CAP-837
June, 2015
Rev. B

Nx Series

iCommand – Touch Controller

OPERATOR MANUAL

WARNING

Personal injury and/or equipment damage will be result by failing to pay attention to the vital safety information and instructions in this manual. Carefully read, understand, and retain all safety information and instructions before operating this compressor.

Information on these operating instructions

These instructions enable you to use the machine safely and efficiently. The instructions are a component part of the machine and must be accessible for staff at all times.

Staff must have carefully read and understood these instructions before starting all work. The basic prerequisite for safe working is compliance with all the safety instructions and instruction for actions included in these operating instructions.

The local occupational health and safety regulations and general safety rules for operational area of the machine also apply.

The instructions for the machine do not cover operation of the controller. Therefore, the instructions and content of the instructions for the controller in question must also be taken into account.

Copyright

Limitation of liability

All information and instructions in this manual have been compiled taking account of the applicable standards and regulations, state-of-the-art technology and our years of knowledge and experience.

The manufacturer assumes no liability for damages caused by:

- failure to adhere to these instructions
- improper use
- use of unqualified staff
- unauthorized conversions
- technical modifications
- use of non-approved spare parts

The actual scope of supply may differ from the descriptions and illustrations in these instructions in the case of special designs, the inclusion of additional ordering options or as a result of the latest technical modifications.

The obligations agreed in the contract of supply, the manufacturer's general terms and conditions of business and delivery and the legal regulations valid at the time of completion of the contract apply.

Customer service

Our Customer Service department is available to provide technical information.

In addition, our employees are always interested in receiving new information and hearing of your experiences from usage which could be valuable for the improvement of our products.

1 Safety

This section is a summary of import ant safety aspects to ensure optimum protection of the personnel and safe and trouble-free operation.

The owner, lessor or operator of this compressor is hereby notified a nd forewarned that failure to observe these safety precautions may result in injury and/or property damage.

FS Curtis does not mean to imply that the following safety precautions are all-inclusive or that the observance of these precautions will prevent all injury or property damage.

FS Curtis expressly disclaims responsibility or liability for any injury or property damage caused by failure to follow these specified precautions or by failure to exercise ordinary caution and due care required in operating or handling this equipment even though not expressly specified.

1.1 Symbols in these instructions

Safety instructions

The safety instructions and safety information in these instructions are denoted by symbols. The safety instructions are prefaced by signal words which express the extent of the risk.

DANGER!

This combination of symbol and signal word indicates a directly hazardous situation which will lead to serious or even fatal injuries if not avoided.

WARNING!

This combination of symbol and signal word indicates a possibly hazardous situation which may lead serious or even fatal injuries if not avoided.

CAUTION!

This combination of symbol and signal word indicates a possibly hazardous situation which may cause minor or light injuries if not avoided.

NOTICE!

This combination of symbol and signal word indicates a possibly hazardous situation which may cause material damage if not avoided or possible hazards for the environment.

Safety instructions in action sequences

Safety instructions may relate to certain, individual instructions for actions. These safety instructions are embedded in the instruction for action so that they do not interrupt the flow of reading when performing the action. The signal words described above are used.

Example:

1. Unfasten the screw.
2. 

   CAUTION!
   Risk of entrapment on the cover!

   Close the cover carefully.
3. Tighten the screw.

Special safety instructions

The following symbols are used in conjunction with the safety instructions in order to draw attention to particular hazards:

	Warning – high-voltage.
	Warning – explosive substances.
	Warning – danger zone.

Tips and recommendations

This symbol indicates tips and recommendations and information for efficient and fault-free operation.

Further markings

The following markings are used in these instructions for emphasizing instructions for actions, results, lists, cross references and other elements:

Marking	Explanation
1.,2.,3,…	Identifies step-by-step instructions.
⇨	Identifies a state or automatic sequence as result of steps.
	Identifies references to chapters in this manual and to other valid documents.
■	Identifies random numerations and list entries.
[Key]	Indicates names of keys, buttons and other operating controls.

1.2 Proper use

The machine is designed and constructed exclusively for the proper use described here.

The screw compressor serves exclusively to generate compressed air in an environment not subject to explosion. The screw compressor must be supplied exclusively with cool, dry and dust-free cooling air.

Do not operate the compressor in excess of its rated pressures and speeds indicated on the compressor nameplate.

The proper use also includes adherence to all details in this manual.

Any use beyond the proper use or other type of use counts as misuse.

WARNING!
Danger due to misuse!

- The compressed air may not be used for breathing without appropriate after-treatment.
- The compressed air may not be used directly for pharmaceutical or sanitary purposes or for the direct handling of food without appropriate after-treatment.
- The screw compressor may not be operated outdoors.
- The screw compressor or individual components may not be rebuilt, modified or re-equipped.
- The screw compressor may not be used in an atmosphere subject to explosion.
- The intake of media other than cool, dry and dust-free cooling air is forbidden.

Claims of any type for damage due to misuse are excluded.

1.3 General safety

1. Read and understand all the instructions found in this manual before operating your compressor.
2. **Disconnect the main power source before working on or performing any maintenance procedures on this unit. Use a lock out and tag out process.**
3. Do not attempt to remove any parts, break any connection, loosen oil fill plug or drain plug until the unit has been shut down and air pressure has been relieved.
4. Do not operate the compressor in excess of its rated pressures and speeds indicated on the compressor nameplate.
5. Do not remove guards, shields, or screens while the compressor is in operation. If removed for maintenance replace before resuming operation.
6. Observe the delivery pressure gauge daily to be sure the automatic control system is operating within proper limits.
7. Periodically check all safety and relief devices for proper operation.
8. Use compressed air properly. Pressurized air can cause serious injury to personnel.
9. Be sure that no tools, rags or loose parts are left in or on the compressor or drive parts.
10. Do not use flammable solvents for cleaning parts.
11. Exercise cleanliness during maintenance and when making repairs. Keep dirt away from parts and exposed openings by covering with clean cloth or Kraft paper.
12. Do not install a shut-off valve in the discharge line without installing a pressure relief valve between the shut-off and the compressor package.
13. Do not operate the compressor in areas where there is a possibility of flammable or toxic substances entering the system.
14. Never disconnect (or jump) the air discharge temperature switch or any other safety device and attempt to operate the compressor.
15. Know what mode of operation the compressor is in before working around the unit. The power may be on but the machine not running if it is in the auto restart mode. Adhere to note #2 above.

1.4 Safety devices

WARNING!
Danger to life from nonfunctional safety devices!

If safety devices are not functioning or are disabled, there is a danger of grave injury or death.

- Check that all safety devices are fully functional and correctly installed before starting work.
- Never disable or bypass safety devices.
- Ensure that all safety devices are always accessible.

1.4.1 Position of the safety devices

The following illustrations show the position of the safety devices.

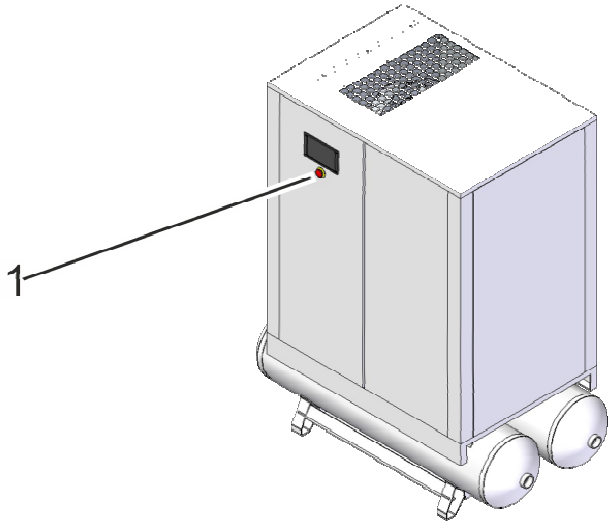


Fig. 1: Emergency stop button (1) on the screw compressor 18–37 kW with tank (optional)

1.4.2 Description of the installed safety devices

Emergency stop button

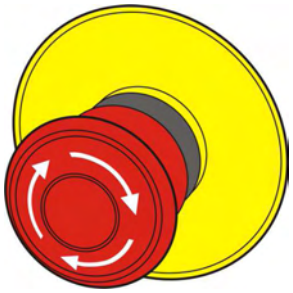


Fig. 2: Emergency stop button

By pressing the emergency stop button, the machine is stopped by an immediate switching off of the power supply. After an emergency stop button has been pressed, it must be unlocked by turning it so that switching on is possible.

WARNING!
Danger to life from an unauthorized restart!

An uncontrolled restart of the machine may cause serious injuries including death.

- Before switching the machine back on, make sure the cause of the emergency stop has been removed and all safety devices have been installed and function properly.
- Do not unlock the EMERGENCY-STOP button until there is no more danger.

Relief valves

Relief valves are unburdening equipment for areas under pressure such as boilers, pressure vessels and pipes. In case of an impermissible pressure increase, relief valves bleed off gases, vapors or liquids into the atmosphere.

Do not change the pressure setting of the pressure relief valve, restrict the function of the relief valve or replace the relief valve with a plug.

1.5 Environmental protection

NOTICE!
Danger to the environment from incorrect handling of pollutants!

Incorrect handling of pollutants, particularly incorrect waste disposal, may cause serious damage to the environment.

- Always observe the instructions below regarding handling and disposal of pollutants.
- Take the appropriate actions immediately if pollutants escape accidentally into the environment. If in doubt, inform the responsible municipal authorities about the damage and ask about the appropriate actions to be taken.

The following chemicals are used:

Oil

Oils can contain substances that are harmful to the environment. They must not be allowed to escape into the environment. Catch replaced oils in suitable containers and dispose of in accordance with applicable local, state and federal regulations

Lubricants

Lubricants such as greases and oils can contain harmful substances. They must not be allowed to escape into the environment. Dispose of lubricants in accordance with applicable local, state and federal regulations.

1.6 *Instructions on the machine*

WARNING!
Danger of injury from illegible symbols!

