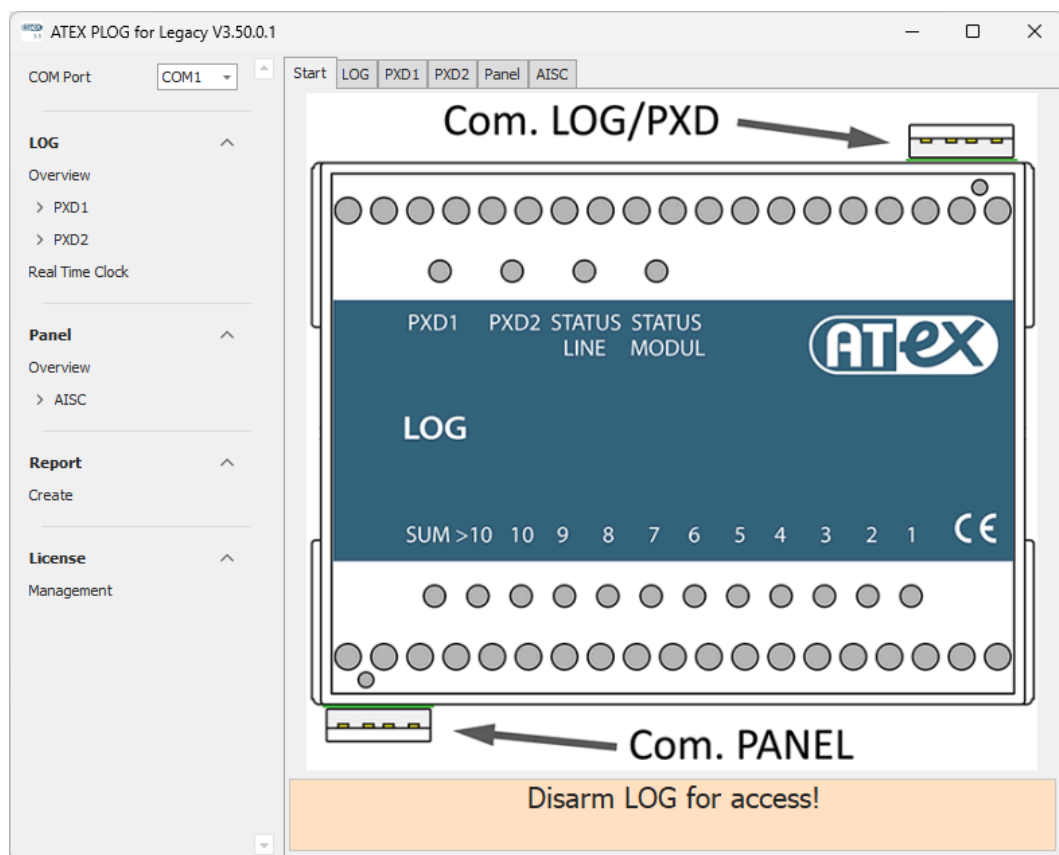




ATEX PLOG

Version 3.50



User manual

Revision 1 May 2026

ATEX Explosionsschutz GmbH
Auf der Alm 1 59519 Möhnesee
www.atex100.com

Content

Introduction.....	2
System requirements / Installation.....	2
System requirements	2
Installing the PLOG 3.50 software.....	2
Software activation / access levels.....	4
Using the software / Reading out the data	6
Choose COM port:	7
Overview of software features.....	9
Menu item LOG:	9
Menu item LOG / Overview.....	10
Reading out the explosion pressure sensor type PXD.....	13
Setting the PXD parameters	15
Recorded pressure flows	17
Reading and recording actual pressure data during operation	19
Calibration	20
Real Time Clock	24
Connecting to the “PANEL”	25
Display operation status AIS-Panel	25
Menu item Report:	31
Menu item License:	32

Introduction

The Atex PLOG 3.5 is a configuration and diagnostic software for ATEX explosion protection units with LOG components.

The software communicates with the protection system via USB - RS 485 adapter.

NOTE: The PLOG 3.5 software must be unlocked by an activation code during the initial setup.

It is not upward compatible with later ATEX exCONTROL explosion protection systems.

For the configuration of protection systems with ATEX LOG, the PLOG 4 software is required.

Unlike the previous version, the DMU modules in the AIS suppressors can no longer be configured. This is now done using the separate DMU Config Tool.

System requirements / Installation

System requirements

The following requirements must be met in order to use the ATEXPLOG V3.10 software and connect to the LOG:

- PC / Laptop with Windows 11 or higher
- free USB Port
- Adapter cable type FTDI (Article number 101124) + Cable for data reading of the LOG-Box (Article number 101014) **Note:** for USB-Connection both cables are required.



101014

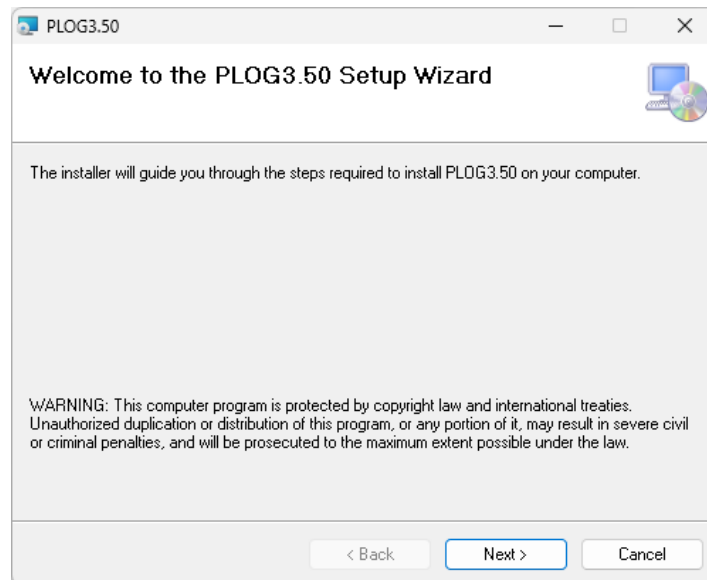
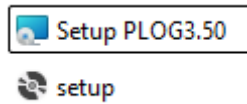


101124

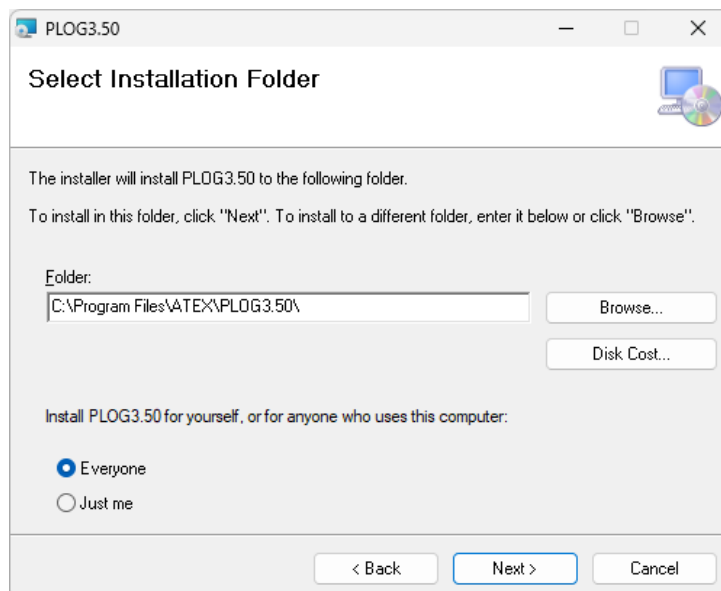
For the reprocessing of the stored data a spreadsheet program (e.g. Microsoft Excel) is recommended.

