

Manual

Control Unit GFCD 16

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NOTE: Figures shown inside square brackets [...] refer to positions on page 15.

ATTENTION: Before use, read the instructions thoroughly to acquire sufficient knowledge of the product. For your convenience, keep this sheet as a quick reference.
Subject to change without notice.



The GFCD 16 unit is to be installed by trained personnel only!

1. Main features

The Simatek GFCD 16 has been designed to guarantee the control of diaphragm valves mounted on the pulse jet dust collector filters containing filter bags or cartridges.

The main features of the Simatek GFCD 16 are:

- Operates in MANUAL or AUTOMATIC mode.
- Automatic start-up of cleaning cycle according to set ΔP .
- SHUT DOWN CLEANING with selectable number of cleaning cycles.
- PRECOATING function for new filters or filters equipped with new filtering elements.
- REMOTE function.
- ALARM contact enabling connection to external alarms.
- ΔP value playback (option).

2. Technical features

Enclosure	Grey ABS – transparent cover (option: 2 screws for transparent cover).
Grade of protection	IP65.
Dimensions	Simatek GFCD 16: 4 / 8 / 12 / 16 outputs: case 213 x 185 x 113 mm.
Weight	Simatek GFCD 16: approx. 2 kg.
Connections	Push in terminal blocks – with max. wire section of 2.5 mm ² .
Temperature	Storage: -20°C/+80°C. Operating: -10°C/+50°C, with duty cycle 30%.
Voltage available	Input: 230 V ($\pm 10\%$) – 50/60 Hz / Output: 115/230/24V AC, 24 V DC. Input: 115 V ($\pm 10\%$) – 50/60 Hz / Output: 115/24V AC, 24 V DC. See page 6, 7.1 Special version 24V DC/24V DC
Power consumption	Without output 2.5 VA Output: 25 VA / AC or 20 W / DC
Relay	2 A – 250 V AC
Pulse time	0.01 – 9.99 sec.
Pause time	1 – 999 sec.
Pause time in automatic	1-999 sec.
Max duty cycle	30%
Operating ΔP	0.01–3.00 kPa
Max pressure	75 kPa
Set ΔP alarm	0.01-3.00 kPa
ΔP pre-coating	0.01–3.00 kPa
Hour counter	0-65,999 hours
Remote control	Activated via external contact (normally open) free of power.
Shut down cleaning	1 – 99 cycles. To be operated from the normally closed contact of fan remote control switch.
Fuse	500 mA delayed 115 V-230 V. 2 A delayed 24 V-48 V.



The device should be disposed of in accordance with current European regulations



The neutral of the power supply **shall** be connected to earth.
If this is not the case an isolation transformer is to be installed and the neutral of the output to be earthed.
Otherwise the filter control will be damaged.





3. Installation guidelines

- Do not expose the control unit to direct sunlight in order to prevent overheating of the circuit board.
- Connect the control unit to a continually powered line to allow SHUT DOWN CLEANING when the fan stops and to have maximum precision in the ΔP measurements.
- Protect the control unit from rain, water infiltration and humidity. Incomplete closing of the cover may cause infiltration which can seriously damage the circuit board.
- Do not have cables entering via the upper part of the Control unit box.
- Do not install any electronic devices on vibrating structures.
- Use only cable glands with protection grade IP65 and of proper size (according to the cable used).



- A disconnecting switch has to be installed on the power line before the control unit.
- Do not attempt to repair the control unit – contact Simatek!
- All wiring has to be carried out by a qualified electrician to prevent any risk of fire and electrical shocks.
- The control unit wiring has to be performed in such a way that the different types of cables (power, relay's contact, valve output, 4-20 mA output) are kept separated and not passing close by the PCB.
- Before opening the unit make sure that the control unit is switched off (switch on/off [1] on 0 and wires on clamps [4] disconnected, including connection to alarm/signal relays).
- All the control unit electrical connections, including solenoid valves, have to use separate paths in respect to the other loads.
- Voltage selector's jumpers have to be positioned only by skilled personnel and following the instructions.
- A wrong voltage selectors jumpers positioning may cause potential danger to the personnel safety.

4. Preliminary checks

1. Check that the Simatek GFCD 16 has no power (switch on/off [1] on 0 and terminals [4] disconnected).
2. Check that the supply voltage, indicated on the yellow label [22] as "IN" corresponds to the available power supply (Voltage and Frequency).
3. Check that the supply voltage to valves, indicated on the yellow label [22] as "OUT" corresponds to the voltage/frequency as indicated on the coils.

5. Electrical connections

1. Check that the Simatek GFCD 16 does not have power (switch on/off [1] on 0 and terminals [4] disconnected).
2. Unscrew and remove the terminals cover [20].
3. Extract the removable terminals [2].
4. Make sure that the supply voltage to valves indicated on the yellow label [22] as "OUT" corresponds to the voltage/frequency as indicated on the coils.
5. Connect the valves to the terminal blocks [2], between terminal C and the numbered outputs.
6. Earthing [3] of the valves is necessary when the output voltage is $\geq 48V$.
7. NEVER connect the Common or valve output to earth [3].
8. The Commons are interconnected on the printed circuitry.
9. The outputs are "static" type, with "zero-crossing" command, to prevent electrical disturbances.
10. Check that the valve connections are correct and isolated in regard to earthing, by measuring the isolation between ground [3] and Common with outputs terminal.
11. Put the extractable terminals back in place
12. Replace the terminals cover [20] and tighten the screws.