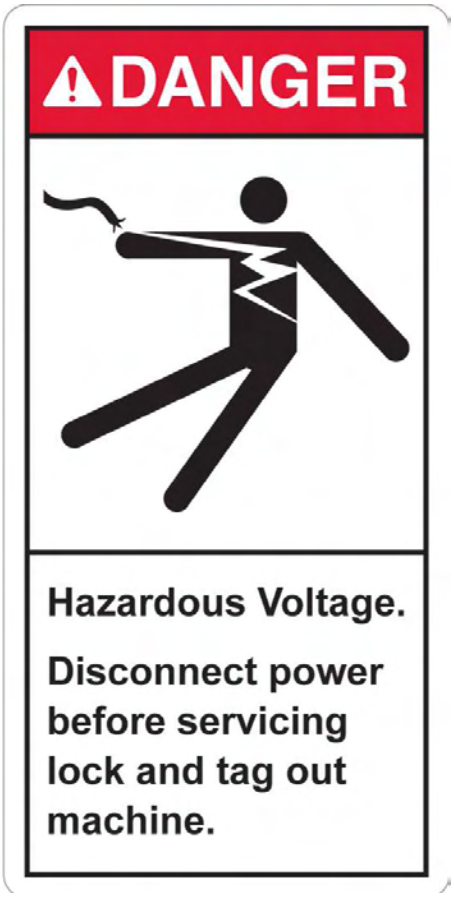
Stickers and signs can become dirty or otherwise obscured over time, with the result that dangers cannot be recognized and the necessary operating instructions cannot be complied with. This, in turn, poses a risk of injury.

- All safety, warning and operating instructions must always be maintained in a completely legible condition.
- Damaged signs or stickers must be replaced immediately.

Direction of rotation

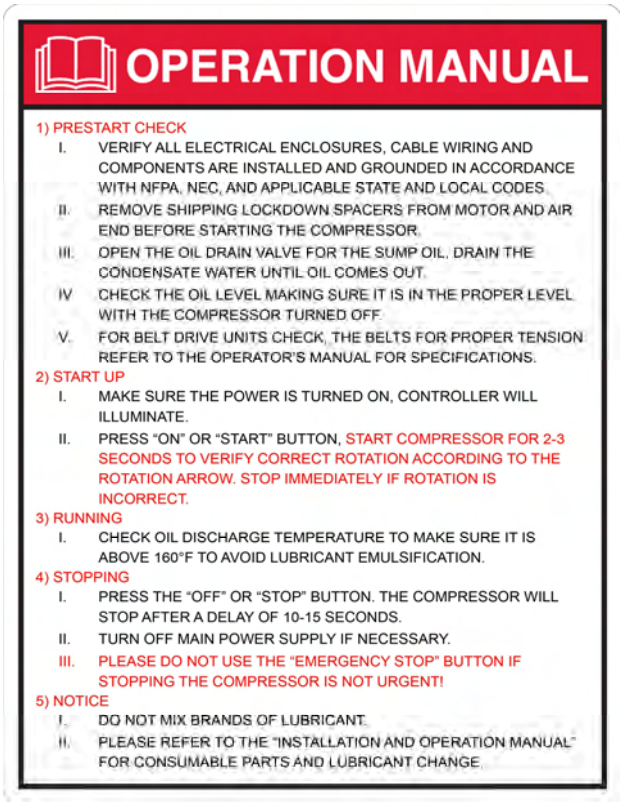
There is a direction of rotation sticker on the drive unit and on the cooling air ventilator. This sticker shows the appropriate direction of rotation.

Hazardous Voltage



Brief instructions for operation

This sticker is on the enclosure and contains brief instructions for operation.



2 ICOMMAND - TOUCH

2.1 Overview of the ICOMMAND - TOUCH

No.	Key/icon	Description of function
1	Display	Displays settings and operating parameters.
2		Serves to switch on the compressor.
3		Serves to switch off the compressor.

During the start, the control displays for about three seconds, a welcome screen. The display changes automatically to the basic display.

The control unit has a resistant color touch screen. A slight tap on the respective operating controls - using a finger or stylus - is sufficient to perform the desired entry. Glove operation is also possible.

2.2 Brief description

The ICOMMAND - TOUCH controller serves

- to display operating data
- to switch on/off the compressor
- to program the compressor

2.3 *Operating modes*

Overview

Three operating modes can be set using the controller.

Operating mode	Description
Automatic operation	After reaching the switch-off pressure, the system switches to idle for the duration of the idle time (run-on). After the run-on time has elapsed, the motor switches off. The compressor can start up by itself at any time if the machine drops below the switch-on pressure.
Load/idle operation	The compressor switches between "Load" and "Idle" operation; i.e. there is an unlimited run-on.
Lead lag control mode (LLC operation)	The switch on/off pressure set is not taken into account by the controller. The compressor is controlled by a master controller.

Safety pressure

The safety pressure is the sum of the set maximum pressure + 14 PSI. If the pressure exceeds the value of the safety pressure, the compressor is switched off with a fault message. If the maximum pressure is exceeded by 7 PSI, a warning appears on the display.

2.4 Display structure

Overview

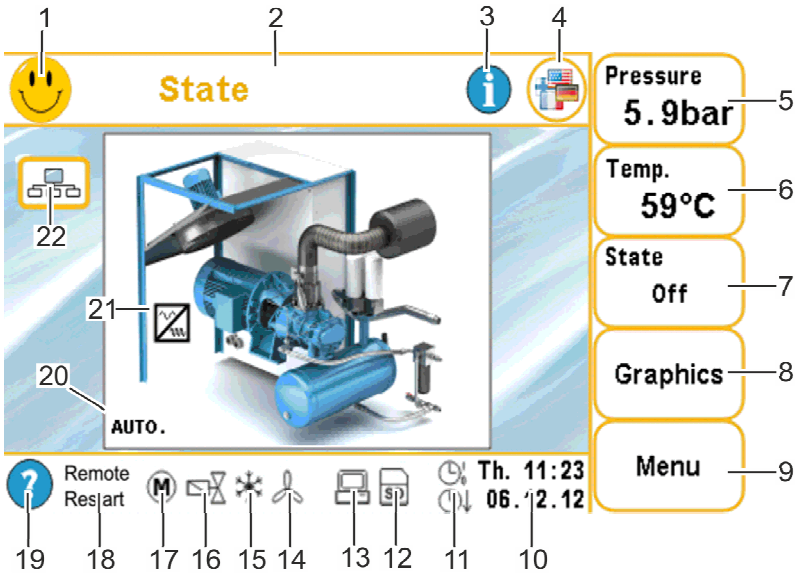
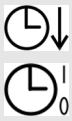


Fig. 3: ICOMMAND - TOUCH basic display

This illustration contains, for illustration purposes, a combination of symbols, which are not possible in a real system.

The settings and operating parameters are shown in the display. Five buttons (Fig. 3/5–9) are located on the right-hand side of the basic display, which allows access to all important functions and information for the system.

No.	Key/icon	Description of function
1		This symbol shows the current system state.
2	*"State"*	Display of the current screen
3		By tapping the *"Information"* button a switch occurs into the type plate.
4		This button is used to select the display language in the basic display.
5		Button with display of the current pressure and to open the "Pressure" screen.
6		Button with display of the current temperature and to open the "Temperature" screen.
7		Button with display of the system state and to open the "State" screen
8		Button to open the "Graphics" screen
9		Button to open the menu system
10		Display of date and time
11		Timer pressure times active display Timer compressor active display
12		SD - Card (indicates if a SD - card is inserted)
13		Communication on RS485 active display
14		Ventilator display
15		Frost protection display
16		Load valve open display

17		Motor runs display
18		"Remote" display: Remote On/Off is activated "Restart" display: Automatic restart is activated
19		Button *"?"* to open the symbol explanation
20		State display
21		If this symbol is shown, then the compressor is an inverter.
22		Display "LLC mode activated" (display of the master controller)

System state

The current state of the system is shown in all display pages in the upper left corner via the following three symbols:

No message is present, if the smiley face is shown. The system functions flawlessly.

As soon as a warning or maintenance message is present, the smiley face is replaced by a flashing warning triangle.

The flashing tool signals a fault (the compressor is switched off).

Messages are also shown in the system diagram in order to detect the source location of the warning, maintenance or fault. Below the system diagram a status line is located, which provides constant information about the operating mode of the system.

Navigation

Navigation of the individual screens is done via the button in the title line:

The *"Home"* button leads back to the basic display from any display page (not available in the basic display). A possibly earlier entered code is deleted.

The arrow to the left leads, depending on context, backs a page or level.

The arrow to the right leads, depending on context, one page further.

Buttons in the basic display

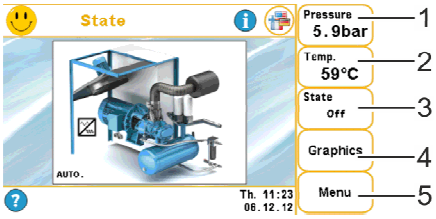


Fig. 4: "Basic display" screen

The buttons in the basic display are allocated as follows:

- *"Pressure"* (Fig. 4/1) button to open the "Pressure" screen
- *"Temperature"* (Fig. 4/2) button to open the "Temperature" screen
- *"State"* (Fig. 4/3) button to open the "State" screen
- *"Graphics"* (Fig. 4/4) button to open the "Graphics" screen
- *"Menu"* (Fig. 4/5) button to open the "Menu" screen

"Pressure" screen

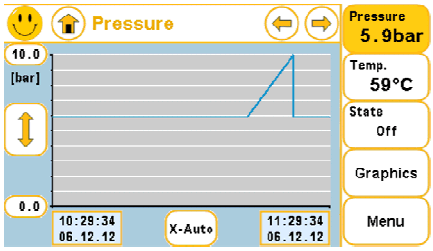


Fig. 5: "Pressure" screen

The current measured value of the pressure sensor is displayed in the "Pressure" screen. A tap on the *"Pressure"* button graphically displays the pressure.

