Wilo-CONTROL BOX CE+

D Einbau- und Betriebsanleitung

GB Installation and operating instructions

F Notice de montage et de mise en service

NL Inbouw- en bedieningsvoorschriften

4 123 063-Ed. 02/2009-03-EUROSCRIPT

Fig. 1a

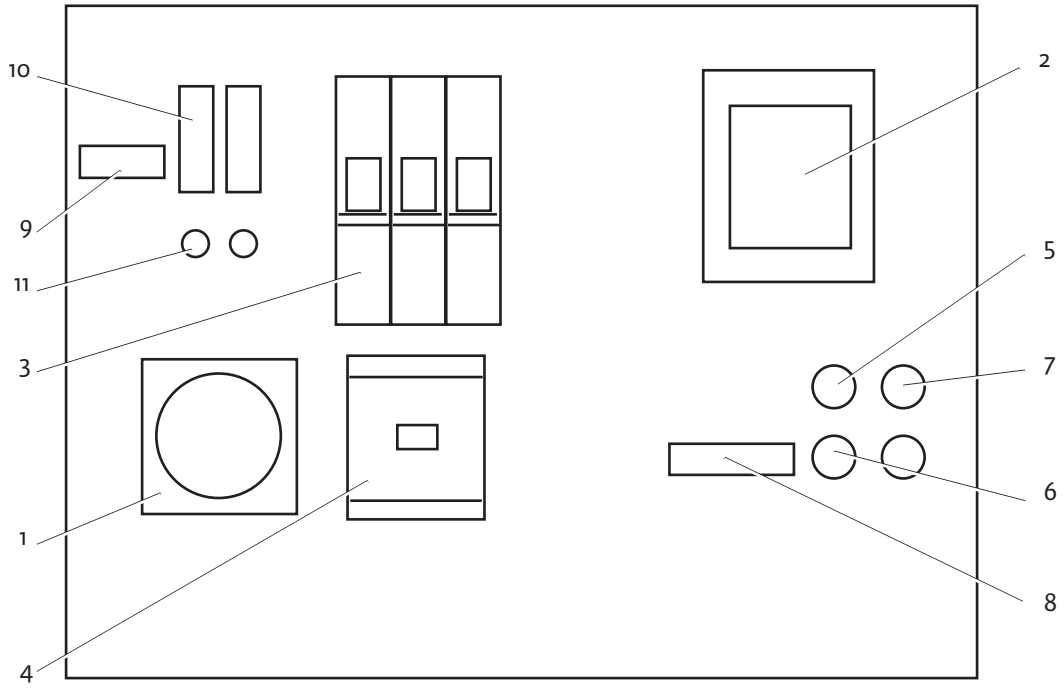


Fig. 1b

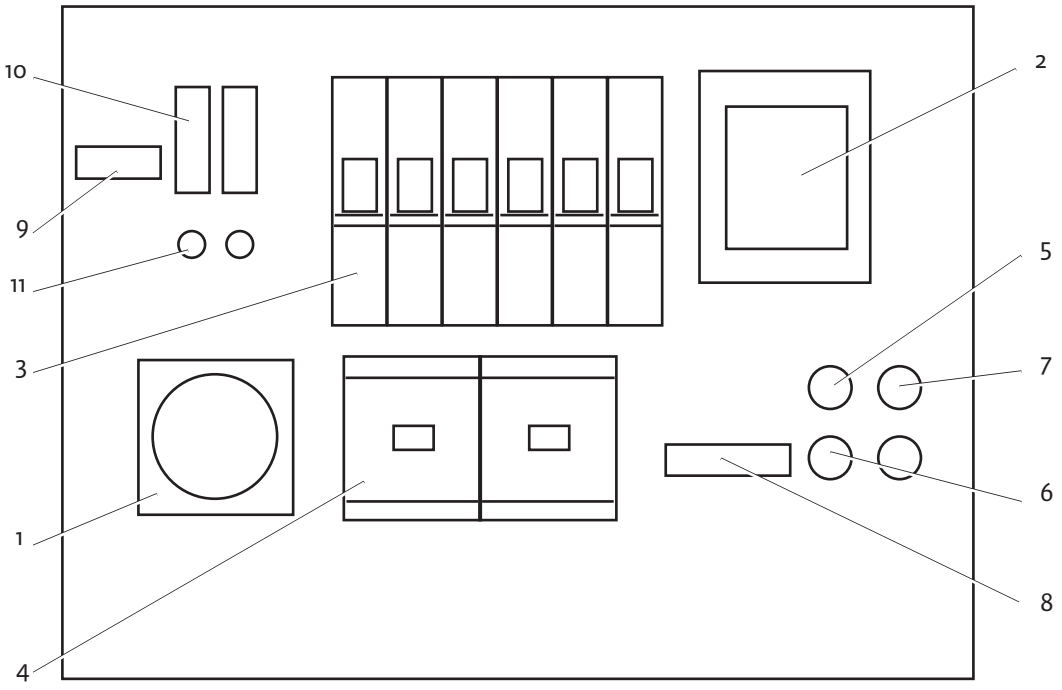


Fig. 1c

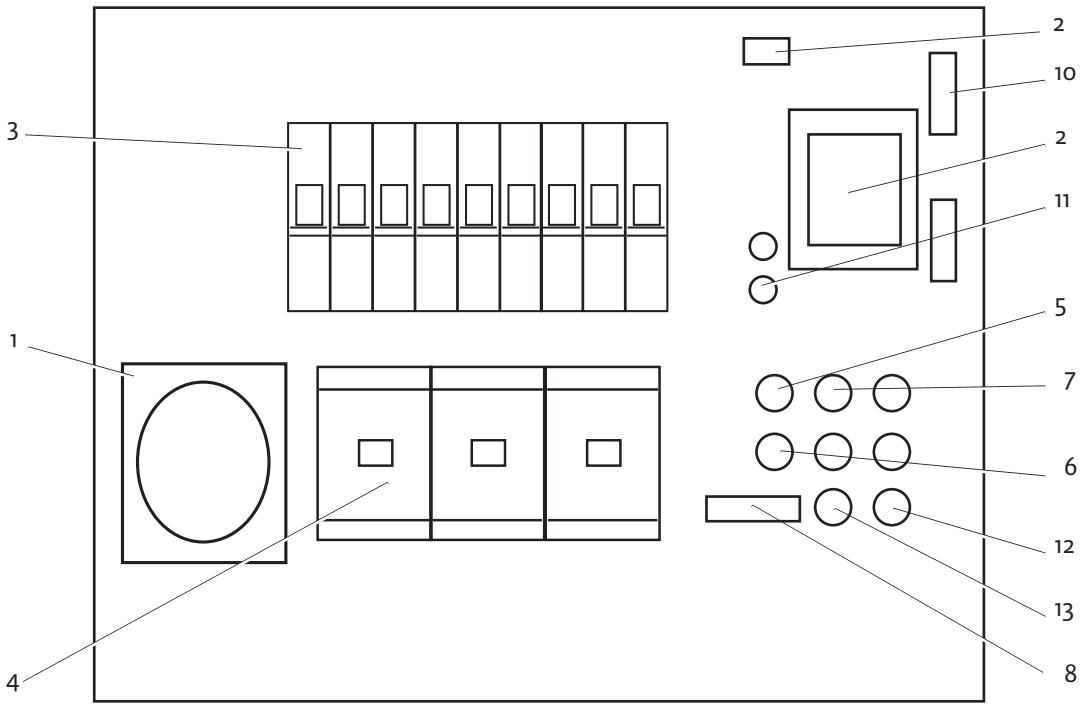


Fig. 1d

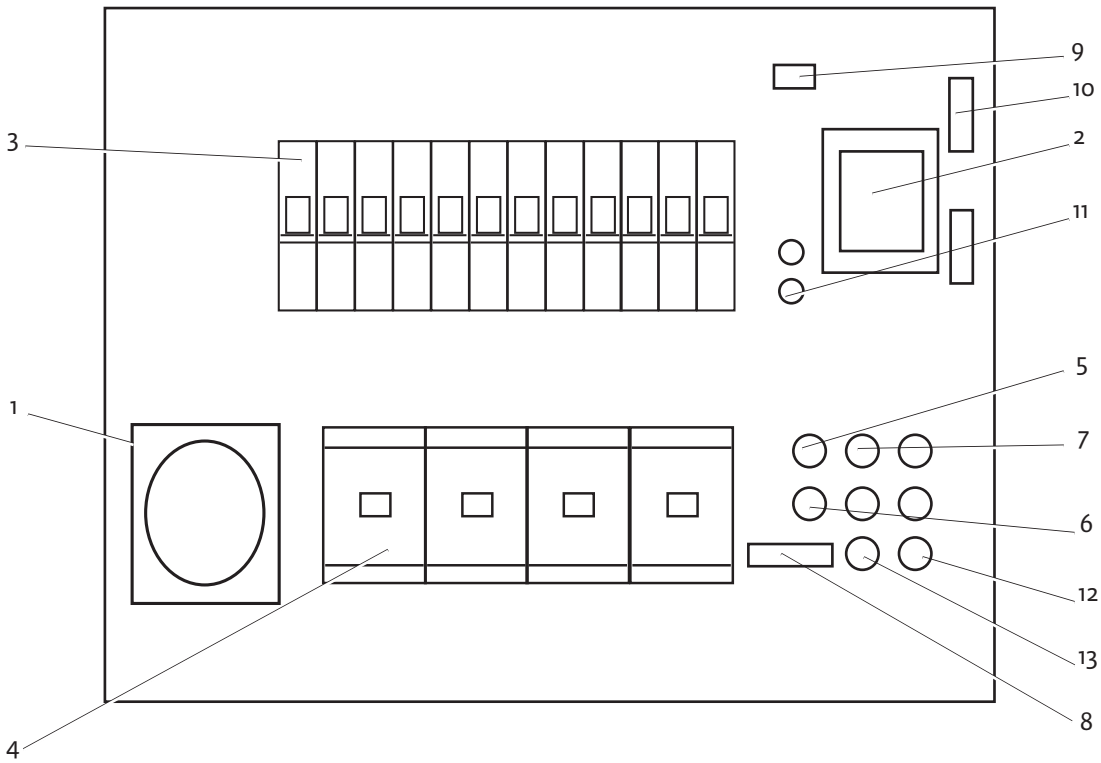