6. Filter taps

It is very important that dust and liquid are not allowed to enter into the hose couplings, as this will damage the instrument. Any dust clogging in the hose connections may also result in indication errors, so protection by a filter element is recommended.

For documentation regarding these DP filters, please see documentation for the DP filter.

7. Settings

7.1 Voltage selection

CHECK:

1. That the Simatek GFCD 16 is not powered (switch on/off [1] on 0 and terminals [4] disconnected).
2. That the supply voltage, indicated on the yellow label [22] as "IN" corresponds to the available supply voltage.
3. That the supply voltage to valves, indicated on the yellow label [22] as "OUT" corresponds to the voltage/frequency as indicated on the coils.

**IF THESE 3 CONDITIONS ARE MET, GO TO PARAGRAPH 7.2.
OTHERWISE, CAREFULLY FOLLOW THE PROCEDURE BELOW!**

A. Supply voltage selection

1. Unscrew the two 2 screws [21] (optional), and open the Simatek GFCD 16 transparent cover.
2. Remove the 4 screws of the front panel. Lift the front panel (do not remove it, as it is connected to the base of the enclosure!).
3. Check that the supply voltage, selectable by jumper [5], corresponds to the one available from the supply voltage (e.g. both are set to 230 V).
4. Should the two voltages be different, move the jumper [5] in order to select the same supply voltage.
5. Go to point 7.1B.

B. Selection of power supply to the valves

1. Check that the supply voltage to the valves, selectable by jumpers [6] and [6A], corresponds to the supply voltage indicated on the coils of the valves (e.g. both 230 V).
Jumper [6]: 1HV = 110 V; 2HV = 220 V; LV = 24 V
Jumper [6A]: HV = 110 / 220 V; LV = 24 V
2. Should the two voltages be different, move the jumpers [6] and [6A] in order to select the same supply voltage as indicated on the coils.
Jumper [6]: 1HV = 110 V; 2HV = 220 V; LV = 24V
Jumper [6A]: HV = 110 / 220 V; LV = 24V
CAUTION! Both jumpers [6] and [6A] must correspond to the same voltage!
3. Go to section 7.1C.

C. Selection of power supply frequency to the valves (AC/DC)

1. Make sure that the output frequency to the valves selectable by jumper [8] corresponds to the value indicated on the coils (e.g. both are set to AC).
2. Should the two frequencies be different, move the jumper [8] in order to select the same frequency as indicated on the coils.
3. Put the front panel back in place and fasten the 4 screws.
4. Close the transparent cover by means of the two screws [21] (optional).



Never select 115 or 230 V DC for output!



7.2 Parameters selection

Connecting the power supply [4]:

L = phase, N = neutral

On/off switch [1] on 1. The display [7] will indicate for a few seconds the release code of Simatek GFCD 16. Once the code disappears the display [7] will show the letter P followed by the ΔP value of the filter.

LED OK [18] is on:

LED Auto [16] if Simatek GFCD 16 is in automatic mode

or LED Pause [12] if Simatek GFCD 16 is in manual mode

ATTENTION! The display [7] must show a ΔP value of "0" kPa when the fan is switched off. Otherwise adjust the zero ΔP as indicated in paragraph 13, page 9.

- 1) Press SELECT MENU [9]:
The no. 1 will flash on the display [7]:
Using keys "+/-" [10] select Manual or Automatic mode. (0 = Manual, 1 = Automatic).
- 2) Press SELECT MENU [9]:
The no. 2 will flash on the display [7]:
Using keys "+/-" [10] select the No. of valves you wish to connect (example: if you wish to connect 4 valves to Simatek GFCD 16, select 4). When skipping this step of the menu the Simatek GFCD 16 will automatically set the No. of valves as if they were all connected (if your model is Simatek GFCD 16: 4), then 4 valves will be recognized, (if your model is Simatek GFCD 16: 12), then 12 valves will be recognized.
- 3) Press SELECT MENU [9]:
The no. 3 will flash on the display [7]:
Using keys "+/-" [10] select Pulse Time.
(0.01-9.99s).
- 4) Press SELECT MENU [9]:
The no. 4 will flash on the display [7]:
Using keys "+/-" [10] select Pause Time in Manual mode. (1-999 sec).
Caution: if you have selected Automatic in step 1) of the menu you have to select Pause Time in Shut down cleaning.
- 5) Press SELECT MENU [9]:
The no. 5 will flash on the display [7]:
Using keys "+/-" [10] select Pause Time in Automatic mode.
(1-999s).
Caution: skip this step if you have selected Manual in step 1).
- 6) Press SELECT MENU [9]:
The no. 6 will flash on the display [7]:
Using keys "+/-" [10] select operating ΔP .
(0.01-3.00 kPa).
Each time the ΔP of the filter exceeds the Operating ΔP , filter cleaning will begin. As soon as ΔP of the filter goes below the Operating ΔP , filter cleaning will be interrupted (with differential of - 0.05 kPa).
- 7) Press SELECT MENU [9]:
The no. 7 will flash on the display [7]:
Using keys "+/-" [10] select Set Delta-P Alarm.
(0.01-3.00 kPa).
If the Delta-P Alarm value is reached in the filter, Simatek GFCD 16 gives an alarm. Display shows "PP1". It is possible to have signalling if you connect relay's terminals C and NC [24].
- 8) Press SELECT MENU [9]:
The no. 8 will flash on the display [7]:
Using keys "+/-" [10] select No of cycles of Shut down cleaning.
(0-99).
(Select 0 if you do not wish to have Shut down cleaning).
Shut down cleaning starts automatically when the ΔP of the filter goes below 0.10 kPa and Fan contact is open.
Caution: Shut down cleaning will start only when MPS is working in automatic mode
- 9) Press SELECT MENU [9]:
The no. 9 will flash on the display [7]:
Using keys "+/-" [10] select ΔP Pre-coating.
(0.01-3.00 kPa).
Both in Automatic and Manual mode the cleaning of the filter will start only

