

Atlas Copco

Control solutions

Instruction book

Original instructions

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1 Elektronikon™ Touch controller

1.1 Controller



The Elektronikon™ Touch controller

Introduction

The Elektronikon™ controller has following functions:

- Controlling the compressor
- Protecting the compressor
- Monitoring components subject to service
- Automatic restart after voltage failure (ARAVF)

Automatic control of the compressor

The controller maintains the net pressure between programmable limits by automatically loading and unloading the compressor (fixed speed compressors) or by adapting the motor speed (compressors with frequency converter). A number of programmable settings, e.g. the unloading and loading pressures (for fixed speed compressors), the setpoint (for compressors with frequency converter), the minimum stop time, the maximum number of motor starts and several other parameters are taken into account.

The controller stops the compressor whenever possible to reduce the power consumption and restarts it automatically when the net pressure decreases. If the expected unloading period is too short, the compressor is kept running to prevent too short standstill periods.



A number of time based automatic start/stop commands may be programmed. Take into account that a start command will be executed (if programmed and activated), even after manually stopping the compressor.

Protecting the compressor

Shutdown

Several sensors are provided on the compressor. If one of the measured signals exceeds the programmed shutdown level, the compressor will be stopped.

Example: If the compressor element outlet temperature exceeds the programmed shutdown level, the compressor will be stopped. This will be indicated on the display of the controller.

The compressor will also be stopped in case of overload of the drive motor or fan motor.



Before remedying, consult the [Safety precautions](#).

Before resetting a warning or shutdown message, always solve the problem. Frequently resetting these messages without remedying may damage the compressor.

Shutdown warning

A shutdown warning level is a programmable level below the shutdown level.

If one of the measurements exceeds the programmed shutdown warning level, a message will appear on the display and the general alarm LED will light up to warn the operator before the shutdown level is reached.

The message disappears as soon as the warning condition disappears.

A warning will also appear if the dew point temperature is too high (on compressors with integrated dryer).

Service warning

A number of service operations are grouped as a Service Plan. Each Service Plan has a programmed time interval. If the service timer exceeds a programmed value, this will be indicated on the display to warn the operator to carry out the service actions belonging to that Service Plan.

Automatic restart after voltage failure (ARAVF)

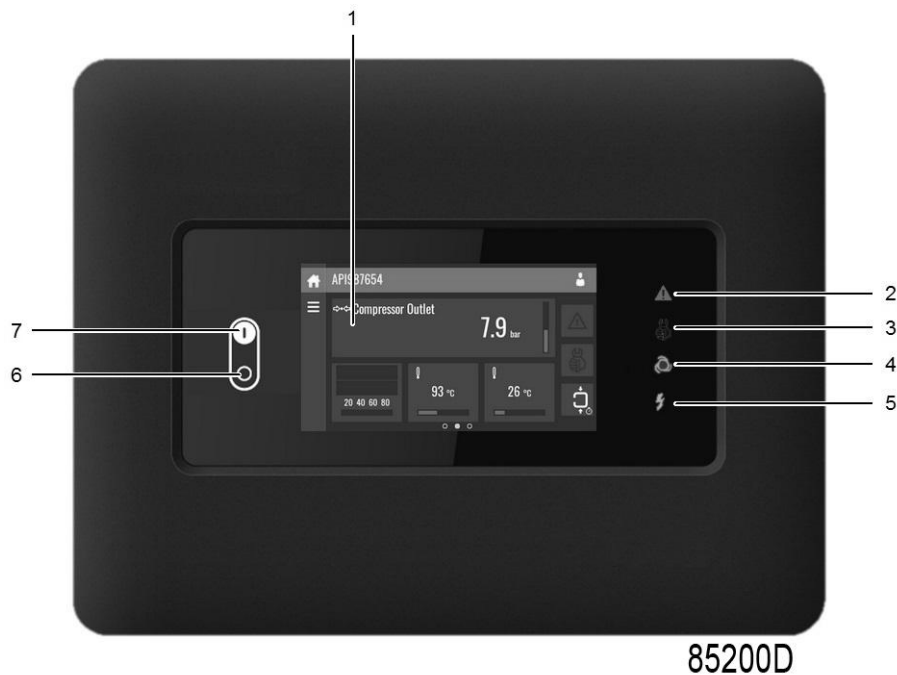
The controller has a built-in function to automatically restart the compressor when the voltage is restored after voltage failure. For compressors leaving the factory, this function is made inactive. If desired, the function can be activated. Consult your supplier.



If the function is activated and provided the regulator was in the automatic operation mode, the compressor will automatically restart if the supply voltage to the module is restored.

