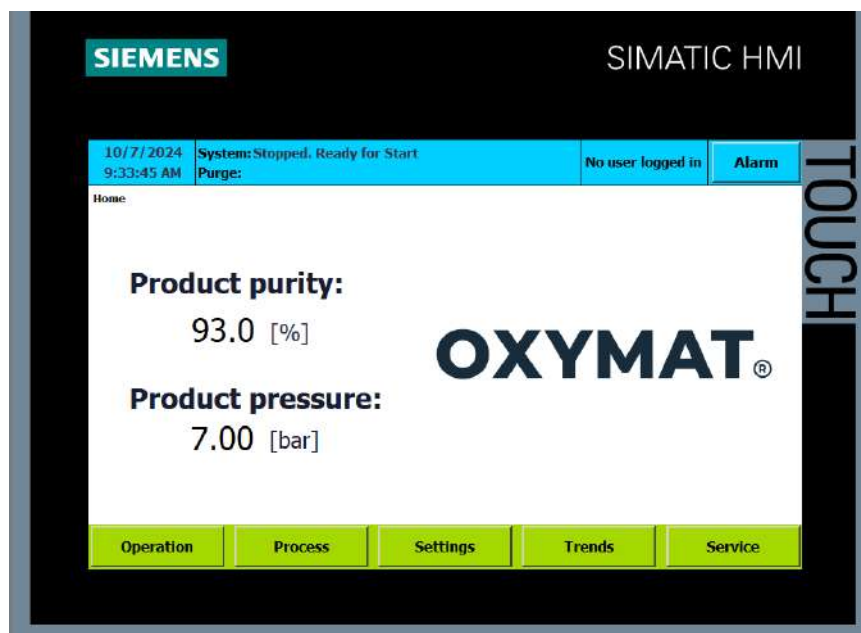




User & Superuser Manual

Touch screen Controller

intelliControl Siemens



Manufacturer:

ACG Air & Gas Solutions SK s.r.o.

Vaňovce 87

916 13 Vaňovce

OXYMAT®

Valid for:

intelliControl Siemens X1-X2

Software version: ≥ 1.09

SIMATIC KTP700 BASIC

SIMATIC TP700 COMFORT

**Siemens SIMATIC HMI KTP700 basic for
standard functionality**



**Siemens SIMATIC HMI TP700 comfort – for
standard functionality + remote control and view**



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1. Safety and responsibility

IntelliControl is manufactured to the latest engineering standards and acknowledged safety regulations. The safety regulations of the PSA Generator manufactured by ACG Air & Gas Solutions SK in which Intellicontrol is installed apply.

1.1. Specified & Improper use

IntelliControl is intended for the control of machines in which is factory-installed. Any other use is considered incorrect. The manufacturer is not liable for any damages that may result from incorrect use. The operator alone is liable for any risks incurred. Improper usage can cause damage to property and/or (severe) injuries to operator or other personnel.

1.2. Safety precautions



Warning: Use IntelliControl only as intended.



Warning: Do not use IntelliControl to control other machines for which is not intended.



Warning: The screen can be damaged if you press too hard or if you strike it with a hard or pointed object.



Warning: The operating temperature shall be between 0°C to +50°C and humidity must not exceed 85% RH (relative humidity). Otherwise, the screen may malfunction, or operating life shortens.



Warning: Do not use in areas with large temperature fluctuations. This can cause condensation inside the screen.



Warning: Do not let water, other liquids, metal or charged particles enter into the screen. This can create an electrical shock.



Warning: Do not use the screen in direct sunlight. The UV rays can cause damage to the screen. Nor in very dusty/dirty environments.



Warning: To avoid impreciseness, keep the screen away from large shocks and excessive vibration.



Warning: Do not use paint thinner or organic solvents to clean the screen.



Warning: Temperature higher or lower than recommended can cause irreversible damage to data.

2. Design and function

IntelliControl controls, regulates, monitors, and protects the PSA Generator.

All parameters and settings needed to operate Oxymat PSA Generator can be set and displayed using the IntelliControl. Various customer dependent password mechanisms protect the parameters.

2.1. Main components

IntelliControl has the following components:

- Enclosure
- Siemens PLC – industrial PC
- Siemens HMI – user interface

2.2. Function

The control and regulating functionality allows:

Control of the PSA Generator by HMI Touch screen

Setting parameters of process, e.g. pressure

Automatic stand by mode.

The monitoring functionality allows:

Monitoring of PSA process parameters, e.g. pressure, purity and temperature

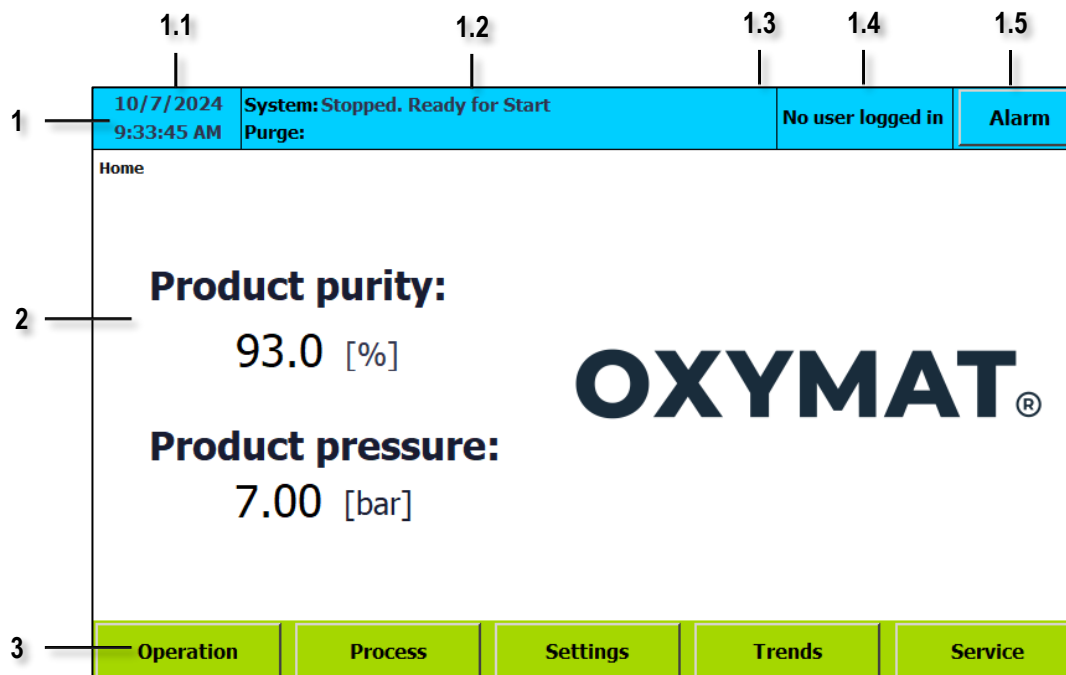
Displaying warning alarms

The protective functionality allows:

Automatic shutdown on alarms that may lead to damage to the machine,

3. Home

The home screen is the screen that is shown automatically when the PSA Generator is powered up.



Ref.	Designation	Function
1	Information bar	
1.1	Date & Time information	Shows screen time. Can be tapped to change time and date.
1.2	PSA status	PSA System and purge status information PSA status information. It is divided into two sections, System and Purge, (Purge is available only when Purity control addon is purchased) See chapter 3.1 & 3.2
1.3	LOG/SRVS	Indicates when Logging is inactive when grey Logging is active when bright green Service mode is active SRVS displayed
1.4	Log-in information	Shows information about user and can be tapped to change user.
1.5	PSA Alarm information	Blue = no active alarms, Flashing red = active alarm present, Can be tapped to see active alarms and alarm history. See chapter 9. Alarms
2	Screen specific content	Specific for each screen, Home screen shows Product purity & pressure
3	Buttons bar	Accessible touch buttons (black text on green background), Can be tapped to view specific screen. Operation is described in Chapter 4 Process is described in Chapter 5 Settings is described in Chapter 6 Trends is described in Chapter 7 Service is described in Chapter 8

