulated ATG / PoS difference (8)
   - continuous cumulated PoS sales (3)
   - Cumulated Difference / cumulated sales values in percent
### Figure 17: Reconciliation report

<table>
<thead>
<tr>
<th>From Date/Time</th>
<th>To Date/Time</th>
<th>POS Sales</th>
<th>Volume Change</th>
<th>ATG Delivery</th>
<th>ATG/POS Difference</th>
<th>Cumulative Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-08-01 00:00</td>
<td>2009-08-01 19:59</td>
<td>631.0</td>
<td>-631.0</td>
<td>8300.0</td>
<td>7755.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-02 20:00</td>
<td>2009-08-02 19:59</td>
<td>599.0</td>
<td>-599.0</td>
<td>7755.0</td>
<td>7146.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-03 00:00</td>
<td>2009-08-03 19:59</td>
<td>716.0</td>
<td>-716.0</td>
<td>7146.0</td>
<td>6396.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-04 20:00</td>
<td>2009-08-04 19:59</td>
<td>830.0</td>
<td>-830.0</td>
<td>6396.0</td>
<td>5315.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-05 00:00</td>
<td>2009-08-05 19:59</td>
<td>5315.0</td>
<td>-5315.0</td>
<td>5315.0</td>
<td>5730.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-06 20:00</td>
<td>2009-08-06 19:59</td>
<td>5730.0</td>
<td>-5730.0</td>
<td>5730.0</td>
<td>5630.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-07 00:00</td>
<td>2009-08-07 19:59</td>
<td>5630.0</td>
<td>-5630.0</td>
<td>5630.0</td>
<td>4902.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-08 20:00</td>
<td>2009-08-08 19:59</td>
<td>4902.0</td>
<td>-4902.0</td>
<td>4902.0</td>
<td>4675.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-09 00:00</td>
<td>2009-08-09 19:59</td>
<td>4675.0</td>
<td>-4675.0</td>
<td>4675.0</td>
<td>4015.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-10 20:00</td>
<td>2009-08-10 19:59</td>
<td>4015.0</td>
<td>-4015.0</td>
<td>4015.0</td>
<td>3736.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-11 00:00</td>
<td>2009-08-11 19:59</td>
<td>3736.0</td>
<td>-3736.0</td>
<td>3736.0</td>
<td>3108.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-12 20:00</td>
<td>2009-08-12 19:59</td>
<td>3108.0</td>
<td>-3108.0</td>
<td>3108.0</td>
<td>2975.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-13 00:00</td>
<td>2009-08-13 19:59</td>
<td>2975.0</td>
<td>-2975.0</td>
<td>2975.0</td>
<td>2416.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-14 20:00</td>
<td>2009-08-14 19:59</td>
<td>2416.0</td>
<td>-2416.0</td>
<td>2416.0</td>
<td>2164.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-15 00:00</td>
<td>2009-08-15 19:59</td>
<td>2164.0</td>
<td>-2164.0</td>
<td>2164.0</td>
<td>1814.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-16 20:00</td>
<td>2009-08-16 19:59</td>
<td>1814.0</td>
<td>-1814.0</td>
<td>1814.0</td>
<td>1584.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-17 00:00</td>
<td>2009-08-17 19:59</td>
<td>1584.0</td>
<td>-1584.0</td>
<td>1584.0</td>
<td>1366.0</td>
<td>0.0</td>
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<tr>
<td>2009-08-18 20:00</td>
<td>2009-08-18 19:59</td>
<td>1366.0</td>
<td>-1366.0</td>
<td>1366.0</td>
<td>1140.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2009-08-19 00:00</td>
<td>2009-08-19 19:59</td>
<td>1140.0</td>
<td>-1140.0</td>
<td>1140.0</td>
<td>917.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Note: The table above represents the reconciliation report for the specified dates, with POS sales, volume change, ATG delivery, and cumulative values. The goal is to ensure accuracy and balance in financial transactions.
Diagram: For Graphical representation of the reconciliation results, the cumulated difference between the ATG and POS data is based on the cumulated sales. The percentage difference shows tendencies. If only a few reconciliation data have been collected, there are usually variations which can also be seen in the graph. Since VISY-Monitor always starts out from cumulated differences, the variations smooth out gradually.

In the standard case, the graph should be parallel to the X-axis. Gradients are always due to causes that need to be analysed.

Figure 18: Reconciliation graph

5.3.5 Leak Detection (static)

In the submenu “leak detection”, the leak detection data for the selected month (format "yymm") can be displayed or printed on an A4 printer. The leak detection records the volume difference at a specified start and stop time. In compliance with the sales and the temperature on the volume difference, the difference net volume of the product is determined during the leak detection. This should be preferably "zero". If the value is below (minus sign), the tank e.g. might have a leak.
Volume: Start and stop volume
Difference volume: Stop volume minus start volume
Turnover volume: Sales minus deliveries (in proportion to the monitoring period)
Difference net volume: temperature-compensated differential volume plus sales

5.3.6 Sales Data
In the submenu "sales data", the data for a selected month (format "yymm") can be displayed or printed on an A4 printer.

Table:
In the column "Difference %" the differences between the PoS system and the ATG system are displayed. Normally, there are slight variations between positive and negative. Tends the value in the column "Difference %" in a certain direction, it can be a counter-piston drift.

Based on the flow rate in percent (AvgSpeed %), deviations of the flow rate of the highest ever measured (maximum) flow rate can be shown. This can e.g. be a clogged filter.
Figure 21: Meter data

**PoS Sales**
Economic volume of sales at the selected dispensing tube in litres/gallons.

**ATG volume change**
measured change of volume in the tank.

**Difference liter/gallon**
ATG volume delivery minus PoS sales

**Difference %**
Difference litres / gallons / PoS Sales x 100

**AvgSpeed l/min or AvgSpeed g/min**
The determined flow rate of the selected dispenser point is displayed. If the flow rate cannot be calculated, it is indicated by a question mark (?).

**AvgSpeed%**
The relative flow rate is always calculated by the maximum ever achieved flow rate.
5.4 Main menu “Extra”

In the main menu “Extra”, you will find the following subitems:

- Temperature Compensation
- Status
- Demo Mode
- Start Configuration

5.4.1 Temperature Compensation

If the item is on “Temperature Compensation” in the menu “Extra”, the measured levels are shown temperature compensated. VISY-Monitor does not know whether the data of the PoS system are also transmitted temperature compensated. For this reason, VISY-Monitor records the data from the POS system as they are transmitted. If the PoS data are clearly communicated temperature compensated, the setting in the VISY-Monitor Config (Configuration → System Configuration → Temp Comp. Sales data) can be changed accordingly.

![Setting of temperature compensated sales data for PoS](image)

If the temperature compensation is enabled, VISY-Monitor displays the reference temperature at each menu (e.g. “Temperature compensated @ +15 °C”).
5.4.2 Status

In this window, the status of the VISY-Monitor module

- Service
- Pilot
- Config

...can be read. In addition, the version of each module is displayed.

Figure 23: Reconciliation (temperature compensated)
5.4.3 Demo Mode

In the demo mode the sales and deliveries can be simulated. By clicking the word "demo mode", the simulation is started or stopped.

5.4.4 Start Configuration (only executable with administrator rights)

Clicking on "Start Configuration" will directly open the VISY-Monitor Config menu. This requires the relevant password of the user (administrator). The configuration is as described in the Technical Documentation VISY-Monitor.
5.5 Info

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