The ARAVF label (see section Pictographs) shall be glued near to the controller.

1.2 Control panel



Control panel

Parts and functions

Reference	Designation	Function
1	Touchscreen	Shows the compressor operating condition and a number of icons to navigate through the menu. The screen can be operated by touch.
2	Warning sign	Flashes in case of a shut-down, is lit in case of a warning condition.
3	Service sign	Is lit when service is needed.
4	Operation sign	Is lit when the compressor is running in automatic operation.
5	Voltage sign	Indicates that the voltage is switched on.
6	Stop button	This button stops the compressor.
7	Start button	This button starts the compressor. The operation sign (4) lights up. The controller is operative.

1.3 Icons used

Menu icons

Menu	Icon	Menu	Icon	Menu	Icon
Data	 85233D	Status	 85239D		
		Inputs	 85240D		
		Outputs	 85241D		
		Counters	 85242D		
		Aux. Equipment Parameters	 85243D	Converters	 85251D
Service	 85234D	Service		Overview	 85252D
				Service Plan	 85253D
				Service History	 85254D
		Service functions	 85244D		
		Clean Screen	 85302D		
Week Timer	 85235D			Week	 85303D
				Remaining Running Time	 85304D
Event History	 85236D	Saved Data	 85245D		

Menu	Icon	Menu	Icon	Menu	Icon
Machine Settings	 85237D	Alarms	 85239D		
		Regulation	 85240D		
		Control Parameters	 85241D		
		Aux. Equipment Parameters	 85242D	Converter(s)	 85251D
				Fan	 85255D
				Internal SmartBox	 85256D
		Auto Restart	 85243D		
Controller Settings	 85238D	Network Settings	 85246D	Ethernet Settings	 85257D
				CAN Settings	 85258D
		Localisation	 85247D	Language	 85259D
				Date/Time	 85260D
				Units	 85261D
		User Password	 85248D		
		Help	 85249D		
		Information	 85250D		

Status icons

Icon	Description
 85262D	Motor Stopped

	Motor Stopped Wait
	Running Unloaded
	Manual Unload
	Running Unloaded Wait
	Running Loaded
	Failed to Load
	Running Loaded Wait
	Manual Stop
	Machine Control Mode, Local
	Machine Control Mode, Remote
	Machine Control Mode, LAN
	Automatic Restart After Voltage Failure
	Week Timer Active

System icons

Icon	Description
	Basic User
	Advanced User
	Atlas Copco Service
	Antenna 25%

 85280D	Antenna 50%
 85281D	Antenna 75%
 85282D	Antenna 100%
 85283D	Change between screens (indication)
 85284D	Energy recovery
 85285D	Dryer
 85286D	Compressor Element
 85287D	Drain(s)
 85288D	Analogue Output
 85289D	Menu
 85290D	Reset
 85291D	Auto Restart
 85292D	Filter(s)
 85293D	Cooler
 85294D	Valve(s)
 85295D	Power Meter

Input icons

Icon	Description
 85296D	Pressure

 85297D	Temperature
 85298D	Special Protection
 85299D	Open
 85300D	Closed

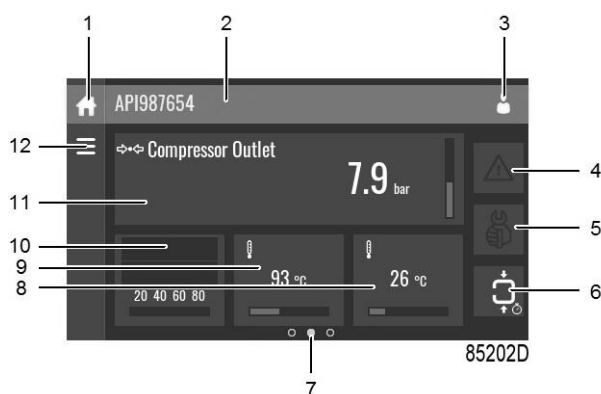
	This chapter gives a general survey of available icons. Not all icons mentioned in this chapter are applicable to every machine.
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1.4 Main screen

Function

The Main screen is the screen that is shown automatically when the voltage is switched on. It is switched off automatically after a few minutes when there is no touch input.

Description



Reference	Designation	Function
1	Home button	The home button is always shown and can be tapped to return to the main screen.
2	Screen information	On the main screen, the screen information bar shows the serial number of the machine. When scrolling through menus, the name of the current menu is shown.
3	Access level button	The access level button is always shown and can be tapped to change the current user access level.