when ΔP will exceed ΔP Pre-coating, regardless of the value of Operating ΔP . This is to allow the filter elements to form a dust cake in their surface.

- Select "0" if you do not wish to use Pre-coating.

- Once ΔP Pre-coating is reached and exceeded, this function will automatically be excluded and the cleaning cycle will be performed according to the Operating ΔP . Please digit a new value of ΔP Pre-coating if you wish to reactivate the function.

- Shut down cleaning may start only when ΔP Pre-coating has been previously reached, otherwise Shut down cleaning will not start even if the fan is switched off.

10) Press SELECT MENU [9]:

On the left- hand side of the display [7] appears the letter C followed by a three digit number. Using keys "+/-" [10] to perform the 4 mA tuning. Adjust the numeric value till you can read the correct indication of 4 mA on an external instrument.

11) Press SELECT MENU [9]:

On the left-hand side of the display [7] appears the letter F followed by three digit number. Using keys "+/-" [10] to perform the 20 mA tuning. Adjust the numeric value till you can read the correct indication of 20 mA on an external instrument.

12) Press SELECT MENU [9]:

On the display [7] flashes the letter L together with the three final numbers (from 0 to 999) out of 5 indicating the total number of operating hours for the Simatek GFCD 16. (Example: if the control unit works for 12,270 hours the display will show L 270).

13) Press SELECT MENU [9]:

On the display [7] flashes the letter H together with the two initial numbers (from 0 to 65) out of 5 indicating the total number of operating hours for the Simatek GFCD 16. (Example: if the control unit works for 12,270 hours the display will show H 12).

14) Press SELECT MENU [9]:

On the display [7] appears the letters **oooo** (zero ΔP Automatic). Press the keys "+" [10] so that the first digit flashes: P or – followed by three digits. Press SELECT MENU [9] to start the calibration.
Note: Remove the pipes before operating.

LED Pulse [11] will indicate that a valve is activated.

LED Pause [12] will indicate that the Simatek GFCD 16 is waiting to activate the next valve.

NOTE!

- Valves are pulsed from outlet No. 1 onwards.
- Check that during the first cleaning cycle every valve is activated.
- If manual mode is used we suggest setting the Simatek GFCD 16 working parameters to clean the filter at the lowest possible frequency, thereby reducing the little dust escape arising during jet-pulsing, achieving a longer lifetime of filter bags/cartridges and reducing the compressed air consumption.
- Pause time should allow an efficient filter cleaning in the worst conditions, but should never be shorter than the time needed to re-pressurise the compressed-air tank!
- While selecting parameters (in Select menu), Simatek GFCD 16 will return to normal operation if no buttons are pressed within a 5 minute interval.

8. Remote control

ATTENTION!

Simatek fits the Simatek GFCD 16 unit with a connection on terminals Remote and Common [26].

If you wish to operate Simatek GFCD 16 with a remote switch, read the instructions below. If you do not wish to take advantage of this opportunity, do not remove the connection.

To activate Remote:

1. Unscrew and remove the terminals cover [20].
2. Remove the connection from terminals Remote and Common [26].
3. Bring an external no-load and normally open (NO) contact to Remote and Common terminals [26].
4. Replace and screw the terminals cover [20] tight.
5. Close the contacts on the Remote and Common terminals [26] in order to enable the Remote function.
6. Should you open the contact on Remote and Common terminals [26] the Simatek GFCD 16 will stop working. Close the contact in order to start the cleaning cycle again from the position where it stopped.

9. Shut down cleaning

We suggest operating one or more cycles of Shut down cleaning at the end of each working session in order to remove the residual dust of the filter. Shut down cleaning is started each time the ΔP of the filter goes below 0.10 kPa.

A free contact of the fan can be connected between clamps F and C. The contact has to be closed when the fan is on. In this case Shut down cleaning will not start until the fan is switched off.

The Shut down cleaning will start any time the ΔP goes below the value of 0.10 kPa and the contact is open.

ATTENTION!

Shut down cleaning will only start if Simatek GFCD 16 is in Automatic mode!

