

# How-to: VIDI Alarms



r.0 – 2021

# Alarms

The *VIDI Alarms* allow the users to detect anomalies in the monitoring system or values which needs attention. The alarms are displayed in the VIDI GUI. If the ADI module is present, it is also possible to receive notifications via email, sms or Notigram when an alarm is triggered by the system.






In VIDI we can have alarms from analog and digital measures

- Analog measures are identified by a numeric value and an unit of measurement →
- Digital measures are identified in VIDI by a light bulb and can assume only ON or OFF values →

VALVE POSITION	0 %
BATTERY LEVEL	3546 mV
COMMUNICATION FAULT	
FULL CLOSE	

# Alarms types

In VID I we have two categories of alarm: originated from analog and digital measures

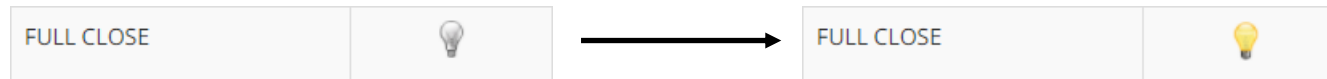
Analog measures	Digital measures
 Very high  High  Low  Very low	 Change From Normal
On analog measures (e.g. pressure, temperature, level, battery voltage) alarms are triggered when the recorded value exceeds a threshold which has been set by a user.	On digital measures (e.g. communication fault, sensor fault, low battery) alarms are triggered when the status changes from normal (e.g. sensor ok → sensor fault).

# Alarms vs. events

Each change of status in a digital measure represents an event. But not each event triggers an alarms.

Only a digital measure which is configured as alarm and changes from OFF to ON will trigger an alarm.

Example: a VIDI Positioner changes status to FULL CLOSE













This is an event but not an alarm because the FULL CLOSE tag is not configured as alarm

Example: a VIDI Positioner changes status to CALIBRATION ERROR



This is both an event and an alarm because the CALIBRATION ERROR tag is configured as alarm and the value changes from OFF to ON. When the CALIBRATION ERROR comes back to OFF, it will not trigger an alarm.

# Alarms vs. events

Description	Value	TAG	Date	Actions
VALVE POSITION	0 %	AP092M002	2021-02-24 03:11:05	  
FULL OPEN		AP092S001	2021-02-24 03:11:05	 
FULL CLOSE		AP092S002	2021-02-24 03:11:05	 
PARTIALLY OPEN		AP092S003	2021-02-24 03:11:05	 

To know if a digital measure is configured as alarm, press the *Chart* button to open the related TAG data

If the *Alarm Areas* field is set to *N.A.* the measure is not configured as an alarm. A change of state results into a simple event

TAG Data			
<b>Id</b>	520884	<b>RTU</b>	9281
<b>Name</b>	AP092S001	<b>Description</b>	FULL OPEN
<b>Access Level</b>	0	<b>Original Name</b>	OPEN
<b>Address</b>	N.A.	<b>Unit Of Measure</b>	N.A.
<b>Start Of Scale</b>	0	<b>End Of Scale</b>	1
<b>Type Of Data</b>	0	<b>Data Formatting</b>	N.A.
<b>Driver Name</b>	N.A.	<b>On SCAN</b>	1
<b>Label For Open ...</b>	N.A.	<b>Label For Close...</b>	N.A.
<b>Signal Conditio...</b>	N.A.	<b>Alarm Areas</b>	N.A.

# Alarms vs. events

If the *Alarm Areas* field is set to A, the measure is configured as an alarm. A change of state from OFF to ON results into an alarm

TAG Data					
Id	520889	RTU	9281		
Name	AP092S012	Description	CALIBRATION ERROR		
Access Level	0	Original Name	N.A.		
Address	N.A.	Unit Of Measure	N.A.		
Start Of Scale	0	End Of Scale	1		
Type Of Data	0	Data Formatting	N.A.		
Driver Name	N.A.	On SCAN	1		
Label For Open ...	N.A.	Label For Close...	N.A.		
Signal Conditio...	N.A.	Alarm Areas	A		

# How to define an alarm




- For digital measurements:
  - For VIDI Devices the configuration is fixed for each device and it cannot be modified by the user
  - For SCADA systems the configuration is defined inside the SCADA. The SCADA agent communicates the Alarm Area to VIDI.
- For analog measurements all events are also alarms if the user has defined one or more alarm thresholds