Reference	Designation	Function
4	Alarm button	The alarm button can be tapped to show the current alarms. If an alarm occurs, the icon on the button will be red.
5	Service button	The service button can be tapped to show the service information.
6	Compressor status	This icon shows the current compressor status.
7	Page indicator	Indicates which page you currently see. The middle indication is the main screen, left is the menu screen and at the right the quick access screen. Swipe left or right to go to another screen.
8, 9, 10, 11	These fields can contain a history chart, an input or a counter value, depending on the type of the machine.	Tap the field to view the type of measurement. This will be shown in the screen information bar. Examples of inputs: • Ambient temp • Compressor outlet • Dryer dewpoint Examples of counters: • Running hours • Load relay • Loaded hours
12	Menu button	The menu button is always shown and can be tapped to go to the menu.

1.5 Quick access screen

Function

The screen is used to directly access some frequently used functions.

Procedure

The Quick access screen can be viewed by swiping left, starting from the main screen.

Description



Through this screen, several important settings can be viewed and modified.

Function	Description
Setpoints	Several setpoints can be modified by tapping this icon.
Control mode	The control mode can be changed by tapping this icon. • Local control via start/stop buttons • Remote control via digital input(s) • LAN control via the network. When in Remote or LAN control, the start/stop buttons on the controller will not work.
Display language	The display language of the controller can be changed by tapping this icon.
Manual unload (only on fixed speed compressors)	When tapped, the machine will go in Manual unload mode until the icon is tapped again.
Week timer	Week timers can be set by tapping this icon.
Remaining running time	The Remaining running time can be set and modified by tapping this icon.
Internal SmartBox	The reception quality of the internal antenna can be monitored.  Each bar represents 25% reception strength. If the four bars are filled, the reception strength is 100%. If only one bar is filled, the reception strength is just 25%.
Auto restart	Auto restart can be activated by tapping this icon.

1.6 Menu screen

Function

This screen is used to display the different menus where settings can be viewed or changed.

Procedure

The Menu screen can be viewed by tapping the Menu button or by swiping right, starting from the main screen.

Description



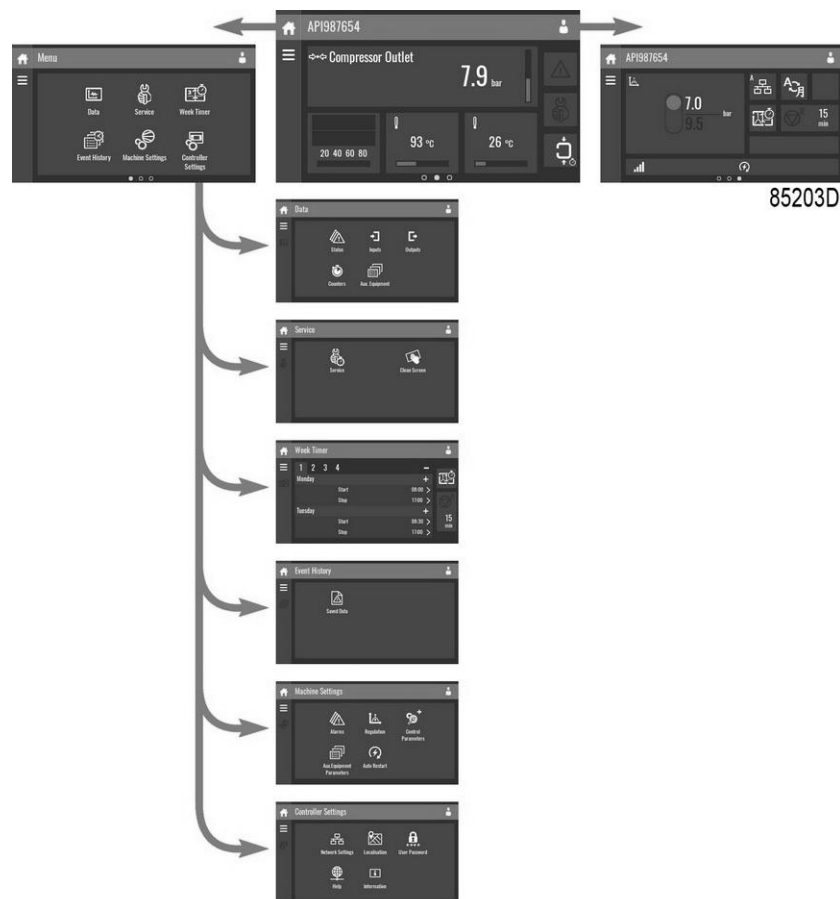
85204D

Reference	Designation	Function
(1)	Data	The data menu contains the Compressor status, information about the Inputs, Outputs and Counters. The Auxiliary equipment can also be viewed through this menu.

