Operating and installing instructions

Filter Control System Type 2200 SPS

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[1] DP = differential pressure

1 Basic advice about safety concerning the electronic control system

DANGER!
Danger of an accident caused by improper installation

Serious personal injuries or even fatal injuries can be caused if the device breaks down because the control system or the connected electrical equipment has not been installed properly. Therefore, comply with the following points in particular besides the general rules about safety for electrical equipment in industrial power systems.

- The control system is only allowed to be installed by qualified technical personnel according to the provisions of IEC 364 and DIN VDE 0105 for electrical equipment.
- All of the applicable laws, provisions, ordinances and regulations for installing electrical equipment must be complied with at the place of installation.
- Only authorized technical personnel are allowed to make adjustments on equipment that is fitted with the IP00 type of fuse without covers, after it has been switched off and subject to the local safety regulations and accident-prevention regulations.
- The control system is only allowed to be operated within the permissible operational area.

2 Technical data about the control system and the switch cabinet's components

2.1 Power units

2.2 Feed

L1-L2-L3 feed on the X1: 1-2-3 terminal strip

2.3 Motor control unit

U-V-W motor connection directly onto the K1 motor starting contactor

2.4 Power supply

Primary voltages
0 - 220 V, 380 V, 400 V, 440 V, 500 V and 550 V

Secondary voltages
0 V AC - 220 V AC valve voltage 230 V, AC: red wire
0 V AC - 115 V AC valve voltage 115 V, AC
0 V DC - 24 V DC valve voltage 24 V, DC
0 V AC - 220 V AC valve voltage for the control system: black wire

2.5 Fuses

Fuses in the switch cabinet
F1 to F3, each 2 A

2.6 SPS inputs and outputs

X2 terminals
MCV inputs, outputs and potential-free (floating) contacts.

➤ **ADVICE**
The respective diagrams of the switch cabinets show the connections and descriptions according to the type of filter.

2.7 Potential-free (floating) relay outputs

Faults and notifications are indicated by the centre-zero relay. X2 terminals: 16 – 30.

➤ **ADVICE**
The respective diagrams of the switch cabinets show the connections and descriptions according to the type of filter.

2.8 Electrical plans

The wiring diagrams are located in the separate electrical plan for the respective type of filter.

3 Operation

3.1 Operating elements

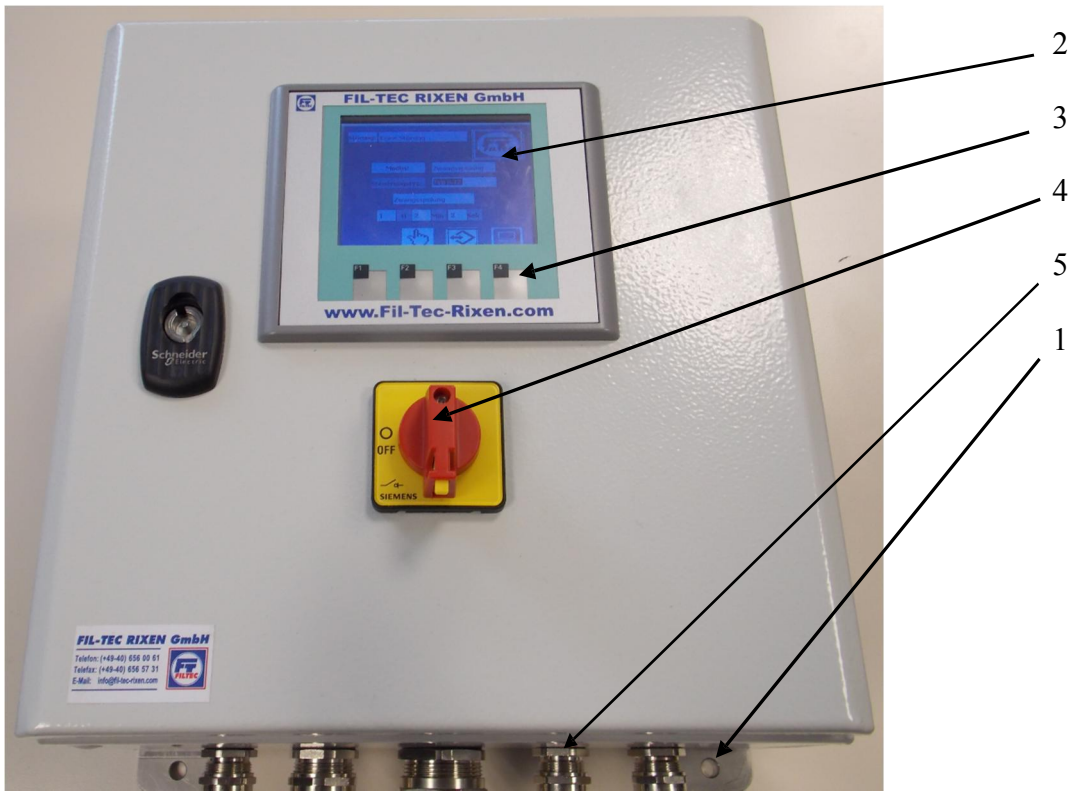

Fig. 3-1 Siemens 212 type electrical control unit

1 Fastening
2 Display and visualization
3 F1, F2, F3 and F4 keyboard
4 Main switch
5 Cable bushing socket

3.2 Monitoring of the control voltage

The electrical mains will be connected as soon as the main switch is actuated: the visualization starts and the MCV, i.e., the “monitoring of the control voltage”, will be triggered. The “monitoring of the control voltage” relay is not triggered any longer in the event of a power cut. The contacts are released.

3.3 Fault in the motor

If the motor’s measured electricity exceeds the reference value of the P9 parameter, then a notification will be given on the “P9 fault in the motor” visualization. The fault will be notified via the potential-free (floating) contacts on the overriding point. The motor and the backrinsing will switch off. The operator must acknowledge the fault via the F1 key after the fault has been remedied.