# Setting the alarm thresholds

























Press the *Threshold* button

Smart View
Status
Alarms
Historical Data
Documents
P&I
Gallery
Help Desk
Parameters

### Process Measures

Description	Value	TAG	Date	Actions
WATER PRESSURE	2.832 bar	AP079M001	2021-02-24 12:30:00	  



### Device Status

Description	Value	TAG	Date	Actions
COMMUNICATION FAULT		AP079S000	2021-02-24 12:30:00	 
BATTERY LEVEL	3492 mV	AP079M100	2021-02-24 12:30:00	  
LOW BATTERY		AP079S008	2021-02-24 12:30:00	 
TAMPER ALARM		AP079S002	2021-02-24 12:30:00	 
TAMPER ALARM OCCURRED		AP079S012	2021-02-24 12:30:00	 
SENSOR ABSENT		AP079S021	2021-02-24 12:30:00	 
SENSOR MALFUNCTION		AP079S022	2021-02-24 12:30:00	 
SENSOR SHORT CIRCUIT		AP079S023	2021-02-24 12:30:00	 

### Commands



#### Reset Tamper

Last sending: **N.A.** - Status: **N.A.**

#### Reset Battery

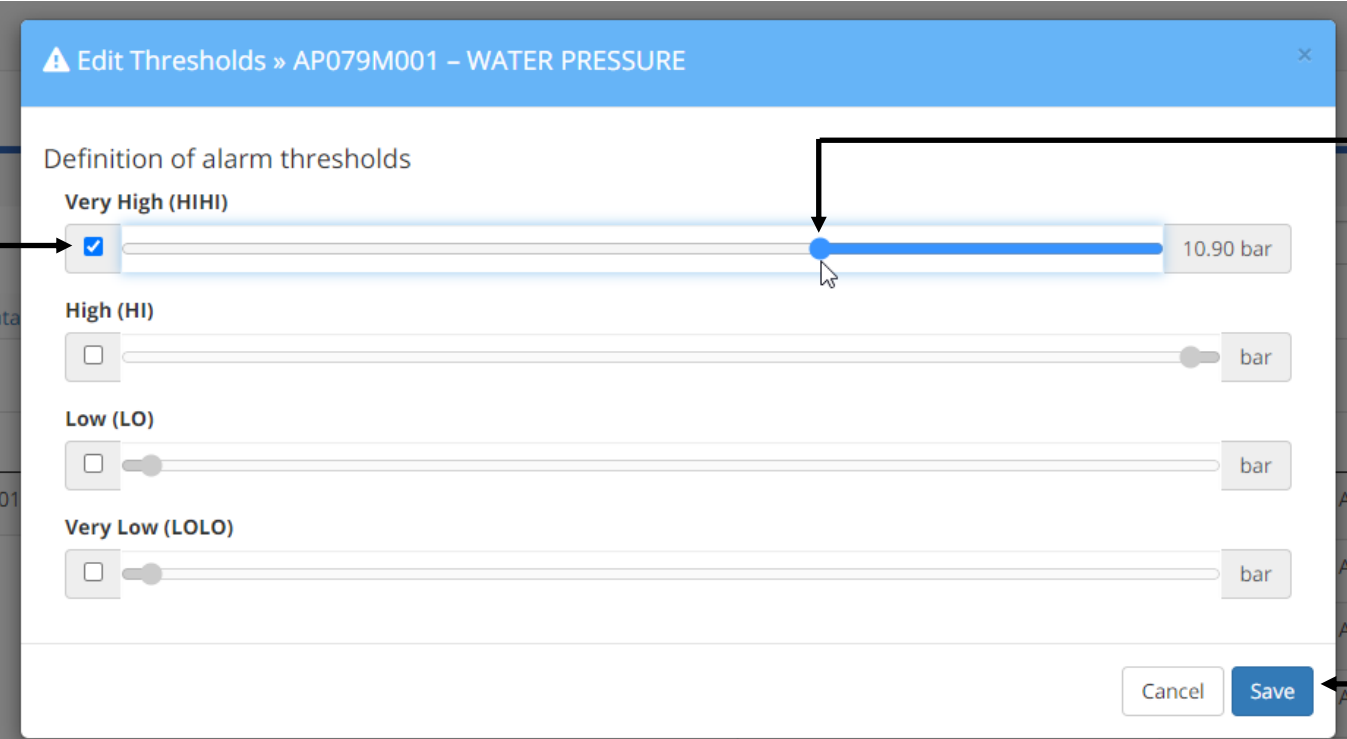
Last sending: **N.A.** - Status: **N.A.**