Reference	Designation	Function
(2)	Service	The service menu contains the Service information. The 'Clean screen' function can be used to clean the touchscreen.
(3)	Week timer	Multiple Week timers and a Remaining running time can be set through this menu.
(4)	Event history	In case of an alarm, the compressor Status information is saved and can be viewed through this menu.
(5)	Machine settings	Alarms settings, Regulation settings and Control parameters can be changed through this menu. Auxiliary equipment parameters can also be changed. The Auto restart function can be set through this menu. This function is password protected.
(6)	Controller settings	Network settings, Localisation settings and a User password can be set through this menu. There is also a Help page available and the Controller information can be shown.

Menu structure

Operating the controller can be done by swiping through screens and tapping icons or menu items.



This is the main menu structure. The structure can be different depending on the configuration of the unit.

1.7 Data menu

Function

This screen is used to display the following submenus:

- Status
- Inputs
- Outputs
- Counters
- Aux. Equipment

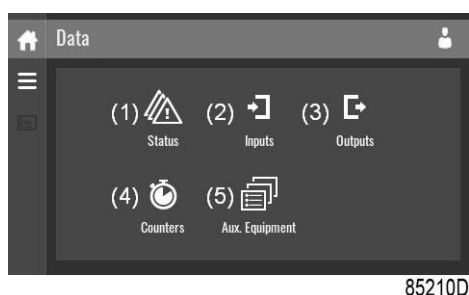
These submenus can be entered by tapping the icons.

Procedure

To enter the Data menu screen:

1. Tap the Menu button
2. Tap the Data icon

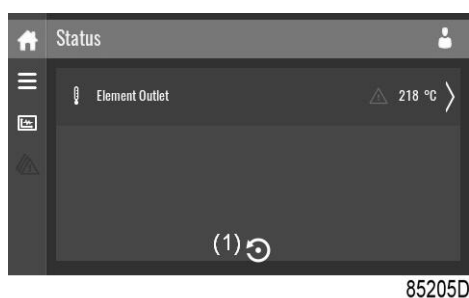
Description



Reference	Designation
(1)	Status menu
(2)	Inputs menu
(3)	Outputs menu
(4)	Counters menu
(5)	Auxiliary equipment menu

Status menu

Tap the Status icon to enter the Status menu.



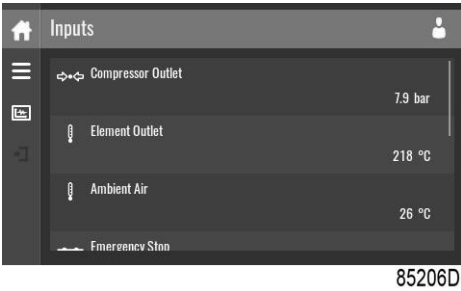
This menu shows the current compressor status.

If an alarm is active, it can be viewed by tapping the alarm message. To reset an alarm, tap the reset button (1).

	Before remedying, consult the Safety precautions . Before resetting a warning or shutdown message, always solve the problem. Frequently resetting these messages without remedying may damage the compressor.
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Inputs menu

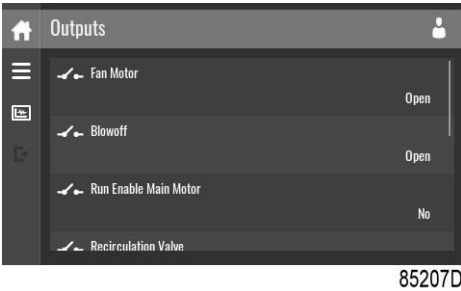
Tap the Inputs icon to enter the Inputs menu.



This menu shows information about all the inputs.

Outputs menu

Tap the Outputs icon to enter the Outputs menu.

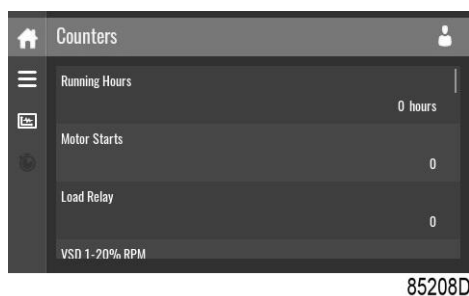


This menu shows information about all the outputs.

	Voltage-free outputs may only be used to control or monitor functional systems. They should NOT be used to control, switch or interrupt safety related circuits. Check the maximum allowed load on the label.
	Stop the compressor and switch off the supply before connecting external equipment. Check the Safety precautions .