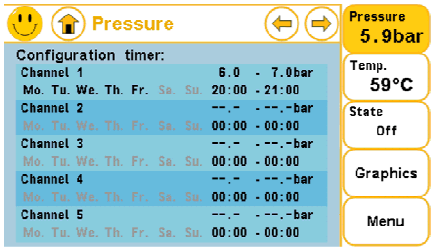


Fig. 6: "Pressure" screen

All pressure values of the entire system are compiled on the other pages (scrolling is done using the arrow key).

"Temperature" screen

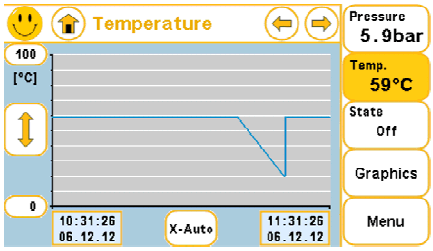
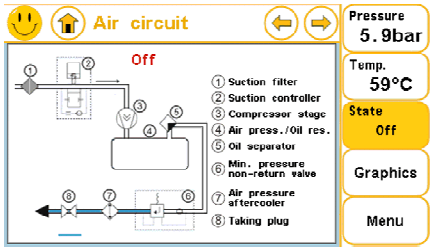


Fig. 7: "Temperature" screen

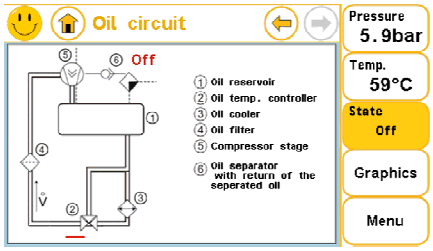
The current measured value of the final compressor temperature is displayed in the "Temperature" screen. A tap on the *"Temperature"* button graphically displays the temperature course. All temperature values of the entire system are compiled on the other pages (scrolling is done using the arrow key).

"Air circuit" and "Oil circuit" screen



Tap the *"State"* button and the compressor stage is shown. The air circuit and oil circuit are displayed schematically.

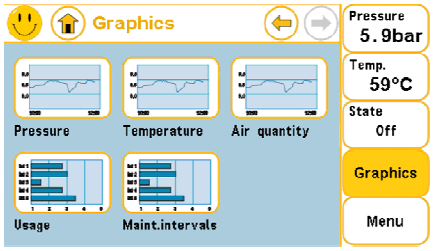
Fig. 8: "Air circuit" screen



Tap the button to the *"right"* to get to the "Oil circuit" screen.

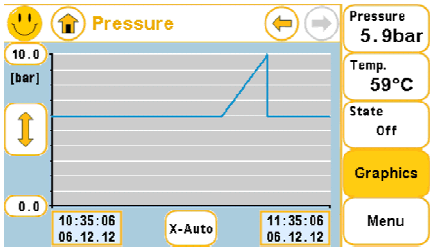
Fig. 9: "Oil circuit" screen

"Graphics" screen



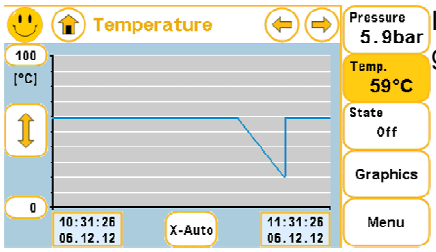
The "Graphics" button initially leads to an overview of all existing graphical evaluation. The pressure, temperature, air quantity, usage and maintenance intervals are displayed.

Fig. 10: "Graphics" screen



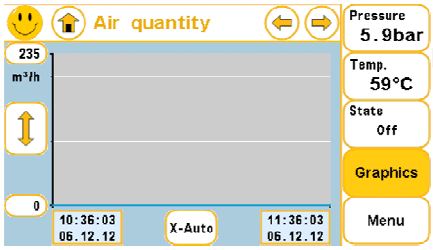
In the "Pressure" screen the pressure of the system is graphically displayed.

Fig. 11: "Pressure" screen



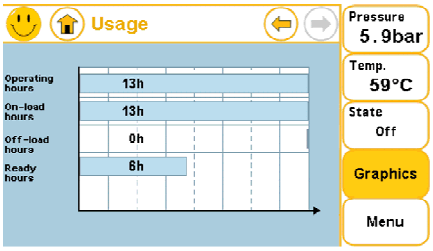
In the "Temperature" screen the temperature of the system is graphically displayed.

Fig. 12: "Temperature" screen



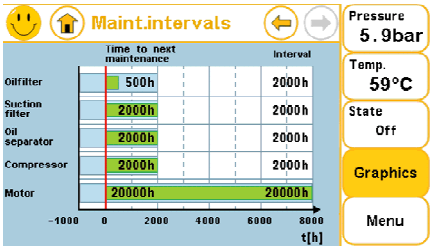
In the "Air quantity" screen the air quantity is displayed in cubic feet per hour.

Fig. 13: "Air quantity" screen



In the "Usage" screen the amount of operating hours, on-load hours, off-load hours and ready hours are graphically displayed.

Fig. 14: "Usage" screen



In the "Maintenance interval" screen the time to the next maintenance for the oil filter, suction filter, oil separator, compressor and motor are graphically displayed.

Fig. 15: "Maintenance interval" screen

Menu" screen

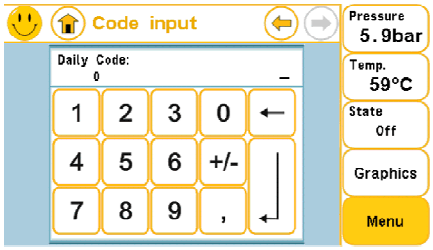


Fig. 16: "Code input" screen

The "Menu" button allows access to the menu system. All setting parameter are located here.

Representation of the graphics

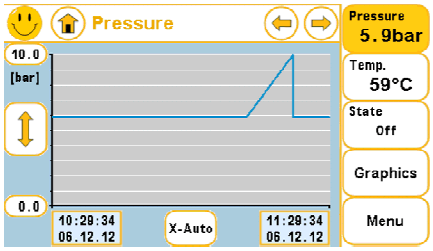


Fig. 17: "Pressure" screen

The measured values for the pressure and the final compressor temperature are saved regularly. The collected data is graphically displayed. Within the graph surface the display area can be zoomed into by pulling on the rectangle using your fingers (Zoom in).

The following option are available in the x direction:

- Max: All available data points are displayed. Both axes are ideally adjusted for this.
- 10 min, 30 min, 1 h: The respective section is displayed. Using the arrow keys allows scrolling in the x direction by a quarter of the selected interval.
- X-Auto: The values from the menu *Display parameter* ➔ *Graphs* ➔ *X-Auto* assumed.
- Manually: This option allows to select date and time and set them to the desired value.

The y-axis is initially scaled with the values from the menu *Display parameter* ➔ *Graphs*. The upper as well as the lower limit can be changed. Input is done via a keypad. Tap the double arrow at the y-axis and the limits are reset to the values from the menu.

2.5 *Switching the compressor on/off*

Switching the compressor on 1. Press (I).

Switching the compressor off 1. Press (0).

> *During the switch-off process, the compressor initially switches to "Off load" (motor running, however the compressor is not compressing any air; a flashing dot appears on the screen) for the duration of the off time. Only then does the compressor switch off (the motor stops).*

2.6 *Access to the menu system*

2.6.1 Code input

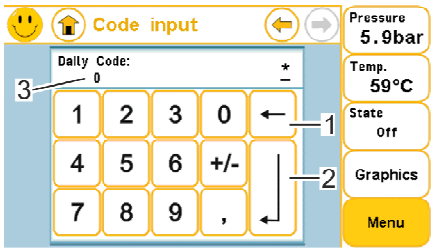


Fig. 18: "Code input" screen

After a tap on the *"Menu"* button the "Code input" screen appears".

A keypad appears to enter the access code or function code. Using the *"Correction"* (Fig. 18/1) button the code can again be deleted in part. Using the *"Enter"* (Fig. 18/2) button the code number is confirmed, the Home button in the title line cancels the input. Once the correct code has been confirmed, the screen switches into the menu level or the associated function is performed. Codes are available for different functions.

The number for the day code is displayed in the input field (Fig. 18/3).

Code	Code type	Access level/ function	Description
---	Menu	Without code	The menu system is displayed in whole. Setting can not be changed. The "Lock touch" function is accessible.
1	Menu	Customer	The menu system is displayed in whole. Setting can be changed. The "Lock touch" function is accessible.

2.6.2 Access to the menu system without a code

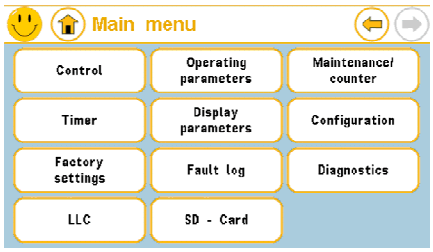


Fig. 19: "Main menu" screen

In the menus all changeable parameter can be selected via a button (see Fig. 19).

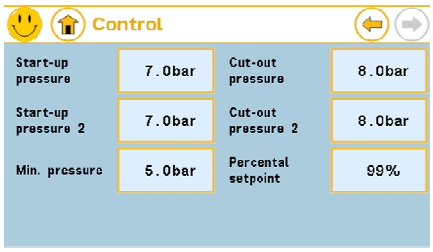


Fig. 20: "Control" screen (can not be changed)

When accessing the menu system without a code only a value in the display is released. Instead of a button, a light blue field (Fig. 20) appears.