Installing the PLOG 3.50 software

Open the file "Setup PLOG3.50" and follow the instructions of the Installation Wizard:



The installation programme will guide you through the installation process. This is where you specify the folder on your hard drive where the software will be installed. This folder also contains the 'template file' that you will need later when creating reports.



After successful installation, the software is located at the location previously defined in the installer.

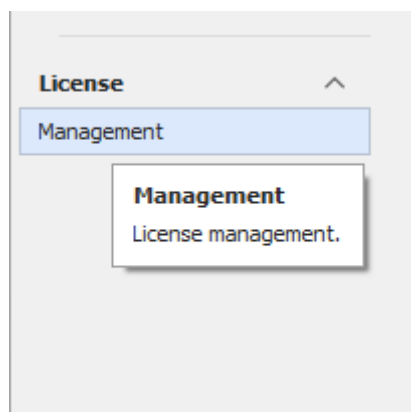
NOTE: To be able to use the software fully later on, you must now specify a folder (preferably on the desktop) where you will later save the report file created by PLOG 3.5. Copy the above-mentioned report template file into this folder.



Software activation / access levels

The activation code must be entered when the software is started for the first time. You will receive this from ATEX. For this purpose, we require the so-called node ID with the desired authorization level:

Open the licence management by clicking on the 'Management' button in the 'Licence' submenu at the bottom right of the operating window:



A window will then open in which you can activate the software after entering the activation code.

The image shows a 'License' dialog box with the following fields and buttons:

- Node-ID:** A text field containing the value: <179BF5FF00A50F00:tullmann:ATEX-DE:PLOG 3.50-Standard>
- Requested license level:** A dropdown menu currently set to 'Standard'.
- Copy node ID to clipboard:** A button to copy the Node-ID.
- E-mail node-ID to ATEX to get an activation code.** A text instruction.
- Activation code:** An empty text field for entering the activation code.
- activate:** A blue button to activate the license.
- Current license level:** A dropdown menu currently set to 'Guru'.
- done:** A button at the bottom right to close the dialog.

Any change to the read-out parameters or stored data can only be done in the pro/guru level. If changes to the sensor settings or stored data is required, then this work can only be carried out by ATEX personnel with appropriate access authorization and is therefore not part of this operating manual.

There are 3 authorized steps:

Standard:

reading out data, events download, adjusting time + AISC-Addressing

Pro:

reading out data, events download, adjusting time, AISC-Addressing + PXD settings

Guru:

reading out data, events download, adjusting time, AISC-Addressing + PXD settings and advanced settings (calibration)

Connecting to the LOG module

A connection must be set up between the PC and the LOG - box.

For this purpose, the USB to RS-485 adapter cable is connected to the LOG module depending on which card has to be read out. The ATEX LOG2+ box contains two separate evaluation boards, each of which can be read out separately.

The upper card so called “**LOG-card**” displays the overall status of the system and the status of the connected PXDs.

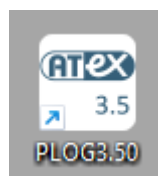
The lower so called “**PANEL-card**” is used to display and evaluate the connected protection units (suppressors)



Using the software / Reading out the data

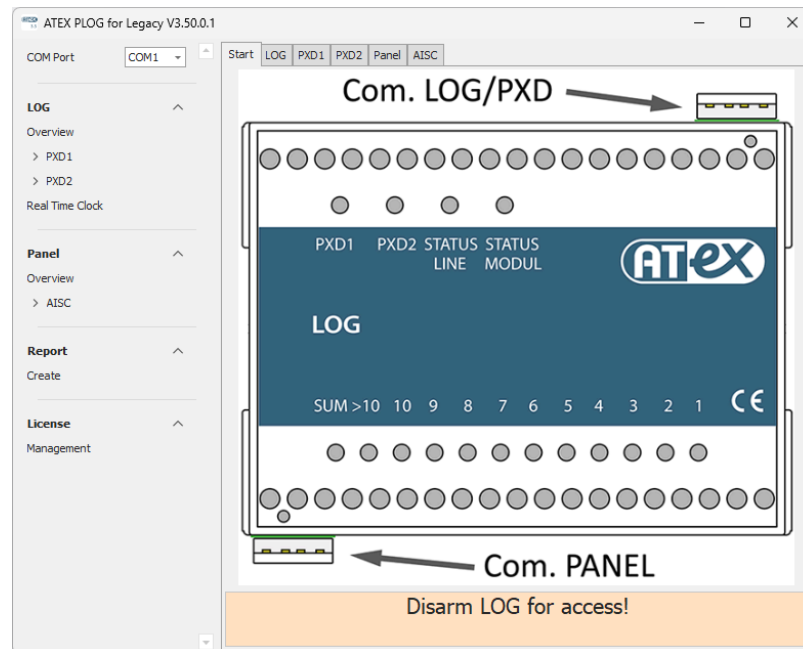
Open the program and select the correct COM port:

After installation, the program is launched via ‘Start’ and ‘ATEXPLOG V3.5’ or via the icon on the screen.



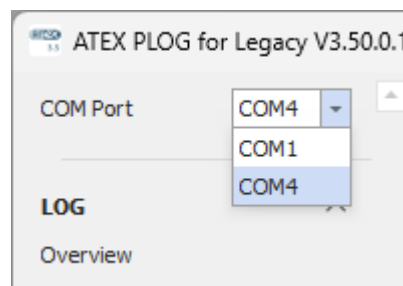
The start window opens:

The main window appears as follows:



Choose COM port:

To connect to the LOG-box, select the correct COM port from the drop-down menu.



If you're unsure what COM port your device uses, you can use the Windows Device Manager to help you identify it. On Windows 10 & 11, right-click on the Start button and select "Device Manager," or find it using the search bar. The Device Manager shows all the devices connected to your PC, organized into categories.

After selection of an interface via **COM Port** (COM 1 - COM 8), it will be confirmed by pushing the circuit surface **Connect**. The window closes automatically, afterwards.

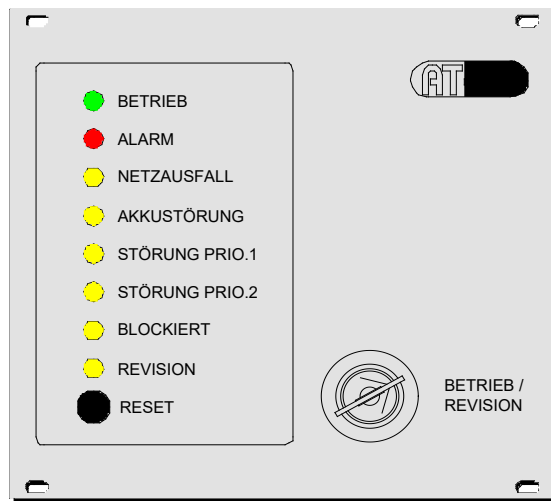
To continue using the software, the explosion protection system connected to it must be switched to maintenance mode (Disarmed Mode). To do this, proceed as follows:

On control panels type EZ K :

Disconnect the 24 V line voltage at the LOG 2 logic module (terminal 7/8) during the readout process.