Counters menu

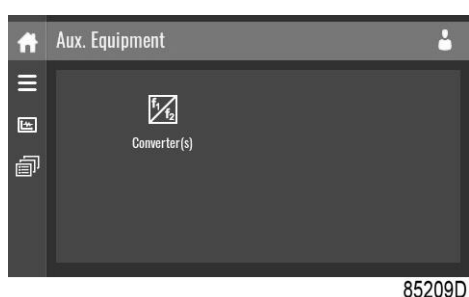
Tap the Counters icon to enter the Counters menu.



This menu shows an overview of all actual hours and counters of the compressor and controller.

Auxiliary equipment menu

Tap the Aux. Equipment icon to enter the Aux. equipment menu.



This menu shows an overview of all auxiliary equipment fitted.

1.8 Service menu

Function

This screen is used to display the following submenus:

- Service
- Service functions (Only visible as advanced user)
- Clean screen

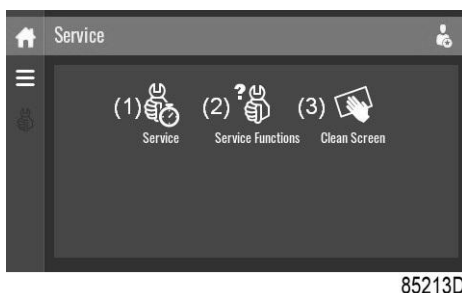
These submenus can be entered by tapping the icons.

Procedure

To enter the Service menu screen:

1. Tap the Menu button
2. Tap the Service icon

Description

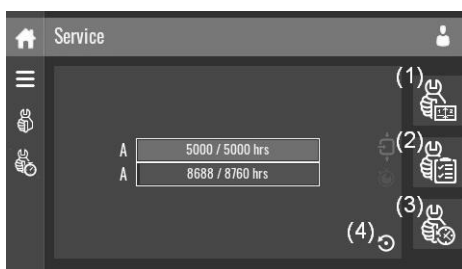


85213D

Reference	Designation
(1)	Service
(2)	Service functions (Only visible as advanced user)
(3)	Clean screen

Service menu

Tap the Service icon to enter the Service menu.



85211D

This menu shows the remaining Running Hours and the remaining Real Time Hours until the next service. The first row (A) shows the Running Hours when the first service is needed (green), the second row shows the Real Time Hours (blue)

A service overview can be viewed by tapping icon (1).

The service plan can be viewed by tapping icon (2). Through this menu, the service plan can be modified:

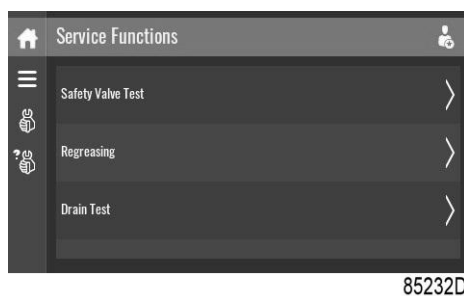
1. Tap the desired service plan. A selection screen will pop up.
2. Change the Running Hours by tapping '–' or '+'.
3. Confirm by tapping 'V' or decline by tapping 'X'.

The service history can be viewed by tapping icon (3).

When a service plan interval is reached, a message will appear on the screen. When service has been performed, the service timer can be reset by tapping the reset button (4).

Service functions (Only visible as advanced user)

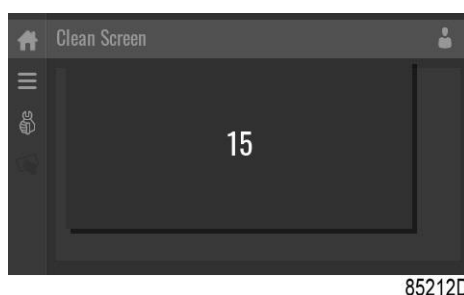
Tap the Service Functions icon to enter the Service Functions menu.



Depending on the machine, this menu can have a different set of functions. Many of them are password protected, as they are only accessible for authorized personnel.

Clean screen

Tap the Clean Screen icon to start the 15 seconds countdown to perform cleaning of the touchscreen.



The touchscreen and the start and stop button become inactive for 15 seconds.

1.9 Week timer menu

Function

This screen is used to set up to 4 different week timers with each up to 8 settings per day.

The week timers can be activated through this screen.

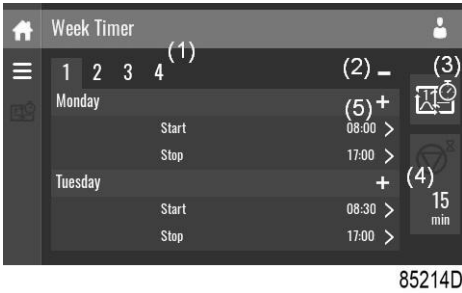
A Remaining Running Time can be set from 5 up to 240 minutes.