3.1. System status

Ref.	Status	Function
1	Stopped. Ready for start	Default state when PSA Generator is turned off and is ready for start
2	Stopped. Cannot Start	Default state when PSA Generator is turned off and cannot be started because alarm (A and C alarm type) is present. See chapter Alarm 9. For more details
3	Starting air pack	Air pack starting See chapter Process settings 6.2 Air pack control
4	Filling air tank	When PSA Generator is started compressor is filling air tank, when setpoint is reached, starting sequence continues with ref. 5
5	Equalizing PSA columns	Equalizing pressure in PSA Generator columns
6	Running normally	PSA Generator running normally
7	Standby mode	PSA Generator is in standby mode. See chapter Advanced settings 6.5 Standby mode
8	Remote started – Running normally	PSA Generator running normally – started by remote digital input
9	Remote started – Standby mode	PSA Generator is in stand by mode – started by remote digital input
10	Stopping after PSA sequence	Stopping PSA Generator, manual stop or by Alarm (type C)

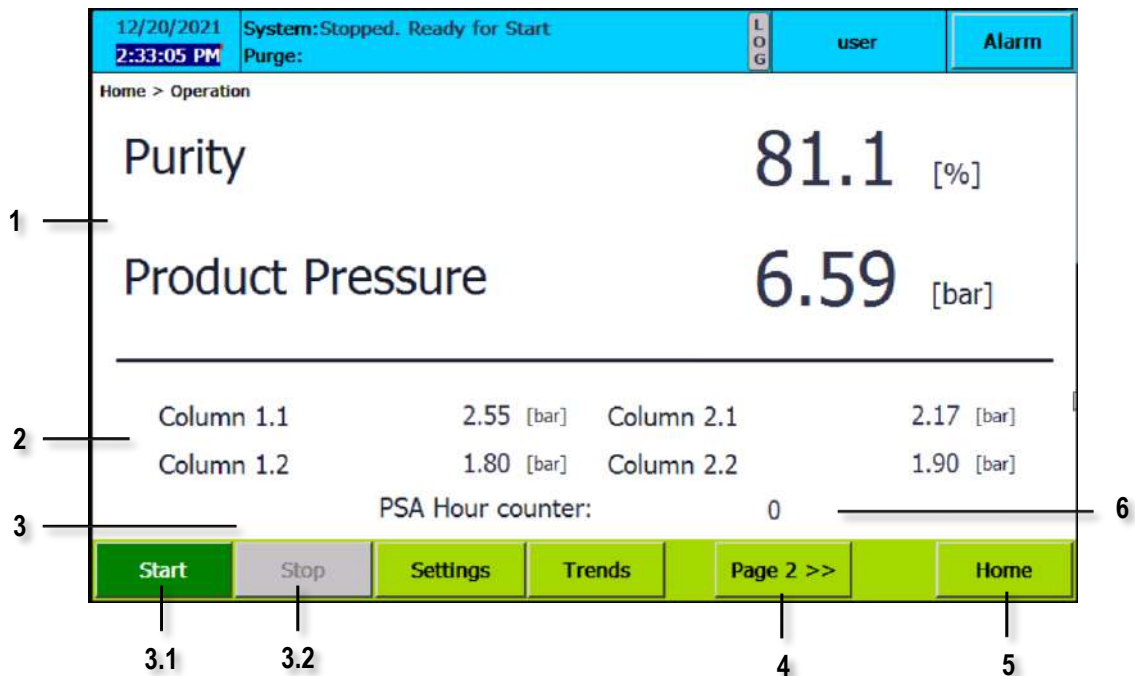
3.2. Purge status

For details about Purity control settings, see chapter 6.5 Advanced settings

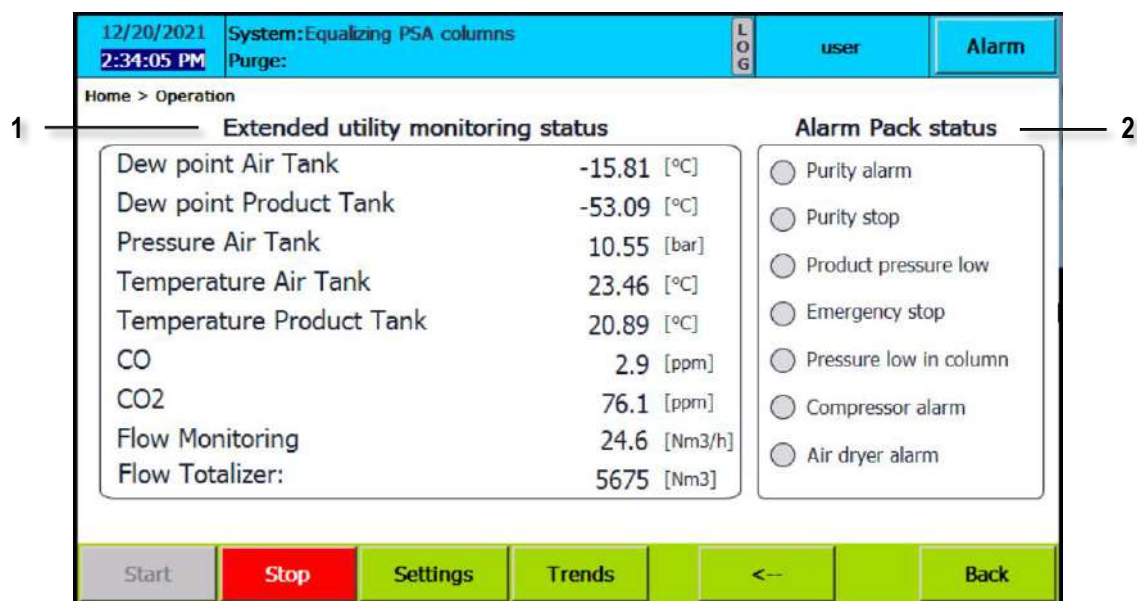
Ref.	Status	Function
1	Purging	Purge valve is opened, delivery valve is closed.
2	Delivering	Delivery valve is opened, Purge valve is closed.
3	Waiting for min. pressure	Purity control is waiting for minimum pressure in product tank.
4	(No text)	Purity control addon is not purchased

4. Operation

Tapping the operation button on home screen leads to operation where PSA starting and stopping is operated. When the PSA is powered up the first time or if there has been a power failure, the oxygen, nitrogen sensor will need to heat up to measure correct. As long as they are doing that, the readings can be incorrect (several seconds).



Ref.	Designation	Function
1	Product parameters	Shows information about purity & pressure in product tank
2	Column pressures	Shows information about pressure in both PSA generator columns. Respectively in four if PSA Generator is X2 version.
3	PSA Start & Stop	Start & Stop of the PSA Generator
3.1	Start	Green when PSA is not running Grey when PSA is running Can be tapped to start
3.2	Stop	Grey when PSA is not running. Red when PSA is running Can be tapped to stop
4	Log-in information	Can be tapped to move to page 2 of Operation screen
5	Home	Can be tapped to return to Home screen
6	PSA Hour counter	PSA running hours counter

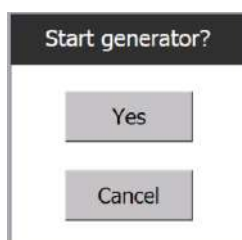


Ref.	Designation	Function
1	Extended utility monitoring status	Addon that extends monitoring to additional instruments Visible only when extended utility monitoring addon is purchased
2	Alarm pack status	Addon that indicates alarms for customer Visible only when alarm pack addon is purchased

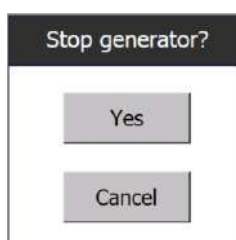
4.1. PSA generator Start & Stop

It is possible to start the PSA when no critical or high level alarms are active. tap "Start" button to start PSA. Small box appears with confirmation statement: „Start generator? “

To stop generator tap stop button. Again small box appears with confirmation statement: „ Stop generator? “. It is not possible to restart during the stopping sequence. The text "Stopping" is shown on the Information bar.



Pop up screen when starting PSA generator



Pop up screen when stopping PSA generator

4.2. Start & Stop in service mode

! Service mode is dedicated for service personnel & troubleshooting only.

It is possible to start the PSA in service mode when no critical alarms are active. Go to **Settings/Advanced (Chapter 6.5)** and press "Service mode" ON.