Fig. 1e

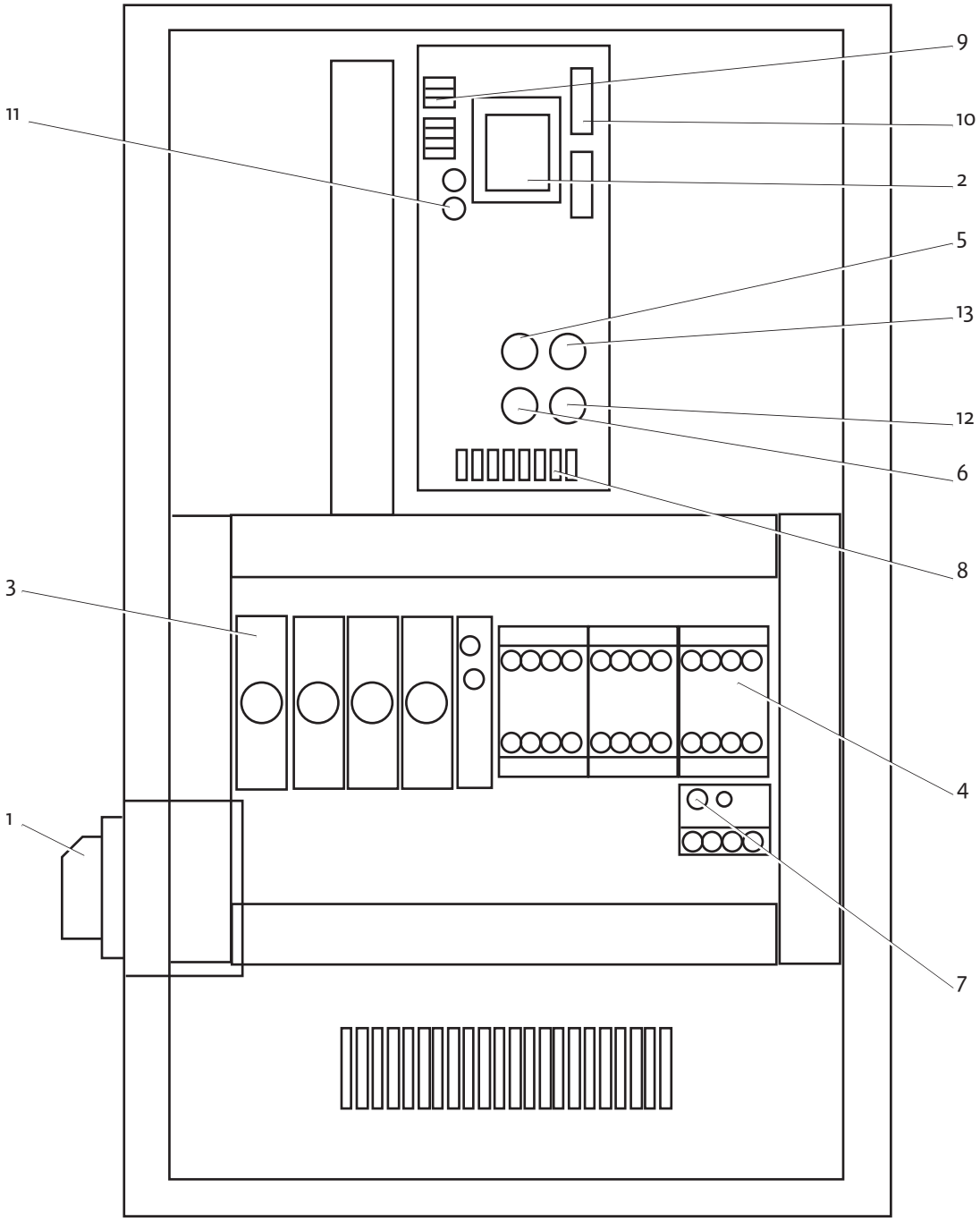


Fig. 2

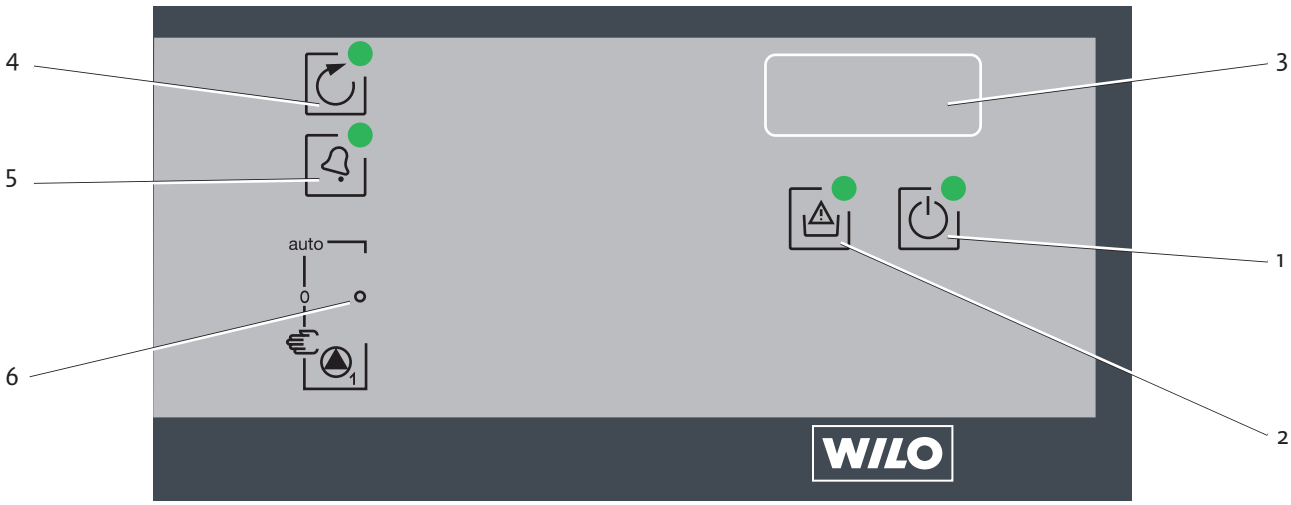

4
5
6
3
1
2
auto
0
1
WILO

Fig. 3

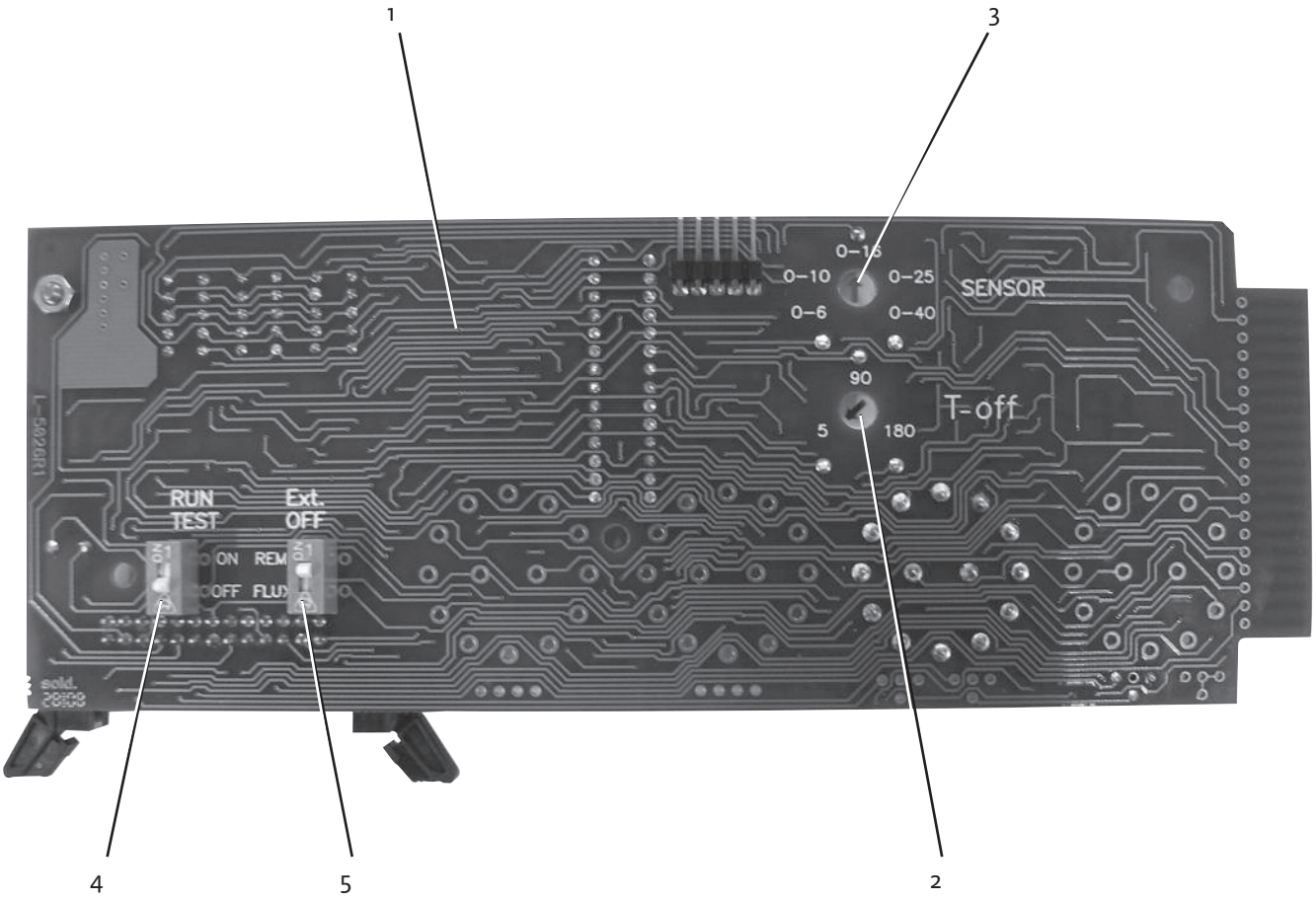

1
3
4
5
2
0–16
0–10
0–25
