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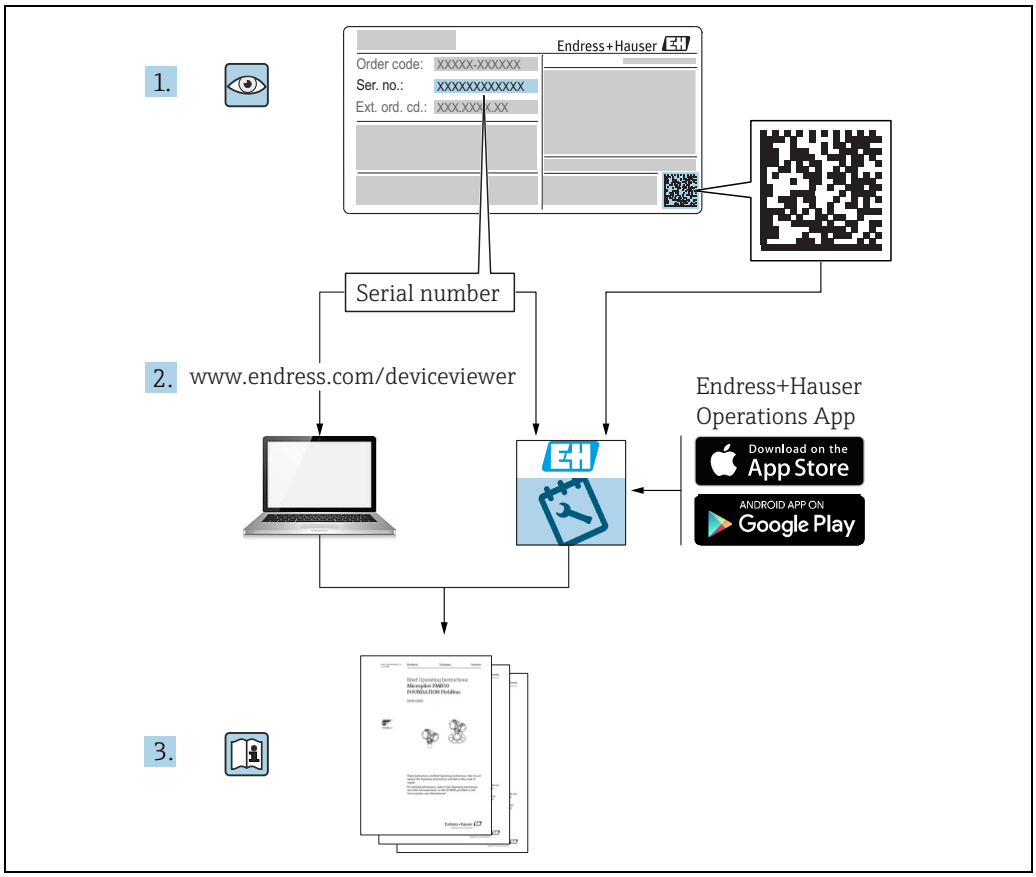
Valid as of software version:
5.1.0

Operating Instructions
Tankvision
Multi Scan NXA83B

Local display Operation manual

Endress+Hauser
People for Process Automation



- Make sure the document is stored in a safe place such that it is always available when working on or with the device.
- To avoid danger to individuals or the facility, read the "Basic safety instructions" section carefully, as well as all other safety instructions in the document that are specific to working procedures.
- The manufacturer reserves the right to modify technical data in line with technological developments without prior notice. Your Endress+Hauser sales center will supply you with current information and updates to this manual.

Version history

Document version	Valid for SW version	Changes to the previous version
BA01288G/01.14	3.0.10	Initial version
BA01288G/02.15	3.0.12	Change of order code structure
BA01288G/03.16	3.1.0 and 4.0.0	Old V1 support and simplified configuration
BA01288G/04.18	3.4.0 and 4.4.0	Changes to V1 Driver and GBT calculations
BA01288G/05.21	5.0.0	Migration to Windows 10 IoT operating system
BA01288G/06.23-00	5.1.0	Introduction of a new Webserver

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1 About this document

1.1 Document function

This manual is giving detailed information on the system capabilities and architecture. It supports project and sales engineers in designing the system architecture during acquisition and execution phase. Furthermore during operation time of the system all servicing personnel in need of detailed knowledge about the system capabilities.

1.2 Symbols

1.2.1 Safety symbols

Symbol	Meaning
A0011189-EN	**DANGER!** This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.
A0011190-EN	**WARNING!** This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.
A0011191-EN	**CAUTION!** This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.
A0011192-EN	**NOTICE!** This symbol contains information on procedures and other facts which do not result in personal injury.

1.2.2 Symbols for certain types of information and graphics

Symbol	Meaning
A0011193	**Tip** Indicates additional information.
A0011195	**Reference to page** Refers to the corresponding page number.
1. , 2. , 3. ...	Series of steps
A0018373	Result of a sequence of actions

1.2.3 Symbols in graphics

Symbol	Meaning
1, 2, 3 ...	Item numbers
1. , 2. , 3. ...	Series of steps
A, **B**, **C** ...	Views
A0011187	**Hazardous area** Indicates a hazardous area.
A0011188	**Indicates a non-hazardous location** Safe area (non-hazardous area)

1.3 Documentation

The following documentation types are available in the Downloads area of the Endress+Hauser website: www.endress.com/downloads

For an overview of the scope of the associated Technical Documentation, refer to the following:

- *W@M Device Viewer:* www.endress.com/deviceviewer - Enter the serial number from the nameplate
- *Endress+Hauser Operations App*: Enter the serial number from the nameplate or scan the matrix code on the nameplate

1.4 Registered trademarks

Microsoft®, Windows® and Internet Explorer®
Registered trademarks of the Microsoft Corporation

Modbus™
Modbus is a registered trademark of Schneider Electric USA, Inc.

Java®
Registered trademark of Sun Microsystems, Inc.

Mozilla® Firefox®
Registered trademark of the Mozilla Foundation

Enraf, Honeywell, Rosemount, Emerson, Saab, L&J, VAREC, GPE are registered trademarks and trademarks of these organizations and companies.
All other marks are property of their respective owners.

2 Basic safety instructions

2.1 Requirements for the personnel

The personnel for installation, commissioning, diagnostics and maintenance must fulfill the following requirements:
- Trained, qualified specialists: must have a relevant qualification for this specific function and task.
- Are authorized by the plant owner/operator.
- Are familiar with federal/national regulations.
- Before starting work, read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application).
- Follow instructions and comply with basic conditions.

The personnel must fulfill the following requirements for its tasks:
- Trained, qualified specialists must have a relevant qualification for this specific function and task.
- Are authorized by the plant owner/operator.
- Are familiar with federal/national regulations.
- Before starting work, read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application).
- Follow instructions and comply with basic conditions.

The operating personnel must fulfill the following requirements:
- Are instructed and authorized according to the requirements of the task by the facility's owner-operator.
- Follow the instructions in this manual.

2.2 Intended use

2.2.1 Applications

Inventory control

By using Tankvision Multi Scan to monitor the tank level and stored volume of valuable liquids remotely, owners or operators of tank farms or terminals for petroleum products and chemicals (liquids) can visualize the volume of the stored medium in real time. The data can be used to plan the inventory and distribution. The data can also be used to manage tank farm operations like pumping or transferring products. Tankvision has its unique concept using network technology. Without using proprietary software, the users can visualize and manage their valuable liquids stored in the tanks by a web browser. Tankvision Multi Scan is a flexible and cost effective solution due to its scalable architecture. The application coverage goes from small depots with only a few tanks up to refineries.

Inventory Calculations

Tankvision Multi Scan calculates based on measured variables and tank capacity tables:
- Observed or gross volumes
- Net volumes and
- Mass

of products like
- Hydrocarbons,
- Liquefied gases,
- Asphalt.

They are corrected according to international standards, including API/ASTM tables 5A, 5B/6, 53A, 53B/54, 23/24, LPG.

This includes temperature corrections at 15 °C, 60 °F and alternative temperatures. Additionally, available pump able volumes and water volume are calculated.

Remote configuration of measuring equipment

Some on-site operations can be avoided using remote configuration of measuring equipment during commissioning or maintenance (the availability of this feature may depend on the system configuration).

Application areas

- Tank farms in refineries
- Ship loading terminals
- Marketing and distribution terminals
- Pipeline terminals
- Logistic terminals for tanks storing products like crude oils, refined white and black products, chemicals, LPG

2.3 Workplace safety

For work on and with the device:
- Wear the required personal protective equipment according to federal or national regulations.

Before connecting or disconnecting the device:
- Switch off the supply voltage.

2.4 Operational safety

Risk of injury!
- Operate the device only if it is in proper technical condition, free from errors and faults.
- The operator is responsible for interference-free operation of the device.

Modifications to the device

Unauthorized modifications to the device are not permitted and can lead to unforeseeable dangers!
- If modifications are nevertheless required, consult with the manufacturer.

Repair
To ensure continued operational safety and reliability:

- Carry out repairs on the device only if they are expressly permitted.
- Observe federal/national regulations pertaining to the repair of an electrical device.
- Use only original spare parts and accessories.

2.5 Product safety

This measuring device is designed in accordance with good engineering practice to meet state-of-the-art safety requirements, has been tested, and left the factory in a condition in which it is safe to operate. It meets general safety standards and legal requirements. It also complies with the EC directives listed in the device-specific EC Declaration of Conformity. Endress+Hauser confirms this by affixing the CE mark to the device.
Furthermore, the device meets the legal requirements of the applicable UK regulations (Statutory Instruments). These are listed in the UKCA Declaration of Conformity along with the designated standards.
By selecting the order option for UKCA marking, Endress+Hauser confirms a successful evaluation and testing of the device by affixing the UKCA mark.

Contact address Endress+Hauser UK:
- Endress+Hauser Ltd.
  Floats Road
  Manchester M23 9NF
  United Kingdom
  www.uk.endress.com

2.6 IT security

Our warranty is valid only if the product is installed and used as described in the Operating Instructions. The product is equipped with security mechanisms to protect it against any inadvertent changes to the settings.