On a control panel type AE 10xx / TS8,

Set the OPERATION / DISARMED keyswitch located on the front of the control panel to the DISARMED position.

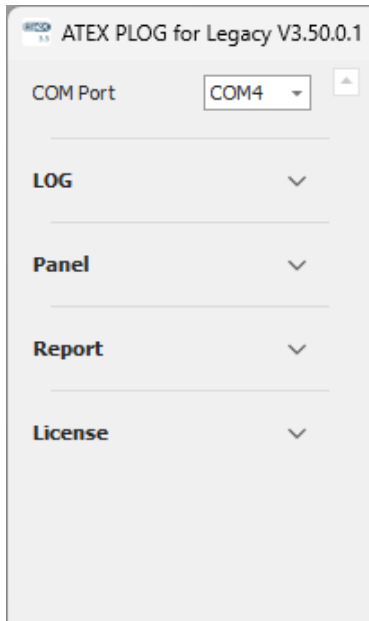


The readout status is displayed as follows at the LOG 2:

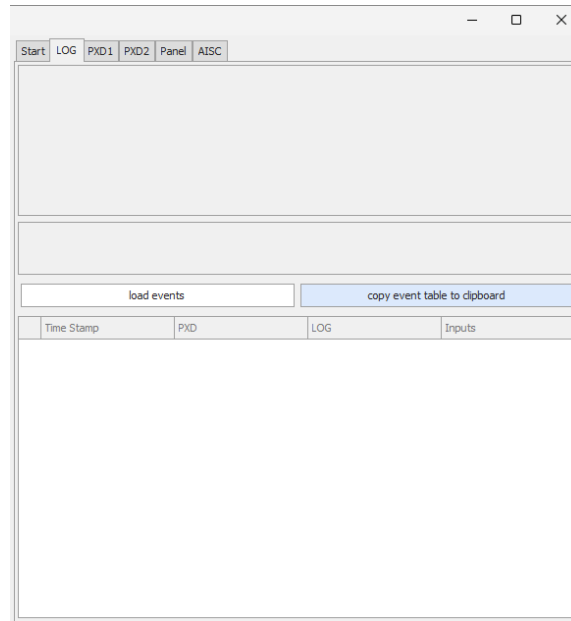
LED	PXD Sensor 1	out
LED	PXD Sensor 2	out
LED	Status Line	out
LED	Status Module	flashes green

The readout status is displayed as an error on the corresponding control panel. (see assembly and operation instructions).

Overview of software features



right menu



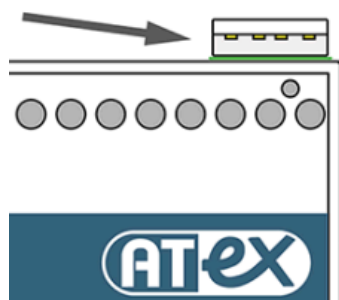
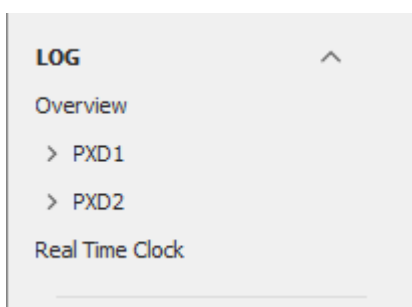
main window

The software has a menu bar on the right-hand side for reading the two cards contained in the LOG box. This is where the main functions of the software are accessed.

The menu bar contains the following items: LOG, Panel, Report and License.

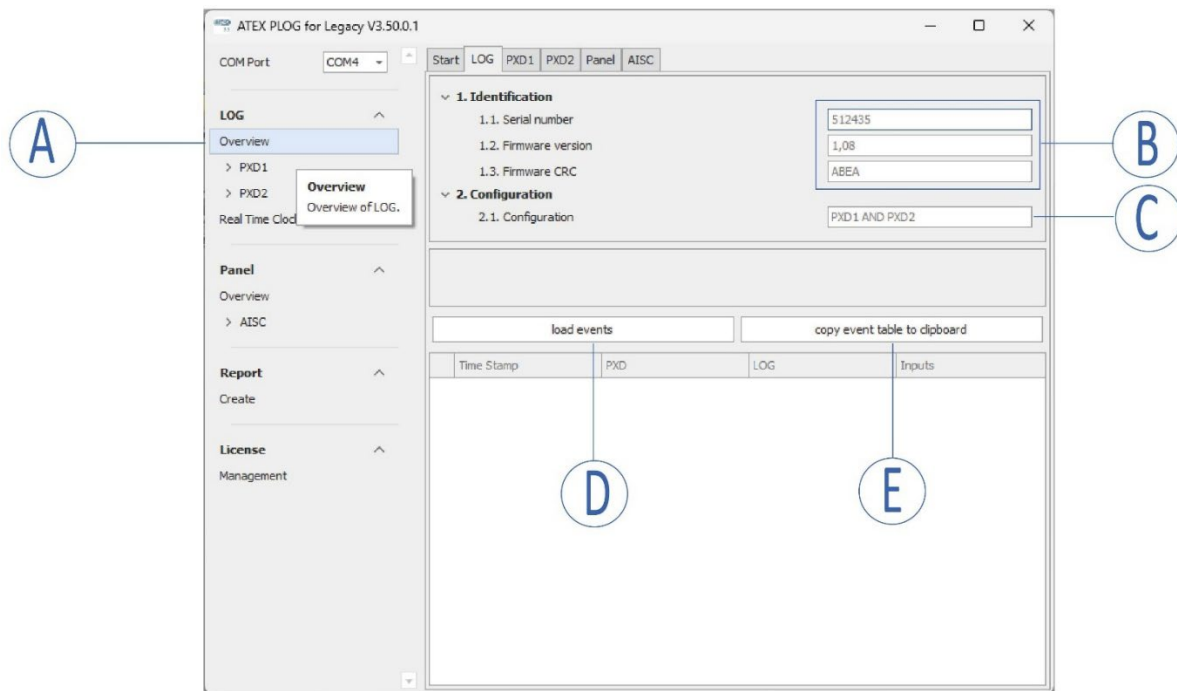
The main display window is located on the left-hand side. This is where the items selected on the right are displayed.

Menu item LOG:



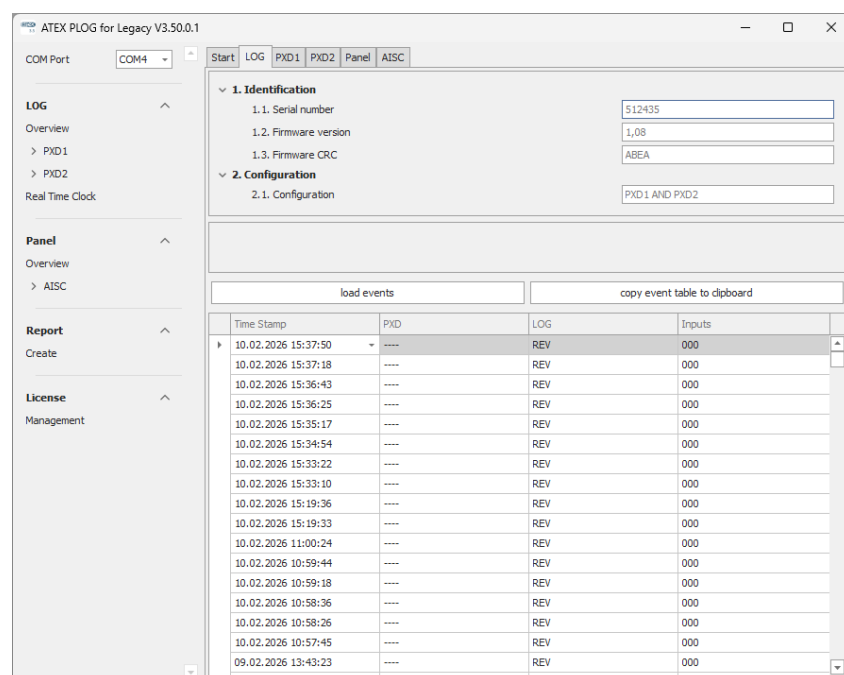
This reads out the upper card (**LOG**-card) of the LOG box. In order to connect to the LOG-card, the connection cable must be plugged into the upper USB port. The PXDs are also displayed and read out under this menu item.