# Setting the thresholds


Enable one or more thresholds




**Edit Thresholds » AP079M001 – WATER PRESSURE**

Definition of alarm thresholds


**Very High (HIHI)**

☒  10.90 bar


**High (HI)**

☐  bar

**Low (LO)**

☐  bar

**Very Low (LOLO)**

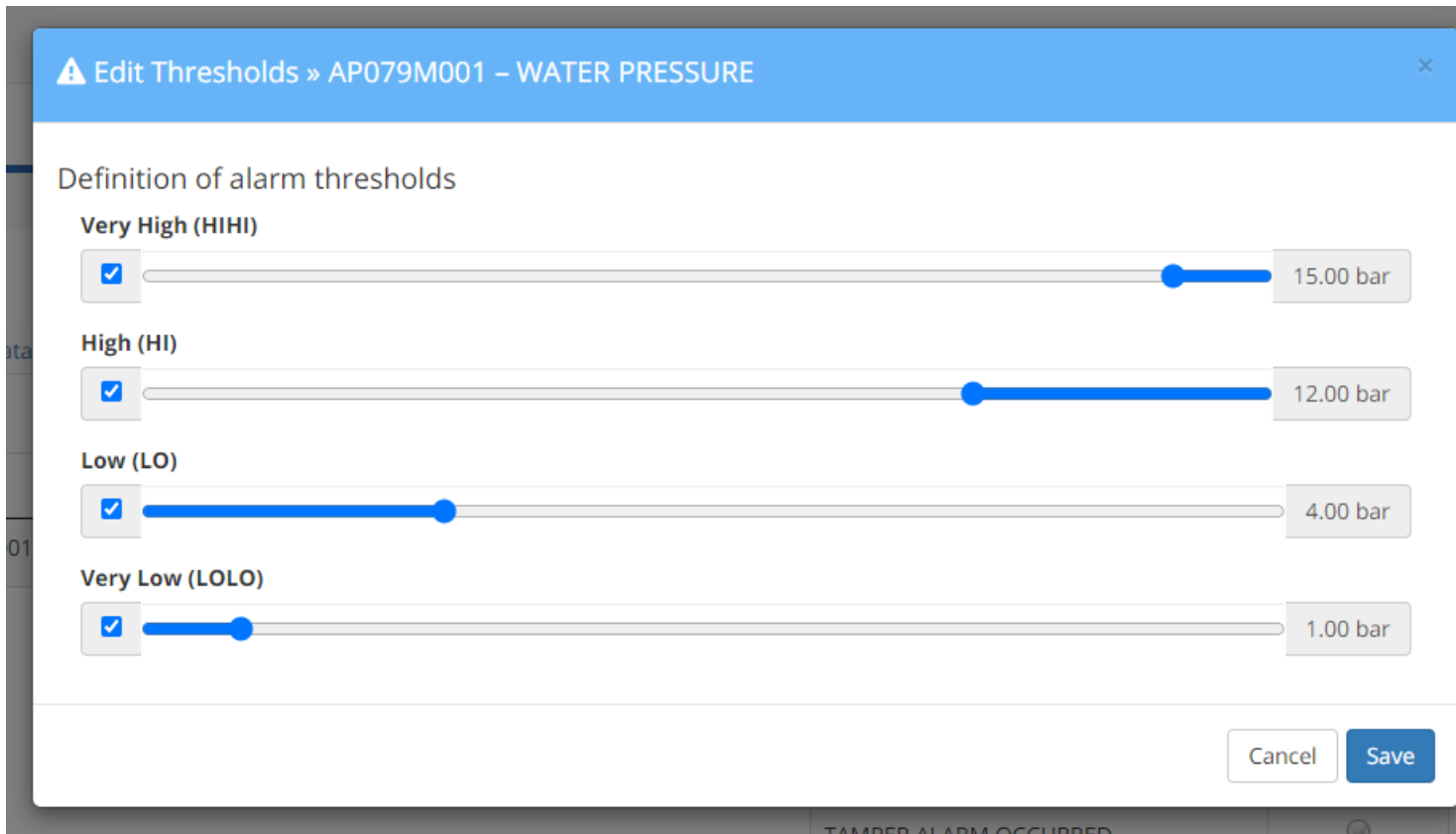
☐  bar

Cancel Save

Move the slider and set the desired threshold  
You can use the left and right key on your keyboard for a fine tuning