3.4 Excessive differential pressure in the concentration of rinsing oil and the cartridge alarm

The signal transmitter is a push-button switch contact that is connected to the MCV input of the “Fault in the concentration of rinsing oil”. If the notification lasts for longer that it was set by the P7 parameter, then an alarm will be given on the visualization. The operator must acknowledge the fault via the F1 key after the fault has been remedied.

3.5 Excessive differential pressure of 100%

The signal transmitter is a push-button switch contact that is connected to the “Excessive differential pressure of 100%” MCV input. If the notification lasts longer than 3 seconds, than an alarm will be given on the display. The operator must acknowledge the fault via the F1 key after the fault has been remedied.

3.6 F3 key (number of rinses)

The image with the number of rinses will be shown on the display when the F3 key is actuated (number of rinses in the main window). Return to the main image by pressing the F1 key.

Fig. 3-2 Rinsing-cycle meter

3.7 Multiple rinsing

The number of chambers that is set in the P1 parameter will be worked through.

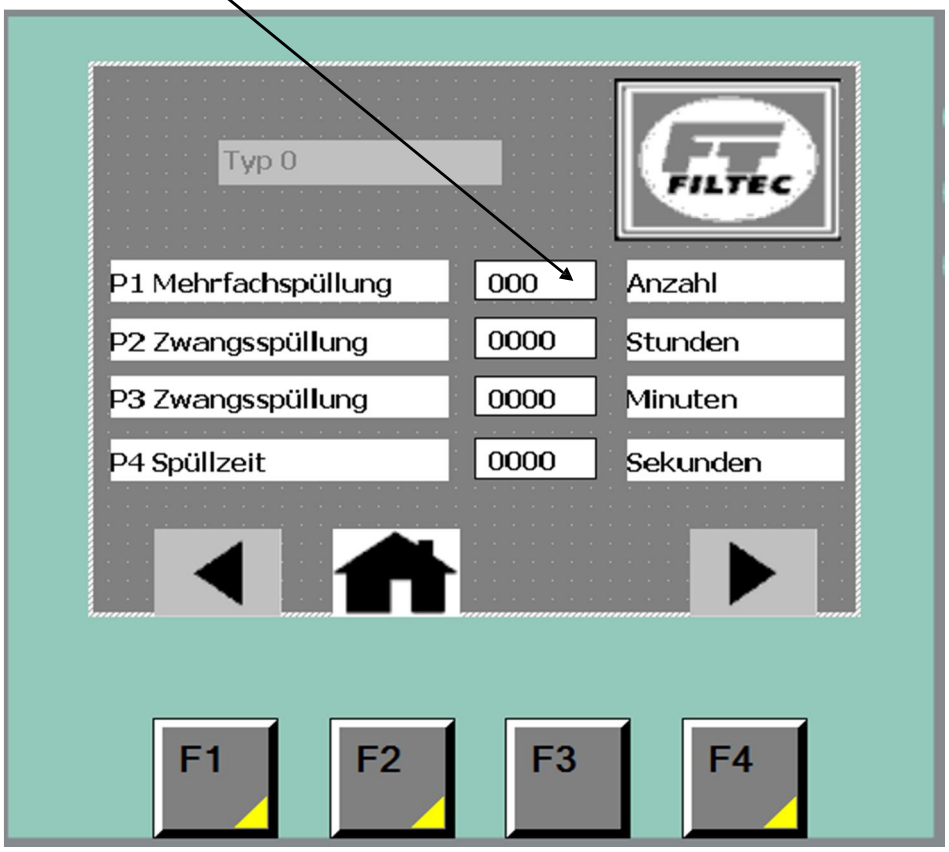

Fig. 3-3 Parameter page 1

Scroll back to the image by pressing the F1 key.
Scroll forward by pressing the F2 key.
Show the main image by pressing the F 3 key.

3.8 Monitoring of the rinsing frequency

If a “Differential pressure (DP) of 75%” has been activated before the “Time-controlled backrinsing trigger” has expired, then the “Differential pressure of 75%” notification will be shown on the display and the “service” key flashes.

3.9 Display of the “Operation” mode

The “Operation” type of mode will appear on the display if no type of filter is chosen (type of filter: “0 type”), after switching on the mains (electrical supply). “System off” is shown beneath in the window. The “Manual” field appears next to it, which guides the operator to the “Manual window”: see Fig. 3-5. If one type of filter is chosen, then the current status of the system will be shown in the type of mode. For example:

Type of control:	6.60 type
Mode:	forced rinsing
Underneath:	forced rinsing time

3.10 Visualizing the images, start image and manual image

The start image appears after switching on the system.