SENSOR
0–6
0–40
90
T-off
5
180
RUN
TEST
Ext.
OFF
ON
REM
OFF
FLU

Fig. 4a

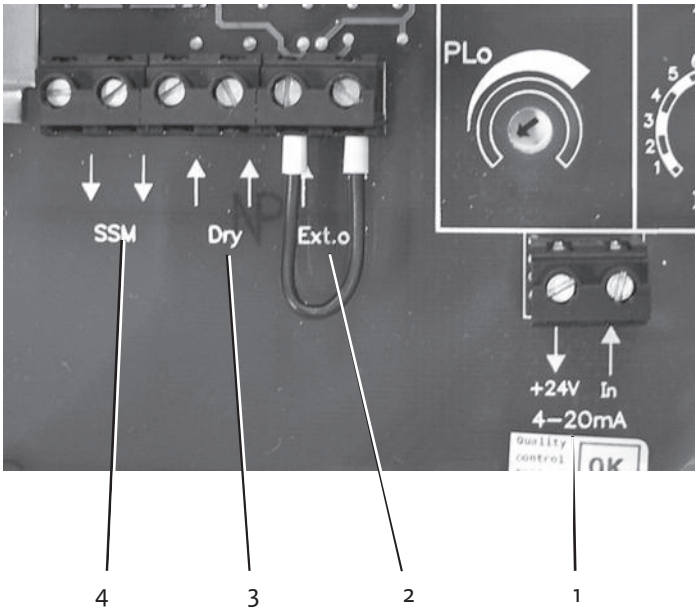


Fig. 4b

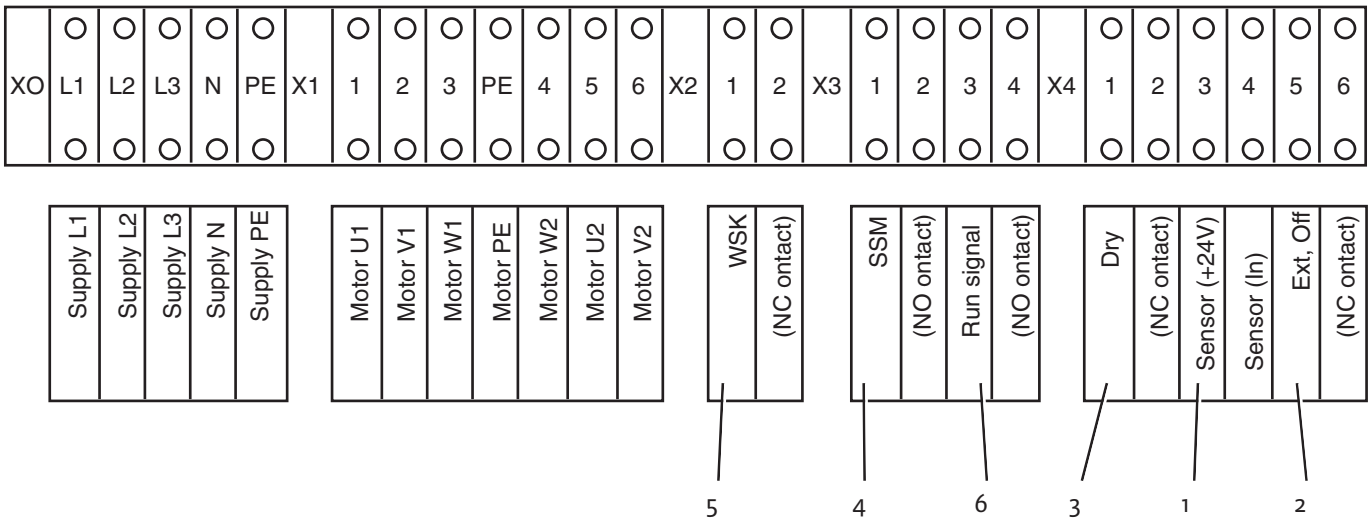
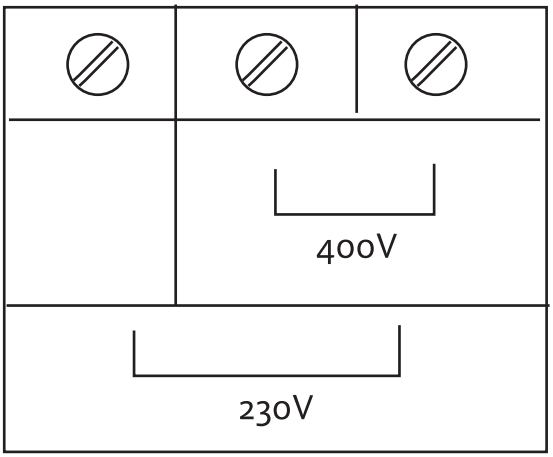