Procedure

To enter the Week Timer menu screen:

1. Tap the Menu button
2. Tap the Week Timer icon

Description



Reference	Designation	Function
(1)	Add or select week	If less than 4 weeks are programmed, tap the '+' button to add a week.
(2)	Remove week	Tap to remove a programmed week timer.
(3)	Activate week timer	A selection screen pops up. The user can choose the correct week by tapping '-' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.
(4)	Remaining running time	A selection screen pops up. The user can change the remaining time by tapping '-' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.
(5)	Add setting	A selection screen pops up. The user can change the setting by swiping up or down and confirm by tapping 'V' or decline by tapping 'X'.

1.10 Event history menu

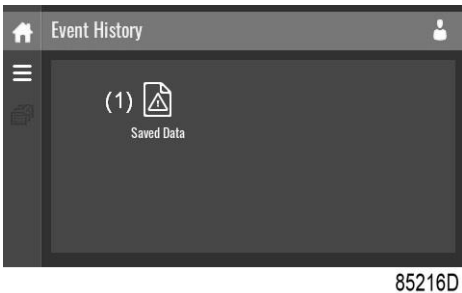
Function

This screen is used to display the saved data in case of an alarm.
These submenus can be entered by tapping the icons.

Procedure

- To enter the Event history menu screen:
1. Tap the Menu button
 2. Tap the Event History icon

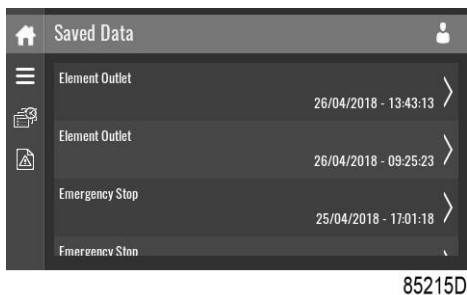
Description



Reference	Designation
(1)	Saved Data

Saved data

Tap the Saved Data icon to enter the Saved Data menu.



Scroll through the items swiping up and down in this list. The event date and time is shown at the right side of the screen.

Press on one of the items in the list for more information reflecting the status of the compressor when the shutdown occurred.

1.11 Machine settings menu

Function

This screen is used to display the following submenus:

- Alarms
- Regulation
- Control Parameters
Only visible if the machine has adaptable parameters.
- Aux. Equipment parameters
- Auto Restart

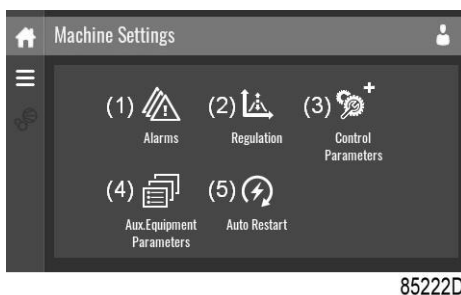
These submenus can be entered by tapping the icons.

Procedure

To enter the Machine settings menu screen:

1. Tap the Menu button
2. Tap the Machine Settings icon

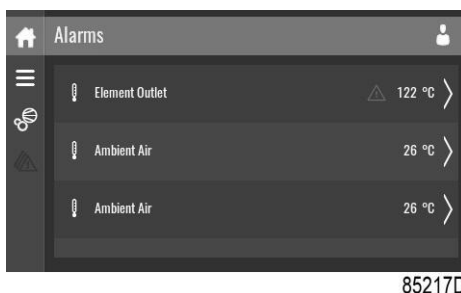
Description



Reference	Designation
(1)	Alarms menu
(2)	Regulation menu
(3)	Control Parameters menu
(4)	Aux. Equipment Parameters menu
(5)	Auto Restart menu

Alarms menu

Tap the Alarms icon to enter the Alarms menu.



A list of all alarms is shown.

When pressing on one of the items in this list, the warning and/or shutdown levels are shown for this alarm.

Regulation menu

Tap the Regulation icon to enter the Regulation menu.



Setpoints or pressure bands can be modified through this menu.

Modify a setting

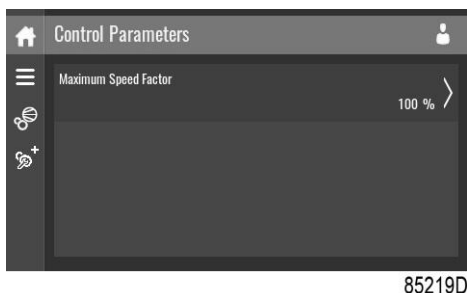
When tapping a list item, a selection screen pops up. The user can modify the setting by tapping '–' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.