IT security measures, which provide additional protection for the product and associated data transfer, must be implemented by the operators themselves in line with their security standards.

3 Identification

3.1 Product identification

The following options are available for identification of the device:

- Nameplate specifications
- Order code with breakdown of the device features on the delivery note
- *W@M Device Viewer:* www.endress.com/deviceviewer - Enter the serial number from the nameplate

The following documentation types are available in the Downloads area of the Endress+Hauser website: www.endress.com/downloads

3.2 Nameplate

The information that is required by law and is relevant to the device is shown on the nameplate, e.g.:

Manufacturer identification
Device name
Order code
Extended order code
Serial number
Degree of protection
Barcode
CE mark
Admissible ambient temperature
Supply voltage

3.3 Manufacturer address

Endress+Hauser SE+Co. KG
Hauptstraße 1
79689 Maulburg, Germany

Place of manufacture: See nameplate.

3.4 Order code and device version

To find out the version of your device, enter the order code indicated on the nameplate in the search screen at the following address:
www.products.endress.com/order-ident

4 Introduction

The Multi Scan NXA83B is a configurable system designed for tank gauging and tank inventory management systems. It has been designed to fulfil a number of requirements some of which are listed below:

- Act as a foreign device gateway allowing old legacy equipment and devices with proprietary interfaces to interface with modern devices using OPC and Ethernet Technology.
- To provide a complete tank gauging and tank inventory management system for small sites. It can interface directly with a wide variety of tank gauging devices and provide a number of communication links to host devices. The Multi Scan NXA83B polls the field instruments maintaining an in-memory database of live and calculated data whilst also being able to service host computers for data.
- Up to 20 serial interfaces can be provided, capable of supporting a range of different electrical interfaces such as RS232, RS485, BPM, Current Loop etc. An Ethernet port and two USB ports are also provided.

The Multi Scan NXA83B is available as 19 in Rack Mount version. An option is to have a 7 in touch screen built into the front of the device to view and navigate through the different display options.

NXA83_Rack-Mount

19 in Rack Mount

The Multi Scan is available in the following versions:

- 1 to 4 serial ports
- 1 to 12 serial ports
- 1 to 20 serial ports (16 in or outputs and 4 outputs)

The ports can be configured to be either inputs (from the field or host ports) or outputs (to host systems or slave ports). For the version 1 to 20 serial ports, 4 ports are reserved for outputs only.

5 Operation

This section will describe the normal operation of the Multi Scan NXA83B and the interactions with the user screens.
The screens shown on the LCD display are highly configurable. Whilst those shown in this section are only examples of what can be displayed, the basic navigation between screens will remain the same.
For more information on configuring the displays refer to the Multi Scan NXA83B Configuration manual (BA01291G).

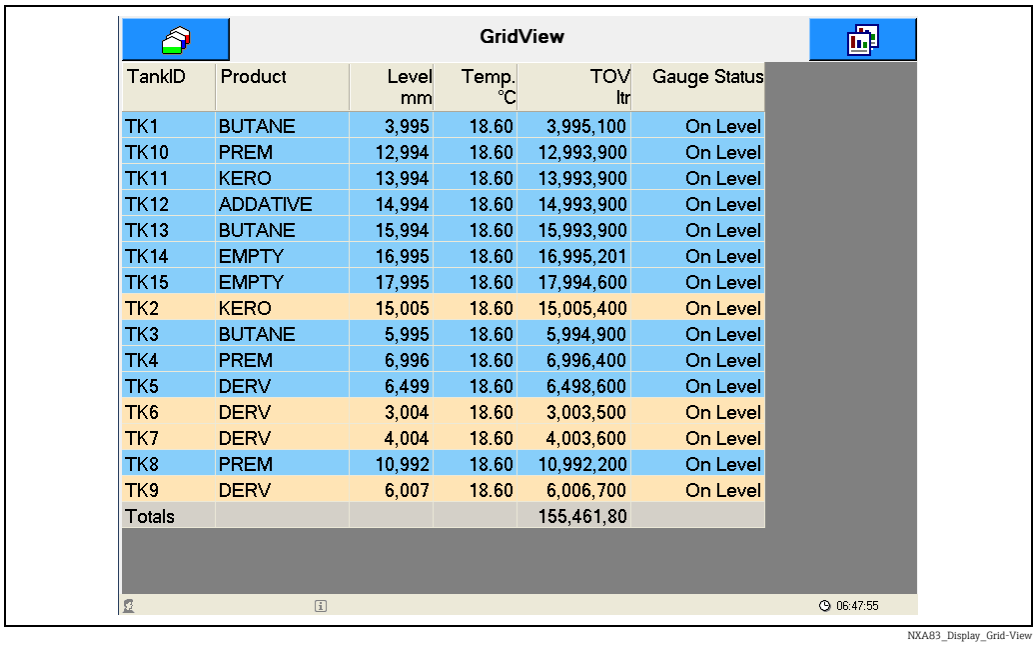
5.1 Starting and Stopping

When power is applied to the Multi Scan NXA83B the Green power LED will be illuminated and the Windows operating system will start to boot.
This will take approximately 2 minutes, during which time a number of windows boot messages will be displayed before automatically logging into the user account, at which point the Endress+Hauser wait message will be displayed.

NXA83_E+H_Wait_Message

Depending on the firmware version of the Multi Scan NXA83B, the top line of the splash screen will display a range of information, including:
- The Network Name of the Multi Scan NXA83B
- If the system is currently connected to network it will show the IP address
- The firmware version

The boot will be complete when the GridView display is shown. At this point the system is fully operational, with all interfaces active (master and slaves).



NXA83_Display_Grid-View

It is perfectly safe to switch off the power without shutting down the operating system. The Multi Scan NXA83B contains an Enhanced Write Filter which protects the system from being corrupted due to a loss of power (see configuration document for description).

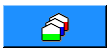
5.2 Status Bar

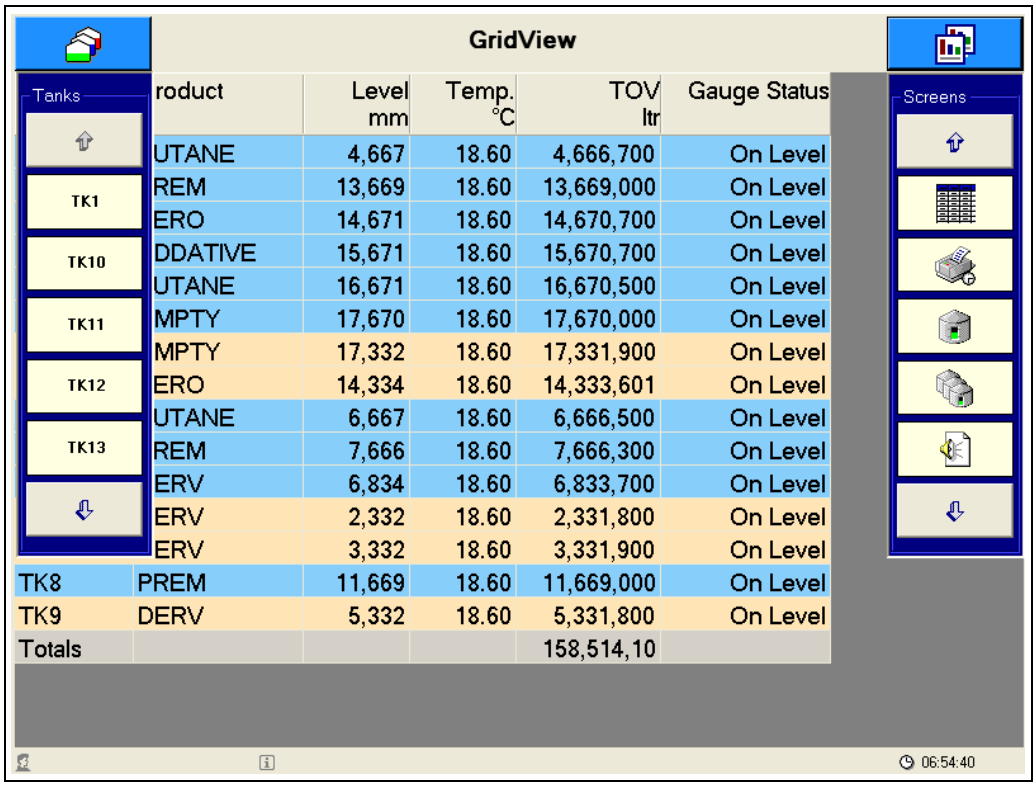
At the bottom of the Multi Scan NXA83B display screen is a status bar which will display the following information:

Field	Description
NXA83_Display_Field_User	This field will show the currently logged in user account
NXA83_Display_Field_Info	This field shows any information that is current to the system. This could include such messages as: ▪ Watchdog Disabled ▪ W&M Approved ▪ W&M Unsealed (i.e. no longer approved)
NXA83_Display_Field_Time	This shows the current time