Fig. 5



1. General

1.1 About this document

These installation and operating instructions are an integral part of the unit. They must be kept readily available at the place where the unit is installed. Strict adherence to these instructions is a precondition for the proper use and correct operation of the unit.
These installation and operating instructions correspond to the relevant version of the unit and the underlying safety standards valid at the time of going to print.

2. Safety

This instruction contains important information which must be followed when installing and operating. For this reason, this operating instruction must, without fail, be read by the service technician and the responsible operator before installation and commissioning.
Both the general safety instructions in the "Safety precautions" section and those in subsequent sections indicated by danger symbols should be carefully observed.

2.1 Symbols and signal words used in these operating instructions

Symbols

General safety symbol.

Hazards from electrical causes.

NOTE: ....

Signal words:

DANGER! Imminently hazardous situation. Will result in death or serious injury if not avoided.

WARNING! Risk of (serious) injury. 'Warning' implies that failure to comply with the safety instructions is likely to result in (severe) personal injury.

CAUTION! There is a risk of damage to the product/unit. 'Caution' implies that damage to the product is likely if this information is disregarded.

NOTE: Useful information on the handling of the product.
It alerts the user to potential difficulties.

2.2 Personnel qualification

The installation, maintenance and repair personnel must have the necessary qualifications for this work.

2.3 Risks incurred by failure to comply with the safety instructions

Non-observance of the safety instructions can result in risk of injury to persons and damage to product/unit. Non-observance of the safety instructions can result in the loss of any claims to damages.
In detail, non-observance can, for example, result in the following risks:

- Failure of important product/unit functions,
- failure of the maintenance and repairing process recommended,
- danger to persons due to electrical, mechanical and bacteriological influences,
- material damage.

2.4 Safety precautions for the operator

Existing regulations for the prevention of accidents must be followed.
Dangers caused by electrical energy are to be excluded. Local or general rules issued by the IEC, VDE, etc. as well as the local electricity supply companies are to be observed.

2.5 Safety information for inspection and assembly

The user must ensure that all inspection and installation works are carried out by authorised and qualified specialists who have carefully studied these instructions.
Work on the product/unit should only be carried out when it has been brought to a standstill.

2.6 Unauthorized modification and manufacture of spare parts

Alterations to the pump or installation may only be carried out with the manufacturer's consent. The use of original spare parts and accessories authorized by the manufacturer will ensure safety. The use of any other parts may invalidate claims invoking the liability of the manufacturer for any consequences.

2.7 Improper use

The operating reliability of the supplied product/unit is only guaranteed if the product/unit is used as intended in accordance with Section 4 of the operating instructions. The limit values must on no account fall under or exceed those specified in the catalogue/data sheet.

3. Transport and interim storage

When the product is delivered, check it for any damage in transit. If any defect is found, inform the delivery company (forwarding agent).

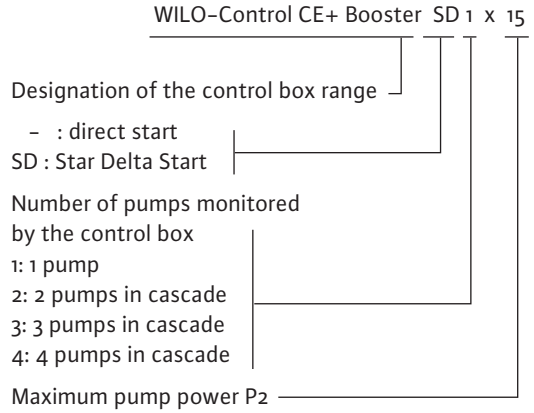
CAUTION! If the product is installed later on, store it in a dry place. Protect it from impacts and any outside influences (moisture, frost, etc. ...). Handle the product with care.

4. Application

The control box CE+ is used to control the output pressure of a booster and to protect the booster and the pumps.
It is used for water supply in high-rise apartments, hospitals, offices and industrial buildings.
In case of pressure deviations more than 1 bar in the suction pipe it is recommended to use a pressure relief valve. The pressure downstream of the pressure relief valve (back-pressure) is the basis for the total head calculation of the booster.

5. Technical data

5.1 Type key



5.2 Technical data

– Maximum operating pressure:	40 bar
– Pressure transmitter (in bar):	0 – 6 ; 0 – 10 ; 0 – 16 ; 0 – 25 ; 0 – 40 Output: 4-20 mA
– Ambient temperature:	0 to +40°C
– Storage temperature:	-10 to +55°C
– Three-phase supply voltage:	230/400V (±10%) 50Hz
– Nominal current:	See type plate
– Protection class:	IP 54

5.3 Scope of Supply

- Booster control box CE+.
- Installation and operating instructions.

6. Description and function

6.1 Product description

Inside the control box

FIG. 1a, 1b, 1c, 1d, 1e

1 MAIN switch with power supply connection terminals (control box with thermal relay connection on terminals X0 : fig. 4b).
2 Safety transformer 230-400V / 24V.
3 Magnetic circuit-breaker (control box with thermal relay : Fuses).
4 Contactor with motor connection terminals (control box with thermal relay connection on terminals X1 : fig. 4b).
5 High pressure potentiometer: it allows to set the high pressure detection limit.
6 Low pressure potentiometer: it allows to set the low pressure detection limit.
7 Current protection potentiometer: it allows to set the over current protection limit of the motors.
8 Terminal blocks for connection of external devices (pressure transmitter, float switch, fault relay, remote control).
9 Voltage selector switch: it allows to select the supply of the transformer according to the supply voltage (230V or 400V).
10 Primary protection fuses of the transformer:
- 2 Fuses 6.3 x 32mm 0.3A 500V with 20kA peak current for control box fitted with a 35VA transformer.
- 2 Fuses 6.3 x 32mm 0.5A 500V with 20kA peak current for control box fitted with a 45VA transformer.