The main menu includes the following submenus:

- Control
- Operating parameters
- Maintenance counter
- Timer
- Display parameters
- Configuration
- Factory settings
- Fault log
- LLC
- Diagnostics
- SD-Card

2.6.3 Access to the menu system code 1

Parameter input

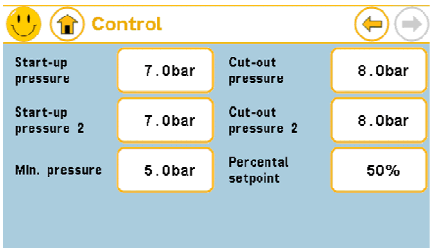


Fig. 21: "Control" screen (can be changed)

When accessing the menu system with code "1" settings are available in the controller. If a code is entered, all values are highlighted in white (Fig. 21) and can be changed by selection on the individual buttons. For example, if the *"Cut-out pressure"* button is selected in the "Control" screen, then the submenu is reached (Fig. 22), in which the stop pressure can be set.

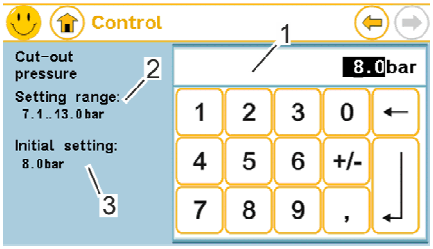


Fig. 22: "Control" screen

1 Input field
2 Display of the setting range
3 Display of the default settings

A keypad appears in the submenu and numeric parameters can be set. It appears as soon as a value is entered. Left at the edge the possible setting range, the default setting as well as a brief explanation text is displayed.

After input the new value can be accepted or deleted:

Accept input and leave

Correct input

Discard input and close input page

2.7 Menu system

Overview

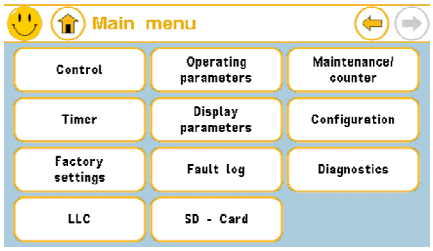


Fig. 23: "Main menu" screen

The main menu includes the following submenus:

- Control (↯ *Chapter 2.7.1 '"Control" menu' on page 30*)
- Operating parameters (↯ *Chapter 1.5 'Environmental protection' on page 32*)
- Maintenance / counter (↯ *Chapter 2.7.3 '"Maintenance / counter" menu' on page 34*)
- Timer (↯ *Chapter 1.6 'Instructions on the machine' on page 36*)
- Display parameters (↯ *Chapter 0 '"Display parameters" menu' on page 39*)
- Configuration (↯ *Chapter 2.7.5 '"Configuration" menu' on page 43*)
- Factory settings (↯ *Chapter 2.7.6 '"Factory settings" menu' on page 49*)
- Fault log (↯ *Chapter 2.7.7 '"Fault log" menu' on page 50*)
- Diagnostics (↯ *Chapter 2.7.8 '"Diagnostics" menu' on page 50*)
- LLC (↯ *Chapter 4.7.10 '"LLC" menu' on page 50*)
- SD-Card (↯ *Chapter 4.7.11 '"SD - Card" menu' on page 55*)

2.7.1 "Control" menu

This menu contains the following parameter:

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Start-up pressure	Lower limit for the pressure regulation. Setting range: 51 PSI – Stop pressure minus 1 PSI Initial setting: depending on compressor type	All	Editable
Cut-out pressure	Upper limit for the pressure regulation. Setting range: depending on compressor type, however at least 1 PSI above the start-up pressure Initial setting: depending on compressor type	All	Editable
Start-up pressure 2	Lower limit for the pressure control when switching to the second pressure range. Setting range: 51 PSI – Stop pressure minus 1 PSI Initial setting: depending on compressor type	All	Editable
Cut-out pressure 2	Upper limit for the pressure control when switching to the second pressure range. Setting range: depending on compressor type, however at least 1 PSI above the start-up pressure Initial setting: depending on compressor type	All	Editable
Minimum pressure	The "Minimum pressure warning" is triggered when the pressure during LLC operation (slave) falls below the minimum pressure. As long as the warning is present or is not acknowledged, the compressor switches to internal pressure control. Setting range: 51 PSI – Stop pressure minus 1 PSI Initial setting: 0 PSI (no minimum pressure monitoring)	All (only during LLC operation)	Editable

2.7.2 "Operating parameters" menu

This menu contains the following parameters:

Parameter	Value setting/Initial setting/Remarks	Com-pressor type	State
Automatic restart	Automatic restart after power failure. Setting range: Yes/No Initial setting: No	All	Editable
Remote On/Off	Specifies the possibility to switch the system on or off remotely. If yes, switching on and off can be done via a digital input. If no, a respectively programmed digital input will be ignored. Setting range: Yes/No Initial setting: No	All	Editable
Remote Load / Idling	Specifies the possibility to trigger an external load request via a digital input. If yes, switching on and off can be done via a digital input. If no, a respectively programmed digital input will be ignored. On a LLC slave it is thereby specified as if the input signal Setting range: Yes/No Initial setting: No	All	Editable
Circulation	Activate/deactivate the circulation for anti-freeze protection. The actual circulation start/stop depends on the temperature limits found in the heating / ventilation menu. Setting range: Yes/No Initial setting: No	All	Editable
Operating mode	Selection of the operating mode Specifies the behavior during load change. During Off-/On-load the motor runs continuously, during automatic operation the motor will be completely stopped (while considering the required stopping time), if the load requirement is missing. Setting range: Automatic/On-load/Off-load Initial setting: Automatic	All	Editable
Switch. cycles monitored	Activating or deactivating the switch cycles monitoring. Setting range: Yes/No Initial setting: No	All	Editable

Parameter	Value setting/Initial setting/Remarks	Com-pressor type	State
Max. no. of motor starts	During activated switch cycles monitoring: maximum amount of permitted motor starts per hour. Setting range: 1 – 60 /h Initial setting: depends on compressor type	All	Editable
Lead lag control	During operation with an external LLC (as LLC slave) Local pressure tolerance is ignored. However, maximum pressure is still monitored. Two inputs with the LLC - OK function and Remote Load / Idling (=external load requirement) are required to trigger via digital signals. Furthermore, the parameter "Remote Load / Idling" must be set to "Yes" (see above). Setting range: Yes/No Initial setting: No	All	Editable

2.7.3 "Maintenance / counter" menu

2.7.3.1 Maintenance intervals

This menu contains the following parameters:

Parameter	Value setting/Initial setting/Remarks	Com-pressor type	State
Suction filter maintenance interval	Time interval in which the suction filter should be serviced. Setting range: 0 – 30000 h Initial setting: 2000 h	All	Display
Oil/oil filter maintenance interval	Time interval in which the oil or oil filter should be serviced. Setting range: 0 – 30000 h Initial setting: 2000 h	All	Display
Oil separator maintenance interval	Time interval in which the oil separator should be serviced. Setting range: 0 – 30000 h Initial setting: 4000 h	All	Display
Motor maintenance interval	Time interval in which the motor should be serviced. Setting range: 0 – 30000 h Initial setting: 2000 h	All	Display
Compressor maintenance interval	Time interval in which the compressor should be serviced. Setting range: 0 – 30000 h Initial setting: 2000 h	All	Display
Oil maintenance interval	Time interval in which the oil should be serviced. Setting range: 0 – 30000 h Initial setting: 8000 h	All	Display
Universal 2 maintenance interval	Freely usable maintenance interval Designation can be set in the *Display parameter* ➔ *Texts* menu. Setting range: 0 – 30000 h Initial setting: 0 h	All	Display
Universal 3 maintenance interval	Freely usable maintenance interval Designation can be set in the *Display parameter* ➔ *Texts* menu. Setting range: 0 – 30000 h Initial setting: 0 h	All	Display

2.7.3.2 "Counter" menu

This menu contains the following parameters:

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Operating hours	Operating hours (Motor on) Setting range: 0 – 999999 h Initial setting: 0 h	All	Display
On-load hours	On-load hours counter (Motor on, load valve open) Setting range: 0 - Operating hours Initial setting: 0 h	All	Display
Ready hours	Ready hours counter (System on, motor off) Setting range: 0 – 999999 h Initial setting: 0 h	All	Display
Total delivery volume	From the maximum air volume of the compressor and the on-load hours calculated air quantity of the compressor. Setting range: 0 – 999999999 ft³ Initial setting: 0 ft³	All	Display

2.7.4 "Timer" menu

Overview

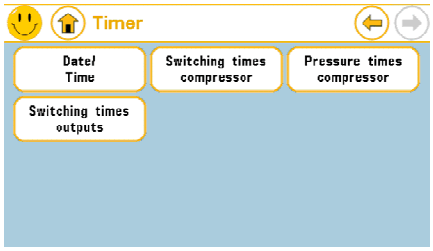


Fig. 24: "Timer" screen

- Date/Time (↯ *Chapter 2.7.4.1 'Date/Time screen' on page 36*)
- Switching times compr. (↯ *Chapter 2.7.4.2 '"Switching times compr." screen' on page 36)*
- Pressure times compr. (↯ *Chapter 2.7.4.3 '"Pressure times compr." screen' on page 37*)
- Switching times outputs (↯ *Chapter 2.7.4.4 '"Switching times outputs" screen' on page 38*)

2.7.4.1 Date/Time screen

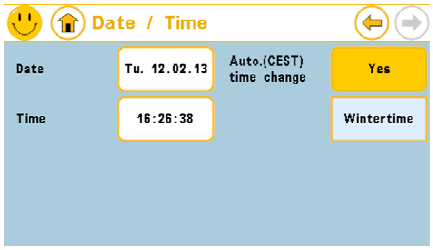


Fig. 25: Date/Time screen

This menu is used to set time and date. The weekday for the date is automatically calculated. In addition, it is also possible to activate the automatic daylight saving time. This takes into account the conversion rules for the CET (Central European Time).

2.7.4.2 "Switching times compr." screen

In this menu, the start and stop of the compressor can be defined.