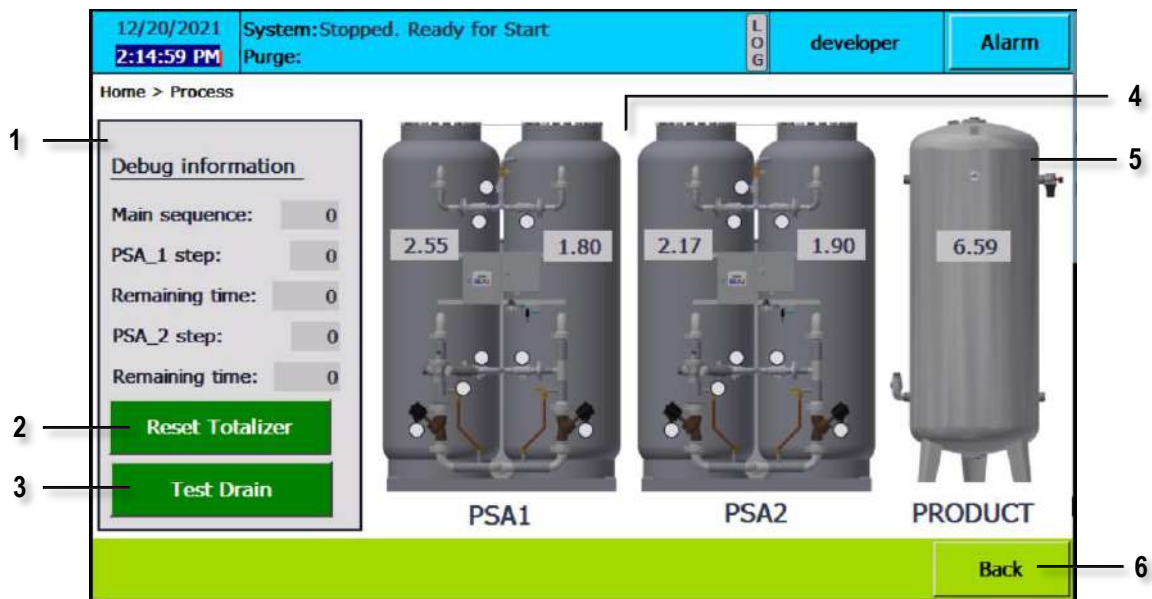
To stop service mode, press button OFF. Than start/stop generator as is described above (Start generator).

It is not possible to restart during the stopping sequence (the text "Stopping") is shown on the Information bar. It is possible to switch service mode during running generator. **To start service mode the operator must log in as superuser.**

! Pressure stop/restart function, high and low alarms are bypassed in service mode.

5. Process

Tapping the Process button on home screen leads to Process screen where Process overview can be observed including basic debugging information.

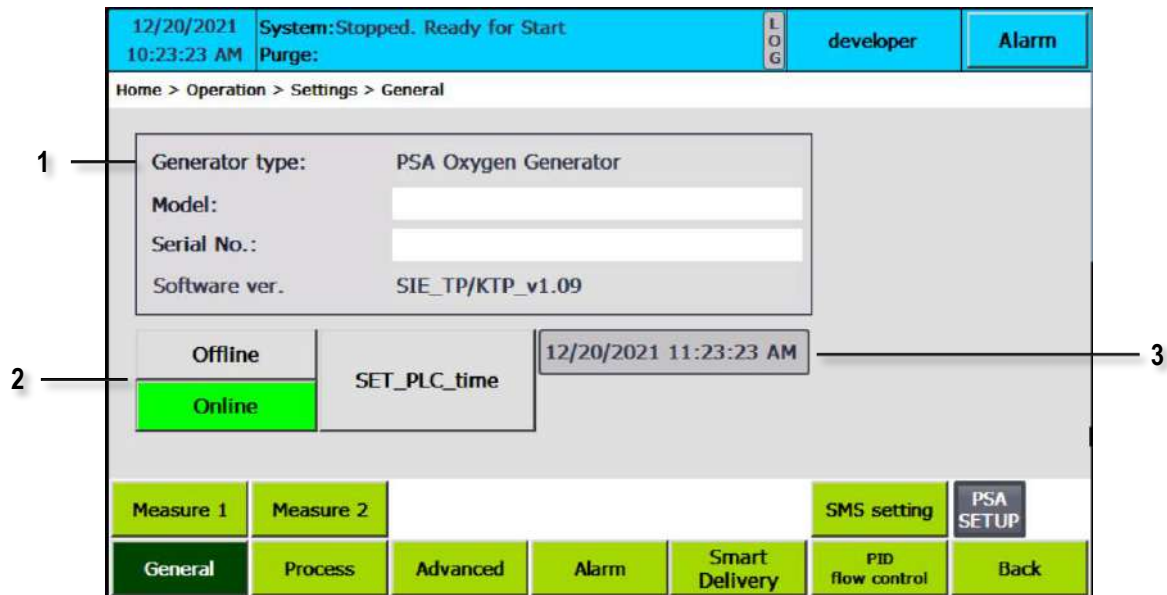


Ref.	Designation	Function
1	Debug information	Shows information about currently running process times
2	Reset totalizer	Can be tapped to reset flow totalizer
3	Test Drain	Can be tapped to test drain valve functionality located in the air tank
4	PSA Process information	Shows PSA1 column pressures and indicates opened valve with green dot If PSA generator is X2 version, shows also PSA2
5	Product tank process information	Shows Product tank pressure
6	Back	Can be tapped to return back

6. Settings

Settings is the place where PSA Generator can be configured. It has lot of sub-screens, tapping the Settings button on home screen leads to sub screen visited previously.

6.1. General settings



Ref.	Designation	Function	
1	PSA Generator factory information	Shows information about PSA Generator factory info such as model and serial number, software version.	
2	PLC Time information	Green Online indicates, that connection is established, Offline button can be tapped to disconnect.	Offline Online
		Red Offline indicates, that connection is not established. Online button can be tapped to connect.	Offline Online
		SET_PLC_time can be tapped to set PLC time to current display time. To see more about screen time please refer to Home screen.	SET_PLC_time
3	Current PLC time/date information	Shows information about current PLC time and date, Note: PLC time/date can be different compared to screen time/date	

6.2. Process settings

1/13/2022 3:49:30 PM System: Stopped. Ready for Start
Purge: LOG user Alarm

Home > Operation > Settings > Process

1 Process Times Settings:

- Inlet time [s]: 6
- Top Equalization time [s]: 4
- Bottom Equalization time [s]: 0
- Enter Password to change Times !

2 Air Pack Control:

- ☐ OFF Air dryer used
- ☐ OFF Compressor used
- Air dryer start delay [s]: 0
- Compressor start delay [s]: 0

3 Drain Settings:

- Drain interval [min]: 5
- Drain time [s]: 3

4 Use drain in STOP mode:

- ☐ OFF Drain interval [min]: 30
- ☐ OFF Drain time [s]: 3

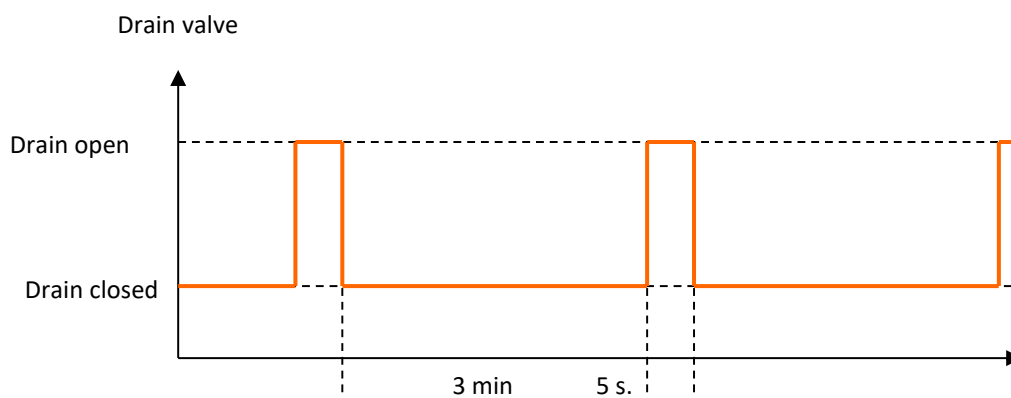
2.1 Air dryer start delay [s]: 0

Measure 1 Measure 2 SMS setting

General Process Advanced Alarm Smart Delivery PID flow control Back

Ref.	Designation	Function
1	Process times Settings	The process time values are controlling the basic functionality of the PSA. Process settings are pre-set during test generator by test engineer and only with permission from Oxymat can be changed.
2	Air pack control	Shows information about Air pack. Can be tapped to enable/disable Air dryer or compressor. (remote stop/start, run/alarm signal). Devices must be connected. OFF- device is disabled ON- device is enabled
2.1	Air pack delay	Shows information, about start delays for each device of Air pack. Can be tapped to change start delay of Air compressor or Air dryer
3	Drain Settings	Shows drain valve settings, Can be tapped and changed.
4	Drain in Stop mode	Enable disable draining during Stop mode, Intervals can be changed

This example uses the drain valve operation with 3 min interval and 5 sec open time for drain valve. The drain function always starts with an open period.