5.3 Display Navigation

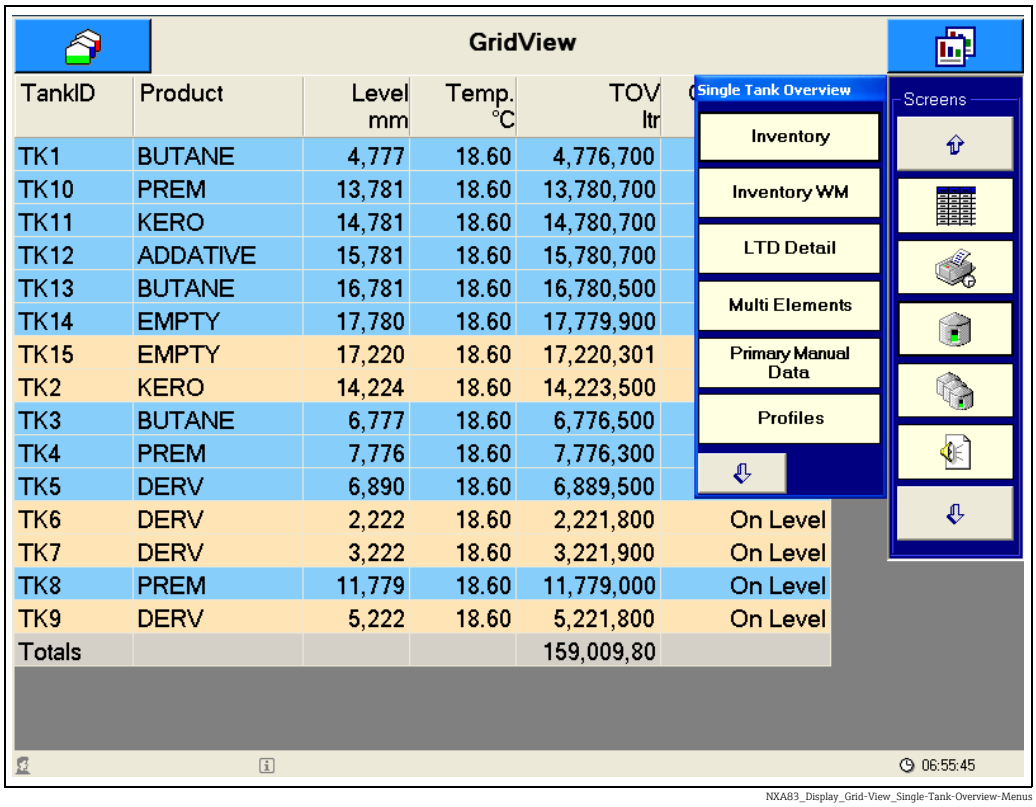
There are a number of screen types that may be displayed:
- GridView
- Single Tank
- Multi Tank
- Report

Navigation between these screens is via two buttons,  in the top left of the screen will open the Tanks menu and in the top right of the screen will open the Screens menu.
Click on a button to display the menu list. Clicking on the button again will remove the list.



NXA83_Display_Grid-View_Both-Menus

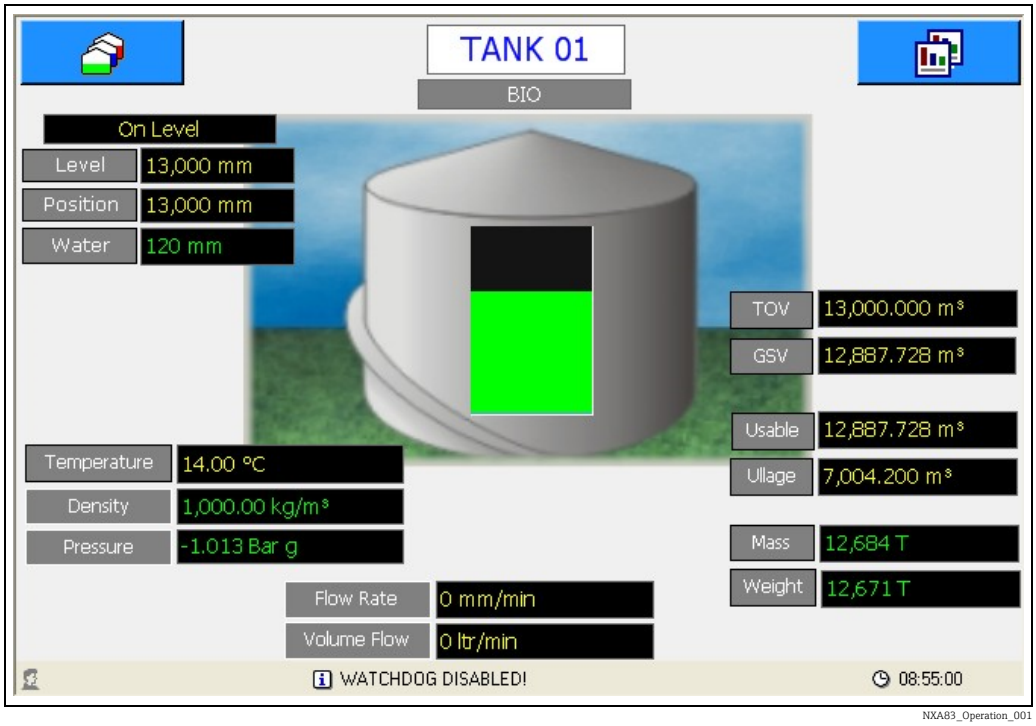
Each drop down list will display up to five items.
Clicking on the or button will display the next five items, if any more are available.
The right hand list allows user to select a different display. Clicking on one of the items will display a pop-up menu with all displays of that type that have been configured for the Multi Scan NXA83B.
Various different displays can be configured.
For example clicking on the Single Tank screens button will display a list of all configured single tank screens available.



TankID	Product	Level mm	Temp. °C	TOV ltr	
TK1	BUTANE	4,777	18.60	4,776,700	
TK10	PREM	13,781	18.60	13,780,700	
TK11	KERO	14,781	18.60	14,780,700	
TK12	ADDATIVE	15,781	18.60	15,780,700	
TK13	BUTANE	16,781	18.60	16,780,500	
TK14	EMPTY	17,780	18.60	17,779,900	
TK15	EMPTY	17,220	18.60	17,220,301	
TK2	KERO	14,224	18.60	14,223,500	
TK3	BUTANE	6,777	18.60	6,776,500	
TK4	PREM	7,776	18.60	7,776,300	
TK5	DERV	6,890	18.60	6,889,500	
TK6	DERV	2,222	18.60	2,221,800	On Level
TK7	DERV	3,222	18.60	3,221,900	On Level
TK8	PREM	11,779	18.60	11,779,000	On Level
TK9	DERV	5,222	18.60	5,221,800	On Level
Totals				159,009,80	

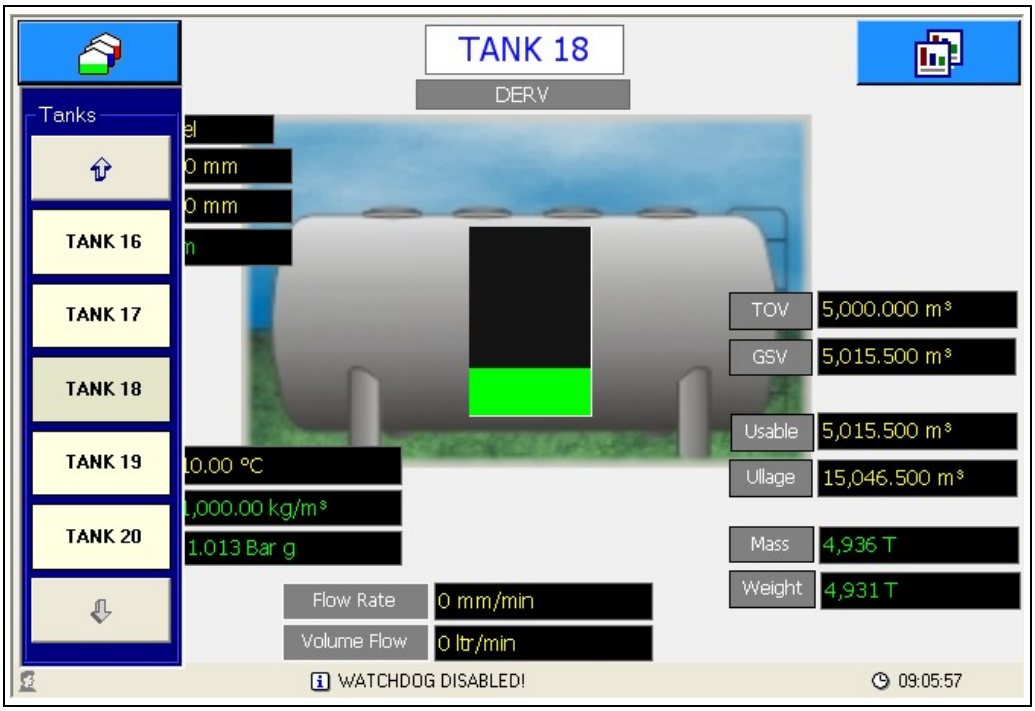
NXA83_Display_Grid-View_Single-Tank-Overview-Menus

Click on the ⇧ or ⇩ buttons to select more display items.
Click on the item in the pop-up menu to change the main display.



NXA83_Operation_001

The left hand drop down list displays all tanks in the database, and allows the user to select a tank to show in the single tank display.



NXA83_Operation_002

5.4 Grid View

The GridView screens display data in a tabular format. The layout of the grid is fully configurable using the Tankvision Multi Scan Configurator tool, but cannot be changed by the user during normal operation.

The configurator can be used to set such things as:
- Title
- Data columns
- Column widths
- Column Header text
- Font Units

Grid views can also be configured for functions such as:
- Totalize all columns that contain volume, mass or weight values
- Show moving tanks with a coloured background
- Show only tanks with a defined product
- Show only selected tanks

A default grid view is supplied as standard with the Multi Scan NXA83B, called "GridView" in the pop-up list of Grid View Screens.
Various different grid view screens may be defined, so for instance a grid view may be configured for each product in the Multi Scan NXA83B, or for different views of the data.

GridView

TankID	Product	Level mm	Temp. °C	TOV ltr	Gauge Status
TK1	BUTANE	3,995	18.60	3,995,100	On Level
TK10	PREM	12,994	18.60	12,993,900	On Level
TK11	KERO	13,994	18.60	13,993,900	On Level
TK12	ADDATIVE	14,994	18.60	14,993,900	On Level
TK13	BUTANE	15,994	18.60	15,993,900	On Level
TK14	EMPTY	16,995	18.60	16,995,201	On Level
TK15	EMPTY	17,995	18.60	17,994,600	On Level
TK2	KERO	15,005	18.60	15,005,400	On Level
TK3	BUTANE	5,995	18.60	5,994,900	On Level
TK4	PREM	6,996	18.60	6,996,400	On Level
TK5	DERV	6,499	18.60	6,498,600	On Level
TK6	DERV	3,004	18.60	3,003,500	On Level
TK7	DERV	4,004	18.60	4,003,600	On Level
TK8	PREM	10,992	18.60	10,992,200	On Level
TK9	DERV	6,007	18.60	6,006,700	On Level
Totals				155,461,80	

06:47:55

NXA83_Display_Grid-View

A single tank display can be selected by clicking on the row for that tank in the grid. This will immediately display the single tank details for the selected tank.