Menu item LOG / Overview



Clicking on the Overview button (A) displays the serial number, firmware version (B) and configuration of the LOG box (C).

By clicking on the 'load events' button (D), the registered events are read from the LOG box and displayed in the window below:



Following adjustments / recordings are displayed:

Serial Number: Serial number of the evaluation appliance

Version: Version of the evaluation-software

Configuration: Position of DIP-Switches, which determine the configuration of the detection system (to be housed on the control circuit board inside the logic module)

Hint: The DIP-Switches are already adjusted; prefabricated, changes of the switch positions are exclusively necessary with changes of the configuration (e. g. at connection of a second sensor). Improper changes will lead to fault functions, respectively to fault messages and besides, are inadmissible.

CRC: Shows the permanent monitoring of the program memory as follows:

Display CRC green ⇒ Program memory in
working order

Display CRC red ⇒ Program memory defective

Events: All status changes in the detection system will be provided with a time and date stamp and stored. The memory covers maximum 511 events; afterwards, the oldest will be overwritten.

Incoming events or changes in the operation status of the detection system will be called up in a 0.2 second phase and stored in the case of changes. The chronological sequence of events in the LOG-main window or at the storing of the events into a text data file (see below) takes place in a one-second phase.

If several events are stored within a second, they will be shown, one after the other with the same time. The latest event shows up at the top.

Following events are stored and displayed:

- Status changes at the sensor (alarm, operation, fault message)

- Status of signal exit (Line Out)
- Operating voltage switched on / off
- Status memory access 1 - 3 (0 / 1)

The appropriately stored event will be displayed as follows:

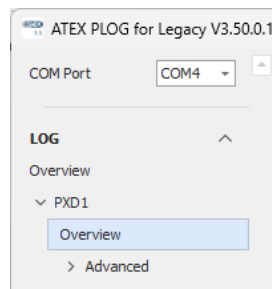
Column	Description	Format	Values	Value Description
1	Time of event	HH:MM:SS		
2	Date of Event	DD.MM.YYYY		
3	Status PXD-Sensor	4 Signs	- N E F	no sensor connected sensor in normal status sensor in error (Error) sensor in alarm (Fired)
4	Status LOG MODULE	3 signs	PDW PUP	operating voltage interrupted (Power down) operating voltage powered (Power up)
Column	Description	Format	Values	Value Description
4			NOR FIR ERR SER	operation(normal) alarm (Fired) error (Error) Error 2 nd prio

				(Option)
5	gage of additional accesses	3 signs	0	Access 0 (Low)
			1	Access 1 (High)

By the LOG-main menu **Maintenance** and **Erase Event Memory** the stored and displayed events can be deleted. This function is password-protected and cannot be performed by the operator.

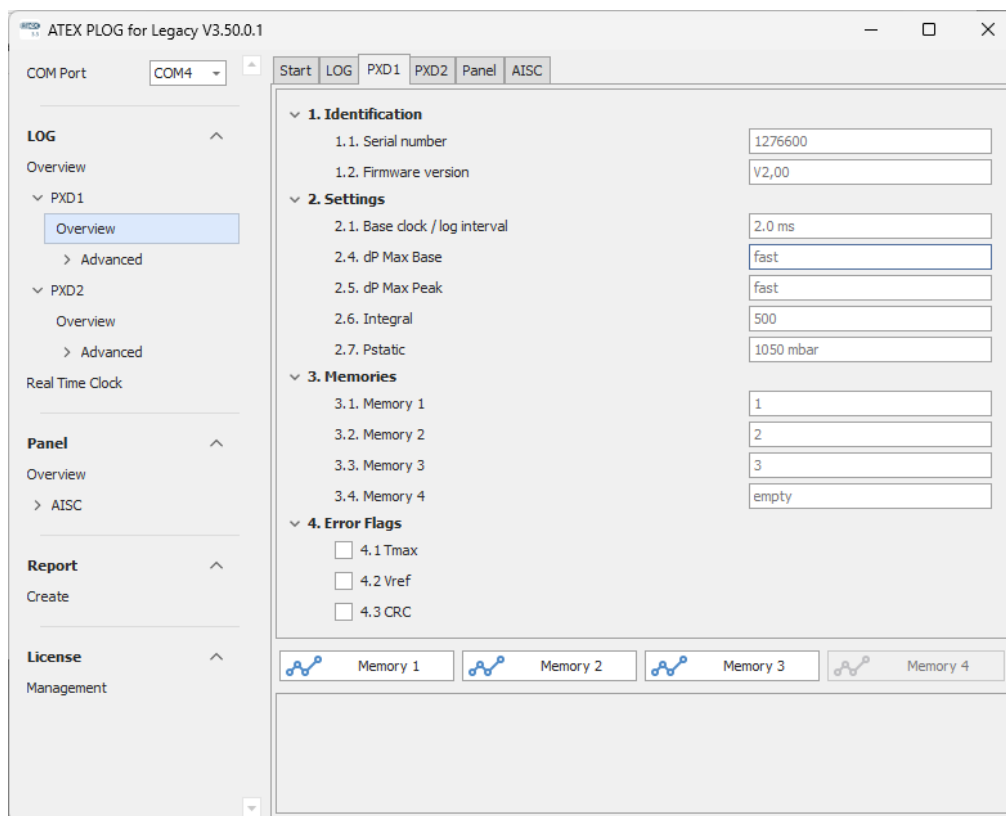
Reading out the explosion pressure sensor type PXD

To read out the stored parameters from one of the connected PXD explosion pressure sensors, click on one of the two buttons PXD 1 or PXD 2 in the start window and then click on the 'overview' button.



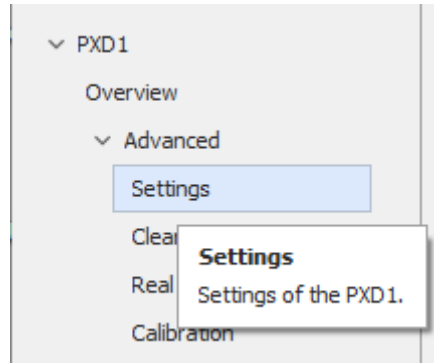
The reading out of the sensor will be displayed by green / red flashing of the LED STATUS MODULE as well as by red flashing at the logic module type LOG 2 to the assigned LED of the corresponding sensor (PXD 1 or PXD 2).

Reading the corresponding sensor takes about 5 seconds. The readout process can be interrupted by pressing the 'Cancel' button. After the readout process is complete, the following PXD main window is displayed:



Setting the PXD parameters

Clicking on the 'Settings' button in the PXD > advanced menu opens a window.