6.3. Measure 1 settings

12/20/2021 2:13:15 PM System: Stopped. Ready for Start
Purge: LOG developer Alarm

Home > Operation > Settings > Measure 1

	Low range	High range	Actual Value
Purity [%]	0.0	96.0	81.4
Pressure Product Tank [bar]	0.00	16.00	6.59
Pressure Column 1.1 [bar]	0.00	16.00	2.55
Pressure Column 1.2 [bar]	0.00	16.00	1.80
Pressure Column 2.1 [bar]	0.00	16.00	2.17
Pressure Column 2.2 [bar]	0.00	16.00	1.90

Measure 1 Measure 2 SMS setting PSA SETUP

General Process Advanced Alarm Smart Delivery PID flow control Back

Ref.	Designation	Function
1	Measurements	Shows list of basic measurements. Column 2.1 & 2.2 is only available for X2 PSA generator
2	Measurements range	Can be tapped to change Low and High range
3	Actual values	Shows actual value of the measurements

6.4. Measure 2 settings

12/20/2021 9:56:45 AM System: Stopped. Ready for Start
Purge: LOG user Alarm

Home > Operation > Settings > Measure 2

	Low range	High range	Actual Value
☒ Air Tank Pressure [bar]	0.00	16.00	10.56
☒ Air Tank Temperature [°C]	0.0	100.0	23.5
☒ Air Tank Dew Point [°C]	-80.0	+20.0	-15.8
☒ Product Flow [Nm3/h]	0.0	85.0	24.7
☒ Product Tank Temperature [°C]	0.0	100.0	20.9
☒ Product Tank Dew Point [°C]	-80.0	+20.0	-53.1
☒ Product CO [ppm]	0.0	65.0	2.9
☒ Product CO2 [ppm]	0.0	1250.0	76.1

Measure 1 Measure 2 SMS setting

General Process Advanced Alarm Smart Delivery PID flow control Back

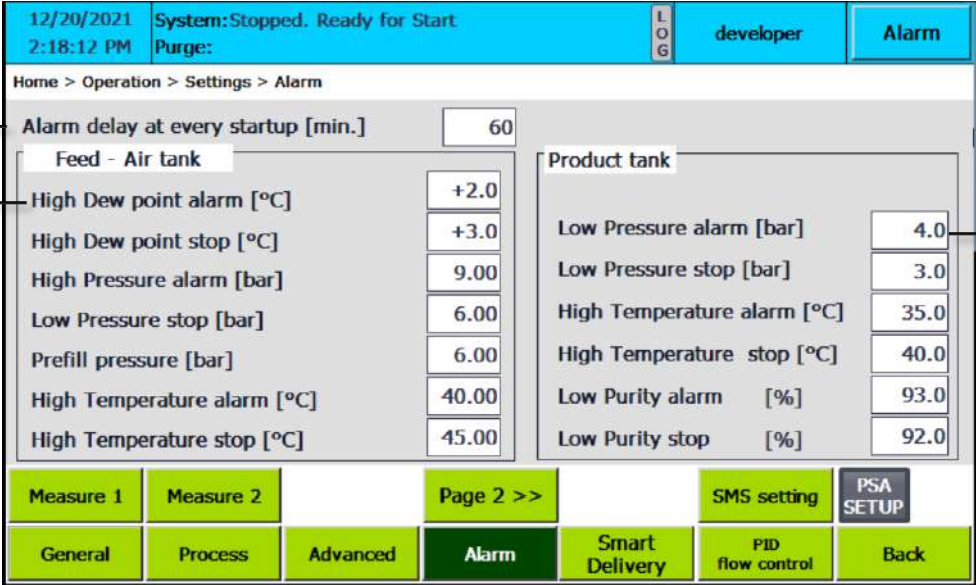
Ref.	Designation	Function
1	Utility monitoring Measurements	Shows List of measurements available only with utility monitoring add-on. Square can be tapped to disable measurement
		☒ Enabled measurement
		☐ Disabled measurement
2	Measurements range	Can be tapped to change Low and High range
3	Actual values	Shows actual value of the measurements

6.5. Advanced settings

Ref.	Designation	Function
1	Standby settings	Shows information about PSA Generator factory stand by settings. Can be tapped to change stand by pressure, restart pressure and minimum cycles required before going into standby. When the pressure reaches the pressure stop level, then the PSA goes into stand-by mode and wait for the pressure to drop below the pressure restart level. Then the PSA will start again automatically. The standby mode will be cancelled if purge valve is opened.
2	Temporary password	Temporary password can be inserted. With temporary password superuser is able to enable purity control functionality (Ref. 3) or Enable/disable one of the PSA generators X2 version only (Ref. 4). Contact Oxymat service for password.
	Purity control temporary enabler	Purity control is an addon and enable when purchased. In case of purchase after delivery it can be activated by temporary password. Upon inserting temporary password, enabler is displayed
3	Purity control settings	Can be tapped to change thresholds of purity control and minimum pressure required for purity control functionality PSA Oxygen generator If the purity reading drops below the “Purge start” value and the pressure in the product tank is above “Min Purge Pressure” then the purge function opens the purge valve and closes the delivery valve. The system automatically calculates the purity and pressure levels where the delivery valve is opened again. PSA Nitrogen generator

		If the purity reading exceeds the “Purge start” value and the pressure in the product tank is above “Min Purge Pressure” then the purge function opens the purge valve and closes the delivery valve.	
4	X2 PSA Generator temporary selector	Can be tapped to enable PSA1 or PSA2	
5	AutoStart after power failure	This feature allows the control to start automatically after power failure. When the power is recovered, then a special “recover” sequence is started and the control will try to start again.	
6	Service mode	When no critical alarms are active, is possible to start the PSA in service mode. Consider that the pressure stop/restart function, high and low alarms are bypassed in service mode	
7	Stop runtime	Can be tapped to stop runtime and access Desktop and Start Center of the Siemens HMI. It is used to access IP settings of the HMI or configuration of Remote control view. See chapter 11 for more details	

6.6. Alarm settings page 1 & 2



The screenshot shows the 'Alarm' settings page. At the top, there's a status bar with the date '12/20/2021', time '2:18:12 PM', system status 'System: Stopped. Ready for Start', and user 'developer'. Below this is a breadcrumb trail: 'Home > Operation > Settings > Alarm'. The main content area is divided into two sections: 'Feed - Air tank' and 'Product tank'. The 'Feed - Air tank' section has a list of alarms with their setpoints and stop values. The 'Product tank' section has a similar list. At the bottom, there's a navigation bar with buttons for 'Measure 1', 'Measure 2', 'Page 2 >>', 'SMS setting', 'PSA SETUP', 'General', 'Process', 'Advanced', 'Alarm' (highlighted), 'Smart Delivery', 'PID flow control', and 'Back'.

Ref.	Designation	Function
1	Alarm delay	At every startup alarms are not active for preset period of time. Can be tapped to change.
2	Changeable Alarms	Complete list of changeable alarms is divided into two pages.
3	Alarm setpoints	Alarm setpoints are factory preset. Can be tapped to change these settings.