The GridView may be optionally set to display any moving tanks with a different background colour. These colours will be:
- Brown: For those tanks that have a falling level
- Blue: For those tanks that have a rising level

The GridView may also be configured to display column totals for certain field types. The fields totalized will be:
- Volume fields
- Mass fields
- Weight fields

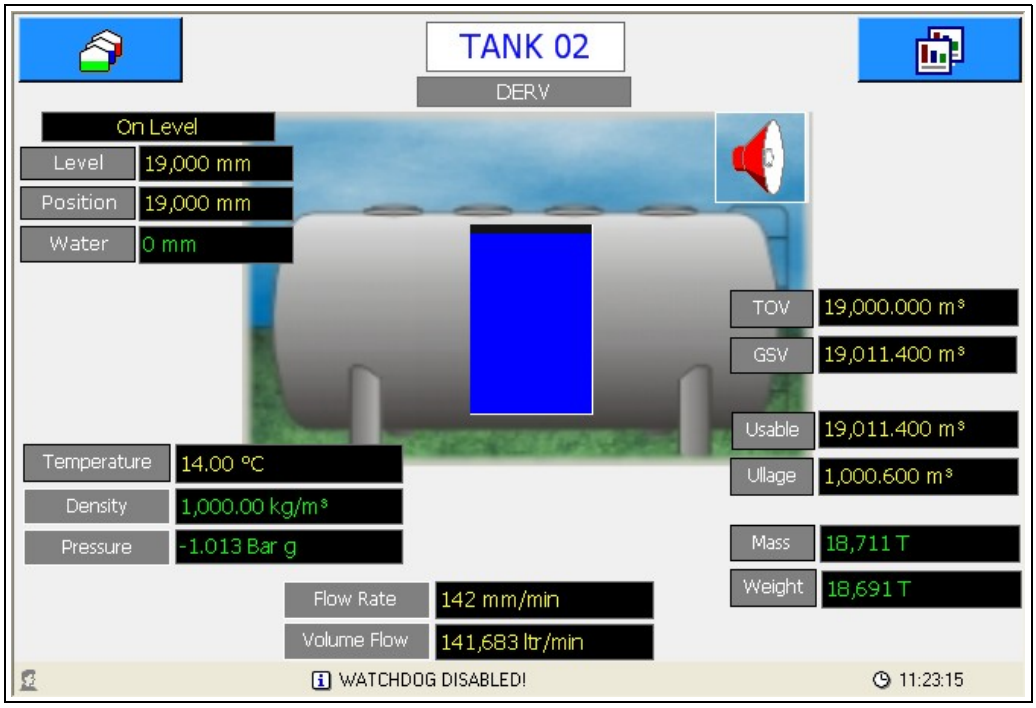
Remember that the moving colours and totals features are optional and may not always be configured for every grid view.
If the displayed GridView is larger than the screen size, scroll bars will be automatically enabled.

The tank data displayed in each field in the grid will have the following formatting:
- **Valid Data**: Will be displayed on a white background
- **Invalid Data**: Will be displayed on a red background. The appropriate diagnostic number will be shown preceded by "DN"
- **Manual Data**: Will be displayed on a white background. An "M" will be displayed after the data value

If the data value is too long to be displayed in the column it will be replaced by "#" characters.

5.5 Single Tank

The Single Tank screens display the data for one tank only and can show an extensive range of data for the selected tank. The layout of the screen is fully configurable using the Tankvision Multi Scan Configurator tool, but cannot be changed by the user during normal operation.
The configuration details for single tank screens are extremely extensive and are covered in the Multi Scan NXA83B Configuration Manual. However certain features will be shown in this section.
A Single Tank screen is a template for the data to be displayed. The user may select the actual tank to be shown in that screen using the drop down list on the left of the screen.
A default screen will be supplied as standard with the Multi Scan NXA83B, called "Inventory" in the pop-up list of Single Tank Screens. Various additional screens may be configured.

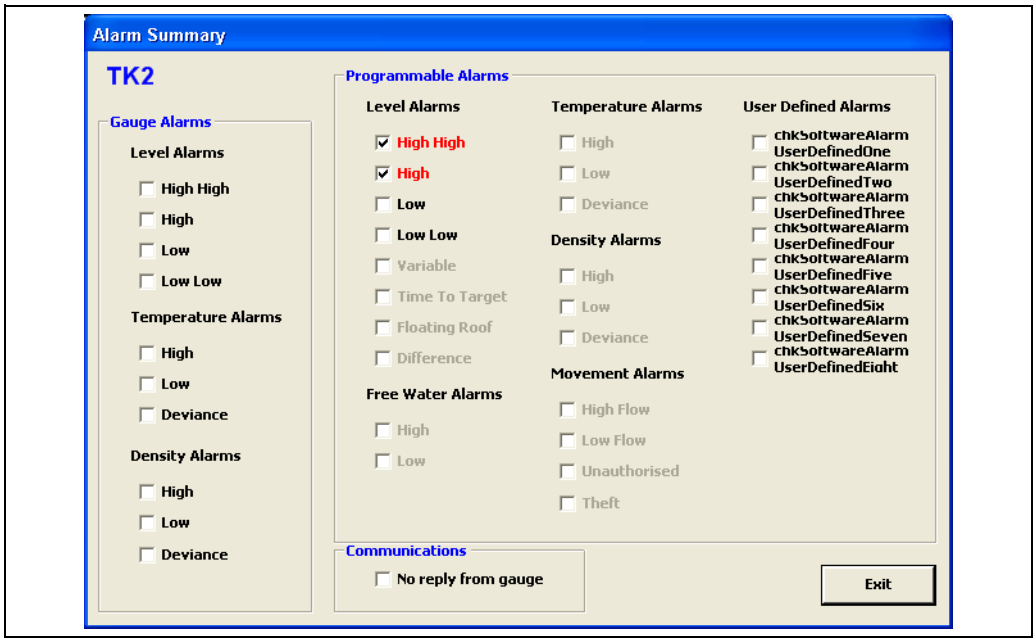


NXA83_Operation_003

The formatting of the data displayed in a Single Tank display, with regard to validity of data or manual data, has no fixed format, and can be configured to suit any site requirement.

The default formatting in the screens as shipped from Endress+Hauser is as follows:
- **Invalid Data**: The appropriate diagnostic number will be shown preceded by "DN" and will be displayed with a red background
- **Manual Data**: The data will be displayed in green, with a black background
- **Valid Data** : The data is displayed in yellow with a black background

It is recommended that these formatting styles are maintained for all user configured Single Tank screens.
If an alarm item has been configured for a Single tank screen the alarm icon will be displayed on any tanks that have one or more currently active alarms.
Clicking on the icon will display the **Alarm Summary** screen.

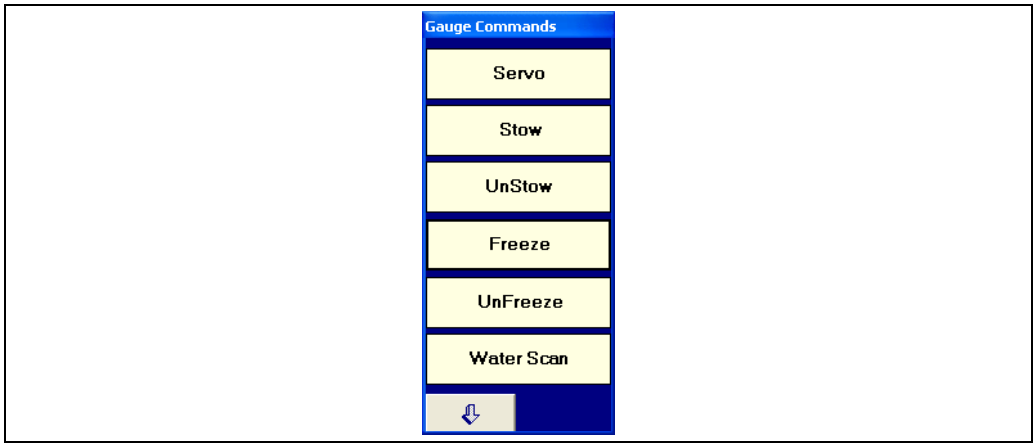


NXA83_Display_Alarm-Summary

Any alarms that are active will be ticked and be displayed in red. Click on the **Exit** button to close the screen.

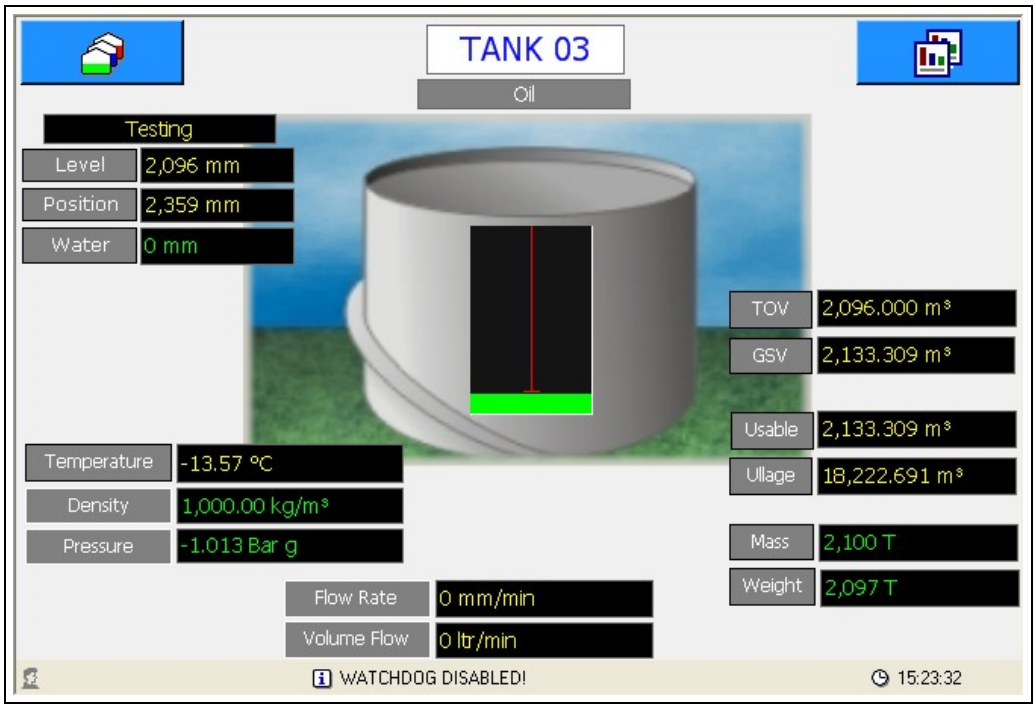
5.5.1 Commands

Certain data fields may be configured so that clicking on the displayed value will show the gauge commands pop-up menu. These fields are usually items such as **Level**, **Position**, **Temperature** etc.