Shut down cleaning will only start if ΔP Pre-coating has already been exceeded, otherwise Shut down cleaning will not start even if the fan is switched off.

In order to activate Shut down cleaning:

Check that the Simatek GFCD 16 is in AUTOMATIC mode.

Select the NUMBER OF CYCLES of Shut down cleaning (see 7.2).

(Select 0 to exclude Shut down cleaning).

Shut down cleaning starts when the ΔP goes below 0.10 kPa, and the fan contact (between F and C) is open. LED Shut down [33] will then flash. Shut down cleaning will start from the next valve and will consider the existing cycle as the first cycle.

Once Shut down cleaning is completed LED Shut down [33] will remain on.

10. Pre-coating function

Pre-coating delays the beginning of the filter cleaning cycle in order to allow the filter elements to form a thin dust cake on their surface.

ATTENTION!

If you select ΔP Pre-coating, cleaning will start only after having reached set ΔP Pre-coating both in Automatic and Manual mode disregarding the Operating ΔP value.

To activate Pre-coating:

Select ΔP Pre-coating as per instructions in paragraph 7.2. LED Pre-coating will flash.

If you do not wish to use Pre-coating, select 0 at step 9 of paragraph 7.2.

Selecting ΔP Pre-coating must be between 0 and 3.00 kPa.

When ΔP in the filter reaches the ΔP Pre-coating value, the cleaning cycle is initiated and the Pre-coating function is simultaneously excluded. LED Pre-coating [5] switches off.

If you wish to reactivate this function, select a new value of ΔP Pre-coating.

Shut down cleaning starts only if ΔP Pre-coating has been exceeded, otherwise it will not start even if the fan is switched off.

11. ΔP /Operating valve button

The letter P followed by 3 numbers appear on the display [7] when the control unit shows the ΔP value of the filter.

Press the key Delta-P/valves [14] to read the number of the valve that will be activated and vice versa. The control unit shows the letter E followed by the number of the valve that is ready to be activated. Each time the control unit is switched on the display [7] automatically shows the ΔP value in the filter (e.g. if Delta-P value is 0.2 kPa, the display shows P0.20).

12. Hour counter

The Hour counter counts the number of hours that the Simatek GFCD 16 has been working. Counting starts each time the ΔP of the filter exceeds 0.10 kPa.

How to read the Hour counter on the display [7]:

Press SELECT MENU [9] until the display [7] shows the letter L followed by the last 3 numbers (from 0 to 999) out of 5 indicating the total number of operating hours of the Simatek GFCD 16 (e.g. if the Simatek GFCD 16 has been working for 12,270 hours the display will show L270).

Press SELECT MENU [9] until the display [7] shows H followed by the first 2 digits (from 0 to 65) indicating the total number of hours that the Simatek GFCD 16 has been working. (Example: if Simatek GFCD 16 has been working for 12,270 hours, the display will show H12).

13. Zero adjust

Disconnect the pressure tubes, if the display [7] does not show 0.00 kPa proceed as follows:

Press SELECT MENU [9]: the letters **oooo** (zero ΔP Automatic) will appear on the display [7].

Press the "+"key [10], so that the first digit will flash: P or – followed by three digits.

Press SELECT MENU [9] to start the calibration.

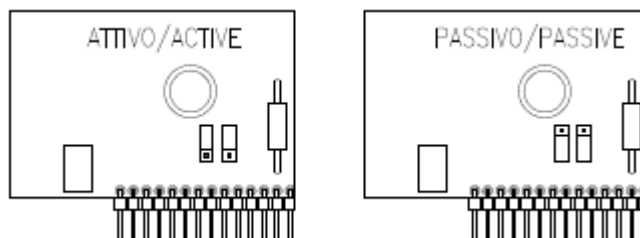
NOTE! Remove the pipes before operating.

ATTENTION! This step must be operated only after minimum 30 minutes warm up.

14. Remote transmission of the ΔP value (GFCD 16:4 and GFCD 16:12 only)

It is possible to transmit the ΔP that is shown on the display of the Simatek GFCD 16 onto another instrument by means of the 4-20 mA board [29].

The output signal can be of "active" or "passive" type – please refer to the drawing below explaining how to choose the type of signal (Active is selected as default at the factory).