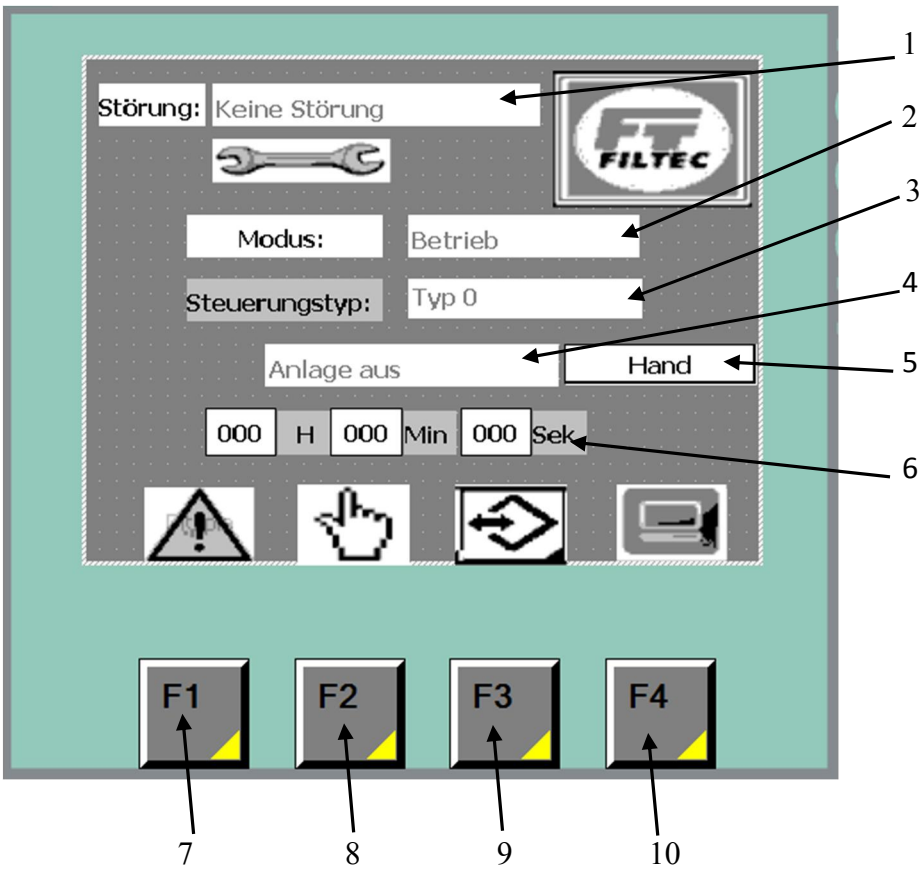

Fig. 3-4 Visualization of the main image: display elements and operating elements.

1 Faults will be displayed.
2 The filter mode will be displayed, e.g., forced rinsing.
3 The chosen type of filter.
4 Naming the time, e.g., rinsing time or filling time.
5 The manual image will be displayed:
the key only appears for the 0 type of filter.
6 Display of the time (hours, minutes and seconds).
7 Key for acknowledging the alarm.
8 Manual rinsing is triggered.
9 The number of rinses is displayed.
10 Menu of parameters.

Manual window: visualization of the inputs and outputs.

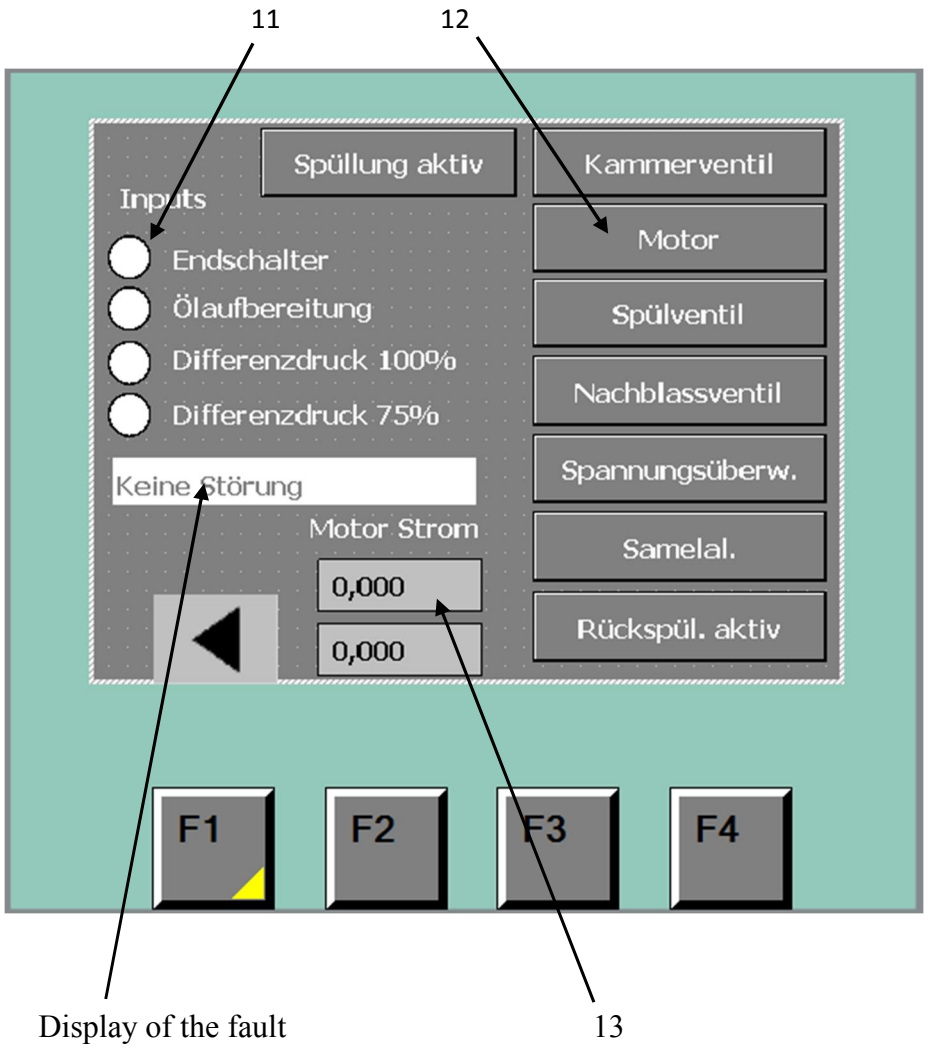

Fig. 3-5 Visualization: manual operation

11. Status of the limit switch and the differential pressure switch.
12. The motor and valves are only triggered when the 0 type of control is chosen.
13. The motor's electricity and the reference value for the motor's electricity are only active in manual operation (i.e., manual mode).

All types of filter will be displayed by pressing Key 3 (choosing the type of filter) on the main image.

Type 0

6.18, 6.19 and 6.44
6.23 and 6.24
6.60
6.60 DP alarm
6.60.07
6.60.07 DP alarm
6.61
6.61 DP alarm
6.61.07
6.61.07 DP alarm
6.62
6.62 DP alarm
6.64
6.64 DP alarm
6.64.07
6.64.07 DP alarm
6.72
6.72 DP alarm

The control system takes over the programme for the type of filter (type of control) when choosing the filter. No programme will be activated for the "Type 0" of filter.