NXA83_Display_Menu_Gauge-Commands

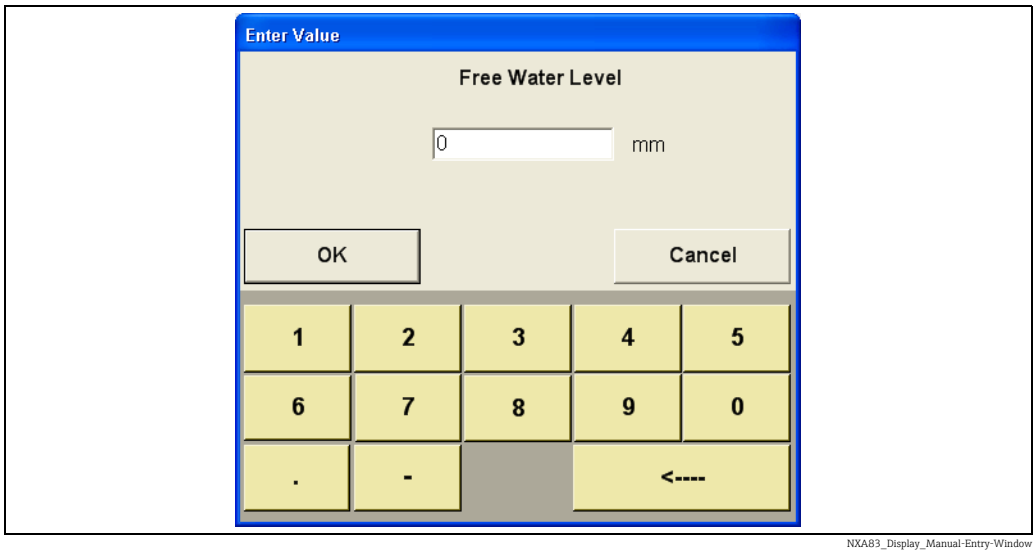
Click on the ⇧ and ⇩ buttons to select more commands.
Click on the command to send it to the connected gauge. Gauges that are not following level are shown in the tank mimic with a red line representing the Displacer position.



NXA83_Operation_004

5.5.2 Manual Data

Certain data fields may be configured so that they are in manual mode (i.e. displayed with the green colour). Clicking on the displayed value will reveal the manual entry window.



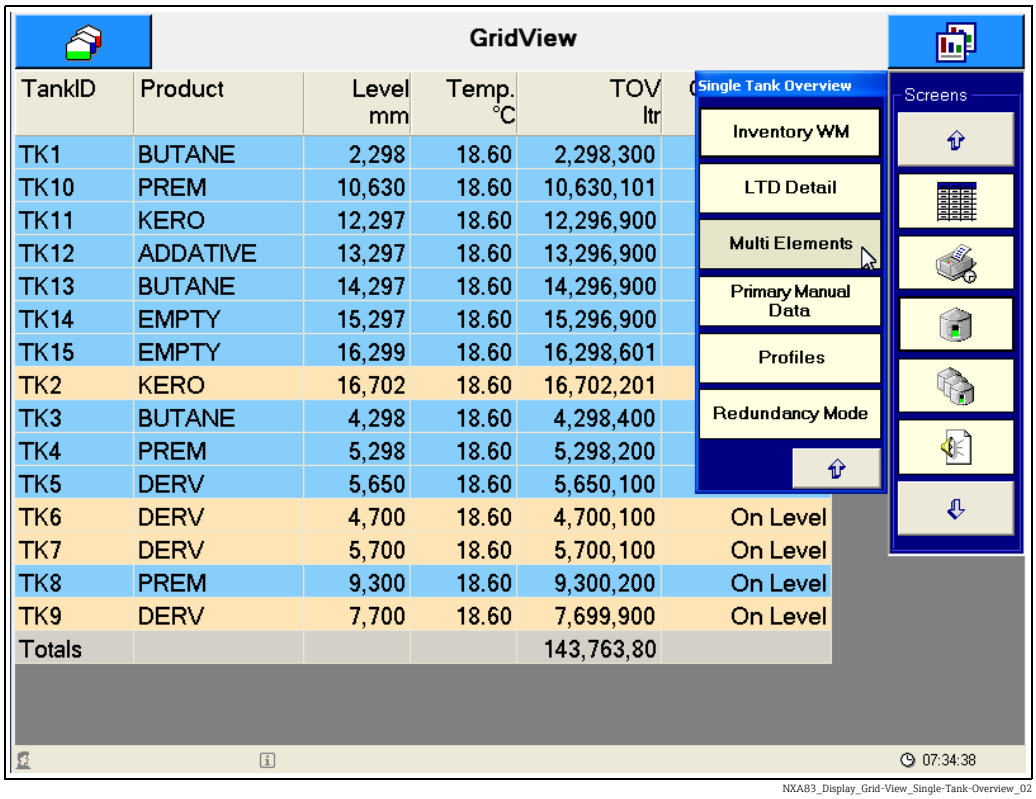
NXA83_Display_Manual-Entry-Window

This allows a new value to be entered via the touchscreen. When the **OK** button is touched, the window will close and the value will be updated on the screen in a few seconds. The value is permanently saved, so that if the NXA83B is rebooted the new value will remain.

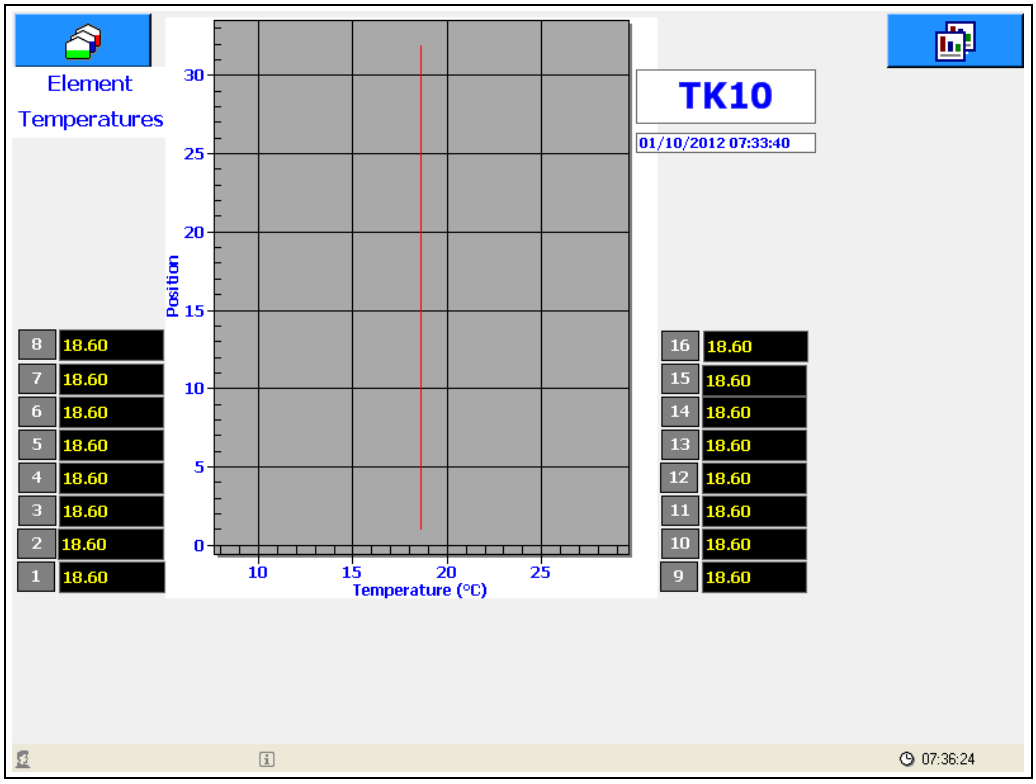
Calculated fields, such as Volumes, Mass etc., cannot be manually entered. If they are displayed in green it is because one (or more) of the calculation parameters is in manual mode.

5.5.3 Multi-Element Display

In the default configuration there is a second Single Tank screen available, called "Multi Elements", which can be used to view multi-element temperatures from gauges that support that function.