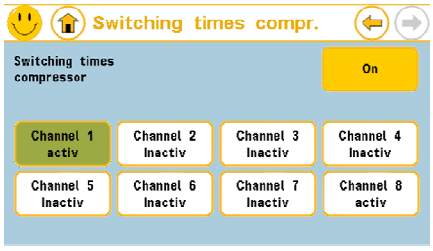


Fig. 26: "Switching times compr." screen (start page)

The timer can be activated and deactivated. The compressor is only released for the programmed times, if the "Switching times compr." is set to "On". There are 8 Switching times (Channel 1 - 8) available for programming. These channels are connected with a wire connection, meaning the compressor can operate, if at least one channel permits this.

Any timely limitations are cancelled, if the "Switching times compr." is set to "Off". It is also possible to switch individual channels on or off. The timer will not be considered during the analysis, if a programmed channel is set to "Inactive". The set time however stay and can be activated if needed.

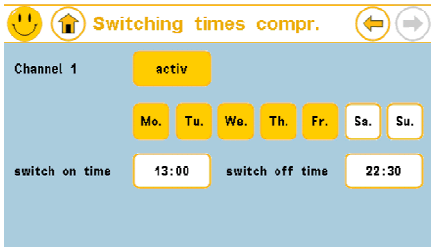


Fig. 27: "Switching times compr." screen for Channel 1

In the displayed example (Fig. 27) the compressor would operate at least from Monday to Friday from 1 pm to 10:30 pm. To switch the compressor on for one or several days continuously, the respective days must be selected and 00:00 must be entered for switching times.

2.7.4.3 "Pressure times compr." screen

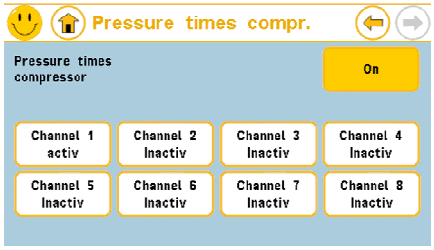


Fig. 28: "Pressure times compr." screen (start page)

The timer can be activated and deactivated. The compressor operates at the programmed time with the respectively set pressure range, if the "Pressure times compr." is set to "On". There are 8 Switching times available for programming. The pressure range of the first active channel, which has a current valid time programmed always applies.

The compressor moves to the pressure range set in the "Control" menu, if the "Switching times compr." is set to "Off". It is also possible to switch individual channels on or off. The timer will not be considered during the analysis, if a programmed channel is set to "Inactive". The set times and pressures however stay and can be activated if needed.

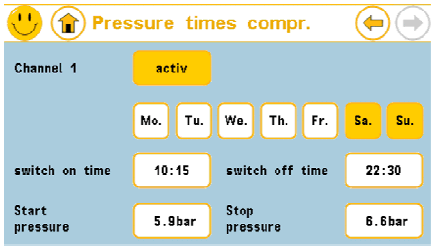


Fig. 29: "Pressure times compr." screen for Channel 1

In the example (Fig. 29) shown, the pressure range of the compressor was set to 123–9.5 bar on the weekend between 10:15 am and 10:30 pm.

To switch on a pressure range for the compressor on for one or several days continuously, the respective days must be selected and 00:00 must be entered for switching times.

2.7.4.4 "Switching times outputs" screen

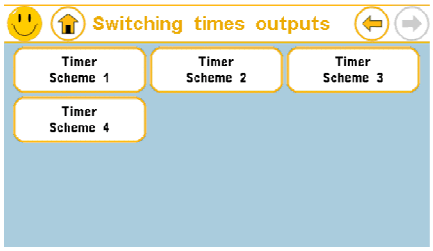


Fig. 30: "Switching times outputs" screen

Programming of the time schedule for the digital outputs is done analogous to the Switching times compressor. There are four schedules available. These can be allocated to the digital outputs if required. Via the *"Timer Scheme 1"* (Fig. 30/1) the channel overview for scheme 1 can be accessed.

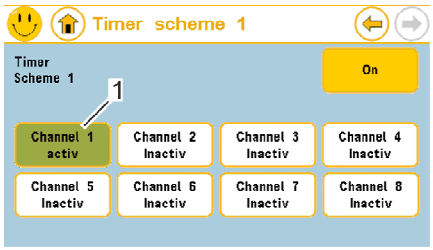


Fig. 31: "Switching times outputs" screen

This channel overview shows that Channel 1 is presently active. Using the *"Channel 1 active"* (Fig. 31/1) button the submenu for programming Channel 1 can be accessed.

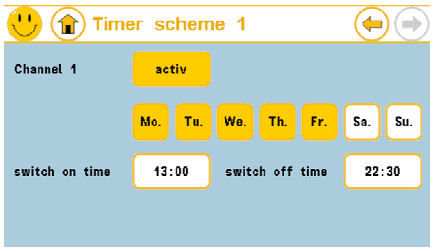


Fig. 32: "Switching times output" screen for Channel 1

In this (Fig. 32) the scheme of Channel 1 can be programmed.

"Display parameters" menu

Overview

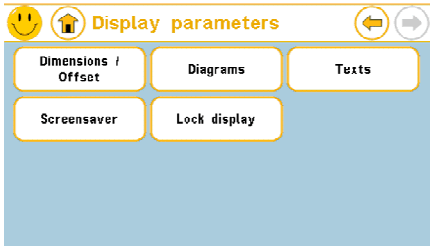
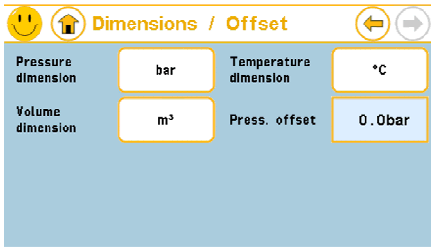


Fig. 33: "Display parameters" screen

This menu contains the following submenus:

- Dimensions / Offset (↯ *Chapter 2.7.4.5 '"Dimensions / Offset" screen' on page 39*)
- Diagrams (↯ *Chapter 2.7.4.6 '"Diagrams" screen' on page 40*)
- Texts (↯ *Chapter 2.7.4.7 '"Texts" screen' on page 41*)
- Screensaver (↯ *Chapter 2.7.4.8 '"Screensaver" screen' on page 436*)
- Lock screen (↯ *Chapter 2.7.4.9 '"Lock Display" screen' on page 43*)

2.7.4.5 "Dimensions / Offset" screen

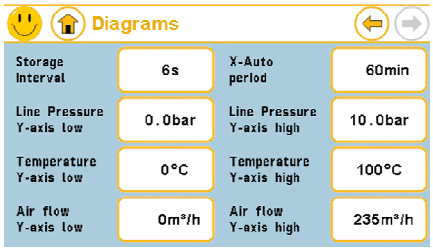


The pressure dimension, temperature dimension, volume and pressure offset can be set in the "Dimensions / Offset" screen.

Fig. 34: "Dimensions / Offset" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Pressure dimension	Display unit for all pressure values. Setting range: bar, MPA, psi Initial setting: psi	All	Editable
Temperature dimension	Display unit for all temperatures. Setting range: °C, °F, K Initial setting: °F	All	Editable
Volume	Display unit for volume/air quantity. Setting range: m³, ft³ Initial setting: ft³	All	Editable
Press. offset	Offset of measured pressure value for display. Setting range: -7 – +7 psi Initial setting: 0 psi	All	Display

2.7.4.6 "Diagrams" screen



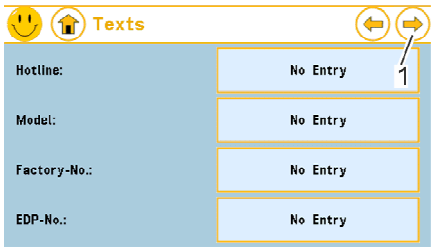
Settings for the illustration of the diagrams can be made in the "Diagrams" screen.

Fig. 35: "Diagrams" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Storage interval	Specifies the recording interval for the flow diagrams. Setting range: 1 – 60 s Initial setting: 6s	All	Editable
X-Auto period	Specifies the display period of the flow diagram when selecting 'X-Auto'. Setting range: 1 – 1440 min Initial setting: 60 min	All	Editable
Line Pressure Y-axis low	Specifies the lower limit of the Y-axis after actuating the double arrow button (Y-restore) in the Mains pressure flow diagram. Setting range: 0 psi – Line Pressure Y-axis high Default setting: 0 psi	All	Editable
Line Pressure Y-axis high	Specifies the upper limit of the Y-axis after actuating the double arrow button (Y-restore) in the Mains pressure flow diagram. Setting range: Line Pressure Y-axis low – 232 psi Initial setting: 145 psi	All	Editable
Temperature Y-axis low	Specifies the lower limit of the Y-axis after actuating the double arrow button (Y-restore) in the tempera-ture flow diagram. Setting range: -58°F – Temperature Y-axis high Default setting: 32 °F	All	Editable
Temperature Y-axis high	Specifies the upper limit of the Y-axis after actuating the double arrow button (Y-restore) in the tempera-	All	Editable

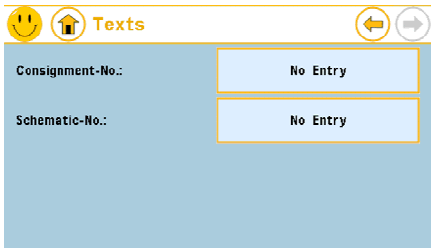
Parameter	Value setting/Initial setting/Remarks	Compressor type	State
	ture flow diagram. Setting range: Temperature graph low – 302 °F Initial setting: 212 °F		
Air flow Y-axis low	Specifies the lower limit of the Y-axis after actuating the double arrow button (Y-restore) in the volume flow diagram. Setting range: 0 ft³t – Air flow Y-axis high Default setting: 0 ft³	All	Editable
Air flow Y-axis high	Specifies the upper limit of the Y-axis after actuating the double arrow button (Y-restore) in the volume flow diagram. Setting range: Air flow Y-axis low – 2354 cu ft³³ Initial setting: Max. air volume of the currently selected system	All	Editable

2.7.4.7 "Texts" screen



This menu contains text about the type plate.