11 Secondary protection fuses of the transformer:
- 2 Fuses 5 x 20mm 2A 250V.

12 Potentiometer time delay : it allows to set the stop delay of the pumps.
13 Potentiometer to select pressure transmitter range : it allows to select transmitter range.

On front side

FIG. 2

1 Led power ON
2 Led dry-running
3 Display 3 x 7 segments
4 Led pump ON (one per pump)
5 Led pump fault (one per pump)
6 3-position rotary switch (one per pump) : Hand – 0 (reset) – Auto

Inside the cover (1 & 2 pumps control box)

FIG. 3

1 Control electronic unit: it manages the input and output signals to ensure the operation and safety of the pumps.
2 Potentiometer time delay: it allows to set the stop delay of the pumps.
3 Potentiometer to select pressure transmitter range: it allows to select transmitter range.
4 Dipswitch run-test: it allows to activate or deactivate the run test function.
5 Dipswitch remote control: this dipswitch must be in position REM.

Inside the cover (1 SD, 3 & 4 pumps control box)

FIG. 3

1 Control electronic unit: it manages the input and output signals to ensure the operation and safety of the pumps.
4 Dipswitch run-test: it allows to activate or deactivate the run test function.
5 Dipswitch remote control: this dipswitch must be in position REM.

6.2 Functional description

6.2.1 Operating

- An electronic pressure sensor supplies the real value of the system pressure thanks a current signal 4-20mA.
- If the output pressure by the booster is lower than the setting pressure defined by the potentiometer "low pressure setting", the base load pump starts after 1 second.
- If the pressure remains lower than the low pressure, the peak load pumps start one after the other after 1 second delay.
- If the output pressure of the booster is higher than the setting pressure defined by the potentiometer "high pressure setting", the peak load

pumps are stopped one after the other at the end of the delay between 3 and 30 seconds, delay relating to the base load pump delay.

- The base load pump stops when the peak load pumps are stopped and when the pressure remains higher than the high pressure during the base load pump delay set between 5 and 180 seconds.
- When the pressure is between both pressures preset (high and low pressure), the pumps remain in their operating mode.

Delay

- Base load pump delay : 5 to 180s can be set
- Peak load pump delay : 3 to 30s related to the base load pump delay.

Base load delay	5	20	40	60	80	100	120	140	160	180
Peak load delay	3	5	8	11	15	18	21	24	27	30

Pump change

To get the same using and operating time of all the pumps, a pump cycling for the starting order is defined after each stop of the main pump.

Operating mode

A 3-position rotary switch on the front part (FIG. 2, pos. 6) allows to select 3 operating modes per pump.

Position OFF and reset:

- The pump is OFF, this position allows the reset of the pump alarms. The reset can be a general or individual reset according to the type of fault.
- For any fault on a line of pump, the reset will be operative as soon as the switch is positioned on 0-reset.
- In case of a general fault (Err-Prs, Err-Sen) the reset will be operative when all the switches of all the pump lines will be positioned on 0-reset.

Position HAND:

The pump is operating in continuous mode for a limited time-period of 15 seconds. After this period the pump stops. It is then required to switch back to the position OFF and again to HAND to start the pump again in continuous operating mode. the magnetic, thermal and lack of water protections remain operative in this mode, other protections are deactivated.

Position AUTO:

All control functions of the booster are operative.

Missing phase

The booster is protected if one or more network phases are missing:

- activation of the fault signal and all the leds pump fault.
- hand reset of the fault by positioning all switches on 0 – reset.

Magnetic fault (except For control box with thermal relay)

A magnetic circuit breaker protect motor and power cable's against short-circuit. On this fault type, the electronic switches directly on another available pump:

- activation of the fault signal and all the leds pump fault.
- Hand reset of the fault (rotary switch on position 0 – reset).

For control box with thermal relay

The protection of motor and power cable against short-circuit is ensured by fuses.

Over current fault

For control box with current sensor

The protection against motor overload is operating by the current measurement in one phase. When this current is higher than current protection setting, the electronic stop the pump in fault and switches directly on another available pump:

- activation of the fault signal and led pump fault.
- Hand reset of the fault (rotary switch on position 0 – reset).

A 0.5A level is fixed for detect no load on the phase supervised. This function allows to protect against overload on 2 other phases when the phase supervised is cut:

- activation of the fault signal and led pump fault.
- hand reset of the fault by positioning all switches on 0 – reset.

For control box with thermal relay

The protection against motor overload and missing phase is operating by a thermal relay. When the thermal relay goes into fault, the faulty pump is stopped and electronic switch directly to another available pump:

- activation of the fault signal and led pump fault.
- Hand reset of the fault (rotary switch on position 0 – reset).

Installation leakage detection

(installation pipes breaking)

When the pressure delivered by the booster is lower than 20 % of the low pressure setting more than 60 seconds, all the pumps are stopped.

- activation of the fault signal
- Err-prs mentioned on the display
- Hand reset of the fault by positioning all the switches on 0 – reset.

Test of the pumps

- Mode run test (dip switch run-test position ON, FIG. 3, pos. 4):
  Every 6 hour the device performs test on a different pump. Every pump runs 15 seconds. At the end of each pump test, the system checks that the installation pressure is really higher than the high pressure setting and that the current consumption of the motor is higher than 0.5A (not with thermal relay). If the test is negative for one of the pumps, the fault Err-Tst is displayed and the device activates the fault signal. To cancel an operating test fault, position the rotary switch of the defective pump on 0-reset.

Lack of water protection
The detection of lack of water will be temporized (20s). This function is operative whatever the operating mode of the control box is.