NXA83_Display_Grid-View_Single-Tank-Overview_02



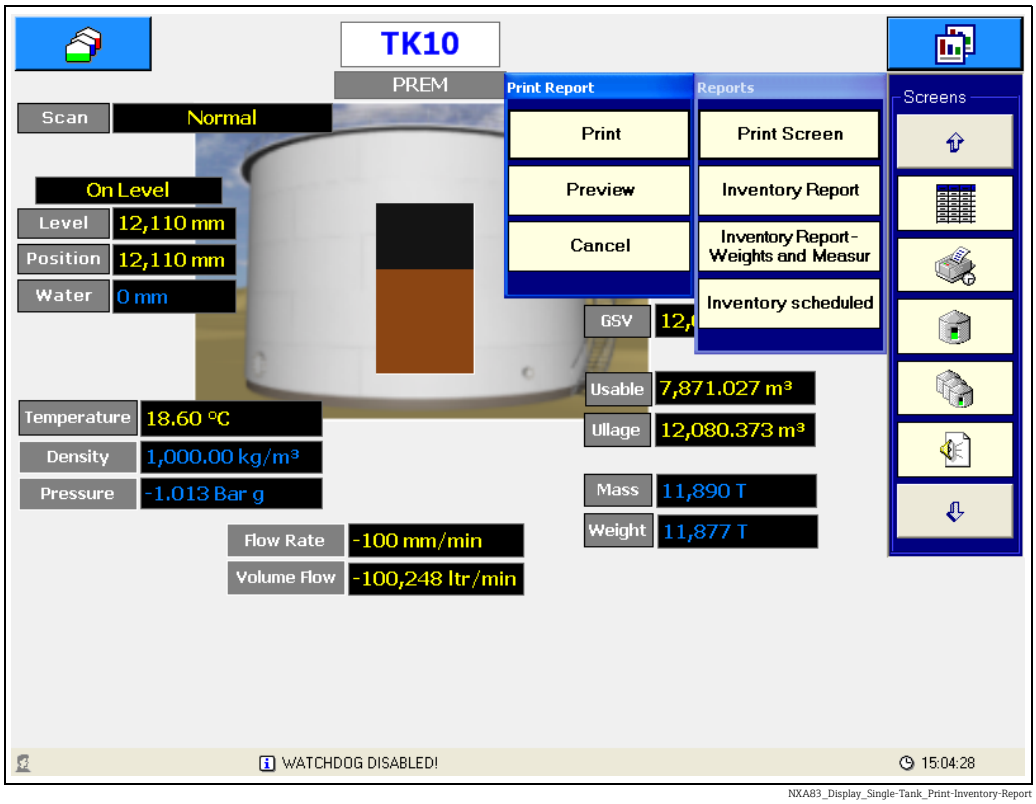
NXA83_Display_Multi-Element-Temperature-View

5.6 Reports

A range of reports may be configured using the Tankvision Multi Scan Configurator tool, which are then available to be viewed or printed on demand by a user during normal operation.
The reports are fully configurable using the same layout as grid views, refer to the Multi Scan NXA83B Configuration Manual (BA01291G) for details.

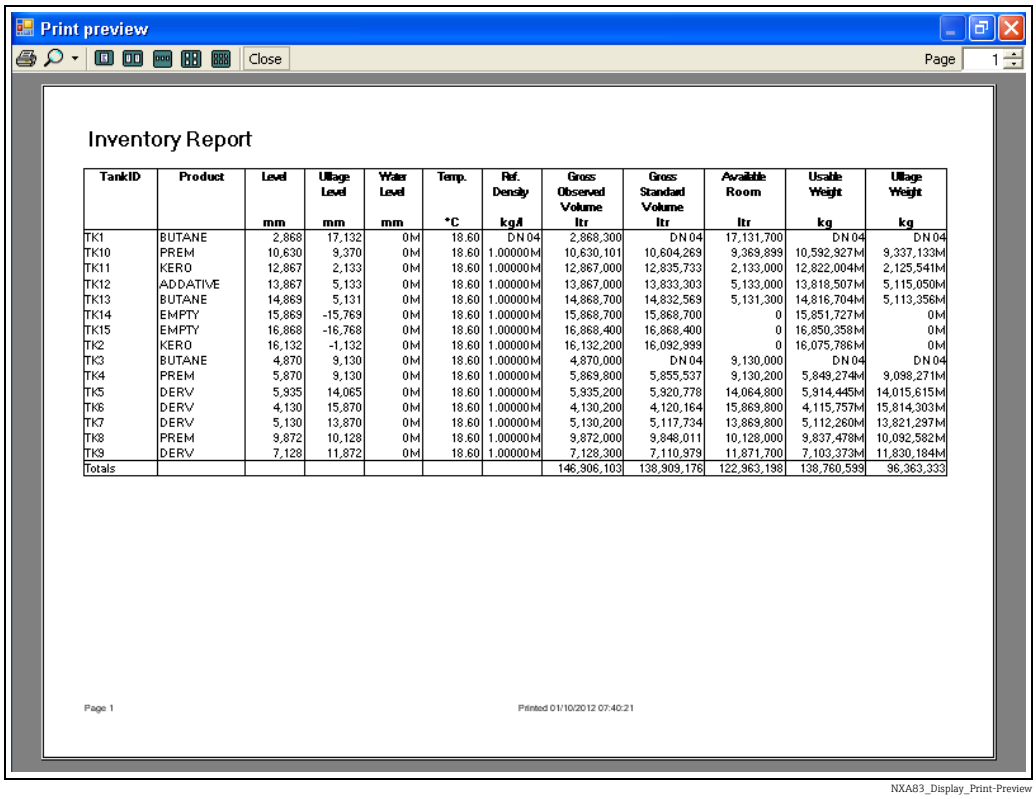
There are some extra configuration items that apply only to reports, such as:
- Select Orientation as Landscape or Portrait
- Set the Margins for the printed document

Reports can be manually printed or viewed by clicking on the icon. This will display a pop-up menu containing all configured reports. Various different reports may be created, however by default the Multi Scan NXA83B will have one report called "Inventory Report" and a screen print facility.
If there is no printer configured for the Multi Scan NXA83B, the Reports menu item will be greyed out and reports may not be printed.
If a printer has been installed and configured in the Multi Scan NXA83B the report may be printed. The printer must be set as the default printer within the operating system.
Otherwise a report may be viewed on screen using the Preview option.
Clicking on a report will display the "Print Report" menu.



NXA83_Display_Single-Tank_Print-Inventory-Report

Clicking the **Preview** button will display the report on the Multi Scan NXA83B screen whereas clicking the **Print** button will send the report directly to the printer.



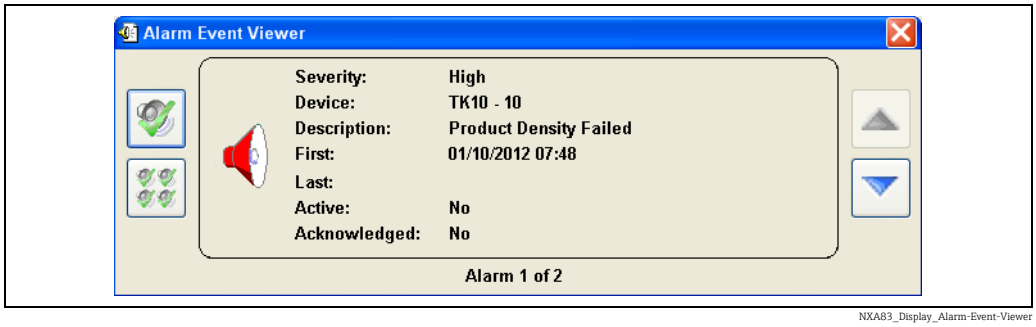
TankID	Product	Level mm	Ullage Level mm	Water Level mm	Temp. °C	Ref. Density kg/l	Gross Observed Volume ltr	Gross Standard Volume ltr	Available Room ltr	Usable Weight kg	Ullage Weight kg
TK1	BUTANE	2,868	17,132	0M	18.60	DN 04	2,868,300	DN 04	17,131,700	DN 04	DN 04
TK10	PREM	10,630	9,370	0M	18.60	1.00000M	10,630,101	10,604,269	9,369,899	10,592,927M	9,337,133M
TK11	KERO	12,867	2,133	0M	18.60	1.00000M	12,867,000	12,835,733	2,133,000	12,822,004M	2,125,541M
TK12	ADDATIVE	13,867	5,133	0M	18.60	1.00000M	13,867,000	13,833,303	5,133,000	13,818,507M	5,115,050M
TK13	BUTANE	14,869	5,131	0M	18.60	1.00000M	14,868,700	14,832,569	5,131,300	14,816,704M	5,113,356M
TK14	EMPTY	15,869	-15,769	0M	18.60	1.00000M	15,868,700	15,868,700	0	15,851,727M	0M
TK15	EMPTY	16,868	-16,768	0M	18.60	1.00000M	16,868,400	16,868,400	0	16,850,358M	0M
TK2	KERO	16,132	-1,132	0M	18.60	1.00000M	16,132,200	16,092,999	0	16,075,786M	0M
TK3	BUTANE	4,870	9,130	0M	18.60	1.00000M	4,870,000	DN 04	9,130,000	DN 04	DN 04
TK4	PREM	5,870	9,130	0M	18.60	1.00000M	5,869,800	5,855,537	9,130,200	5,849,274M	9,098,271M
TK5	DERV	5,935	14,065	0M	18.60	1.00000M	5,935,200	5,920,778	14,064,800	5,914,445M	14,015,615M
TK6	DERV	4,130	15,870	0M	18.60	1.00000M	4,130,200	4,120,164	15,869,800	4,115,757M	15,814,303M
TK7	DERV	5,130	13,870	0M	18.60	1.00000M	5,130,200	5,117,734	13,869,800	5,112,260M	13,821,297M
TK8	PREM	9,872	10,128	0M	18.60	1.00000M	9,872,000	9,848,011	10,128,000	9,837,478M	10,092,582M
TK9	DERV	7,128	11,872	0M	18.60	1.00000M	7,128,300	7,110,979	11,871,700	7,103,373M	11,830,184M
Totals							146,906,103	138,909,176	122,963,198	138,760,599	96,363,333

NXA83_Display_Print-Preview

Reports may also be configured to be printed automatically (→ 24).

5.7 Alarms

When an alarm occurs in the system a pop-up window will be displayed. Where multiple alarms are active they are displayed in order of severity, Critical first then High and finally Low level alarms. Within the severity groupings the alarms are arranged in the order that they occurred with the oldest unacknowledged alarm first.



NXA83_Display_Alarm-Event-Viewer

This window will remain in front of the other screens and cannot be closed until all active alarms have been acknowledged. After all active alarms have been acknowledged the window can be closed by clicking on the ☒ button.