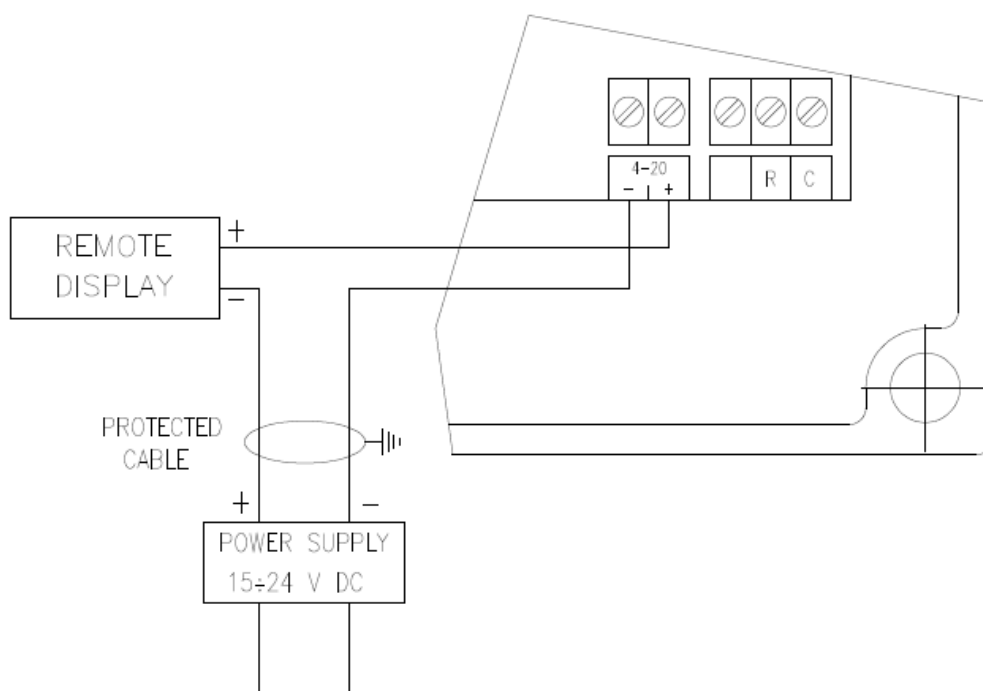
14.1 4-20 mA active output

No need for an external power supply, connect the external instruments to the terminals [28].

14.2 4-20 mA passive output

ATTENTION! In this case the 4-20 mA outlet is passive. It needs to be connected to an external power source!

1. Connect the positive (+) terminal of the remote unit to the 4-20 mA POS terminal [28].
2. Connect the (-) terminal of a Stable power source (15-24 V DC) to the 4-20 mA NEG terminal [28].
3. Connect the positive terminal of power supply to the negative terminal of the external instrument.
4. Use a shielded cable to connect it.



15. Display messages

PP1: The control unit indicates that Alarm ΔP has been exceeded.

Stabilize the filter ΔP , press the key "-" [10] to reset the unit.

PPP: The maximum value of ΔP in the Simatek GFCD 16 has been exceeded (3.00 kPa).

Stabilize the filter ΔP , press key "-" [10] to reset the unit.

P--- ΔP value is <0.50 kPa.

In this case check that the filtered taps are correctly connected to the pressure ports of the Simatek GFCD 16 as described in paragraph 6.2.

if the problem continues:

Disconnect the tubes between the filtered taps and pressure ports.

Adjust the DP indication to 0 kPa as indicated on page 11, paragraph 13.

Connect the tubes between the filtered taps and pressure ports.

SB: the Remote contact is open [26].

16. Troubleshooting

Problem	Probable cause	Solution
Display is blank and all LEDs are off	No power supply	Check the electrical terminals [4]
Display Shows Sb	The connection on terminals Remote and Common [26] is not connected	Check the connection
	Check fuse F1 [31]	Replace the fuse (see chapter 17)
Some valves are ignored	Wrong electrical connections between Simatek GFCD 16 and coils	Check connections [2]
	Coils are interrupted	Check coils continuity
Display shows the pulsing sequence but valves are not functioning	The secondary of the transformer is interrupted	Contact Simatek
	Power circuit is damaged	Contact Simatek
	Supply voltage to the valves is different from voltages indicated on the coils	Check or re-select supply voltage (See paragraph 7.1)
	Wrong connection between Simatek GFCD 16 and valves	Check connections [2]
LED OK [18] is off	Microprocessor failure	Contact Simatek

17. Fuse table

Name	Size	Value	Type	No. on drawing	Description
F3	5 x 20	500 mA	T	[23]	115/230 V main supply fuse
F3	5 x 20	2 A	T	[23]	24/48 V main supply fuse
F1	5 x 20	1.6 A	T	[31]	Output 24 V and Rem-Fan
F2	5 x 20	630 mA	T	[32]	+ 5 V internal power supply



In case of replacement you must respect the above value.

18. Factory settings/Program menu

18.1 Pulse time

Simatek recommends a pulse time of 0.2 sec.

18.2 Pause time – Continuous

By continuous cleaning, the pause time is calculated from a total cleaning time for the filter of 180 sec.
See recommended pause time by continuous cleaning for the current filter type.

18.3 ΔP Start/stop

Each time the differential pressure in the filter exceeds the set Value, bag cleaning starts. Bag cleaning stops, when the ΔP drops below the set value.
 ΔP Start/stop is set in Kilopascal (1 kPa = 100 mm WG).

18.4 Pause time – ΔP -Cleaning

By ΔP -Cleaning, the pause time should be set to a very low value, as the control itself regulates how often the filter is cleaned.
However, the pause time must correspond to the compressor capacity to ensure that the compressed air is admitted at full pressure during the whole cleaning sequence.
See Simatek's filter manual regarding compressed-air consumption.

18.5 Pause time – Shutdown cleaning

The pause time during shutdown cleaning may be set as required according to the properties of the dust in question, however, the pause time must be correspond to the compressor capacity.