An appropriate electrical plan is allocated to every type of filter.

6.18, 6.19 and 6.44	Electrical plan: 6.18, 6.19 and 6.44
6.23 and 6.24	Electrical plan: 6.23 and 6.24
6.60 and 6.60 DP alarm	Electrical plan: 6.60 and 6.60 DP alarm
6.60.07 and 6.60.07 DP alarm	Electrical plan: 6.60.07 and 6.60.07 DP alarm
6.61 and 6.61 DP alarm	Electrical plan: 6.61 and 6.61 DP alarm
6.61.07 and 6.61.07 DP alarm	Electrical plan: 6.61.07 and 6.61.07 DP alarm
6.62 and 6.62 DP alarm	Electrical plan: 6.62 and 6.62 DP alarm
6.64 and 6.64 DP alarm	Electrical plan: 6.64 and 6.64 DP alarm
6.64.07 and 6.64.07 DP alarm	Electrical plan: 6.64.07 and 6.64.07 DP alarm
6.72 and 6.72 DP alarm	Electrical plan: 6.72 and 6.72 DP alarm

3.11 Fault notifications

All faults will be shown via visualization in the main window. Faults will be stored and they must be acknowledged via the F1 key. The faults will not be stored if there is a power cut. The fault will be displayed on visualization when the mains power supply has been restored and in the case of a pending fault. The following faults will be displayed and notified via potential-free (floating) contacts.

- Fault in the motor when overloaded (0.40 amps): “Fault in the motor" (types of motorized versions).
- Excessive differential pressure: "Differential pressure of 100 %"
- Cartridge alarm: "Fault in the concentration of rinsing oil” (types with a concentration of rinsing oil).
- In the case of connecting the device for monitoring the rinsing frequency: differential pressure of 75% (types with a DP alarm).

3.12 Adjustment: altering the parameters

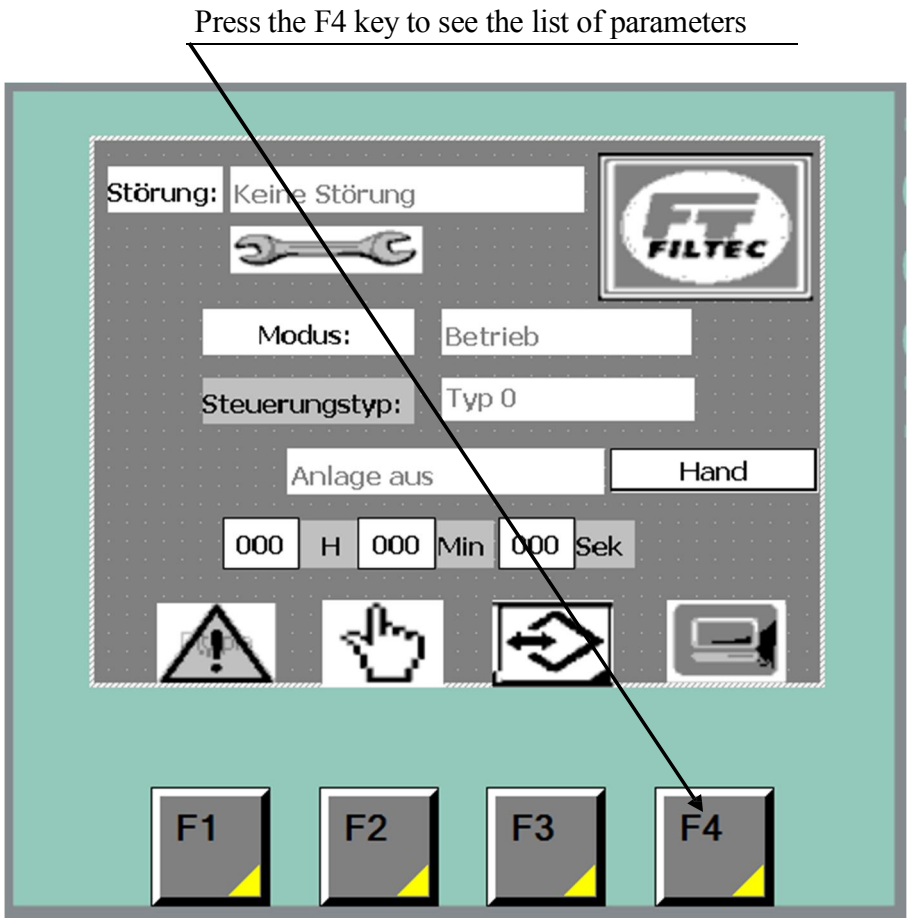

Fig.3-6 Main images

All of the well-known types of filter are available to choose.