Note:

PXD explosion pressure sensors can be programmed with two different versions of software (V1.04 and V2.0). The appearance of the window changes depending on the software version.

Two side-by-side screenshots of settings windows. The left window is titled 'PXD2 Settings' and the right is 'PXD1 Settings'. Both windows have a similar layout with various input fields and buttons. The 'PXD2 Settings' window shows fields for Firmware Version (1,04), SN (1272167), Base Clock / log interval (1.0 ms), DeltaP [mbar] (100), DeltaT [ms] (50), Pstat [mbar] (1150), Filter (8), Pmax [mbar] (1800), and Pmin [mbar] (300). The 'PXD1 Settings' window shows fields for Firmware Version (2,00), SN (1276600), Base Clock / log interval (2.0 ms), Base Line (fast), Peak Line (fast), Integral (500), Pstat [mbar] (1050), Pmax [mbar] (1800), and Pmin [mbar] (300). Both windows have 'Cancel' and 'OK' buttons at the bottom.

If during the dialing of the circuit surfaces **PXD 1** or **PXD 2** the logic module type LOG 2 was not brought into the reading mode (see above), or the logic module is without voltage or the connection between the logic module and PC is interrupted or no sensor is connected, the reading out procedure will be interrupted and the following window appears:

The following parameters are shown in the PXD-main window:

Firmware Version can be either 1.04 or 2.0

SN Serial number

Base Clock / Log Interval Time interval of signal- und alarm processing

Delta P dynamic

pressure increase dP in the time dT, in which it (V1.04) exceeds, the alarm will be triggered

Parameter	Min	Max	Standard
Delta P	20	200	100

Delta T dynamic Period of time dT (ΔT) in which a pressure increase (V1.04) of at least dP (ΔP) triggers an alarm

Parameter	Min	Max	Standard
Delta T	20	300	100

dPmax Base Indication of size corresponding to the pressure (V2.00) changes to be expected at normal operation of the system / protection system serves for all further calculations as pressure zero point

dPmax Peak Indication of size corresponding to the pressure change to be expected at an explosion (V2.00)

Integral continuously adds up the difference between (V2.00) basis und peak pressure. In case of an explosion, the peak pressure increases exponentially opposite the basis pressure and the integrated circuit quickly reaches the alarm limiting value

Pstatic static pressure limiting value (P_{max}) which exceeding triggers an alarm

	Min	Max	Standard
--	-----	-----	----------

Parameter			
Static Alarm	1050	1800	1200

LP Filter the measuring can be limited by determined filters, (V1.04) whereby possible interruptive peaks will be subdued, the adjusted filter will be visible by pushing the circuit surface **LP Filter**

Filter: 8
off
2
4
8
16

Pmax [mbar]:

Pmin [mbar]: 300

☐ Enable editing

Cancel OK

After pressing the 'OK' button, the parameters will be saved on the device.

Recorded pressure flows

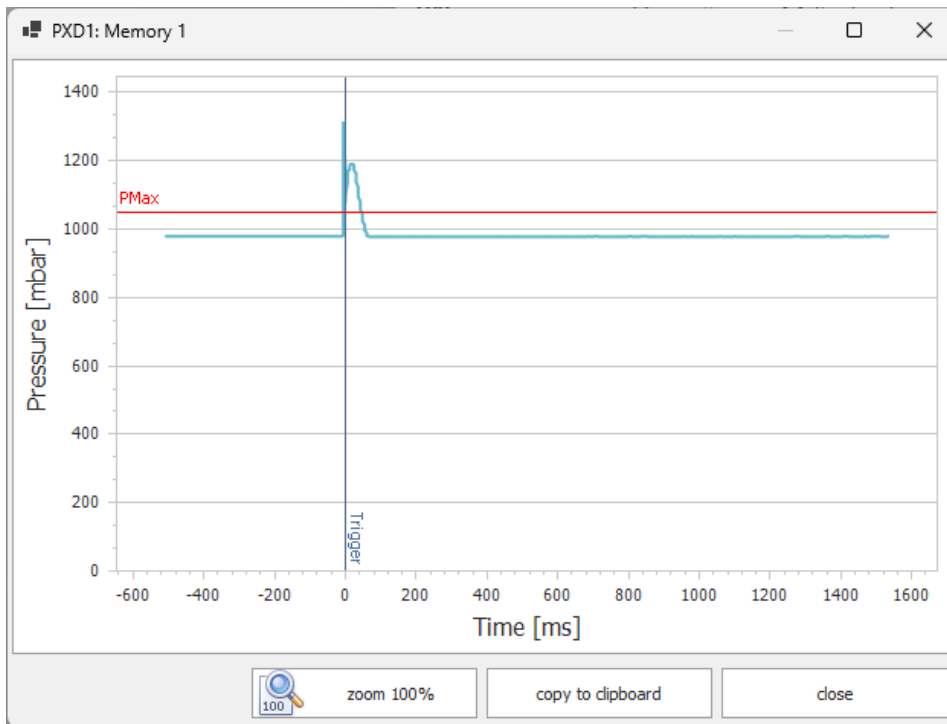
Every pressure flow, which leads to an alarm, is being recorded. There are 4 memory spaces. The memory spaces are marked as **Memory 1 – 4**. If more than four pressure flows are recorded, the oldest data setting will be overwritten.

Every recording has a clear, consecutive figure (starting with 1), that the real number of recorded pressure flows can be recognized. The serial numbers of all four recordings are chronologically displayed in the PXD main window.

Hint:

Only such pressure flows are recorded and stored, at which the adjusted triggering parameters will be reached respectively exceeded.

With the circuit surfaces **Download 1 – 4**, the appropriate recording of the stored pressure flow can be read out and displayed. The download procedure takes about 55 seconds and will be displayed by a running beam. The reading out procedure can be interrupted by pushing the circuit surface **Cancel**. The parameters, adjusted to the alarm time, will also be downloaded and shown together with the pressure flow curve

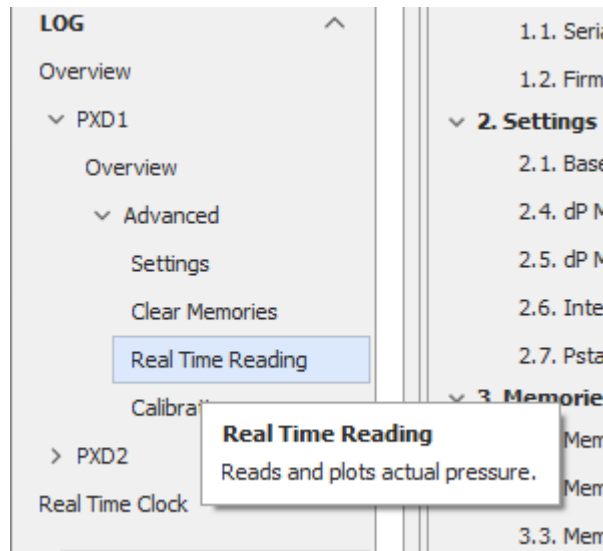


The shown pressure flow can be stored over the button **copy to clipboard** and made available to other programs.

In the PXD-main menu, under **Maintenance** and **Erase Memory**, the recorded and shown pressure flow curves can be deleted. This function is password-protected and cannot be carried out by the operator.