18.6 Shut down cycles

Bag cleaning will continue during the set number of cycles (first valve to last valve) after the ΔP in the filter has dropped below 0.10 kPa (the fan is off).
Any equipment for removal of the separated dust should run during shut down cleaning.
Simatek recommends 2-3 cycles, as the current cycle is regarded as the first shut down cycle. Therefore the first cycle will not necessarily be a full cycle.
Shut down cleaning only works during ΔP -cleaning. If the ΔP in the filter exceeds 0.10 kPa during shut down cleaning, the function will be interrupted, and ordinary bag cleaning will start.

18.7 ΔP Alarm

Each time the differential pressure in the filter exceeds the set value, an alarm is given. If required, the signal may be led to e.g. a control room.
 ΔP Alarm is set in kPa.

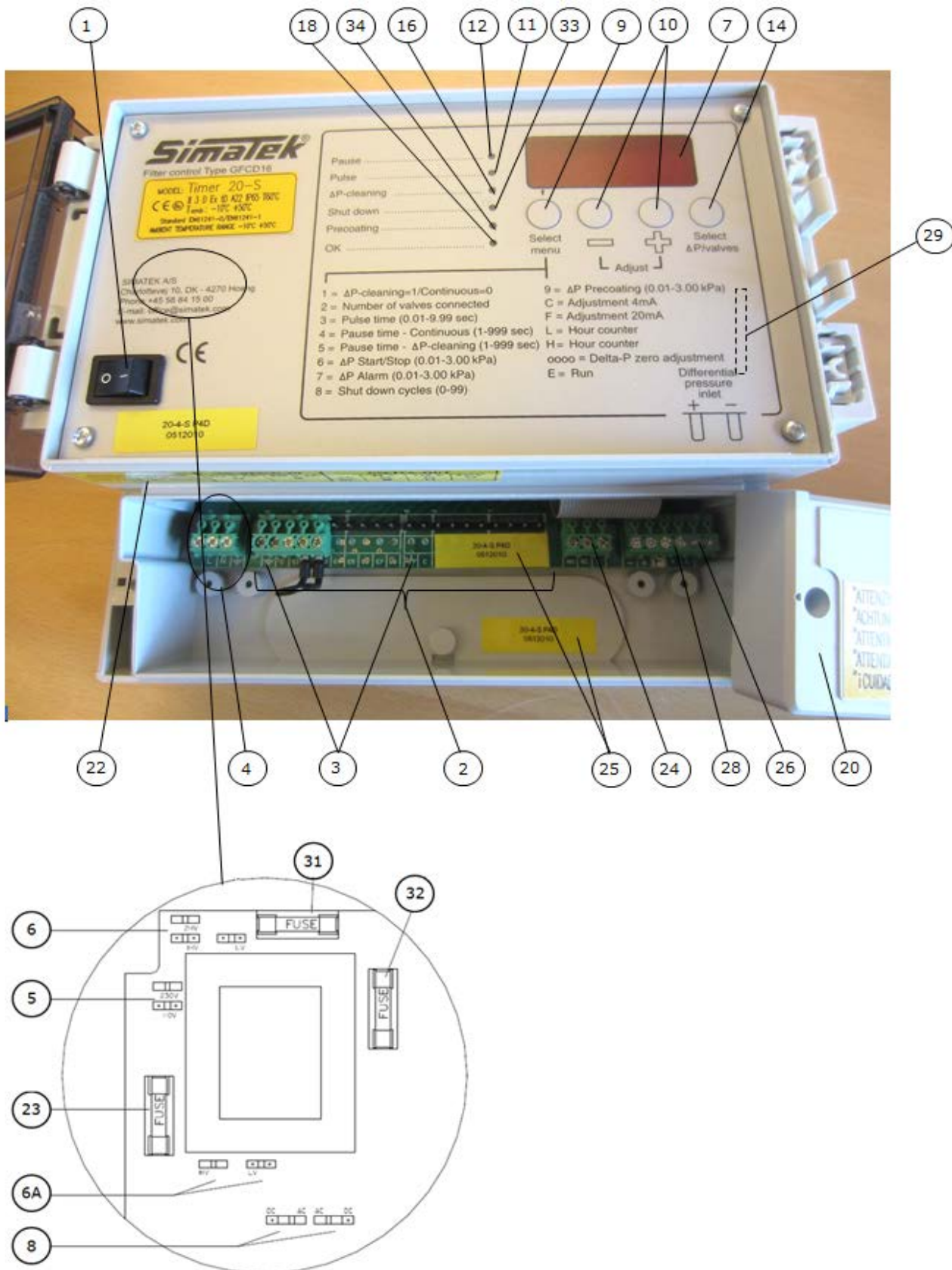
Recommended pause times for SimPact® 4T/4T-R filters

Filter type	Pause time
JM6-8, JM4-CIP	90 sec.
JM7-10-12, JM9-CIP	60 sec.
JM14, JM12-CIP	45 sec.
JM21	36 sec.
JM32	30 sec.
JM41, JM30-CIP	25 sec.
JM44-CIP	23 sec.
JM60-CIP	20 sec.
JM52	18 sec.
JM87-CIP	16 sec.
JM70	15 sec.
JM111-CIP	14 sec.
JM90, JM147-CIP	12 sec.
JM124	11 sec.
JM 146	10 sec.
JM 170, JM 198	9 sec.
JM 183-CIP, JM 255-CIP	8 sec.