Change a selection

When tapping a list item, a selection screen pops up. The user can change the selection by swiping up or down and confirm by tapping 'V' or decline by tapping 'X'.

Control parameters menu

Tap the Control Parameters icon to enter the Control Parameters menu.



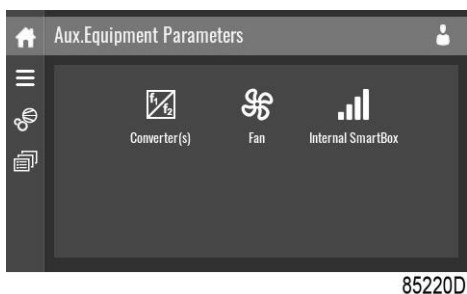
This menu shows information about the Control Parameters.

Modify a setting

When tapping a list item, a selection screen pops up. The user can modify the setting by tapping '–' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.

Auxiliary equipment parameters menu

Tap the Aux. Equipment Parameters icon to enter the auxiliary equipment parameters menu.



This menu shows an overview of all the auxiliary equipment fitted.

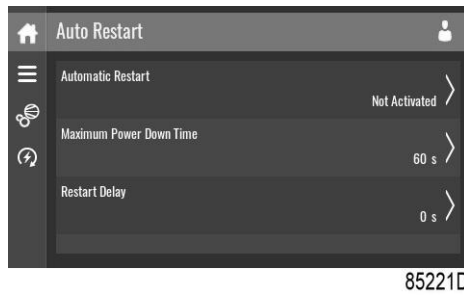
Through this menu, the parameters of the auxiliary equipment can be changed.

Modify a setting

When tapping a list item, a selection screen pops up. The user can modify the setting by tapping '–' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.

Auto restart menu

Tap the Auto restart icon to enter the Auto Restart menu.



Through this menu, the automatic restart can be activated. The activation is password protected. The automatic restart settings can also be changed.

Enter a password

When tapping a password protected item, a selection screen pops up. The user can enter the password by swiping up or down to select the desired number. Once the 4 digits are entered, the user can confirm by tapping 'V' or decline by tapping 'X'.

Modify a setting

When clicking a list item, a selection screen pops up. The user can modify the setting by tapping '-' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.

1.12 Controller settings menu

Function

This screen is used to display the following submenus:

- Network Settings
- Localisation
- User Password
- Help
- Information

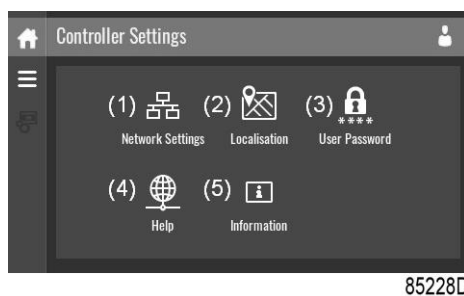
These submenus can be entered by tapping the icons.

Procedure

To enter the Controller Settings menu screen:

1. Tap the Menu button
2. Tap the Controller Settings icon

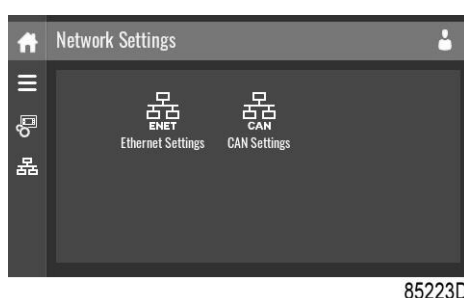
Description



Reference	Designation
(1)	Network Settings menu
(2)	Localisation menu
(3)	User Password menu
(4)	Help menu
(5)	Information menu

Network settings menu

Tap the Network Settings icon to enter the Network Settings menu.



85223D

Ethernet Settings

The list of Ethernet Settings is shown. When ethernet is turned off, the settings can be modified.

CAN Settings

The list of CAN Settings is shown. When CAN is turned off, the settings can be modified.

Modify a setting

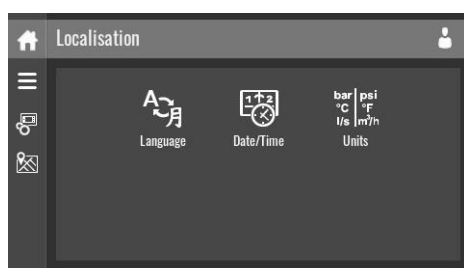
When tapping a list item, a selection screen pops up. The user can modify the setting by tapping '–' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.