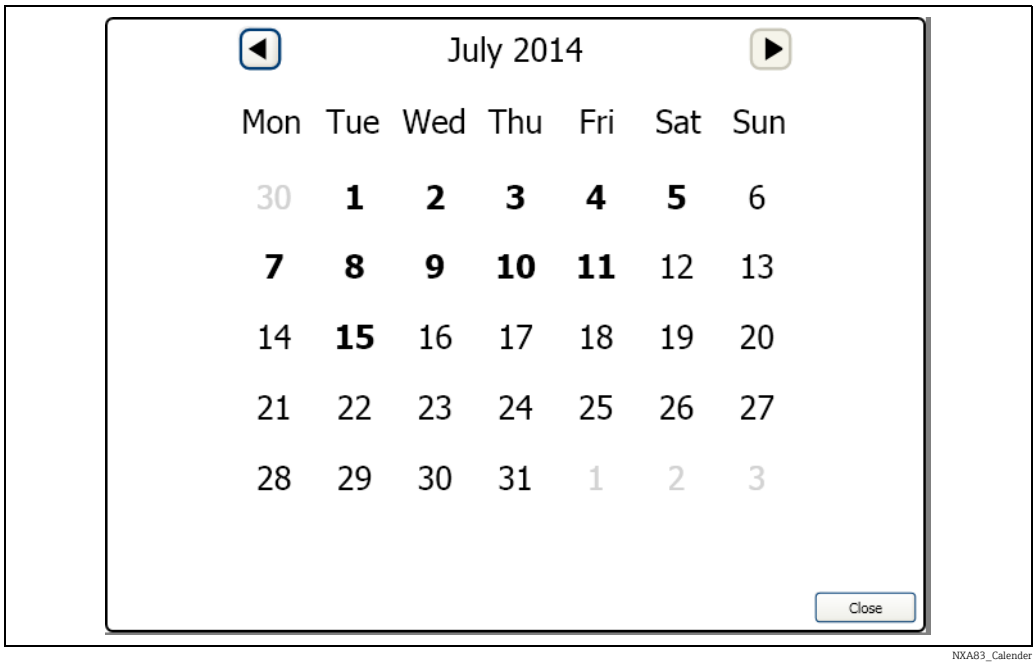
To acknowledge the currently displayed alarm click .

To acknowledge all alarms click .
To scroll through all active alarms, use the and buttons.
The alarm buffer holds a maximum of 100 active alarms. If this is exceeded the oldest alarms will be lost.
To display the alarm window at any time, click on the icon in the Screens menu.

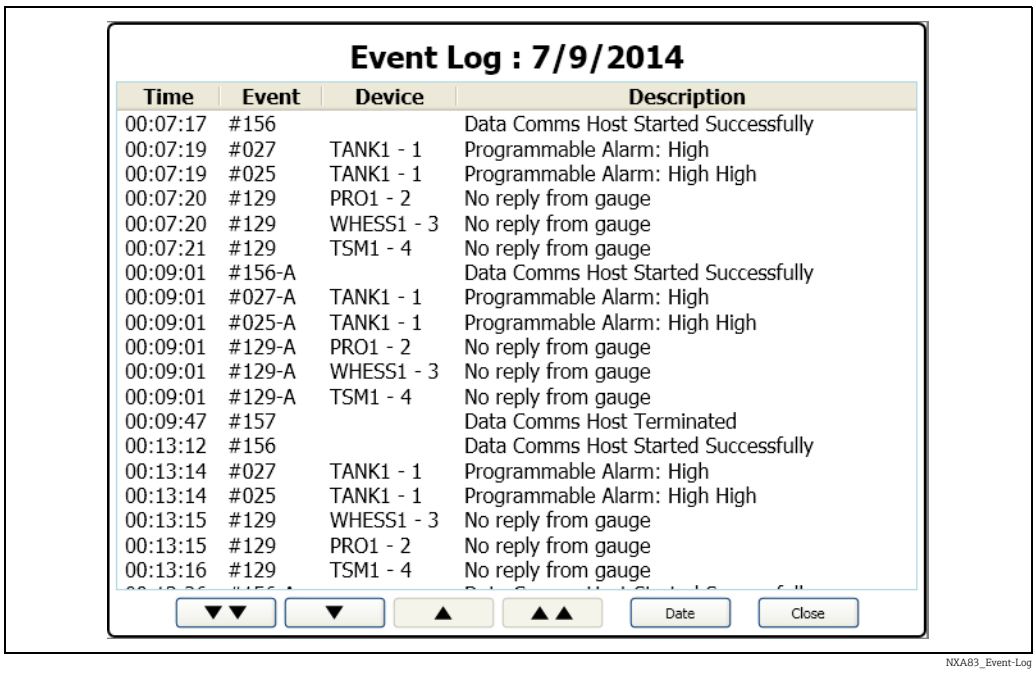
5.7.1 Event Log

A historical log of all alarms and events is saved on disk. To view these events click on the arrow on the right hand Screens menu, then click on the icon.

Select a date, those days in bold contain historical alarms/events.



NXA83_Calender



NXA83_Event-Log

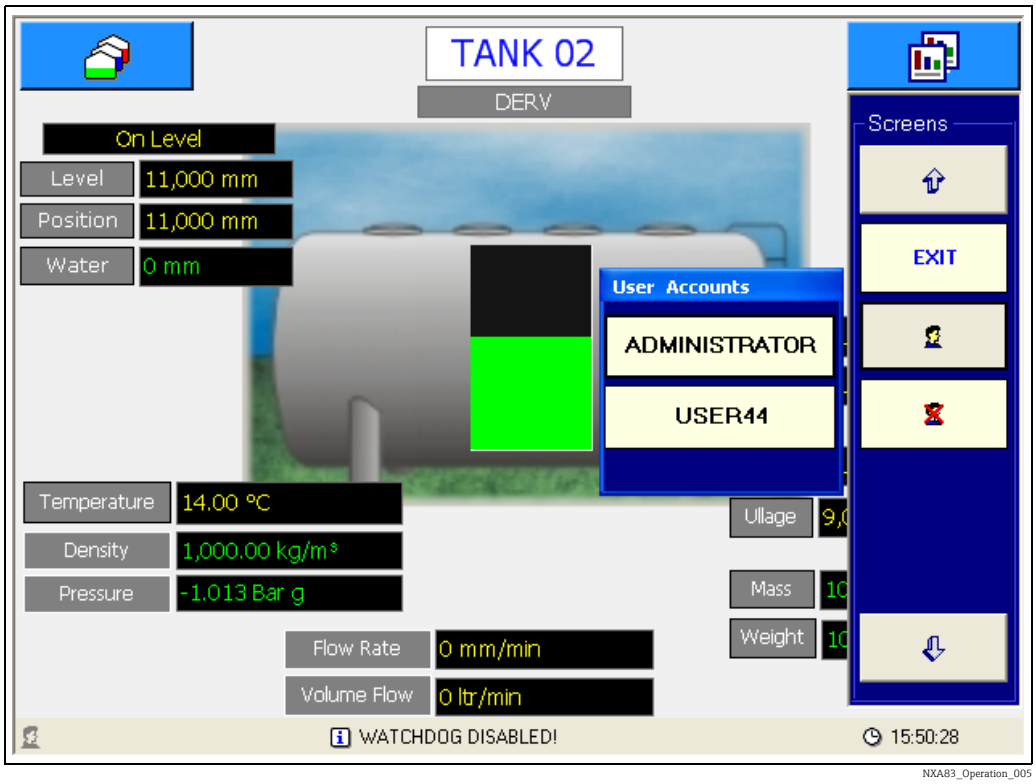
5.8 Scheduling

The following items may be configured to be auto scheduled:
- Gauge Commands
- Reports Printing

Scheduled gauge commands and report are configured using the Tankvision Multi Scan Configurator tool, refer to Multi Scan NXA83B Configuration Manual (BA01291G) for details.

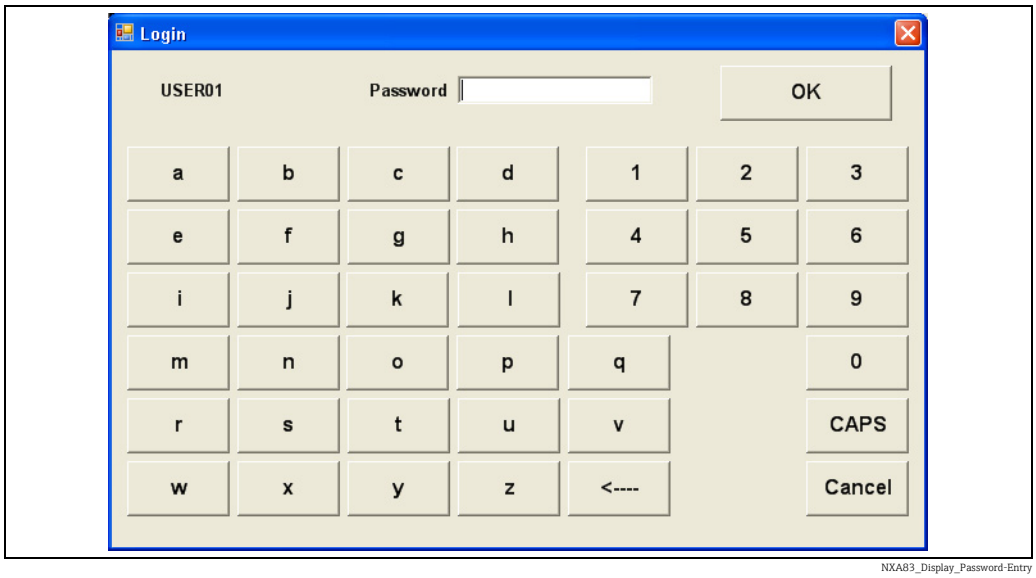
5.9 Security

If security has been enabled in the Multi Scan NXA83B database (by default it is disabled) the user may be required to login to perform certain actions, such as gauge commands or manual data entry.
To login, click on the button (right hand button) then click on .
Select the option and select the user account from the list.