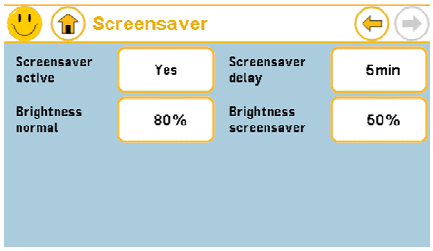
Fig. 36: "Texts" screen (Part 1/2)



Using the (Fig. 35/1) button the second part of the menu can be accessed.

Fig. 37: "Texts" screen (Part 2/2)

2.7.4.8 "Screensaver" screen



In this menu the settings for the screensaver can be performed.

Fig. 38: "Screensaver" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Screensaver active	Specifies if the Screensaver function is active. Should the screensaver be active, the screensaver will be shown after the delay and dimmed to "Brightness screensaver". A touch to the screen on any place will activate the screensaver. The basic display is then always displayed. Setting range: Yes/No Initial setting: Yes	All	Editable
Screensaver delay	Here it is specified after what time period and without operation the screensaver becomes active, meaning the display is dimmed to the "Brightness screensaver" value and the screensaver is displayed. Setting range: 0 – 60 min Initial setting: 5 min	All	Editable
Brightness normal	Specifies the brightness of the display during operation. Setting range: 20 – 100 % Initial setting: 80 %	All	Editable
Brightness screensaver	Specifies the brightness of the display when the screensaver is active. Setting range: 0 – 100 % Initial setting: 50 %	All	Editable

2.7.4.9 "Lock Display" screen

This function is used to clean the display without accidental triggering operation. After this function has been started, the control cannot be used for one minute.

This function is available regardless of code level.

Fig. 39: "Lock Display" screen

2.7.5 "Configuration" menu

Overview

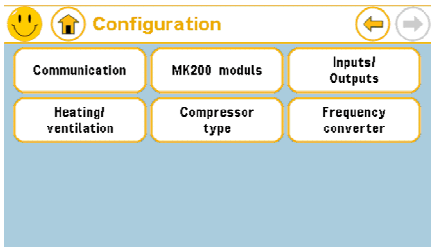
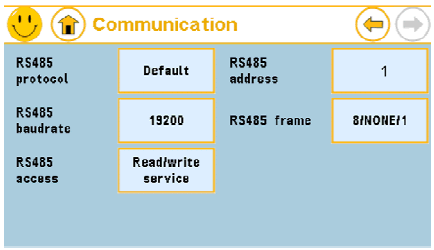


Fig. 40: Configuration screen

This menu contains the following submenus:

- Communication (↯ *Chapter 0 '"Communication" screen' on page 44*)
- MK200 modules (↯ *Chapter 2.7.5.1 '"MK200 modules" screen' on page 45*)
- Inputs / Outputs (↯ *Chapter 2.7.5.2 '"Inputs / Outputs" screen' on page 46*)
- Heating / ventilation (↯ *Chapter 4.7.6.4 ' "Heating / ventilation" screen' on page 46*)
- Compressor type (↯ *Chapter 2.7.5.3 '"Compressor type" screen' on page 48*)

"Communication" screen



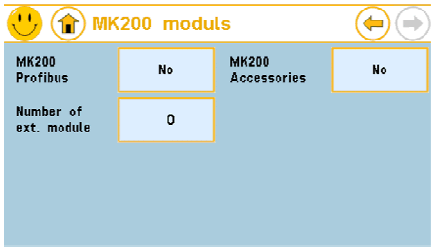
This screen shows the settings for the communication.

Fig. 41: "Communication" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
RS485 protocol	Specifies the protocol type on the RS485 networking interface. Setting range: MODBUS / Standard	All	Display
RS485 address	Specifies the participants address in the RS485 network. Setting range: 0 – 27 Initial setting: 1	All	Display
RS485 baud rate	Setting range: 4800 / 9600 / 19200 / 38400 / 57600 / 115200 Initial setting: 19200	All	Display
RS485 frame	Specifies the protocol frame when networking via Modbus (data bits/parity/stop bits). Setting range: 8/NONE/1, 8/NONE/2, 8/EVEN/1, 8/ODD/1 Initial setting: 8/NONE/1	All	Display
RS485 access	Specifies the authority for changes via the RS485 interface. Depending on setting, either no parameter or only parameter with the respective code level can be changed. Depending on the entered code, not all settings are available. Setting range: Read only, Read/write customer, Read/write service, Read/write factory Initial setting: Read/write service	All	Display

2.7.5.1 "MK200 modules" screen

Overview



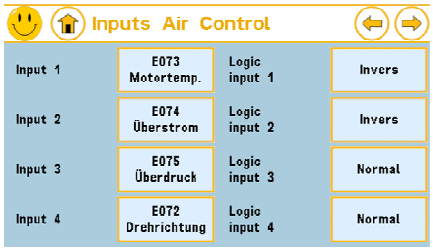
Different MK200 modules can be connected to the RS485 bus. Here, each model must have its own address and each address must only occur once. In principle 32 participants are possible. Whether the ICOMMAND - TOUCH establishes a communication to a module and monitors a fault of a module depends on the settings in this menu.

Fig. 42: "MK200 modules" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
MK200 Profibus	Specifies if a Profibus is triggered on the MK200 module. Set address: 31. Setting range: Yes/No Initial setting: No	All	Display
MK200 Accesso-ries	Specifies if the expansion module on the MK200 module is being considered. The assignment of the digital inputs and outputs of up to two accessory modules of type 8E4RA can be selected via the *Con-figuration* ➔ *Inputs/outputs* submenu from a list of possible freely selectable functions. Addresses: 4 and 5 Setting range: Yes/No Initial setting: No	All	Display
Number of ext. module	Amount of expansion modules connected to the MK200 module bus. Addresses 8 to 30 Setting range: 0 – 23 Initial setting: 0	All	Display

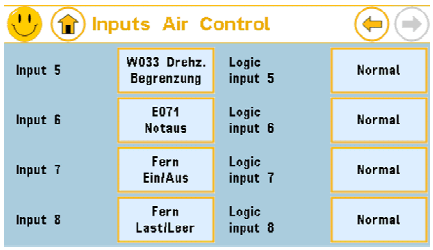
2.7.5.2 "Inputs / Outputs" screen

Overview



This menu is used to assign functions to the ICommand - Touch P digital inputs and outputs and to the accessory modules.

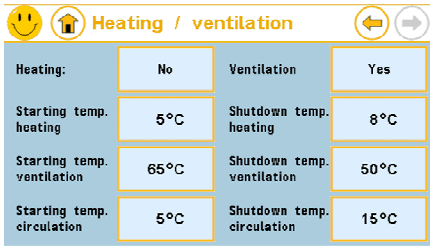
Fig. 43: "Inputs ICommand - Touch" screen (Part 1/2)



Eight digital inputs and seven digital outputs are available on the ICommand - Touch P. These are preconfigured for the initial setting; however it is possible to change if required. Output 1-4 of the ICommand - Touch P can be preassigned, depending on compressor type.

Fig. 44: "Inputs ICommand - Touch" screen (Part 2/2)

4.6.6.4 "Heating / ventilation" screen



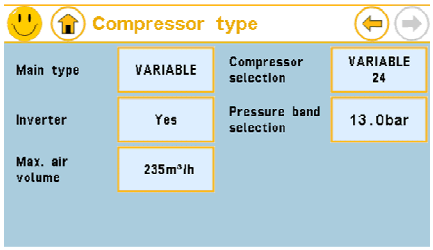
In the "Heating / ventilation" screen the heating or the ventilation can be switched on and off and parameter can be set.

Fig. 45: "Heating / ventilation" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Heating	Specifies whether the compressor controls an oil heating system via the oil temperature. Setting range: Yes/No Initial setting: No	All	Display
Ventilator	Specifies if the compressor performs a 2-point control for a ventilator.	All	Display

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
	Setting range: Yes/No Initial setting: No		
Starting temp. heating	Specifies the switch-on temperature for the heating system (programmable output). Setting range: 36 °F – Shut-down temp. heating Initial setting: 36 °F	All	Display
Shut-down temp. heating	Specifies the switch off temperature for the heating system (programmable output). Setting range: Starting temp. heating – 176 °F Initial setting: 46 °F	All	Display
Starting temp. ventilation	Specifies the starting temperature For the ventilator (programmable output). Setting range: Shut-down temperature ventilation – 194 °F Initial setting: 149 °F	All	Display
Shut-down temp. ventil.	Specifies the switch off temperature for the ventilator (programmable output). Setting range: 32°F – Starting temp. ventilation Initial setting: 122 °F	All	Display
Starting temp. circulation	Specifies the switch-on temperature for the circulation (compressor start without prompt). Setting range: 34 °F – Shut-down temp. circul. Initial setting: 59 °F	All	Display
Shut-down temp. circul.	Specifies the switch-on temperature for the circulation (off-load without prompt). Setting range: Starting temp. circulation – 68 °F Initial setting: 59 °F	All	Display

2.7.5.3 "Compressor type" screen

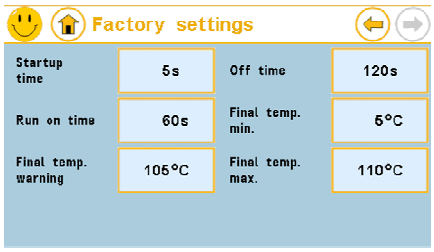


This menu shows the settings for the compressor type.

Fig. 46: "Compressor type" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Main type	Specifies the compressor family for further compressor selection.	All	Display
Compressor selection	Specifies the compressor. Caution! When changing this parameter the type-specific parameters are set to their initial setting.	All	Display
Inverter	Specifies whether the motor is controlled via an inverter or via a Star/Delta. Setting range: Yes/No Initial setting: No	All	Display
Pressure band selection	Specifies the maximum pressure of the compressor Setting range: depending on compressor type Initial setting: depending on compressor type	All	Display
Max. air volume	Specifies the max. air volume of the compressor Setting range: 0 – 2354 cu ft³ Initial setting: depending on compressor type	All	Display

2.7.6 "Factory settings" menu



In the "Factory settings" menu the operating times and final compressor temperature are displayed.