Change a selection

When tapping a list item, a selection screen pops up. The user can change the selection by swiping up or down and confirm by tapping 'V' or decline by tapping 'X'.

Localisation menu

Tap the Localisation icon to enter the Localisation menu.



85224D

Language

The language setting of the controller can be modified through this menu.

Date/Time

The date and time settings of the controller can be modified through this menu.

Units

The units displayed can be modified through this menu.

Modify a setting

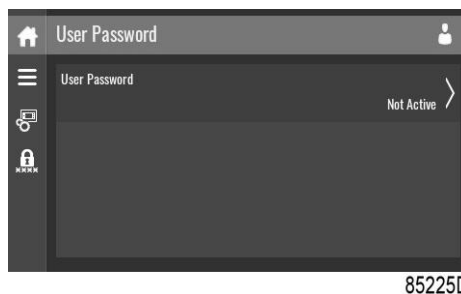
When tapping a list item, a selection screen pops up. The user can modify the setting by tapping '-' or '+' and can confirm by tapping 'V' or decline by tapping 'X'.

Change a selection

When tapping a list item, a selection screen pops up. The user can change the selection by swiping up or down and confirm by tapping 'V' or decline by tapping 'X'.

User password menu

Tap the User Password icon to enter the User Password menu.



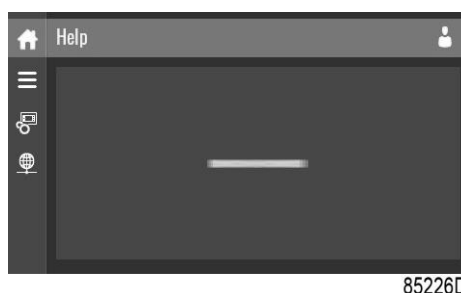
The user password can be activated or deactivated through this menu. Enter and confirm a user password to activate, repeat to deactivate.

Enter a password

When tapping a password protected item, a selection screen pops up. The user can enter the password by swiping up or down to select the desired number. Once the 4 digits are entered, the user can confirm by tapping 'V' or decline by tapping 'X'.

Help menu

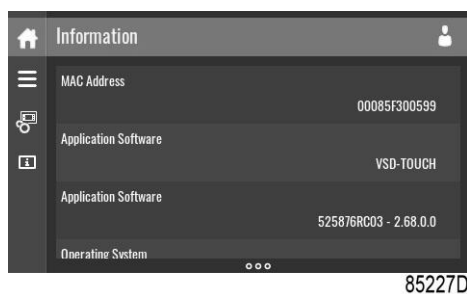
Tap the Help icon to enter the Help menu.



This menu can show a link to the web page of your supplier, a helpdesk phone number or other helpful information.

Information menu

Tap the Information icon to enter the Information menu.



This menu shows information about the controller.

1.13 Access level

Function

Through this pop-up screen the access level settings can be viewed or changed.

Procedure

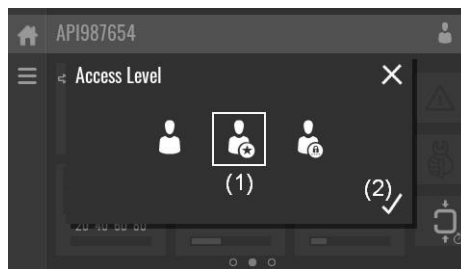
The Access Level screen can be viewed or changed by tapping the Access Level button at the upper right corner of the screen.

Description



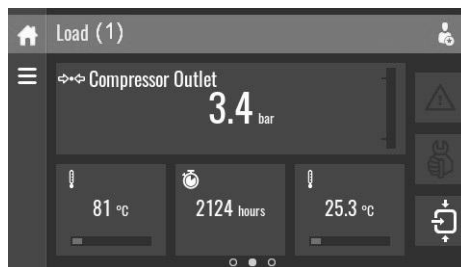
Reference	Designation	Function
(1)	User	A basic set of parameters is visualized, no password required.
(2)	Service	A basic set of parameters can be modified, no password required.
(3)	Full	This access level is not accessible to end users.
(4)	Decline	Tap to decline the selected user level.
(5)	Confirm	Tap to confirm the selected user level.

Service access level



85230D

Tap the Service access level icon (1) and confirm (2).



85231D

The screen information bar (1) now shows the current compressor status instead of the machine serial number.

The Received Signal Strength Indicator (RSSI) value is now shown in the Internal SmartBox menu. See [Quick access screen](#).

In the service menu, an extra menu item is now available. See [Service menu](#).

We stand by our responsibilities towards our customers, towards the environment and the people around us.

We make performance stand the test of time.

This is what we call - Sustainable Productivity.