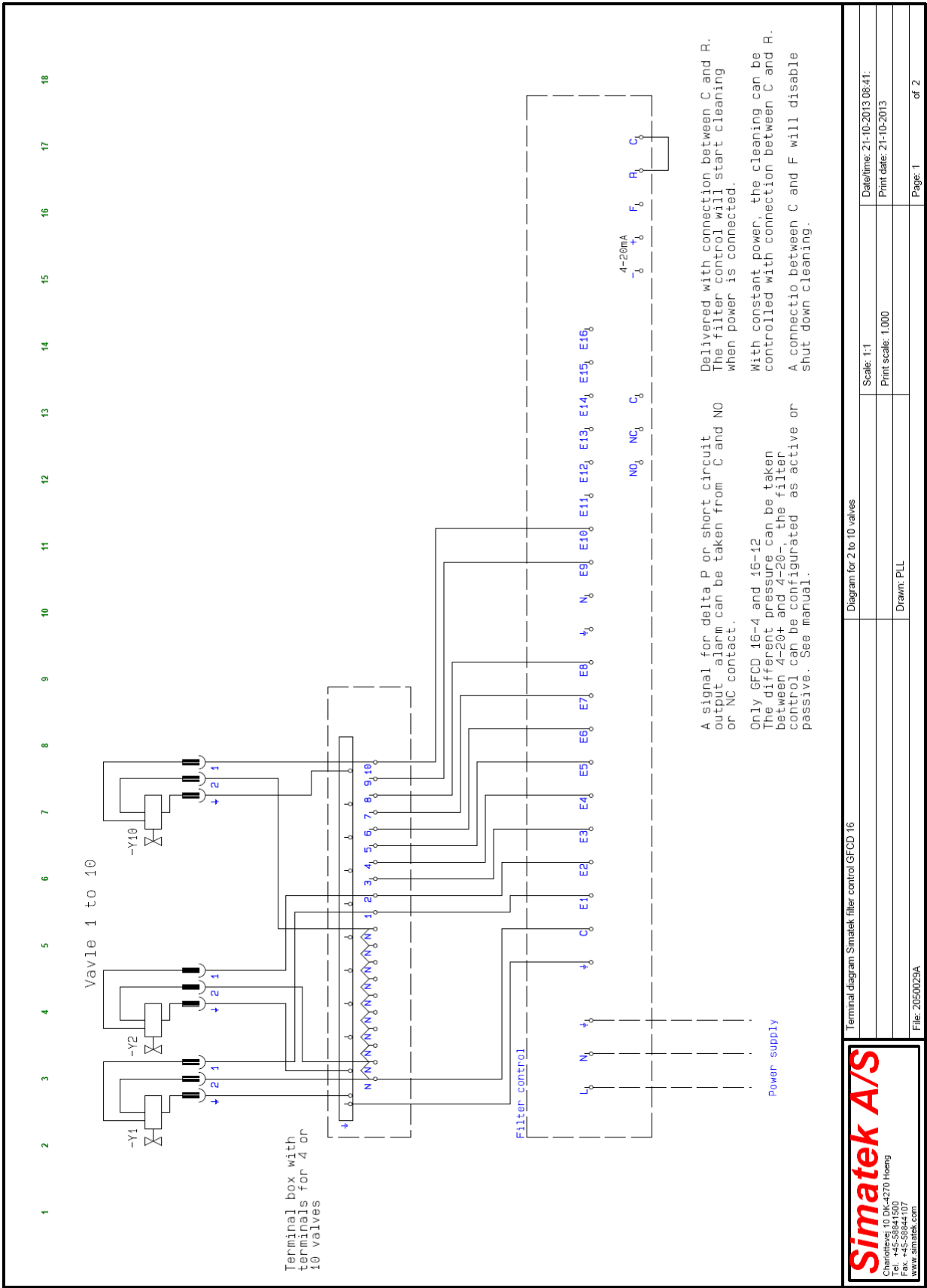
19. Legend

- [1] On/off switch
- [2] Push in valves terminals
- [3] Valves earthing
- [4] Power supply terminals
- [5] Jumper for inlet supply voltage selection
- [6] Jumper for voltage selection to valves
- [6A] Jumper for voltage selection to valves
- [7] Display
- [8] Jumper for the frequency selection to valves (AC/DC)
- [9] Push button Select Menu
- [10] Push buttons +/-
- [11] LED Pulse
- [12] LED Pause
- [14] Push button Delta P/valves
- [16] LED ΔP Cleaning
- [18] LED OK
- [20] Terminals cover
- [21] Transparent cover fixing screws (optional)
- [22] Yellow label indicating IN/OUT voltage frequency
- [23] Main fuse
- [24] Relay terminals
- [25] Product code and serial number
- [26] Remote terminal
- [28] Output clamps for 4-20 mA signal
- [29] Optional 4-20 mA board
- [31] Output fuse 24 V and Fan – Rem
- [32] + 5 V internal power supply fuse
- [33] LED Shut down
- [34] LED Pre-coating