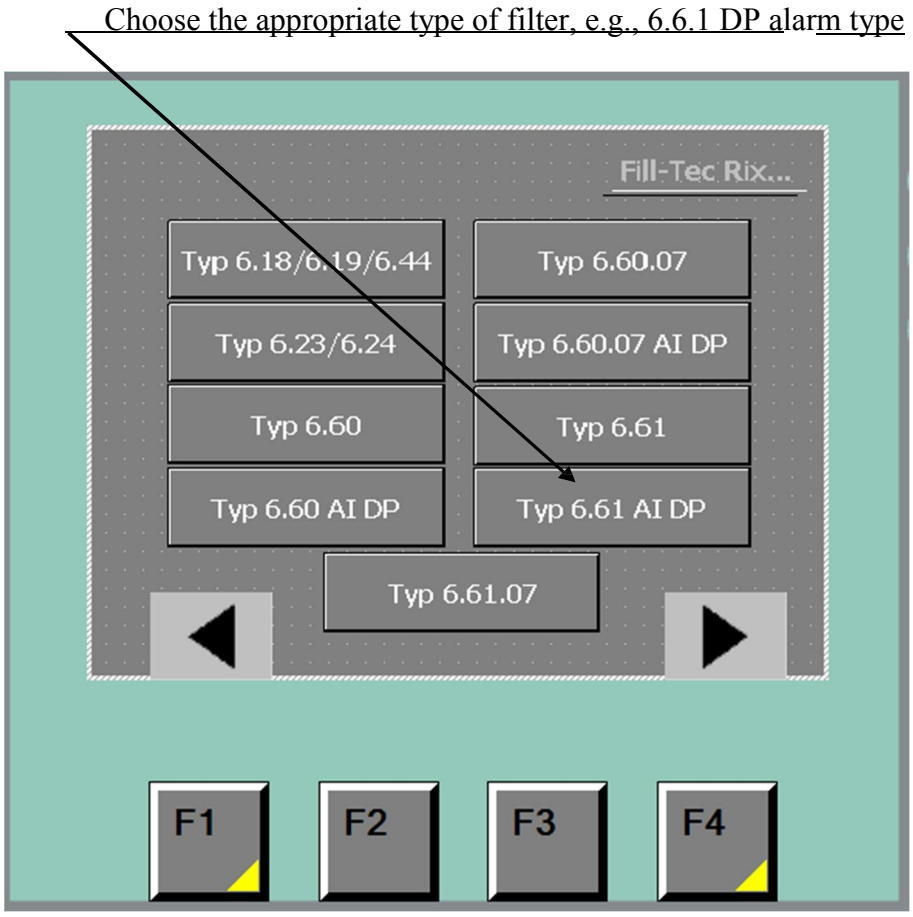

Fig.3-7 Choosing the filter

Press the key for the type of filter in order to display all parameters for the chosen type of filter. Press the F1 key in order to return to the main image and then press the F4 key in order to display the next type of filter.

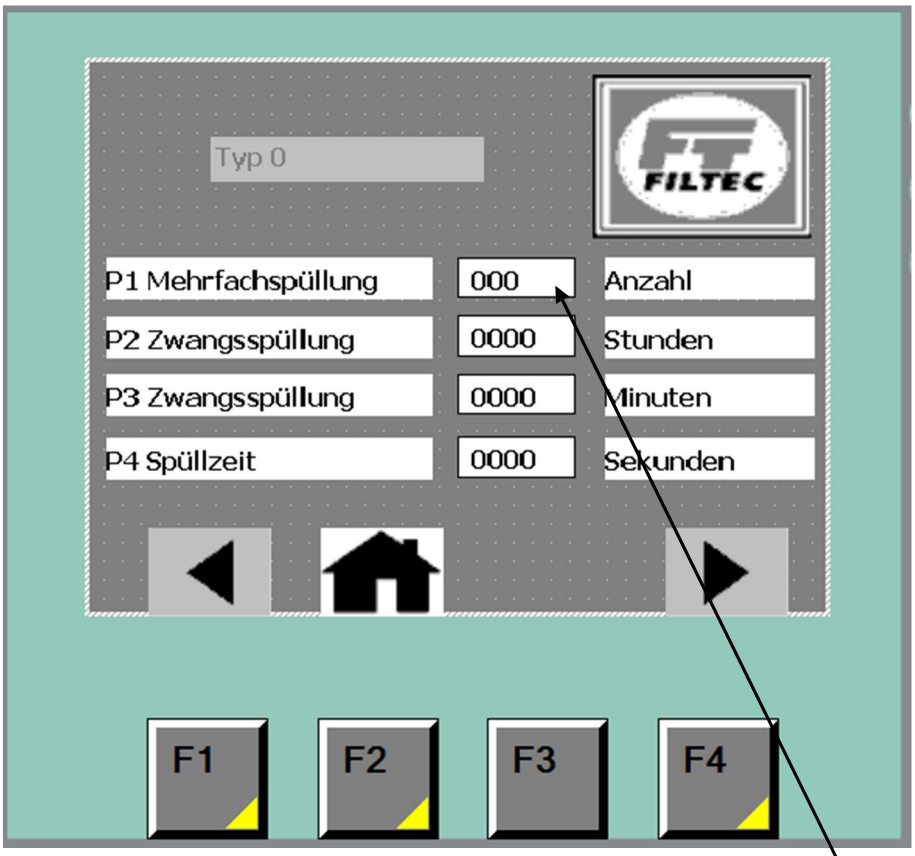

Fig.4-1 Altering the parameters

Click on the central field in order to alter the parameters.

All of the parameters for the respective type of filter can be altered here. The F1 and F4 keys serve for scrolling forwards and backwards. Press the F2 key in order to display the main image again. All of the parameters for the chosen type of filter will be taken over and stored automatically after leaving the parameter mask.

3.13 Description of the list of parameters

P1 multiple rinsing

➤ **Advice**
This parameter is only visible for the following types of filter:
6.61, 6.61 DP alarm, 6.61.07, 6.61.07 DP alarm, 6.62, 6.62 DP alarm, 6.64, 6.64 DP alarm, 6.64.07 and 6.64.07 DP alarm.

Adjustable within the range of 1 to 99 times.
The default value is 1 time (i.e., once).

P2 Time-controlled backrinsing trigger

Adjustable within the range of 0 to 59 hours.
The default value is 2 hours.

P3 Time-controlled backrinsing trigger

Adjustable within the range of 0 to 59 minutes.
The default value is 0 minutes.

P4 Backrinsing time

➤ **Advice**
This parameter is not visible with the following types of filter:
6.23 and 6.24.

Adjustable within the range of 5 to 100 seconds.
The default value is 20 seconds.

P5 Time-controlled backrinsing trigger

➤ **Advice**
This parameter is not visible with the following types of filter:
6.18, 6.19 and 6.44.

Adjustable within the range of 10 to 600 seconds.
The default value is 180 seconds

P6 Overblowing time

➤ **Advice**

This parameter is visible with the following types of filter:
6.60.07, 6.60.07 AIDP, 6.61.07, 6.61.07 AIDP, 6.64.07 and
6.64.07 AIDP.