6.7. Smart delivery

Smart delivery is applicable only for PSA Oxygen Generators

12/20/2021 10:08:36 AM System: Stopped. Ready for Start Purge: LOG user Alarm

Home > Settings > Smart Delivery

Use Smart Delivery ☒

Min. Delivery Time [s] 5

Max. Delivery Time [s] 16

Pressure at max. Delivery [bar] 0.0

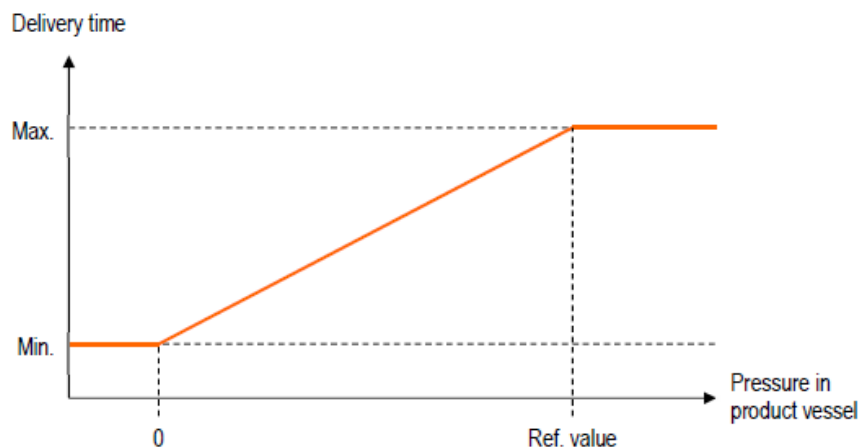
Calculated Delivery [s] 5

Enter Password to enable Smart Delivery settings !

Measure 1 Measure 2 SMS setting

General Process Advanced Alarm Smart Delivery PID flow control Back

Ref.	Designation	Function
1	Smart delivery settings	Smart delivery settings are preset by Oxymat. Adjustment is not possible. The actual delivery clip time is calculated based on the actual pressure in the product vessel. When the pressure is 0 (zero), then the minimum clip value is used. When the pressure reaches the reference pressure (or above), then the maximum value is used. In between 0 (zero) and the reference pressure, then the clip time is calculated based on the linear function shown below.
2	Temporary password	When Logged as superuser and temporary password provided by Oxymat, smart delivery can be disabled and altered. (Diagnostic purpose only)



6.8. PID Flowcontrol

The screenshot shows the 'PID' settings screen. At the top, a status bar displays the date/time (12/20/2021 2:20:32 PM), system status (System: Stopped. Ready for Start), purge status (Purge:), a log button, user name (user), and an alarm button. Below this is a breadcrumb trail: Home > Operation > Settings > PID. The main area is divided into two sections. The top section, labeled '1', shows the 'PID Controller status' as 'Automatic'. Below this, labeled '2', are three input fields: 'Flow [Nm3/h] Setpoint' (50), 'Flow [Nm3/h] Input' (25), and 'Regulation value on Valve [%]' (0). To the right of these fields is a 'Manual mode ON' button (labeled '4') and a 'Manual Regulation value [%]' field (50). The bottom section, labeled '3', shows 'PID parameters' with three input fields: 'P (gain)' (0.02), 'I (integr. time)' (3.00), and 'D (deriv.time)' (0.94). To the right of these are 'Reset Controller' and 'Restart Controller' buttons (labeled '5'). Below the parameters is an 'Error code' field showing '00000000' (labeled '6'). At the bottom of the screen is a navigation bar with buttons: 'Measure 1', 'Measure 2', 'SMS setting', 'General', 'Process', 'Advanced', 'Alarm', 'Smart Delivery', 'PID flow control' (highlighted), and 'Back'.

Ref.	Designation	Function
1	PID controller status	Shows status of the PID controller. Automatic or Manual. In Automatic mode, controller works according to the Flow setpoint with PID parameters active In Manual mode, the valve % open must be manually set. (See Ref. 3)
2	Flow setpoint	Shows setpoint of the Flow, can be tapped to change (Automatic mode only). Shows also Flow input and % valve open.
3	PID parameters	proportional, integral, and derivative settings of the controller, Can be tapped to change.
4	Manual mode	Can be tapped to switch between Manual and Automatic mode. the valve % open can be set
5	PID reset	Reset Controller- clears error code Restart Controller- restart of automatic mode for specific time
6	Error code	Diagnostic tool

6.9. SMS setting

The screenshot shows the 'SMS' configuration page. At the top, a status bar displays the date '12/20/2021', time '10:28:22 AM', system status 'System: Stopped. Ready for Start', a 'Purge:' button, a 'LOG' button, the user 'developer', and an 'Alarm' button. Below this is a breadcrumb trail: 'Home > Operation > Settings > SMS'. The main area is divided into two sections. The left section, labeled 'SMS centre', contains a 'Send alarm broadcast messages to first numbers' label, a text input field with the value '1', and an 'Accepted SMS setting' button. The right section is a table with columns 'Name' and 'Phone'. It contains five rows of data, each with a 'Test' and 'Delete' button. The bottom of the screen features a navigation bar with buttons: 'Measure 1', 'Measure 2', 'SMS setting' (highlighted with a red circle), 'General', 'Process', 'Advanced', 'Alarm', 'Smart Delivery', 'PID flow control', and 'Back'. Numbered callouts 1 through 6 point to specific elements: 1 points to the 'SMS centre' label, 2 points to the 'Send alarm broadcast' label, 3 points to the 'Accepted SMS setting' button, 4 points to the 'SMS' title in the breadcrumb, 5 points to the 'Test' button in the first row of the table, and 6 points to the 'SMS setting' button in the navigation bar.

SMS centre		Name	Phone	Test	Delete
		oxymat	+421912123456	Test	Delete
		insert name 2 here	insert number 2 here	Test	Delete
		insert name 3 here	insert number 3 here	Test	Delete
		insert name 4 here	insert number 4 here	Test	Delete
		insert name 5 here	insert number 5 here	Test	Delete

Navigation bar: Measure 1, Measure 2, SMS setting, General, Process, Advanced, Alarm, Smart Delivery, PID flow control, Back

Ref.	Designation	Function
1	SMS centre	SMS centre number of your provider, Can be tapped to insert
2	Alarm broadcast	Shows for how many numbers alarms are sent. Can be tapped to modify
3	Accepted SMS settings	Every change of the settings must be applied with this button.
4	Name/Phone	Shows information about names and phones. Can be tapped to insert up to 5 names with numbers. recipients in the list can send SMS commands to intelliControl - Siemens.
5	Test/Delete	Test –send test SMS to recipient Delete – delete name/number
6	Send SMS status	 sending text message
		 text message send
		 text message sending error

Before first using insert *unlocked* SIM card.

It is possible sends a text message containing alarm information to any cell phones, but extended with SMS control. System can receive a text message containing control information.

Users in the user list are able to send SMS commands to intelliControl – Siemens:

[illegible]

Example: `#status#(sender phone number)`

7. Trends

Trends is the place where PSA Generator recent history parameters development can be viewed. It is divided into six sub-screens. Availability of trends is limited to purchased instruments

Column pressure –pressure measurements in the PSA generator columns

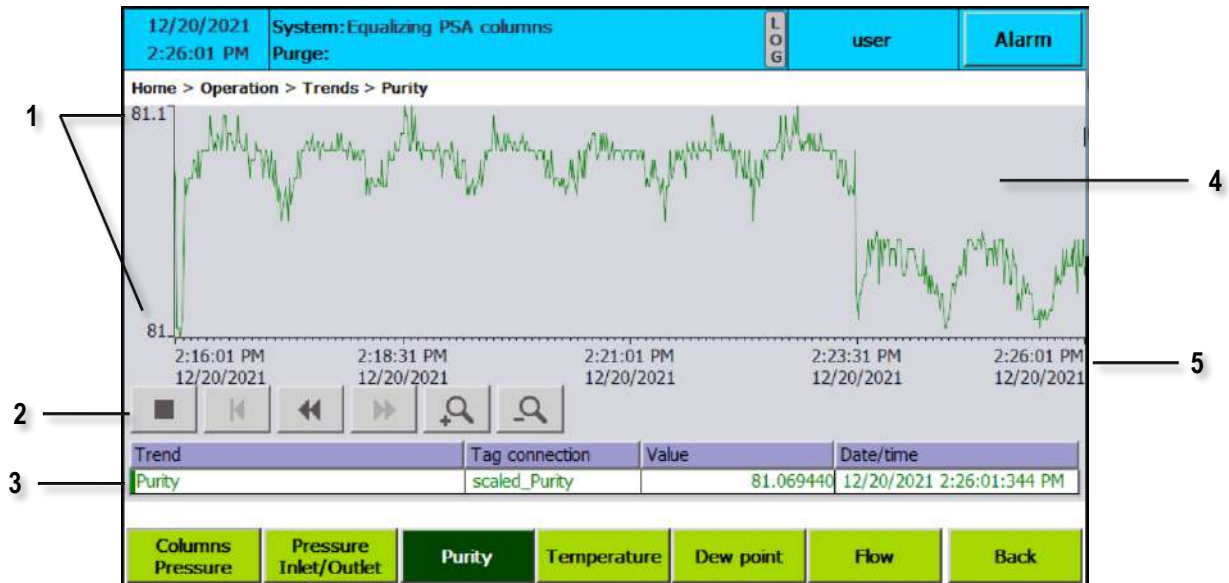
Pressure inlet/Outlet – pressure measurements in the Air tank and Product tank