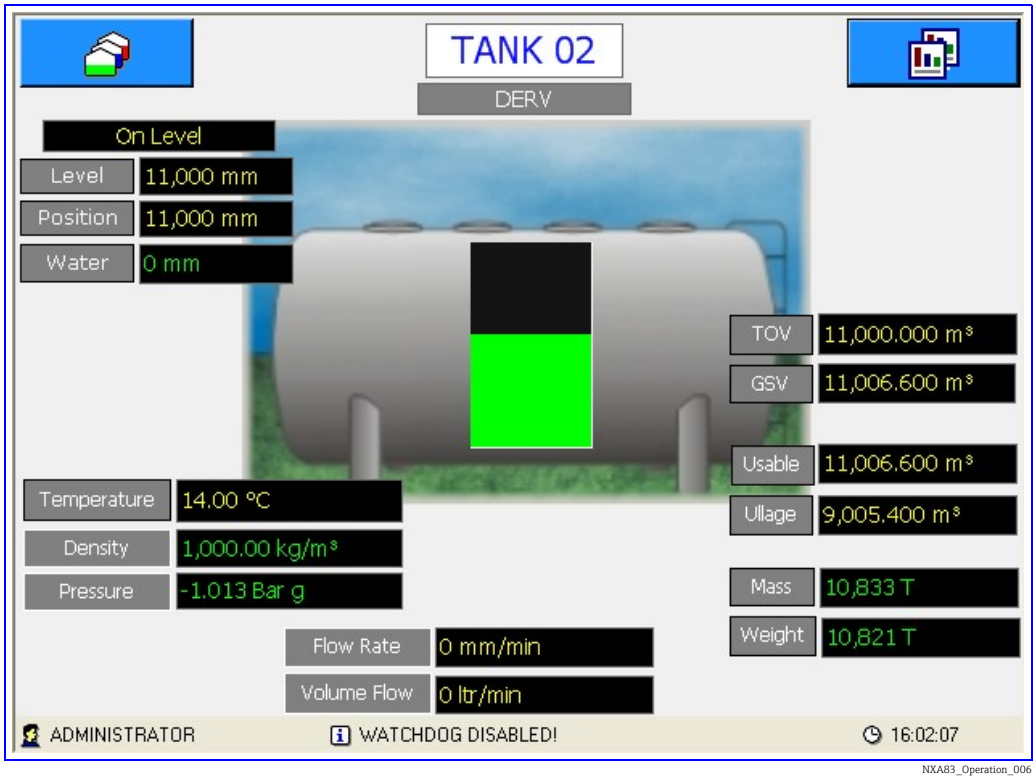
NXA83_Operation_005

The password entry screen will be displayed.



NXA83_Display_Password-Entry

Enter the correct password using the onscreen keyboard and click **OK**. The current login account will be displayed on the status bar at the bottom of the screen.



NXA83_Operation_006

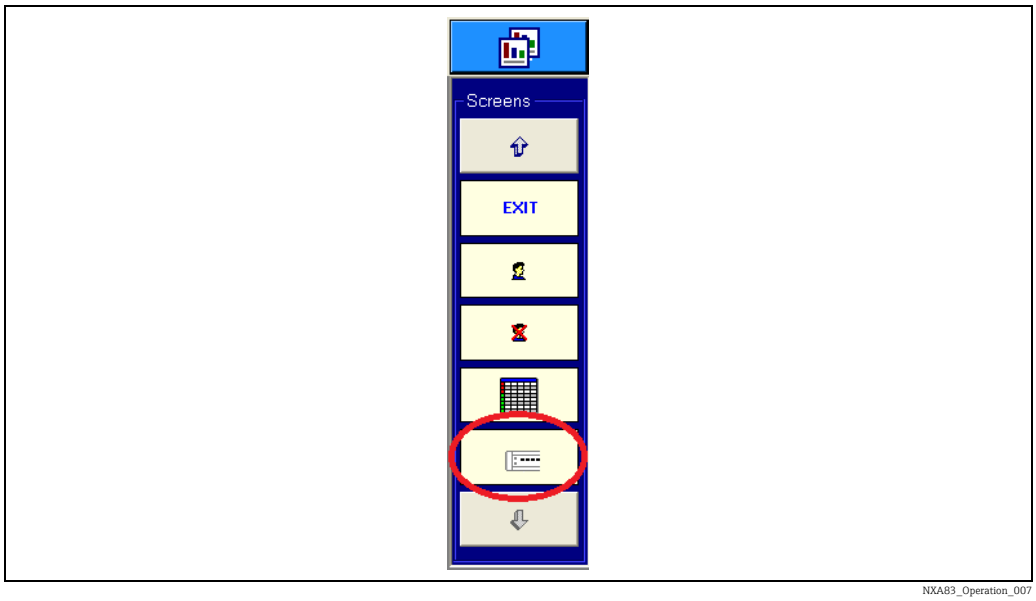
Select the button from the screens menu to log out.

5.10 Communications Monitor

The Communications Monitor is available to be viewed from the Operator touch screen, which can be used to view diagnostic data on the field ports. This utility is similar to the full Communications Monitor available when remotely logged in, but with limited functionality. Therefore certain features will not be available from the Operator screen version, including such items as Raw Data viewing/logging, modem log and Connect details.

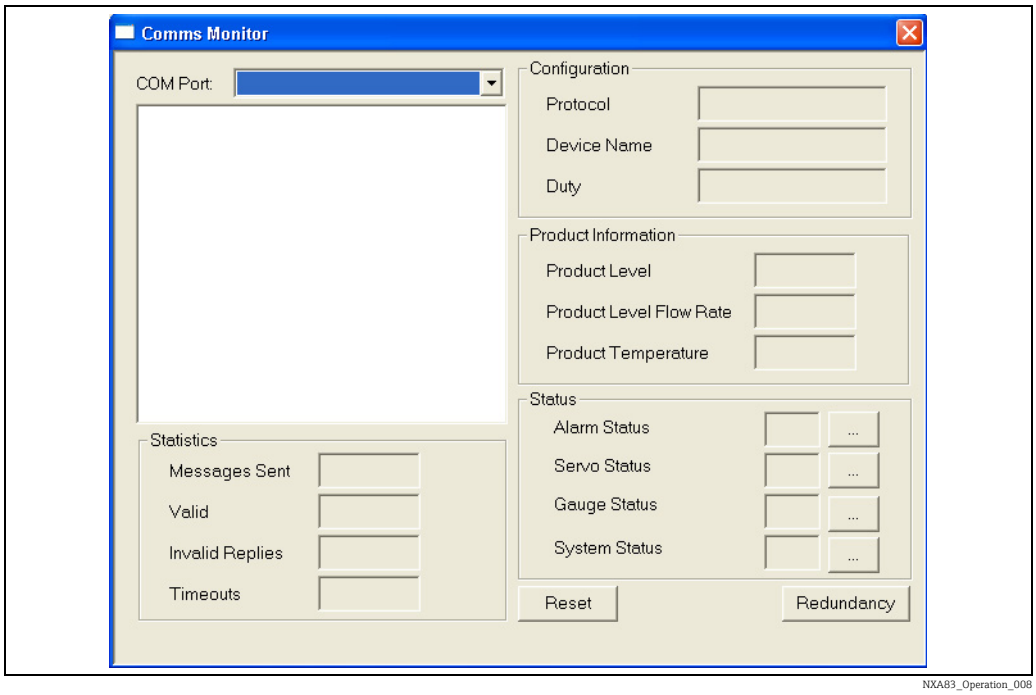
This feature is only available from firmware versions 3.2.0/4.2.0 onwards.

To view the Communications Monitor from the Operator screen click on the **Comms Monitor** icon in the right hand drop down menu.



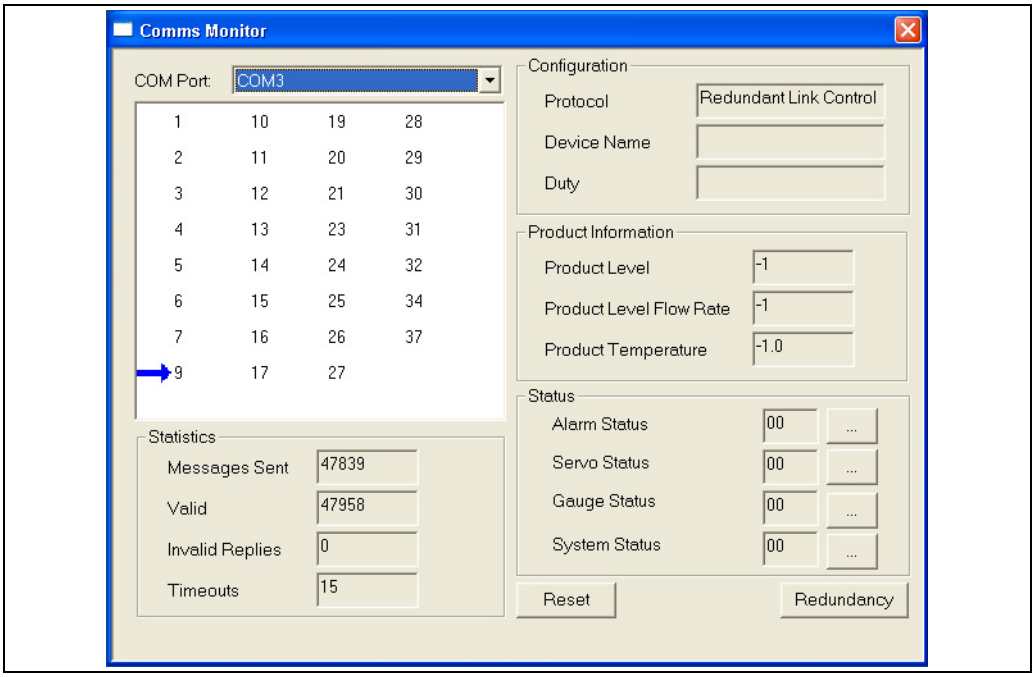
NXA83_Operation_007

A version of the Communications monitor that is formatted for use on a touch screen will be displayed.



NXA83_Operation_008

This screen operates in a similar way to the full Communications Monitor, in that a COM port can be selected from the drop down list. The screen will then show the details of that port.



NXA83_Operation_009

The redundancy details can be viewed by clicking on the **Redundancy** button . This screen functions in exactly the same way as the full Communications Monitor.
Refer to the separate DCC Communications Configuration manual BA01292G for more details on the operation of these screens.

6 Return

The requirements for safe device return can vary depending on the device type and national legislation.

1. Refer to the web page for information:
   http://www.endress.com/support/return-material
2. Select the region.
3. Return the device if repairs or a factory calibration are required, or if the wrong device was ordered or delivered.

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