Adjustable within the range of 10 to 600 seconds.
The default value is 180 seconds.

P7 Delaying time of the cartridge alarm

➤ **Advice**

This parameter is visible with the following types of filter:
6.60.07, 6.60.07 AIDP, 6.61.07 6.61.07 AIDP, 6.64.07 and
6.64.07 AIDP.

Adjustable within the range of 10 to 600 seconds.
The default value is 30 seconds.

P8 DP alarm (monitoring of the rinsing frequency)

➤ **Advice**

This parameter is visible with the following types of filter:
6.60.07. 6.60.07 AIDP, 6.61.07, 6.61.07 AIDP, 6.64.07 and 6.64.07 AIDP.
Adjustable: On or Off.
The default value is On.

P9 fault in the motor

➤ **Advice**

This parameter is visible with the following types of filter:
6.61, 6.61 AIDP, 6.61.07, 6.61.07 AIDP, 6.64, 6.64 AIDP, 6.64.07
and 6.64.07 AIDP.

Adjustable within the range of 0.10 to 0.99 amps.
The default value is 0.45 amps.

P10 Backrinsing time

➤ **Advice**

This parameter is adjustable with the following types of filter: 6.23 and 6.24
Adjustment: for NW 32 = 2 s, NW 40 = 3 s and NW 50 = 4 s.
(NW = nominal width).
The default value is NW 32 = 2 s.

P11 Language

➤ **Advice**

One can choose between German, English and Spanish.
Adjustable: D = German
ES = Spanish
GB = English

P14 Pressure-compensation

➤ **Advice**

This parameter is only visible with the following types of filter:
6.64, 6.64 AIDP, 6.64.07 and 6.64.07 AIDP.
Adjustable within the range of 0 to 99 seconds.
The default value is 10 seconds.

4 Description of the control system and function

4.1 Control system of the 6.18, 6.19 and 6.44 types

All signals will be started on the X2 terminal.

Inputs
Push-button switch on the X2 terminal, 39 and 40: “Differential pressure (DP) of 75%”.
Push-button switch on the X2 terminal, 37 and 38: “Excessive differential pressure of 100%).

Outputs
The motor is connected directly.
Rinsing valve on the X2 8 and 9 terminals.

Potential-free (floating) contacts as fault notifications
1) “Monitoring of the control voltage” fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
   - “Excessive differential pressure of 100%”,
   - “Fault in the motor”.
3) “Fault in the motor” on the X1 terminal, 22, 23 and 24.

Potential-free (floating) contact as notification

1) “Active rinsing” on the X1 terminal, 25, 26 and 27.

Rinsing will be triggered by means of:

1) actuating the F2 key (main window,)
2) the expired forced rinsing time,
3) the “Differential pressure (DP) of 75%” push-button switch.

Specific features

- All faults will be shown via visualization as well as notified and stored via potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key (main window).

- It is only possible to trigger the rinsing manually via the F2 key in the main window.

- If the type of control is changed, then the programme will restart with new parameters.

4.2 Control system of the 6.23 and 6.24 types

All signals will be started on the X2 terminal.

Inputs

Push-button switch on the X2 terminal, 39 and 40: “Differential pressure (DP) of 75%”.
Push-button switch on the X2 terminal, 37 and 38: “Excess differential pressure of 100%”.

Outputs

Rinsing valve on the X2 terminal, 8 and 9.

Potential-free (floating) contacts as fault notifications

1) “Monitoring of the control voltage” fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
   - “Excessive differential pressure of 100%”.

Rinsing will be triggered by means of:

1. actuating the F2 key (main window),
2. the expired forced rinsing time,
3. the “Differential pressure (DP) of 75%” push-button switch.

Special features

- All faults will be shown via visualization as well as notified and stored via potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key (main window).

- It is only possible to trigger the rinsing manually via the F2 key in the main window.

- If the type of control is changed, then the programme will restart with new parameters.

4.3 Control system of the 6.60, 6.60 DP alarm, 6.60.07 and 6.60.07 DP alarm types

All signals will be started on the X2 terminal.

Inputs

Position: switch on the X2 terminal, 31 and 32.
Push-button switch on the X2 terminal, 39 and 40: “Differential pressure (DP) of 75%”.
Push-button switch on the X2 terminal, 37 and 38: “Excessive differential pressure of 100%”.

Additional input for 6.60.07 (concentration of rinsing oil):

Push-button switch on the X2 terminal, 35 and 36: “Alarm for the concentration of rinsing oil”.

Outputs

Rinsing valve on the X2 terminal, 8 and 9,
Chamber valve on the X2 terminal, 10 and 11.

Additional output for 6.60.07 and 6.60.07 DP alarm

Overblowing valve on the X2 terminal, 12 and 13.

Potential-free (floating) contacts as fault notifications

1) “Monitoring of the control voltage” fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
- “Excessive differential pressure of 100%”.

Additionally in the case of a collective fault for 6.60.07 and 6.60.07 DP alarm

- “Fault in the concentration of rinsing oil” fault.

Additional fault notification for 6.60 DP alarm and 6.60.07 DP alarm

3) “Differential pressure of 75%” fault on the X2 terminal, 22, 23 and 24.

Rinsing will be triggered by means of:

1) switching on the mains (electrical supply),
2) actuating the F2 key (main window),
3) the expired forced rinsing time,
4) the “Differential pressure (DP) of 75%” push-button switch or the “Excessive differential pressure of 100%” push-button switch.

The “monitoring of rinsing frequency” function (DP alarm)

If the rinsing will be implemented via the “Differential pressure of 75%” push-button switch before the forced rinsing time has expired, then the control system will notify a fault in the rinsing frequency.

Specific features

• All faults will be shown via visualization as well as notified and stored via potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key.

• It is only possible to trigger the rinsing manually via the F2 key in the main window.