Fault signal
The fault transfer is activated when one of the following fault appears:
- missing phase (mains supply or motor).
- magnetic circuit breaking (except control box with thermal relay).
- motor overload.
- motor current lower than 0.5A (except control box with thermal relay).
- lack of water.
- leakage in the installation.
- pressure transmitter cable cut.
- run test failure.

6.2.2 Inputs/Outputs

FIG. 4

1 Pressure input (4 – 20mA): an analog input on the electronic part allows the connection of a pressure sensor 4-20mA.

2 Remote control (Ext. Off): the remote control (contact NC) allows the full stop of the booster pumps, an input ON/OFF is dedicated to this input.

3 Lack of water: a pressure switch (contact NO) or a float switch protects the booster against lack of water, an input ON/OFF is dedicated to this sensor.
This function is active whatever the operating mode of the control box is.
6 seconds are needed to start again the booster after closing the contact (water back).

4 Fault signal (SSM): an output fitted with a potential free contact (Normally Open; 250V ; 5A) allows the transfer of the booster faults.

For control box with thermal relay

5 WSK Contact: contact WSK allows an external connection of WSK (Klixon) from motor, an input ON/OFF is dedicated to this input.

6 RUN Signal : an output fitted with a potential free contact (Normally Open; 250V ; 5A) allows the transfer of the booster running.

6.2.3 Signalling – FIG. 2

Booster information

1 Power ON: mains voltage signalling (fixed yellow LED).

2 Lack of water: lack of water signalling (fixed red LED).

3 Display: Display 3x7 segments.
Permanent display of the setting pressure. The setting pressure displayed is the average value between high and low pressure settings.
Blinking display when changing value settings:
- high pressure setting (PHi).
- low pressure setting (PLo).
- delay for base load pump stop (dtp).
- setting of the pressure sensor range (Sen).

Fault display:
- Err-Prs : pressure fault < 20% of the low pressure setting.
- Err-Sen : pressure sensor cable cut.
- Err-tSt : run test fault of the pumps.

Information per pump

4 Pump ON : pump operating indication (fixed green LED in mode Auto and a blinking LED in mode Hand).

5 Pump alarm: pump fault indication (red LED that blinks 5 seconds during the fault detection and then remains as fixed).
- No motor consumption.
- Magnetic circuit-breaking (motor short circuit).
- Over current protection (motor overload).

7. Installation and electrical connection

7.1 Installation

The control boxes are directly assembled on the boosters.

7.2 Electrical connection

The electrical connection must be made according to the local regulations by an electrical installation engineer approved by the local utility.

To make the electrical connection, the corresponding installation and operating instructions and attached electrical circuit diagrams must be observed. General points to be considered are listed below.
- the type of current and voltage of the mains connection must comply with the details on the type plate and the circuit diagram of the control unit.
- as protection measure, the booster must be earthed according to the regulations (i.e. according to the local regulations and circumstances) ; the connections intended for this purpose are identified accordingly (see circuit diagram).
- all other measurements, settings, etc., are specified in the installation and operating instruction and on the electrical connection diagram of the control box.

Power supply cable
The electric supply cable shall be correctly dimensioned according to the total booster power (see type plate).
Connecting the control box on a voltage different from the one mentioned in the description (see chapter 5.2. technical data) is not possible.

NOTE: for any further details an electric diagram is available inside the control box.

CAUTION! Do not forget to connect the earth terminal!

Pump supply cable

CAUTION! The installation and operating rules in the instructions of the pumps shall be observed!

The electric supply cable shall be correctly dimensioned according to the total booster power (see type plate).

CAUTION! Do not forget to connect the earth terminal!

Voltage selector – FIG. 5

CAUTION! Check the voltage selected before first starting!

Position the voltage selection strap of the safety transformer in relation to the supply voltage:
- supply 230V : strap positioned on mark 230V
- supply 400V : strap positioned on mark 400V.

Pressure sensor
Right connecting of the sensor to the terminals (FIG. 4, pos. 1) according to the control box electric diagram:
- The sensor supply is connected to the terminal +24V.
- The sensor output is connected to the terminal In.

Use a shielded cable, connect one side of the shield to the earth terminals of the control box.

CAUTION! Do not apply external voltage to the terminals!

Remote control signal
An input ON/OFF (FIG. 4, pos. 2) is dedicated to the remote control (NC), it allows the full stop of the booster pumps.
The control box is delivery with a strap on this input.
This input is only operative for automatic mode.

Lack of water protection
An input ON/OFF (FIG. 4, pos. 3) protects the booster against lack of water, a pressure switch (Normally Open) or a float switch shall be connected to this input.

CAUTION! Do not apply external voltage to the terminals!

Fault signal
A contact (Normally Open FIG. 4, pos. 4), free potential, to allow a remote transfer of the alarms.

WARNING!
A 250V maximum external electrical supply may be connected on this contact. This dangerous voltage remains inside even if main switch is off.

For control box with thermal relay

WSK
An input (FIG.4b, pos.5) allows an external connection of WSK (Klixon) from motor.

Run signal pump
A contact (NO, FIG. 4b, pos. 6), free potential, allows the remote transfer of the pump running signal.

WARNING!
A 250V maximum external electrical supply may be connected on this contact. This dangerous voltage remains inside even if main switch is off.

8. Commissioning

We recommend that the booster is first commissioned by the WILO customer service. Ask your dealer, the nearest WILO agent or contact our central customer service department.

WARNING!
Before switching on for the first time, check that the customer's wiring has been done correctly, particularly the earthing.
Tighten all the supply terminals before starting the unit!
Check the position of the voltage selection strap before switching on!

8.1 Rotation direction of the motors

Check the rotation direction of the pump complies with the direction shown by the arrow on the pump identification label. Use mode « hand operation » to check.
- if all the pumps run in the wrong direction, reverse 2 of the phases of the mains supply cable.

CAUTION!
Before changing over the phases, switch off the installation main switch.

- if only one pump runs in the wrong direction in standard operating, change over 2 of the phases in the motor terminal box.

CAUTION!
Switch off the installation main switch before changing over the phases.

8.2 Setting description

CAUTION!
For changing parameters, the control box must be open and the installation main switch must be on!
Configuration under voltage must be made according to the local regulations by a qualified person.