Fig. 47: "Factory settings" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Start-up time	Specifies the start-up time of the motor. Setting range: 3 – 30 s Initial setting: depending on compressor type	All	Display
Off time	Specifies the minimum run on time during manual switch off of the compressor. This value is also used during restart delays after power failure. Setting range: 0 – 120 s Initial setting: 120 s	All	Display
Run on time	Specifies the run on time of the compressor in automatic operation or when exceeding the specified switching operations. Setting range: 10 – 3600 s Initial setting: depending on compressor type	All	Display
Final temperature min.	Specifies the minimum start temperature of the compressor Setting range: 32 – 50 °F Initial setting: 41 °F	All	Display
Final temp. warning	Specifies the upper threshold for the compressors final temperature. Setting range: 194 – 230 °F Initial setting: 221 °F	All	Display
Final temperature limited to	Specifies the switch-off threshold for the compressors final temperature (fault). Setting range: 212 – 248 °F Initial setting: 230 °F	All	Display

2.7.7 "Fault log" menu

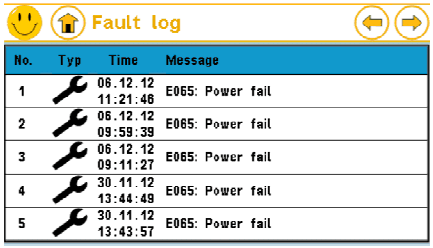


Fig. 48: "Messages" menu for massages, faults and maintenance

The last 20 messages are stored in the message memory. Here, the newest messages appear first. Using the arrow buttons (/) scroll to older messages.

For each entry the following information is available:

- Entry number
- Warning or fault symbol
- Time the message cause appeared
- Message in plain text

Currently still waiting - meaning not confirmed messages - are shown flashing.

A new occurring message replaces the older entry once the message memory is full.

2.7.8 "Diagnostics" menu

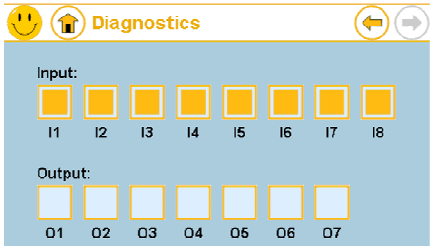


Fig. 49: "Diagnostics" screen

This menu contains the current states of the ICommand - Touch P digital inputs and outputs.

When selecting this screen with the service code you can switch the outputs on and off by tap. Due to safety reasons only the output can be active.

"LLC" menu

2.7.9 "LLC configuration" screen

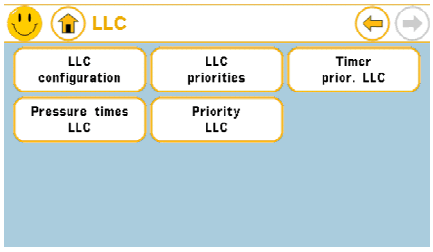


Fig. 50: "LLC configuration" screen (overview)

In this menu the settings for the lead lag control can be performed.

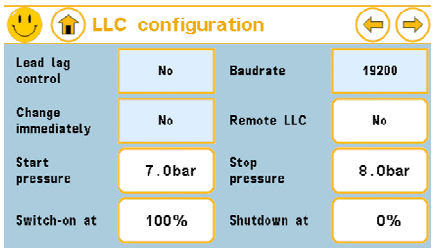


Fig. 51: "LLC configuration" screen (Part 1/2)

Individual settings (e.g. switch-on times, switch-off and change intervals) can be set in the "LLC configuration" (Fig. 50) screen.

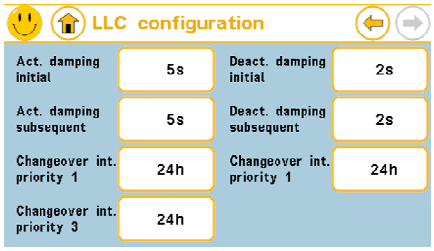


Fig. 52: "LLC configuration" screen (Part 2/2)

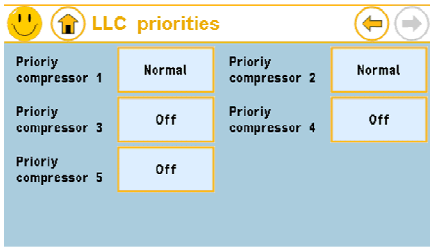
Using the button the second part of the menu can be screen (Fig. 52) accessed.

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Lead lag control	Indicates if and how the communication for the LLC function should be done (or if a LLC module is available). Setting range: ■ No (no LLC) ■ Digital (LLC via expansion module) ■ RS485 (LLC via RS485 connection) ■ When selecting "Digital" a LLC module is expected at address 2 Initial setting: No	All	Display
Baud rate	Baud rate for communication on LLC via RS485 Setting range: 4800 / 9600 / 19200 / 38400 / 57600 / 115200 Initial setting: 19200	All	Display
Change immediately	Specifies if the LLC series rotates immediately after the change interval is completed (recommended) or only when the switch-on or switch-off threshold is reached. Warning: If No, the change interval can be	All	Display

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
	significantly exceeded. Setting range: Yes/No Initial setting: No		
Remote LLC	Specifies if the switching off for all the LLC masters and connected slaves is possible via the ACP controlled compressor stage. Switching on or off is done via a respectively programmed digital input: "Remote basic load cycle" Setting range: Yes/No Initial setting: No	All	Editable
Start pressure	Specifies the (lower) threshold to switch-on a compressor. Setting range: 51 psi – (Stop pressure minus 1 psi) Initial setting: Start-up pressure (from the "Control" menu)	All	Editable
Stop pressure	Specifies the (upper) threshold to switch-off a compressor. Setting range: (Switch-on pressure + 1 psi) – permissible maximum pressure of the current compressor type Initial setting: Cut-out pressure (from the "Control" menu)	All	Editable
Switch-on at	Specifies from what calculated usage a control compressor is switched on. Only if the functionality is activated by setting a value larger than 0% for the "Shut-down at" parameter. Setting range: "Shut-down at" - 100% Initial setting: 100 %	All	Editable
Switch-off at	Specifies from which usage a control compressor is switched off, if at least one more compressor is in operation. Setting of 0% deactivates this function. Setting range: 0 % – "Switch-on at" Initial setting: 0 %	All	Editable

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Act. damping initial	Specifies the minimum time of the first switch-on of a compressor. Setting range: 0 – 600 s Initial setting: 5s	All	Editable
Deact. damping initial	Specifies the minimum time of the first switch-off of a compressor. Setting range: 0 – 60 s Initial setting: 2 s	All	Editable
Act. damping subsequent	Specifies the time prior to switching on further compressors (if the pressure continuous to drop after having switch on). Setting range: 1 – 600 s Initial setting: 5 s	All	Editable
Deact. damping subsequent	Specifies the minimum time prior to switching on further compressors (if the pressure continuous to rise after having switched off). Setting range: 2 – 60 s Initial setting: 2 s	All	Editable
Changeover int. priority 1	Time between the change-over of the LLC for the compressor with priority 1. Setting range: 1 – 168 h Initial setting: 24 h	All	Editable
Changeover int. priority 2	Time between the changeover of the LLC for the compressor with priority 2. Setting range: 1 – 168 h Initial setting: 24 h	All	Editable
Changeover int. priority 3	Time between the changeover of the LLC for the compressor with priority 3. Setting range: 1 – 168 h Initial setting: 24 h	All	Editable

2.7.9.1 "LLC priorities" screen

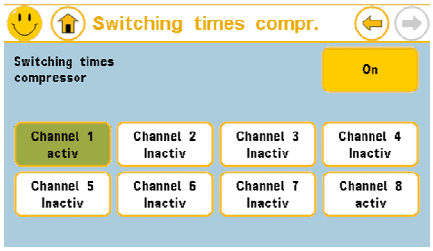


This menu contains the settings for the priority assignments of the individual compressors. The values set here only apply if no timer channel of the timer LLC priorities is active.

Fig. 53: "LLC priorities" screen

Parameter	Value setting/Initial setting/Remarks	Compressor type	State
Priority compressor 1 – 5	Specifies a priority level for each compressor in the LLC series. Compressors with high priority ware preferred when switching on. Lead lag control only takes place between compressors of the same priority. Setting range: OFF (compressor is never switched on) / Low / Normal / High Initial setting: Normal	All	Editable

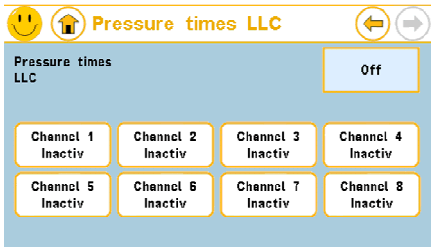
2.7.9.2 "Switching times LLC" screen



The switch-on/off times of the LLC are defined in this menu. This only applies for the LLC master. Programming is done analogous to the "Switching times compr." in section *Chapter 2.7.4.2 '"Switching times compr." screen' on page 36*.

Fig. 54: "Switching times LLC" screen

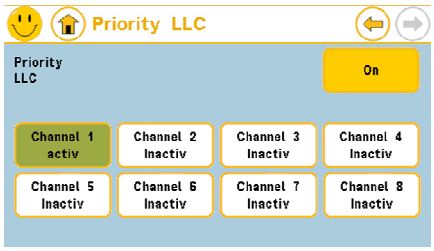
2.7.9.3 "Pressure times LLC" screen



The pressure times of the LLC are defined in this menu (increase/decrease). This only applies for the LLC master. Programming is done analogous to the "Pressure times compr." in section ↯ *Chapter 2.7.4.3 '"Pressure times compr." screen' on page 37*.