Press *Save*

# Example: thresholds



**Edit Thresholds » AP079M001 – WATER PRESSURE**

Definition of alarm thresholds

**Very High (HIHI)**  
☒ 15.00 bar

**High (HI)**  
☒ 12.00 bar

**Low (LO)**  
☒ 4.00 bar

**Very Low (LOLO)**  
☒ 1.00 bar

Cancel Save

- ⬆ Above 15 bar: an HIHI alarm will be triggered
- ⬆ Between 12 and 15 bar: HI alarm
- ✓ Between 4 and 12 bar: no alarm
- ⬇ Between 1 and 4 bar: LO alarm
- ⬇ Above 1 bar: a LOLO alarm

# Management of HIHI, HI, LO, LOLO

- It is possible to set one or more thresholds at the same time
- In case the value is higher than both HI and HIHI thresholds, only the HIHI alarm is triggered
- In case the value is lower than both LO and LOLO thresholds, only the LOLO alarm is triggered
- When the value returns below the threshold or the threshold is deactivated by the user, the alarms are cleared

# Map view

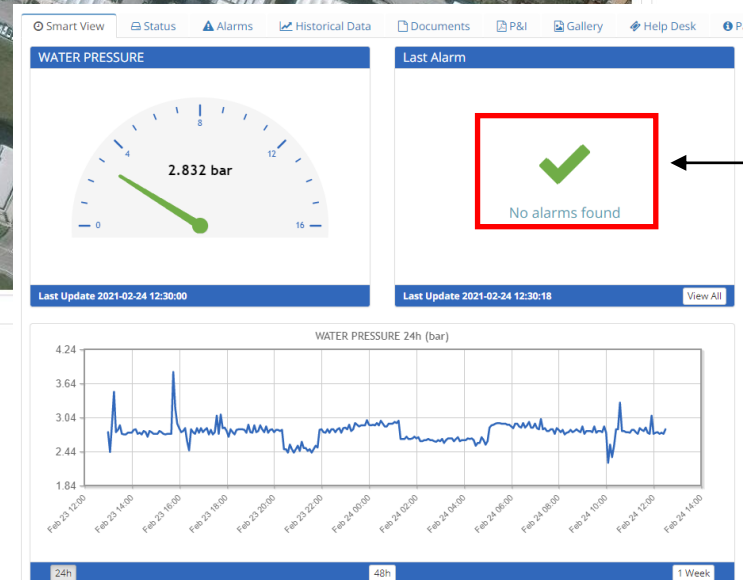
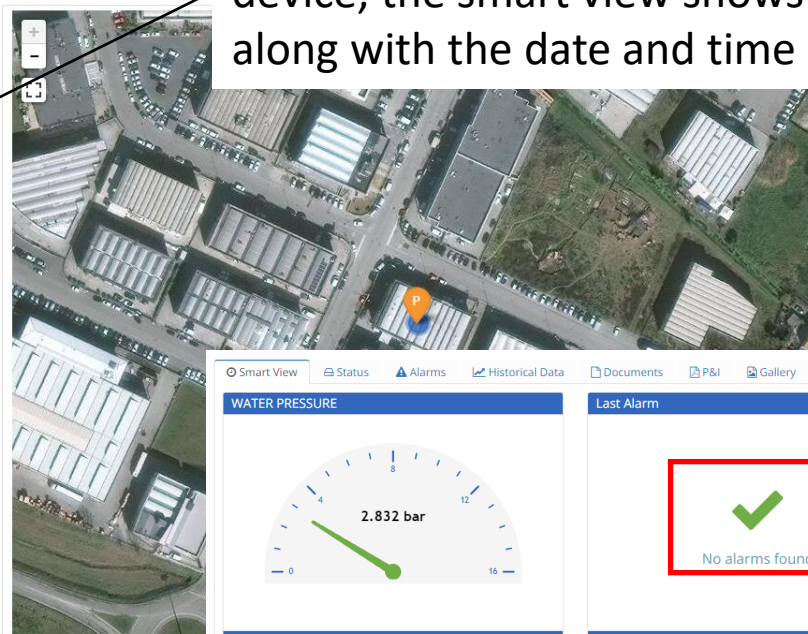
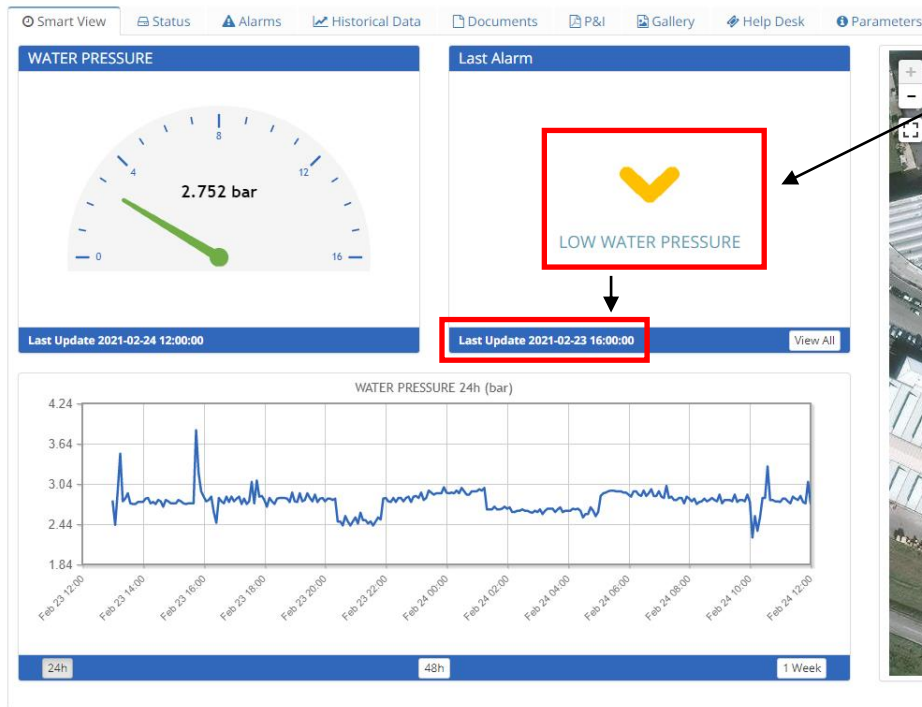