Purity – Oxygen content measurement in the Product tank

Temperature – temperature measurements in the Air tank and Product tank

Dew point - moisture measurements in the Air tank and Product tank

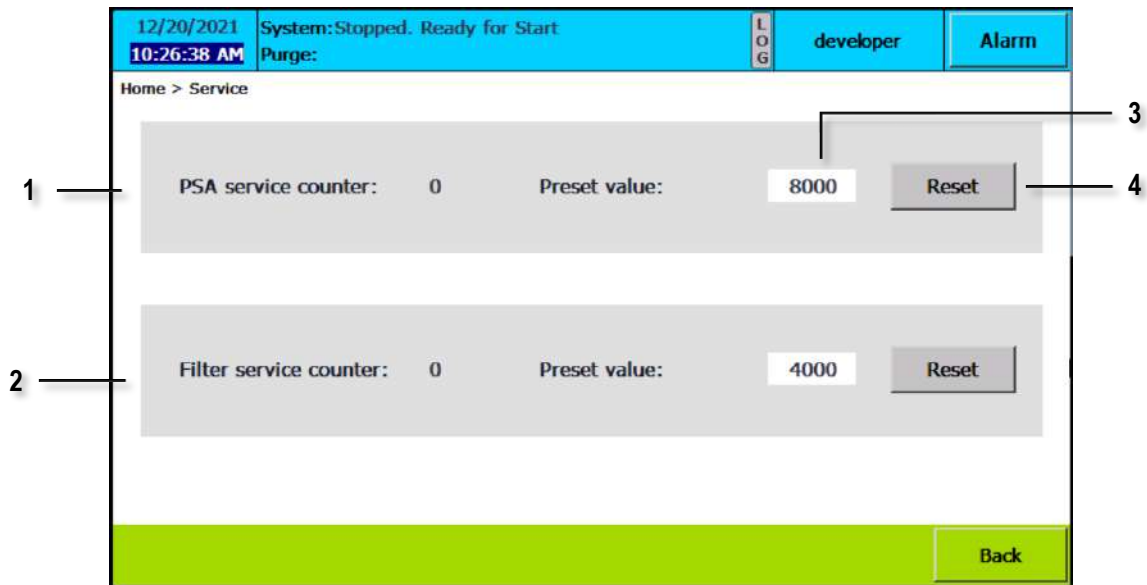
Flow - flow measurement of product



Ref.	Designation	Function
1	Auto changeable limits for trend (Axis Y)	Units are according to the measurements screen. See chapters 6.3 & 6.4
2	Trend view	Can be tapped to stop trend curve view forward & backward or zoom in & out
3	Trend name	Trend(s) name and color designation
4	Actual trend	Actual trend view
5	Time (Axis X)	Time & date in actual view

8. Service

Service is the place where PSA Generator service inspection intervals can be viewed and reset

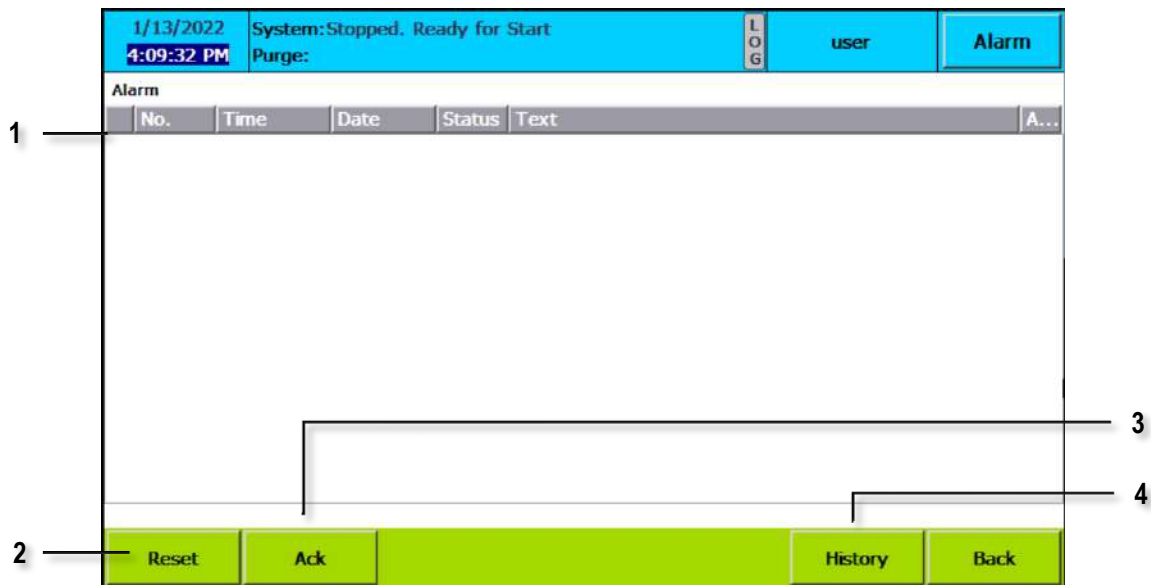


Ref.	Designation	Function
1	PSA service counter	Counter of running hours for PSA Generator maintenance
2	Filter service counter	Counter of running hours for Filter cartridge maintenance
3	Pre-set running hours	8000 hours for PSA Generator and 4000 hours for Filter is factory pre-set. Can be tapped to change this value
4	Reset counter	Can be tapped to reset current service counters

Both service counters are descending from pre-set value to 0, and when it is reached, service maintenance is required.

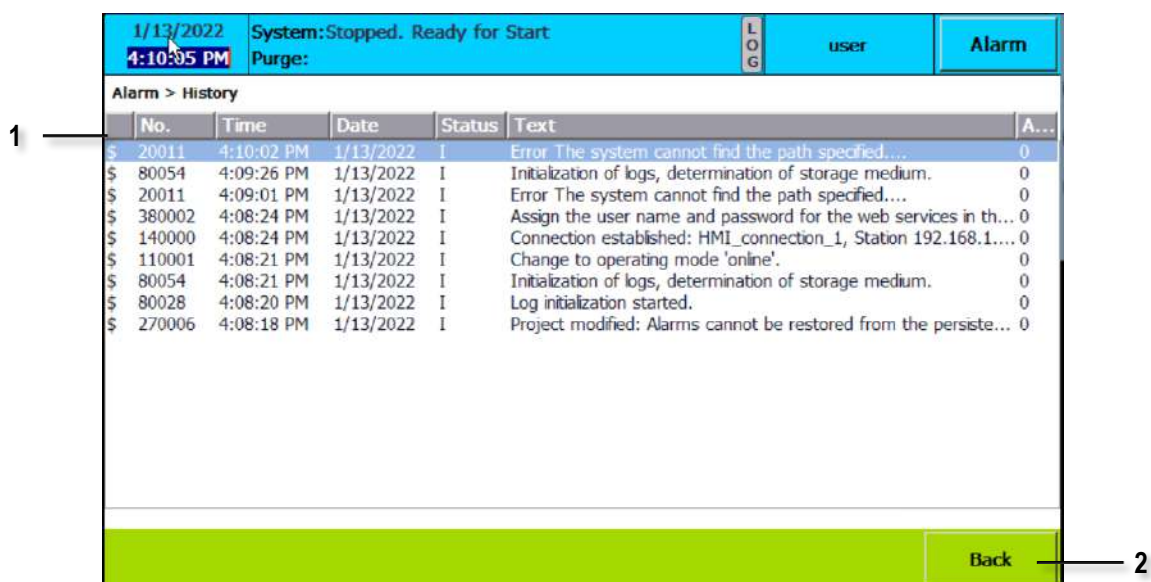
9. Alarm

Tapping the Alarm button on home screen leads to Active Alarms screen, where alarms can be reset, acknowledged or history can be viewed.