Fig. 55: "Pressure times LLC" screen

2.7.9.4 "Priority LLC" screen



The switch-on/off times of the priority switching of the LLC are defined in this menu. This only applies for the LLC master. Programming is done analogous to other timers such as "Switching times compr." (↯ *Chapter 2.7.4.2 '"Switching times compr." screen' on page 36*). The same priority levels as described in ↯ *Chapter 2.7.9.1 '"LLC priorities" screen' on page 53)*.

Fig. 56: "Priority LLC" screen

2.7.10 "SD - Card" menu

All functions with access to the SD - Card are located in this menu. The respective card must be inserted for usage.

2.7.10.1 Save parameters

The current parameter set is written on the SD - Card. Insert a SD - Card without write protection.

2.7.10.2 Load parameters

The parameter set of SD - Cards can be read with this function. The SD - Card with the "ACPParam.par" must be inserted.

Start and stop data logging

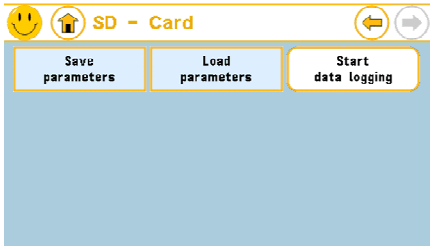


Fig. 57: "SD - Card" screen

This function starts data logging on the SD - Card. Insert a SD - Card without write protection. The following data is also written:

- Time stamp
- System state
- Final temperature
- Oil temperature
- Air quantity
- State of all connected compressors (only on LLC)

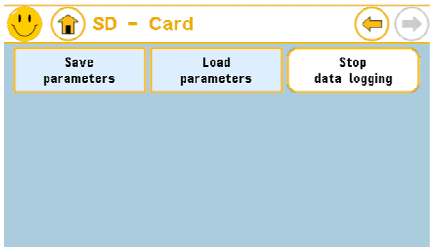


Fig. 58: "SD - Card" screen

Pressure, air quantity and temperatures are saved in the display parameter set on the control (bar/psi/Mpa, m³/ft³, °C/°F/Kelvin). States are in the language that it is set. Per calendar day one file in csv format (delimiter symbol: tabulator) are created. The text of the button changes from *"Start data logging"* (Fig. 57) to *"Stop data logging"* (Fig. 58), if the data logging is activated. In this case, a currently running data logging can be stopped.

2.8 Messages

2.8.1 Overview

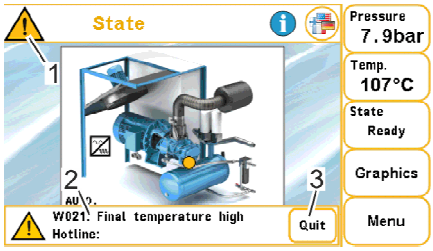


Fig. 59: "State" screen

A flashing warning triangle (Warning/Maintenance) or a tool symbol (Fault) (Fig. 59/1) will appear in the left top of the basic display, if a new message is present. In addition a message pop-up appears at the bottom of the display the message in plain text (Fig. 59/2). The message window can be closed with the quit button (Fig. 59/3).

The fault icon in the title psi flashes but only continues to flash until the cause of the error has been corrected. By pressing on the warning or fault icon in the title psi, the plain text message can be opened again.

2.8.2 Warning

A flashing warning triangle or a tool symbol will appear in the left top of the basic display, if a warning is present. In addition a message pop-up appears at the bottom of the display the message in plain text. The message window can be closed with the quit button. The warning triangle stays in the title psi until the cause of the message has been remedied. The message is displayed again after a tap on the warning triangle. The compressor continuous to run.

Warning message	Remarks	Compressor type
W021: Final temperature high	The maximum permissible compressor final temperature (warning limit) has been exceeded (refer to the "Factory settings" menu).	All
W022: Line pressure high	The pressure has exceeded the limit (max. permissible pressure – 7 psi).	All
W023: Temperature too low	The minimum temperature required to start has been undercut (refer to the "Factory settings" menu).	All
W024: Low. press. threshold	Minimum pressure has been undercut. Only relevant for LLC slave operation (see "Control" menu).	All
W025: Check oil level/heat.	Heating limitation warning: The "Fault overpressure" input was triggered during active heating (Delay 0.5 s).	All
W026: Adjustment wrong	At least one analogue input calibration value is incorrect.	All

Warning message	Remarks	Compressor type
W033: Speed reduction	The on "W034: "Speed reduction" programmed digital input was opened. Delay 1 s.	All
W034: Dryer	The on "W034: Dryer" programmed digital input was opened.- no delay.	All
W036: Condensate drain	The on "W036: "Condensate drain" programmed digital input was closed.	All
W037: Air filter	The on "W037: "Air filter" programmed digital input was closed. Monitoring starts after 15 minutes. Triggering of warning without delay.	All
W038: Oil/oil filter	The on "W038: "Oil/oil filter" programmed digital input was closed. Monitoring starts after 15 minutes. Triggering of warning without delay.	All
W039: Oil separator	The on "W039: "Oil separator" programmed digital input was closed. Monitoring starts after 15 minutes. Triggering of warning without delay.	All
W044: Extension module	At least one of the configured MK200 expansion modules is not answering (possible addresses 8 to 30).	All
W045: I/O-Module (Add.1)	The analogue output module on address 1 does not respond. This monitoring is only active, if this module has been activated.	All
W046: I/O-Module (Add.2)	The LLC module on address 2 does not respond. This monitoring is only active in LLC master operation during digital control of the LLC slave.	All
W048: I/O-Module (Add.4)	The expansion module on address 4 does not respond. This monitoring is only active, if this module has been selected.	All
W049: I/O-Module (Add.5)	The expansion module on address 5 does not respond. This monitoring is only active, if this module has been selected.	All
W050: Profib. Mod.(Adr. 31)	The Profibus module on address 31 does not respond. This monitoring is only active, if this module has been selected.	All

Warning message	Remarks	Compressor type
W055: Access SD-Card	During the access to the SD - Card a fault occurred.	All
W056: Ext. War. 1	The on W056: Ext. maint. 1 programmed digital input was opened.	All
W057: Ext. War. 2	The on W057: Ext. War. 2 programmed digital input was opened.	All
W058: Ext. War. 3	The on W058: Ext. War. 3 programmed digital input was opened.	All
W059: Ext. War. 4	The on W059: Ext. War. 4 programmed digital input was opened.	All

2.8.3 Fault messages

A flashing tool symbol will appear in the left top of the basic display, if a fault message is present. In addition a message pop-up appears at the bottom of the display the message in plain text . The message window can be closed with the quit button. The fault icon in the title psi stays but only until the cause of the error has been corrected. The compressor is switched-off.

By pressing on the symbol in the title psi, the plain text message can be opened again.

Fault message	Remarks	Compressor type
E065: Power fail	The power supply has failed (only if there is no "Automatic restart" function is programmed).	All
E066: Final temp. sensor	Final compressor temperature outside measuring range. Sensor defective or cable break.	All
E067: Oil temperature sensor	Oil temperature measured values outside measuring range. Sensor defective or cable break.	All
E068: Pressure sensor	Pressure measured values outside measuring range. Sensor defective or cable break.	All
E070: Dew point sensor	Dew point temperature outside of measuring range. Sensor defective or cable break.	All
E071: Emergency stop	The Emergency OFF button was actuated.	All
E072: Rotation direction	Direction of rotation incorrect	All
E073: Motor temperature	Motor temperature monitoring input was opened. Delay 1 s.	All
E074: Overcurrent	Current monitoring input open. Delay 500 ms.	All
E075: Over pressure	Motor temperature monitoring input open. Delay 500 ms.	All
E076: Switch. cycles exceeded	Only during active switch cycle monitoring.	All
E077: Final temperature high	Compressor final temperature too high The temperature has exceeded the set maximum temperature.	All

Fault message	Remarks	Compressor type
E078: Line pressure high	Network pressure too high. The pressure has exceeded the set upper limit.	All
E079: System pressure conf.	The system pressure switch digital input has not opened after 35 s in on-load operation.	All
E095: I/O-Module (Add.4)	The accessory module on address 4 (Type MK200 8E4RA) does not respond. This monitoring is only active, if this module has been selected.	All
E096: I/O-Module (Add.5)	The accessory module on address 5 (Type MK200 8E4RA) does not respond. This monitoring is only active, if this module has been selected.	All
E108: Dew point dryer	The dew point exceeded the permissible maximum while motor is running (if set in menu). Only if heating is not active or not available.	All
E109: Dew point low	The dew point cut short of the permissible minimum while motor is running (if set in menu). Only if heating is not active or not available.	All
E110: Ext. Err. 1	The digital input programmed on "External fault 1" was triggered.	All
E111: Ext. Err. 2	The digital input programmed on "External fault 2" was triggered.	All
E112: Ext. Err. 3	The digital input programmed on "External fault 3" was triggered.	All
E113: Ext. Err. 4	The digital input programmed on "External fault 4" was triggered.	All

2.8.4 Maintenance messages

A flashing warning triangle will appear in the left top of the basic display, if a new maintenance warning is present. In addition a message pop-up appears at the bottom of the display the message in plain text. The message window can be closed with the quit button. The warning triangle in the title psi stays but only until the maintenance has been confirmed. The compressor continuous to run.

Maintenance messages	Remarks	Compressor type
M001: Suction filter	Time to next maintenance is less than 100 h	All
M002: Oil/oil filter	Time to next maintenance is less than 100 h	All
M003: Oil separator	Time to next maintenance is less than 100 h	All
M004: Motor	Time to next maintenance is less than 100 h	All
M005: Compressor	Time to next maintenance is less than 100 h	All
M006: Dryer	Time to next maintenance is less than 100 h	All
M007: oil	Time to next maintenance is less than 100 h	All
Maintenance 2 is universally usable	Time to next maintenance is less than 100 h	All
Maintenance 3 is universally usable	Time to next maintenance is less than 100 h	All
M012: Battery maintenance	The battery in the control should be replaced.	All

3 Index

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