Reading and recording actual pressure data during operation

Over the menu **Maintenance** and **Read Pressure**, in the PXD-main window all actual pressure measurements can be read out and recorded.



Pressing the submenu item 'Real Time Reading' opens the recording window. Press the 'Start' button here to start recording the pressure values at the PXD.

The reading out and recording procedure will be started by activating the circuit surface **Log Data to File**.

Hint:

For reading out and recording the actual pressure conditions at the explosion pressure sensor, they have to be stored in the PC or in an external memory space.

Therefore:

By activation of the circuit surface **Log Data to File**, a window will automatically be opened, by which the data can be stored.

After storage of the data the measuring starts automatically. The measurements will automatically be updated in a phase of 0.5 ms, which is displayed by a green flashing light at the display **PDX**

(green), in the window **Real Time Pressure Data**. If no valid data are received, a red flashing light is displayed.

Following measurements can be read respectively stored.

Actual Pressure actual pressure at the PXD-sensor

Pmax maximal pressure at the PXD-sensor since the beginning of the measuring

Pmin minimal pressure at the PXD-sensor since the beginning of the measuring

dPmax maximum pressure increase at the PXD-sensor in
(V1.03/1.04) the adjusted period of time dT (ΔT) since the
beginning of the measuring

I_{max} maximum reached value of the integral (I_{max}.)
(V2.00) since the beginning of the measuring

Additionally to the display PDX in the window **Real Time Pressure Data**, the online-operation at the logic module type LOG 2 will be shown by means of the green / red flashing of the LED STATUS MODULE, as well as by a green light of LED STATUS SENSOR 1 / 2.

Pressing the **Stop Logging** button will quit the pressure reading and recording modus.

The values, shown in the window **Real Time Pressure Data** will be reset, when the window is closed.

Calibration

Before they will be supplied, the calibration parameters are adjusted, pre-fabricated, at each sensor. The adjusted parameters can be read out in the PXD-main window, in the menu **Maintenance**, as well as in the sub-menu **Calibration**. By activating the circuit surface **Update**, the actual calibration parameter will be read out and displayed again.

The download takes about 5 seconds and will be displayed by a running beam. The reading out procedure can be interrupted by activation of the circuit surface **Cancel**.

The change of the calibration parameter is password-protected and cannot be carried out by the operator.

PXD2 Settings

Firmware Version: 1,04

SN: 1272167

Base Clock / log interval: 1.0 ms

DeltaP [mbar]: 100

DeltaT [ms]: 50

Pstat [mbar]: 1150

Filter: 8

Pmax [mbar]: 1800

Pmin [mbar]: 300

☐ Enable editing

Cancel OK

PXD1 Settings

Firmware Version:	2,00
SN:	1276600
Base Clock / log interval:	2.0 ms
Base Line:	fast
Peak Line:	fast
Integral:	500
Pstat [mbar]:	1050
Pmax [mbar]:	1800
Pmin [mbar]:	300

☐ Enable editing

Cancel OK

The following calibration parameters can be read:

SN series number of the sensor

Zero zero point of calibration

Gain increase of calibration

ADC Pmax ADC-value of temperature diode at 90°C

ADC P rough measurement of pressure measuring cell

P [mbar] calibrated pressure measurement

ADC T rough measurement of temperature diode

Code CRC CRC testing sum via program code

Calib CRC CRC testing via calibration data

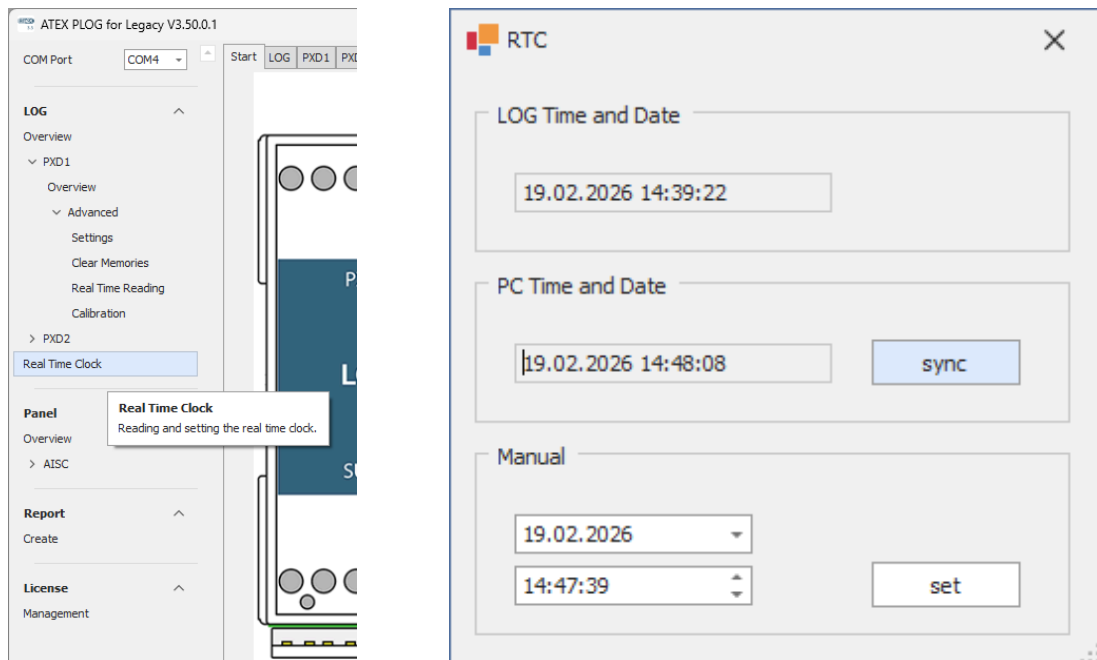
Tmax LED is flashing red, if the maximum sensor-electronic temperature once exceeds the limiting value of 85° C; otherwise the LED is flashing green.

Vref LED is flashing red, if the internal 5,0V- and 3,4V-references once have extremely deviated from the ideal values, otherwise the LED flashes green.

CRC LED is flashing red, if a CRC-test has indicated a fault; otherwise the LED is flashing green.

Real Time Clock

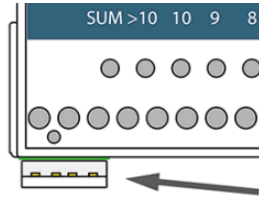
The detection system has a real-time clock to record the time of possible events. The clock is battery-powered and therefore independent of the mains voltage. The RTC is also located on the upper LOG card. The clock must be set at the factory before the detection system is delivered. The current time can be read via the LOG main menu 'Real Time Clock'.



Clicking on the menu item opens a separate window in which the internal clock of the LOG box can either be set manually or synchronised with the connected computer.

Connecting to the "PANEL"

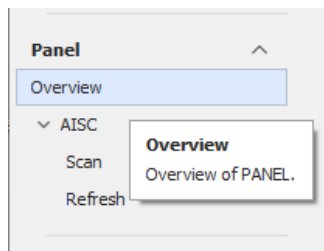
To read out the "PANEL card" and the suppressors connected to the LOG box, the USB plug has to be plugged into the lower socket.