• If the type of control is changed, then the programme will restart with new parameters.

4.4 Control system of the 6.61, 6.61 DP alarm, 6.61.07 and 6.61.07 DP alarm types

All signals will be implemented on the X2 terminal.

Inputs

Position: switch on the X2 terminal, 31 and 32.
Push-button switch on the X2 terminal, 39 and 40: "Differential pressure (DP) of 75%".
Push-button switch on the X2 terminal, 37 and 38: "Excessive differential pressure of 100%".

Additional input for 6.61.07 (concentration of rinsing oil):

Push-button switch on the X2 terminal, 35 and 36: "Alarm for the concentration of rinsing oil".

Outputs

Rinsing valve on the X2 terminal, 8 and 9.
The motor is directly connected.

Additional outlet for 6.61.07 and 6.61.07 DP alarm

Overblowing valve on the X2 terminal, 10 and 11.

Potential-free (floating) contacts as fault notifications

1) "Monitoring of the control voltage" fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
   - "Excessive differential pressure of 100%".

Additionally in the case of a collective fault for 6.61.07 and 6.61.07 DP alarm

- "Fault in the concentration of rinsing oil" fault.

Additional fault notification for 6.61 DP alarm and 6.61.07 DP alarm

3) "Differential pressure (DP) of 75%" fault on the X2 terminal, 22, 23 and 24.

Rinsing will be triggered by means of:

1) switching on the mains (electrical supply),
2) actuating the F2 key (main window),
3) the expired forced rinsing time,
4) the " Differential pressure (DP) of 75%" push-button switch or the "Excessive differential pressure of 100%" push-button switch.

Rinsing is triggered with the mains (electrical supply) on:

The rinsing will begin immediately when the mains (electrical supply) is switched on and the filter is in position in the chamber (querying of the limit switch).

"Monitoring of the rinsing frequency" function (DP alarm)

If the rinsing will be implemented via the "Differential pressure (DP) of 75%" push-button switch before the forced rinsing time has expired, then the control system will notify a fault in the rinsing frequency.

Specific features

- All faults will be shown via visualization as well as notified and stored via potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key (main window).

- It is only possible to trigger the rinsing manually via the F2 key in the main window.

- If the type of control is changed, then the programme will restart with new parameters.

4.5 Control system of the 6.62 and 6.62 DP alarm types

All signals will be started on the X2 terminal.

Inputs

Position: switch on the X2 terminal, 31 and 32.
Push-button switch on the X2 terminal, 39 and 40: “Differential pressure (DP) of 75%”.
Push-button switch on the X2 terminal, 37 and 38: “Excessive differential pressure of 100%”.

Outputs

Rinsing valve on the X2 terminal, 8 and 9.
Chamber valve on the X2 terminal, 10 and 11.

Potential-free (floating) contacts for fault notifications

1) “Monitoring of the control voltage” fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
   - “Excessive differential pressure of 100%”.

Additional fault notification for 6.62 DP alarm

3) “Differential pressure (DP) of 75%” fault on the X2 terminal, 22, 23 and 24.

Rinsing will be triggered by means of:

1) switching on the mains (electrical supply),
2) actuating the F2 key (main window),
3) the expired forced rinsing time,
4) the “Differential pressure (DP) of 75%” push-button switch or the “Excessive differential pressure of 100%” push-button switch.

Rinsing is triggered with the mains (electrical supply) on:

The rinsing will begin immediately when the mains (power supply) is switched on and the filter is positioned in the chamber (querying of the limit switch).

“Monitoring the rinsing frequency” function (DP alarm)

If the rinsing will be implemented via the “Differential pressure (DP) of 75%” push-button switch before the forced rinsing time expires, then the control system will notify a fault in the rinsing frequency.

Specific features

- All faults will be shown via visualization as well as notified and stored via potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key.
- It is only possible to trigger the rinsing manually via the F2 key in the main window.
- If the type of control changes, then the programme will restart with new parameters.

4.6 Control system of the 6.64, 6.64 DP alarm, 6.64.07 and 6.64.07 DP alarm types

All signals will be started on the X2 terminal.

Inputs

Position: switch on the X2 terminal, 31 and 32.
Push-button switch on the X2 terminal, 39 and 40: “Differential pressure (DP) of 75%”.
Push-button switch on the X2 terminal, 37 and 38: “Excessive differential pressure of 100%”.

Additional input for 6.64.07 (preparation of rinsing oil):

Push-button switch on the X2 terminal, 35 and 36: “Alarm for preparation of rinsing oil”.

Outputs

Rinsing valve on the X2 terminal, 8 and 9.
Relief valve on the X2 terminal, 10 and 11.
The motor is directly connected.

Additional output for 6.64.07 and 6.64.07 DP alarm

Overblowing valve on the X2 terminal, 13 and 14.

Potential-free (floating) contacts as fault notifications

1) “Monitoring of the control voltage” fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
   - “Excessive differential pressure of 100%”.

Additionally in the case of the collective fault for 6.64.07 and 6.64.07 DP alarm

- “Fault in the preparation of rinsing oil” fault.

Additional fault notification for 6.64 DP alarm and 6.64.07 DP alarm

3) “Differential pressure (DP) of 75%” fault on the X2 terminal, 22, 23 and 24.

Rinsing will be triggered by means of:

1. switching on the mains (electrical supply),
2. actuating the F2 key (main window),
3. the expired forced rinsing time,
4. the “Differential pressure (DP) of 75%” push-button switch or the “Excessive differential pressure of 100%” push-button switch.

Rinsing is triggered with the mains (electrical supply) on:

The rinsing will begin immediately when the mains (electrical supply) is switched on and the filter is in position in the chamber (querying of the limit switch).

“Monitoring of the rinsing frequency” function (DP alarm)

If the rinsing will be implemented via the “Differential pressure (DP) of 75%” push-button switch before the forced rinsing time has expired, then the control system will notify the fault in the rinsing frequency.