The devices with at least one active alarm are shown in orange on the map

The devices without any active alarm are shown in green on the map

# Smart view

In case one or more alarms are active on the device, the smart view shows the most recent one along with the date and time it was triggered





No alarms

# Device: Alarms tab

The number of active alarms is always shown at the top of the device page

Device 079 - Press PT


Last update 24-02-2021 12:00:18  



Serial Number 3423  
Type VIDI Pressure

Select Rtu

Smart View Status **Alarms** Historical Data Documents P&I Gallery Help Desk Parameters

Attivi




 Show 10 entries

Description	Type	Value	Date	Ack	Tag	Actions
LOW WATER PRESSURE	▼	2.848 bar	2021-02-23 16:00:00		AP079M001	










Showing 1 to 1 of 1 entries

Previous 1 Next

Archivio

  Date Range  Alarm Type Select...

Show 10 entries

Description	Type	Value	Date	Ack	TAG
LOW WATER PRESSURE	▼	2.85 bar	2021-02-23 16:00:00		AP079M001
OK WATER PRESSURE	✓	2.75 bar	2021-02-23 15:30:00		AP079M001
VERY HIGH WATER PRESSURE	⬆	3.36 bar	2021-02-10 11:58:00		AP079M001
OK WATER PRESSURE	✓	2.75 bar	2021-02-10 11:29:00		AP079M001
VERY HIGH WATER PRESSURE	⬆	2.77 bar	2021-02-04 14:58:00		AP079M001
OK WATER PRESSURE	✓	2.72 bar	2021-02-04 11:28:00		AP079M001
VERY HIGH WATER PRESSURE	⬆	2.82 bar	2021-02-04 10:28:00		AP079M001
OK WATER PRESSURE	✓	2.98 bar	2021-02-03 19:28:00		AP079M001
HIGH WATER PRESSURE	⬆	2.83 bar	2021-02-03 09:58:00		AP079M001

List of the alarms which are currently active on the device

Archive of the alarms which were triggered in the past and that now has returned