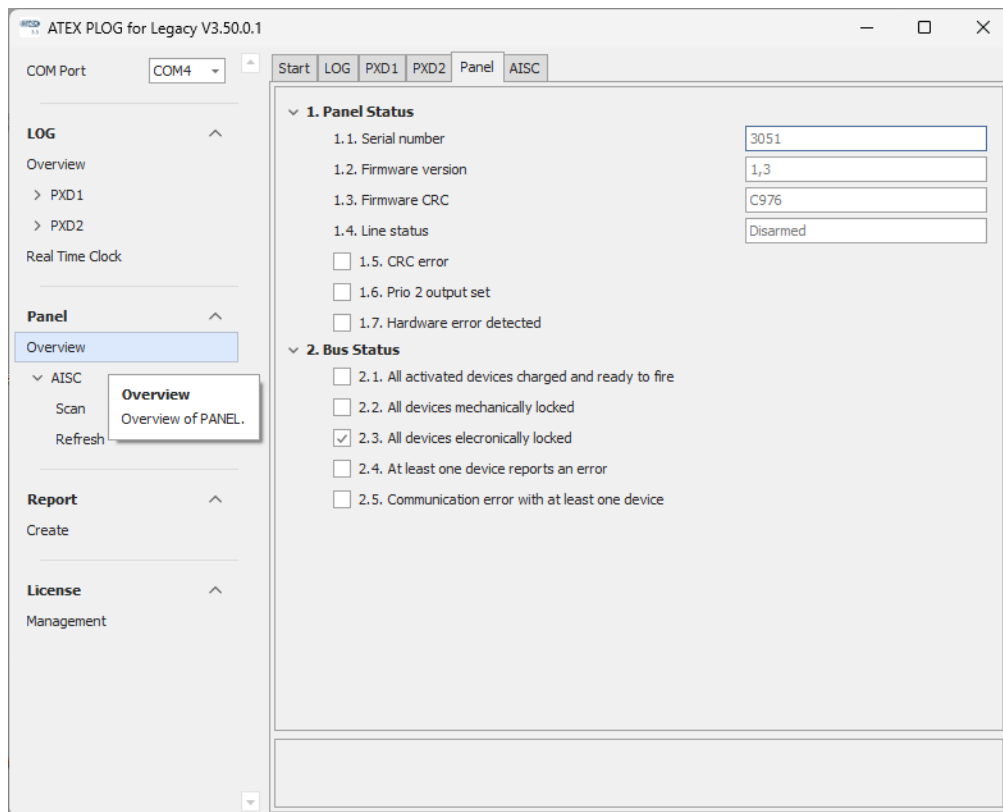
Note: The LOG 2 module does not need to be set to disarmed mode in order to read and display the operating statuses of the connected AIS explosion suppressors. This means that the explosion suppressor can also be read during system operation.

Display operation status AIS-Panel

To read the operating status of the AIS panel, click on the 'Overview' button in the 'Panel' submenu.



The display window now shows both the panel status and the bus status of the LOG card as follows:



Following system statuses are indicated:

Panel Status:

Serial number of the panel

Firmware version of the panel

Firmware CRC CRC-sum of program-flash panel

Line status

CRC error

Pro 2 output set

Hardware error detected

Bus status

All activated devices charged and ready to fir

All devices mechanically locked

All devices electri cally locked

At least one device reports an error

Communication error with at least one device

Panel GREEN communication with PC existing

Communication RED no communication with PC

Protection active GREEN all connected AIS-explosion suppressors
ready for operation

BLACK at least one of the connected AIS-explosion suppressors indicates
a malfunction

Line

GREEN Line in operation

RED Line on alarm (triggering)

BLACK Line inactive (disarmed)

Mechanically locked

GREEN if all connected AIS-explosion suppressors are mechanically locked

BLACK at least one of the connected
AIS-explosion suppressors is no longer
mechanically locked

Electrically GREEN if the triggering capacitors of all connected
AIS- explosion suppressors are completely discharged

BLACK if the triggering capacitors are still not
completely discharged from at least one of
the connected explosion suppressors

Auxiliary Output Auxiliary output

AISC Sum Error

RED at least one of the connected AIS-explosion suppressors indicates a malfunction

BLACK all connected AIS-explosion suppressors are ready for operation

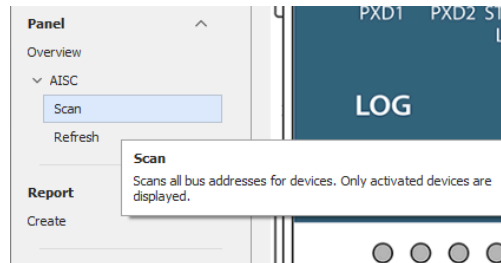
CRC Error RED CRC-checking of flash negative
BLACK CRC-checking of flash positive

Hardware Error RED Hardware-checking negative
BLACK Hardware-checking positive

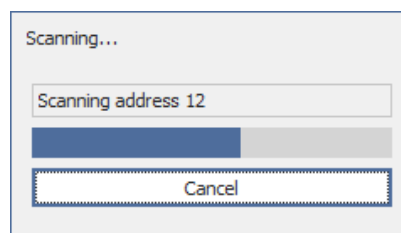
Status display for AIS explosion suppressors

Reading the operating status of the connected AIS suppressors

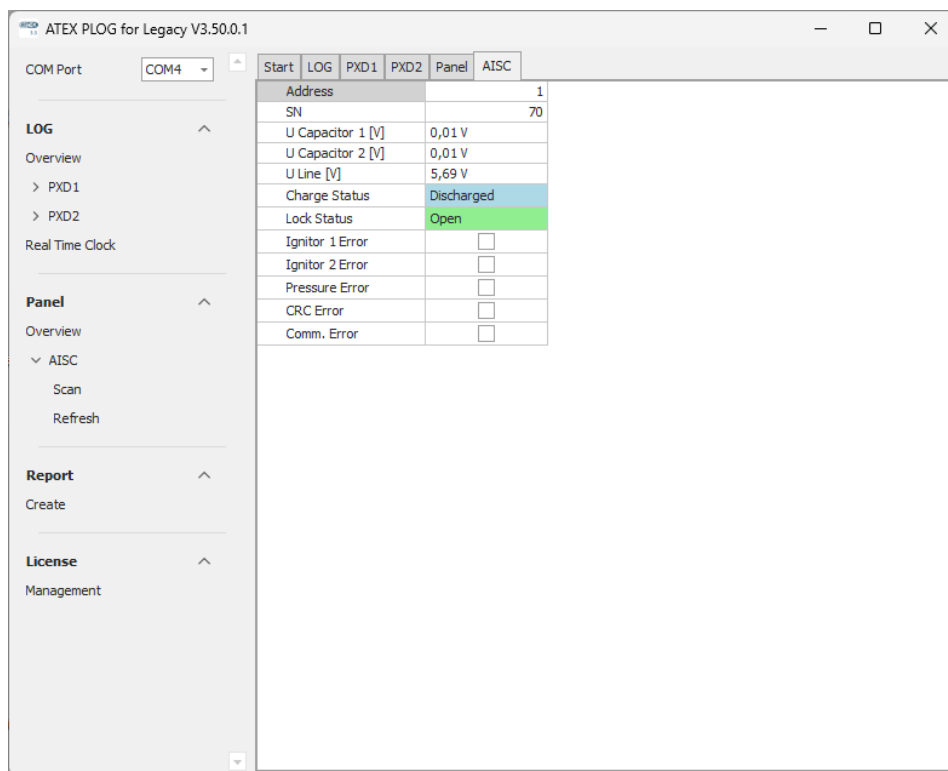
To read the operating status of the containers connected to the LOG-box, press the 'scan' button in the AISC submenu:



In the subsequent scan process, all possible positions are queried. The progress of the readout is visualised by a loading bar:



The status of all connected suppressors is then displayed in the main window under the AISC tab. In the following example, only one device is displayed:



Following system status messages are displayed:

AISC Address

up to 20 AIS-explosion suppressors can be connected to the logic module type LOG 2
each of the connected bottles has one own, prefabricated allocated address (1-20)
by the display **AISC ADDRESS** all connected bottles can separately be dialed (Drop Down List).
If the main window is opened, the bottle with address 1 will automatically activated

SN Serial number of the AISC-module of the dialed AIS-explosion suppressor

Communication GREEN communication to dialed bottle existing flashing

YELLOW communication from PC to AIS-panel flashing existing

RED no communication to the dialed AIS- flashing explosion suppressor

Communication RED no communication from PC to AIS-
flashingpanel

Pressure GREEN Propelling pressure in the dialed
glowingAIS-explosion suppressor, sufficient

RED propelling in the dialed AIS-extinguishing
glowingbottle, insufficient

Locked YELLOW dialed AIS-explosion suppressor
glowing mechanically locked

Lock Error RED locking device at dialed AIS-extinguishing
glowing bottle, in inadmissible interim position

CRC Error RED Error in the program memory

glowing

Generator 1 RED supply line to gas generator interrupted

Error glowing

Generator 2 RED supply line to gas generator 2 interrupted

Error glowing

Capacitor 1 [%] RED charging status of capacitors for the
triggering of gas generator 1 < 90%

GREEN charging status of capacitors for the
triggering of gas generator 1 > 90%

Capacitor 2 [%] RED charging status of capacitors for triggering of gas generator 2
< 90%

GREEN charging status of capacitors for the triggering of gas generator 2 > 90%

Line [V] BLUE Line voltage for the signal exchange,
Disarmed about 5.5 V, operation
about 8.5 V

Hint:

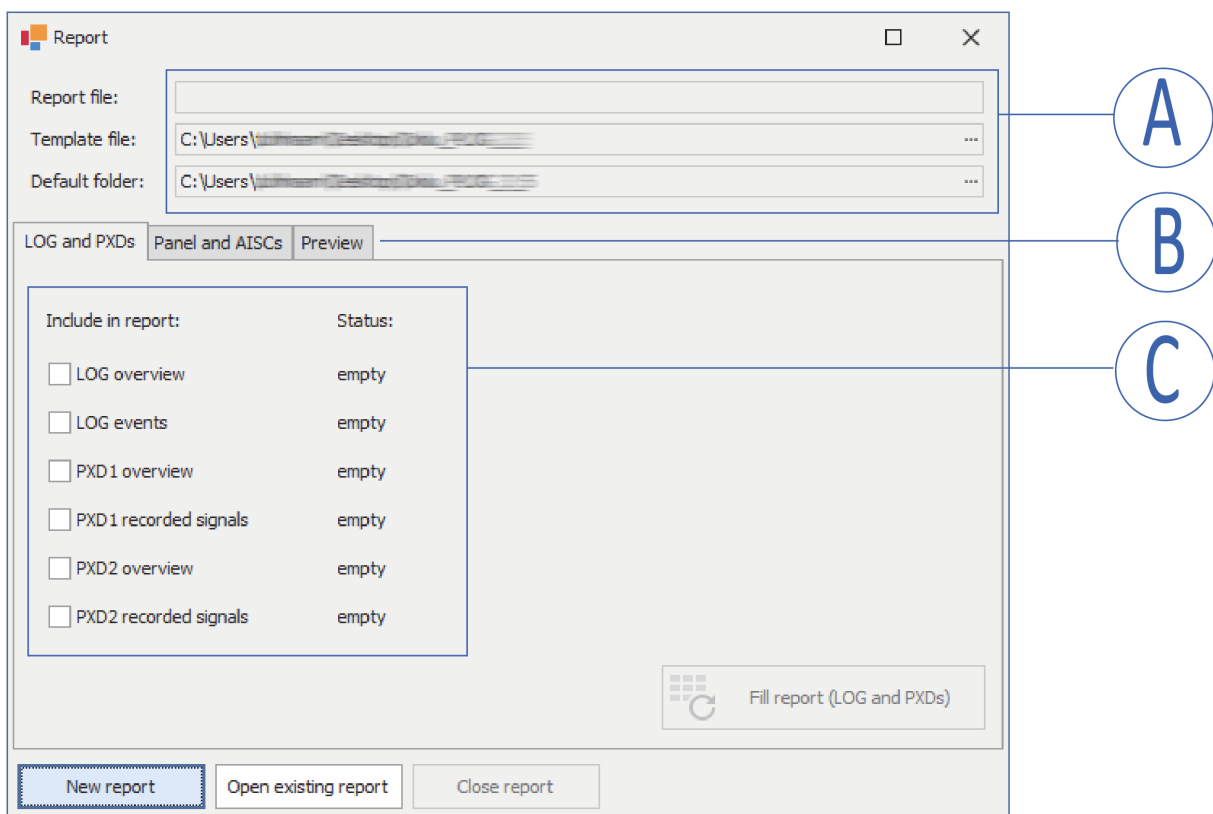
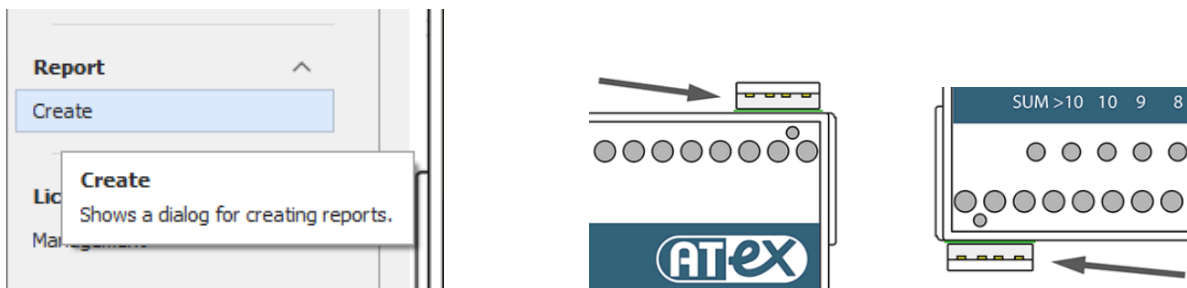
In the status of disarmed the actuation capacitors are discharged, for the triggering of the gas generators. In this way, an unintentional triggering of the connected AIS-explosion suppressors is not possible.

After having the system restored into the status operation, and after the end of the start-up phase of the connected PXD-sensor / s, (duration about 10 seconds), the capacitors will automatically be charged.

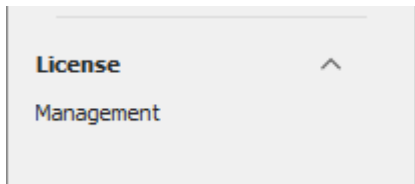
As soon as the charge has reached 90 % (duration about 30 seconds after the end of the start-up phase), the display will change from red to green. Afterwards, there will be the release to the connected control device, respectively control panel.

- If the appliance is turned on, it will be displayed by an illuminated red LED on the upper side of the housing *.

Menu item Report:



Menu item License:



This menu point is covered in the 'Software Activation' section at the beginning of this manual.