Specific features

- All faults will be shown via visualization as well as notified and stored via the potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key (main window).
- It is only possible to trigger the rinsing manually via the F2 key in the main window.
- If the type of control is changed, then the programme will restart with new parameters.

4.7 Control system of the 6.72 and 6.72 DP alarm types

All signals will be started on the X2 terminal.

Inputs

Position: switch on the X2 terminal, 31 and 32.
Push-button switch on the X2 terminal, 39 and 40: “Differential pressure (DP) of 75%”.
Push-button switch on the X2 terminal, 37 and 38: “Excessive differential pressure of 100%”.

Outputs

Rinsing valve on the X2 terminal, 8 and 9.
Chamber valve on the X2 terminal, 10 and 11.

Potential-free (floating) contacts as fault notifications

1) “Monitoring of the control voltage” fault on the X2 terminal, 16, 17 and 18.
2) Collective fault on the X2 terminal, 19, 20 and 21:
   - “Excessive differential pressure of 100%”.

Additional fault notification for 6.72 DP alarm

3) “Differential pressure (DP) of 75%” fault on the X2 terminal: 22, 23 and 24.

Rinsing will be triggered by means of:

1. switching on the mains (electrical supply),
2. actuating the F2 key (main window),
3. the expired forced rinsing time,
4. the “Differential pressure (DP) of 75%” push-button switch or the “Excessive differential pressure of 100%” push-button switch

“Monitoring of the rinsing frequency” function (DP alarm)

If the rinsing will be implemented via the “Differential pressure (DP) of 75%” push-button switch before the forced rinsing time expires, then the control system will notify the fault in the rinsing frequency.

Specific features

- All faults will be shown via visualization as well as notified and stored via potential-free (floating) contacts: they will be written as 0 by acknowledging with the F1 key (main window).

- It is only possible to trigger the rinsing manually via the F2 key in the main window.

- If the type of control is changed, then the programme will restart with new parameters.

5. Adjusting values

Adjustments for the 6.18, 6.19 and 6.44 types of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	20
P5 Filling time, in seconds	-
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in amps	0.40
P10 Backrinsing time, in seconds	-
P 11 Language	German
P 14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.23 and 6.24 types of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds-	
P5 Filling time, in seconds	-
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in amps	0.40
P10 Backrinsing time, in seconds	2
P 11 Language	German
P 14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.60 type of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing. in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120
P6 Overblowing time. in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in amps	-
P10 Backrinsing time in seconds	-
P 11 Language	German
P 14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.60 AIDP type of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	1
P9 Fault in motor, in amps	-
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.60.07 type of filter

P1 Multiple rinsing	-
P2 Forced rinsing in hours	2
P3 Forced rinsing in minutes	0
P4 Forced rinsing in seconds	8
P5 Filling time in seconds	120
P6 Overblowing time in seconds	30
P7 Delaying time in seconds	30
P8 DP alarm	-
P9 Fault in motor, in seconds	-
P10 Backrinsing time in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.60.07 AIDP type of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120
P6 Overblowing time, in seconds	30
P7 Delaying time, in seconds	30
P8 DP alarm	1
P9 Fault in motor, in amps	-
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.61 type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120 up to DN 150 or 150 from DN 200
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in seconds	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.61.AIDP type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120 up to DN 150 or 150 from DN 200
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	1
P9 Fault in motor, in seconds	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing time. in seconds	-

Adjustments for the 6.61.07 type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120 up to DN 150 or 150 from DN 200
P6 Overblowing time, in seconds	30
P7 Delaying time, in seconds	30
P8 DP alarm	-
P9 Fault in motor, in seconds	0.40
P10 Backrinsing time in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.61.07 AIDP type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds8	
P5 Filling time, in seconds	120 up to DN 150 or 150 from DN 200
P6 Overblowing time, in seconds	30
P7 Delaying time, in seconds	30
P8 DP alarm	1
P9 Fault in motor, in seconds	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times. in seconds	-

Adjustments for the 6.62 type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing in minutes	0
P4 Rinsing time, in seconds	8
P5 Rinsing time, in seconds	120
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in seconds	-
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.62 AIDP type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	1
P9 Fault in motor, in seconds	-
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-

Adjustments for the 6.64 type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	180 up to DN 150 or 360 from DN 200
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in amps	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	1 up to DN 150 or 10 from DN 200

Adjustments for the 6.64 AIDP type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	180 up to DN 150 or 360 from DN 200
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	1
P9 Fault in motor, in seconds	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	1 up to DN 150 or 10 from DN 200

Adjustments for the 6.64.07 type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	180 up to DN 150 or 360 from DN 200
P6 Overblowing time, in seconds	30
P7 Delaying time, in seconds	30
P8 DP alarm	-
P9 Fault in motor, in amps	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	1 up to DN 150 or 10 from DN 200

Adjustments for the 6.64.07 AIDP type of filter

P1 Multiple rinsing	1
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	180 up to DN 150 or 360 from DN 200
P6 Overblowing time, in seconds	30
P7 Delaying time, in seconds	30
P8 DP alarm	1
P9 Fault in motor, in seconds	0.40
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	1 up to DN 150 or 10 from DN 200

Adjustments for the 6.72 type of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120 to DN 150 or 200 from DN 200
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	-
P9 Fault in motor, in seconds	-
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-compensating times, in seconds	-

Adjustments for the 6.72 AIDP type of filter

P1 Multiple rinsing	-
P2 Forced rinsing, in hours	2
P3 Forced rinsing, in minutes	0
P4 Rinsing time, in seconds	8
P5 Filling time, in seconds	120 up to DN 150 or 200 from DN 200
P6 Overblowing time, in seconds	-
P7 Delaying time, in seconds	-
P8 DP alarm	1
P9 Fault in motor, in seconds	-
P10 Backrinsing time, in seconds	-
P11 Language	German
P14 Pressure-equalizing times, in seconds	-