Ref.	Designation	Function
1	List of active alarms	Shows active alarms, when occurred, with short text information
2	Reset	Can be tapped to reset alarm
3	Acknowledgement	Can be tapped to acknowledge alarm for which is acknowledgement needed before reset
4	Alarm History	Can be tapped to see Alarm history screen (chapter 9.1)

9.1. Alarm history



Ref.	Designation	Function
1	Alarm history list	Shows history of alarms/events occurred
2	Back	Can be tapped to return

9.2. Alarm List & philosophy

The alarms are grouped into three categories. Quick stop alarms will stop the PSA immediately. Delayed stop (with equalization of PSA or after PSA sequence) alarms will perform a controlled stop and Indicative alarms does not affect the PSA sequence and can be considered as a message.

Alarm type: X,Y

A: Quick stop. (X)

B: Quick stop with equalization of PSA. (X)

C: Stop after PSA sequence. (X)

D: No stops only indicative. (X)

Y=1, Acknowledgment is required to reset the alarm. (Y)

Y=0, Acknowledgment is not required to reset the alarm. (Y)

Digital alarms		Broken Wire Alarms	
Alarm Type	Alarm text	Alarm Type	Alarm text
A1	Emergency stop	C1	Product dew Point BWA
D0	Alarm on Compressor	C1	Air Tank dew Point BWA
D0	Alarm on Dryer	C1	Purity BWA
C1	UPS – Running on Battery	C1	CO BWA
D1	UPS - Alarm	C1	CO2 BWA
D0	PSA Filter Service required	C1	Product Pressure BWA
D0	PSA Filter Service Warning 1	C1	Flowmeter BWA
D0	PSA Filter Service Warning 2	D1	Column 1.1 pressure BWA
D0	PSA Service required	D1	Column 1.2 pressure BWA
D0	PSA Service Warning 1	D1	Column 2.1 pressure BWA
D0	PSA Service Warning 2	D1	Column 2.2 pressure BWA
D0	Alarm on BEKO drain 1	D1	Air pressure BWA
D0	Not PSA selected in X2 Mode	D1	Air temperature BWA
D1	Start after Power Failure	D1	Product temperature BWA

Analogue Alarms			
Alarm Type	Alarm text	Alarm Type	Alarm text
D1	Product Purity Alarm	D1	Air Tank Dew Point Alarm
C1	Product Purity Stop	C1	Air Tank Dew Point Stop
D1	Product Low Pressure Alarm	D1	Product Dew Point Alarm
C1	Product Low Pressure Stop	C1	Product Dew Point Stop
D0	Pressure Low Column 11	D1	Product Temperature Alarm
D0	Pressure Low Column 12	C1	Product Temperature Stop
D0	Pressure Low Column 21	D1	OverFlow
D0	Pressure Low Column 22	D1	CO Alarm
C1	Air Tank Pressure Low	C1	CO Stop
D0	Air Tank Pressure High	D1	CO2 Alarm
D1	Air Tank Temperature Alarm	C1	CO2 Stop
C1	Air Tank Temperature Stop		

10. Access levels

Operator can log in anytime by tapping user information in information bar (see home screen for details). Or when tapping a password protected item, a Login screen pops up. The Operator can enter the password.

As default 4 levels are implemented:

Level	login	password	Function
1	Guest / not logged		Monitor
2	user	4021	Monitor & Operate
3	superuser	182087	SuperOperate
4	developer	available only for Oxymat personnel	DeveloperOperate

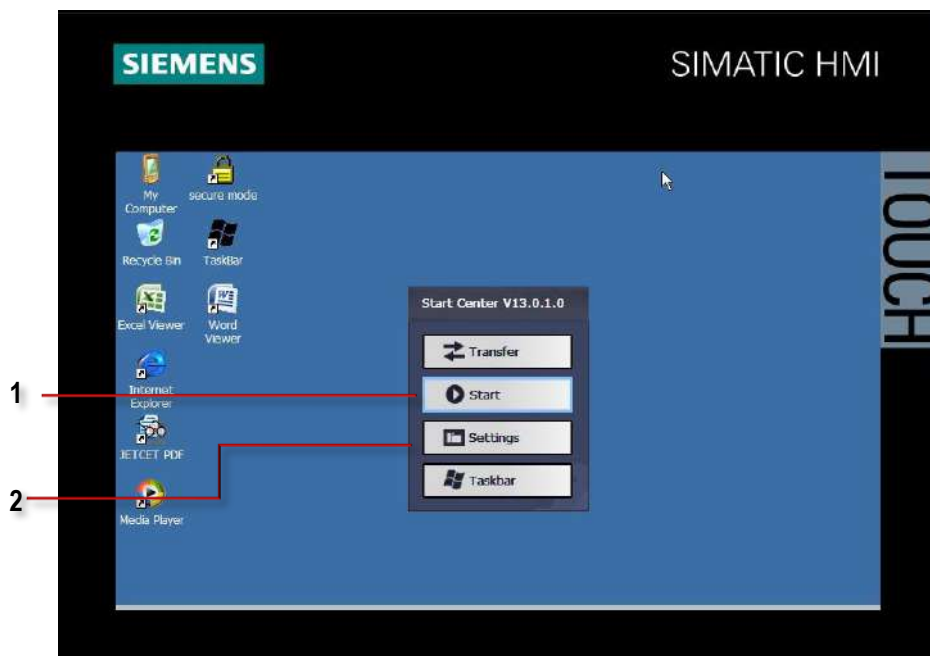
Accessibility matrix, Some Functions are available only for certain PSA Generators or addons

Screen	Sub-screen		No user logged in	USER	SUPERUSER	SUPERUSER + TEMPORARY PASS
			Monitor	Monitor Operate	Super Operate	Temporary
HOME			full access	full access	full access	N/A
OPERATION			full access	full access	full access	N/A
PROCESS	Test Drain		full access	full access	full access	N/A
	Reset totalizer		View only	full access	full access	N/A
SETTINGS	General	Gen.settings	View only	View only	View only	N/A
		PLC TIME	View only	View only	Full access	N/A
	Process	Drain settings	View only	View only	Full access	N/A
		Process times	View only	View only	View only	full access
	Advan ced	StandBy Settings	View only	full access	full access	N/A
		Select PSA (X2 MODE)	View only	View only	full access	N/A
		Autostart Powerfailure	View only	full access	full access	N/A
		Service Mode	View only	View only	full access	N/A
		Purity Control (Purge Function)	View only	ONLY: Purge Start/Stop Min. Purge pressure Cannot enable/disable Purity control		full access
		PILOT_control	View only	View only	full access	N/A
		Alarm	View only	ONLY: Purity Alarms, Product Pressure Alarms	full access	N/A
	Measure 1		View only	View only	full access	N/A
	Measure 2		View only	View only	full access	N/A
	PID flow control		View only	View only	full access	N/A
	SMS settings		View only	View only	full access	N/A
	Smart delivery		View only	View only	View only	full access
SERVICE			View only	View only	full access	N/A
TRENDS			full access	full access	full access	N/A

11. HMI desktop and Start center

To access HMI desktop and Start Center runtime must be stopped.

In chapter 6.5 Advanced settings. Is described how to stop runtime.



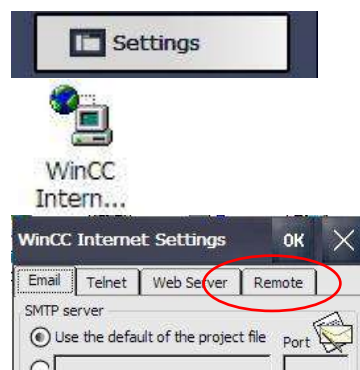
Ref.	Designation	Function
1	Start	Can be tapped to Start HMI Runtime
2	Settings	Can be tapped to open Settings and configure IP addresses and WinCC for remote view.