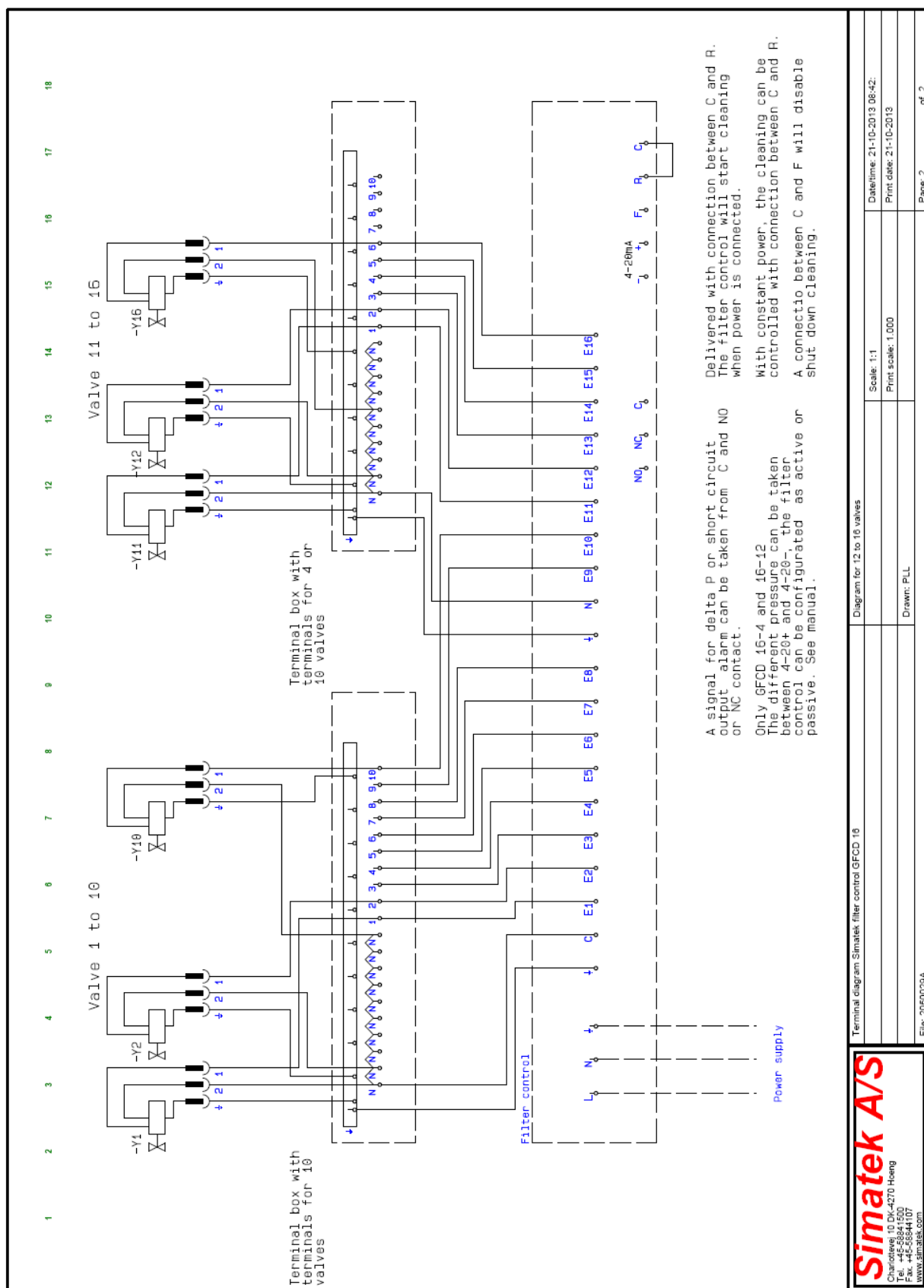
20. General assembly Simatek GFCD 16: 2-16 valves



21. Electric diagram for Simatek GFCD 16: 2-10 valves



22. Electric diagram for Simatek GFCD 16: 12-16



23. Declaration of Conformity

Declaration of Conformity

ATEX Directive 2014/34/EU

SIMATEK
Filter Technology

Simatek A/S
Energien Hus
Energivej 3
DK-4180 Soroe
Danmark

Simatek A/S hereby declares that the Control Unit types:

GFC 16
GFC 32
GFCD 16
GFCD 32

are in conformity with the provisions of the following EC Directives in their current form:

2014/34/EU	ATEX Directive (Potentially Explosive Atmospheres)
2014/30/EU	EMC Directive (Electromagnetic Compatibility Directive)
2014/35/EU	LVD Directive (Low Voltage Directive)

The following harmonised standards or standards documents were applied:

- EN 60079-31:2009 (Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t")
- EN 60529+A1:2002 (Degrees of protection provided by enclosures (IP Code))
- EN 60730-1:2001 + Amd. (Automatic electrical controls for household and similar use – Part 1: General requirements)

Type of protection:



II 3 D Ex tc III C IP65 T60° C
T_{amb.} -10° C + 50° C

Place: Simatek A/S, Soroe, Denmark

Date: 2017.04.25

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