11.1. Remote view

Open "Settings"

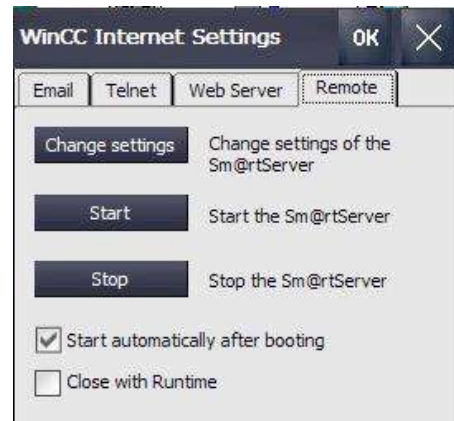
Continue to "WinCC Internet Settings"

Proceed to "Remote" and then



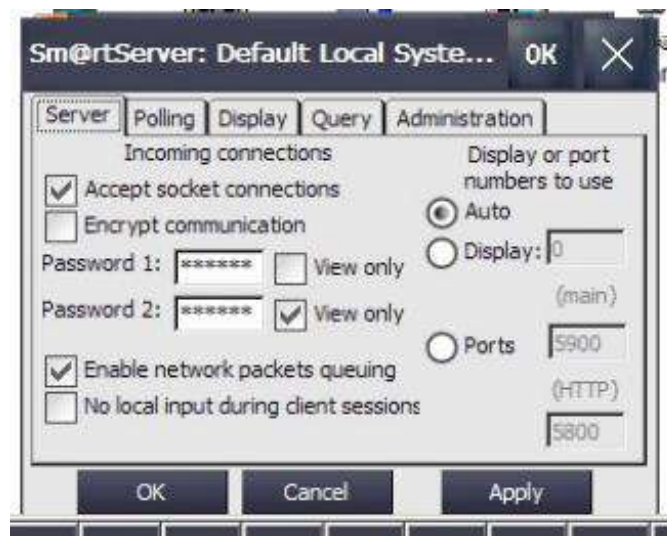
Tap “Change settings”

Start automatically after booting must be enabled



Set two security levels:

Password 1	–	control	–	remote control
Password 2	–	view	–	remote view (click on View only)



After setting the passwords, return to the “HMI Desktop and Start center” and run „Runtime“. Having that done, the application starts at the HMI. Set an identical IP address at your laptop as it was done at the HMI. Now you can start the application „SmartClient“. A window opens, where a „password“ is required. We set in „settings“ for „Smart Server“ (see pic. 29) two levels:

1. **Control**
2. **View**

Choose „control“



An application is opened right away that is also running on the HMI. In the „control“ mode, full control of HMI is enabled. It depends on the logged user_superuser.
In the „view“ mode, only the active screen on HMI is shown. In this mode, control is not enabled, screens cannot be changed

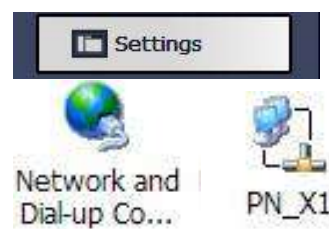
11.2. IP address change



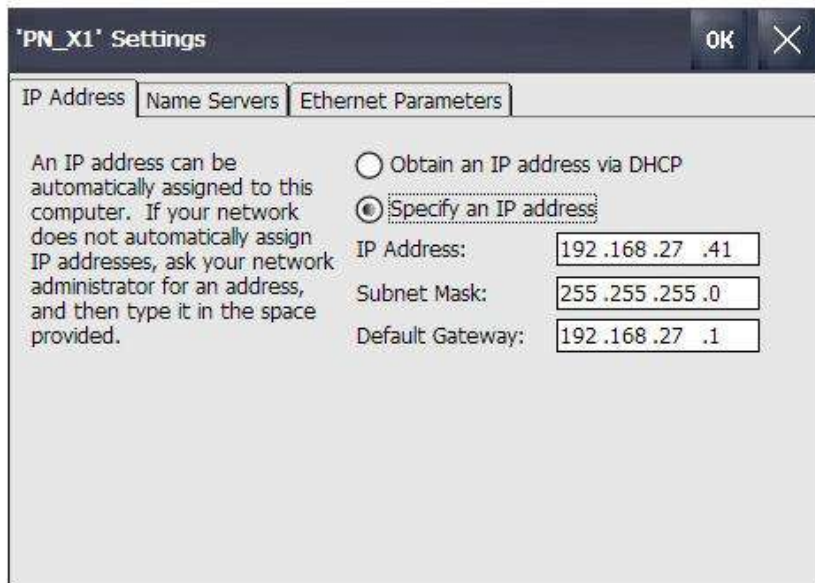
In case of IP change of the HMI, the IP address of the PLC needs to be altered as well.

Open “Settings”

Continue to “Network and dial-up connection” and continue to „PN_X1”



In PN_X1 Settings pop up window, “IP address” of the HMI can be changed, and in the case of having more networks a “Default Gateway” can be set as well.



12. Logging

Data logging is not available for KTP700 BASIC HMI. To collect data, standard SD memory card can be used. To correctly insert memory card:

- Open the enclosure and refer to backside of the HMI panel.
- Unlock the slot by black slider lock to right side.
- Insert SD card into the DATA X51 slot
- Lock black slider lock to left side



Ref.	Designation	Function
1	HMI backside	N/A
2	Black slider lock	Slide to right to access SD card slot, Slide to left to lock SD card lock
3	SD card slot	SD memory card can be inserted

13. Loading program from SD card



It is necessary to record parameters of all settings, because after project transfer from SD card all pre-set parameters will be lost (ranges, alarm setting, Start – Stop pressure values, etc.)

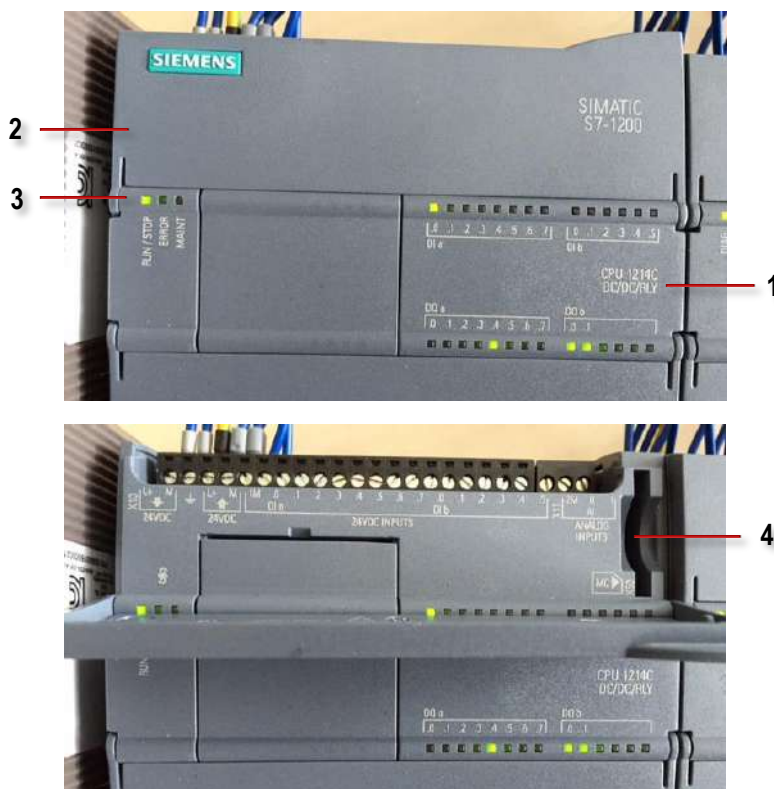


Is available only when software backup is provided from Oxymat. Industrial Siemens SD card must be used.



Industrial Siemens SD card must not be formatted by standard PC/Laptop

1. With the system switched off you slot the memory card into the memory card slot of the S7-1200 CPU.
2. Switch on the S7-1200 CPU. A flashing sequence between the "RUN/STOP", "ERROR" and "MAINT" LEDs indicates that the program is currently being transferred to the controller. The end of the transfer is indicated by the "RUN/STOP" LED lighting orange and the "MAINT" LED flashing at the same time.
3. Switch off the S7-1200 CPU and remove the memory card from the slot.
4. Then switch on the S7-1200 CPU again. The application then starts up automatically ("RUN/STOP" LED lights green).
5. After restart of CPU please re-enter recorded parameters to system.



Ref.	Designation	Function
1	CPU	CPU identification
2	Cover	Protective cover of terminals and SD card slot. Can be opened to access SD card slot
3	LED indicators	Indicates status of the CPU
4	SD card slot	SD card can be inserted. Accepts only Siemens SD cards