- Position all rotary switches on 0 – reset.
- Set the range of the pressure transmitter used with the potentiometer (FIG. 3, pos. 3). The display shows the limit value being set.
- Set the high pressure detection limit with the potentiometer (FIG. 1, pos. 5 "PHi"). The display shows the limit value being set.
- Set the low pressure detection limit with the potentiometer (FIG. 1, pos. 6 "PLo"). The display shows the limit value being set. This value shall always be at least 0.2 bars lower than the high pressure detection limit for sensors 0 – 6 ; 0 – 10; 0 – 16 and 0 – 25 bars and 0.4 bars lower than the high pressure detection limit for sensors 0 – 40 bars.
- The dip-switch (FIG. 3, pos. 5 " Ext.off ") shall be positioned on "REM". The position "FLUX" shall not be used.
- Set the delay for pump stop with the potentiometer (FIG. 3, pos. 2). The display shows the limit value being set. The value mentioned is the

delay for stopping the main pump, it can be set from 5s to 180s, it determines automatically and proportionally the stop delay of the extra pumps from 3s to 30s.
- Set the current detection limit of each motor with dedicated potentiometers (FIG. 1, pos. 7 " I> " or thermal relay) in positioning the arrows on nominal current as mentioned on the motor name-plate and add 10 % % (for the thermal relay it is 0,58*In).
- The run test mode for all the booster pumps is available in the control box. To activate this test, position the dedicated dipswitch (FIG. 3, pos. 4 " run-test ") on "ON", otherwise position the dip-switch on "OFF".

9. Maintenance

Before performing any maintenance or repair, switch off the main switch of the installation!

The control box shall be kept clean.

10. Defects – causes – remedies

Defects	Causes	Remedies
The booster does not run, no light ON	Differential circuit breaker OFF	Set the circuit breaker
	Wrong mains connection	Check every phase
	Missing phase	Check the network
The contactor does not switch on	Wrong voltage selection	Check the voltage selection (230/400V)
	Transformer protection fuse out of order	Replace the fuses
Pump fault signalling	Wrong setting of the current protection	Check the motor consumption and set correctly the current protection potentiometer
	Wrong mains connection	Check phase order
	Motor consumption too high	Repair or replace the motor
	Low motor consumption (< 0,5A) (except control box with thermal relay)	Check the motor wiring or the winding continuity
Lack of water signalling	No water in the booster	Check that the valves of all the pumps are open
	Pressure switch fault	Check that the pressure switch is fitted with a Normally Open Contact
	Float switch fault	Check that the float switch is fitted with a Normally Open Contact
The display shows « Err-Prs »	No pressure increase in the installation	Check that the valves of all the pumps are open
	The transmitter does not read the pressure	Replace the transmitter
The display shows « Err-Tst »	One of the pumps does not meet the operating test	Check the defective pump
The display shows « Err-Sen »	Transmitter wrong connected	Check the wiring
	Transmitter cable cut	Replace the transmitter cable
	Transmitter current <2mA	Replace the transmitter
Switching frequency of the pump too high	Installation capacity too low	Set the main delay setting
	Setting deviation between switching pressure PLo and stopping pressure PHi too small	Review settings of PLo and PHi values

11. Spare parts

All spare parts must be ordered through WILO Customer Services.
In order to avoid any mistakes, please specify the name plate data for orders.
Spare parts catalogue is available at www.wilo.com.

Subject to technical alterations!

D EG – Konformitätserklärung
GB EC – Declaration of conformity
F Déclaration de conformité CE

Hiermit erklären wir, dass die Bauarten der Baureihe : **Control Box CE+**
Herewith, we declare that this product:
Par le présent, nous déclarons que cet agrégat :

in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entspricht:
in its delivered state complies with the following relevant provisions:
est conforme aux dispositions suivants dont il relève:

Elektromagnetische Verträglichkeit – Richtlinie **Electromagnetic compatibility – directive** **Compatibilité électromagnétique– directive**	**2004/108/EG**
Niederspannungsrichtlinie **Low voltage directive** **Directive basse–tension**	**2006/95/EG**

und entsprechender nationaler Gesetzgebung.
and with the relevant national legislation.
et aux législations nationales les transposant.

Angewendete harmonisierte Normen, insbesondere: *Applied harmonized standards, in particular:* *Normes harmonisées, notamment:*	**EN 60204–1** **EN 60439–1** **EN 61000–6–1** **EN 61000–6–2** **EN 61000–6–3** **EN 61000–6–4**

Bei einer mit uns nicht abgestimmten technischen Änderung der oben genannten Bauarten, verliert diese Erklärung ihre Gültigkeit.
If the above mentioned series are technically modified without our approval, this declaration shall no longer be applicable.
Si les gammes mentionnées ci–dessus sont modifiées sans notre approbation, cette déclaration perdra sa validité.

Dortmund, 31.01.2009

i. V.
Erwin Prieß
Quality Manager

WILO SE
Nortkirchenstraße 100
44263 Dortmund
Germany

Document: 2096963.2

NL **EG-verklaring van overeenstemming**

Hiermede verklaren wij dat dit aggregaat in de geleverde uitvoering voldoet aan de volgende bepalingen:

Elektromagnetische compatibiliteit 2004/108/EG

EG-laagspanningsrichtlijn 2006/95/EG

Gebruikte geharmoniseerde normen, in het bijzonder: **1)**

I **Dichiarazione di conformità CE**

Con la presente si dichiara che i presenti prodotti sono conformi alle seguenti disposizioni e direttive rilevanti:

Compatibilità elettromagnetica 2004/108/EG

Direttiva bassa tensione 2006/95/EG

Norme armonizzate applicate, in particolare: **1)**

E **Declaración de conformidad CE**

Por la presente declaramos la conformidad del producto en su estado de suministro con las disposiciones pertinentes siguientes:

Directiva sobre compatibilidad electromagnética 2004/108/EG

Directiva sobre equipos de baja tensión 2006/95/EG

Normas armonizadas adoptadas, especialmente: **1)**

P **Declaração de Conformidade CE**

Pela presente, declaramos que esta unidade no seu estado original, está conforme os seguintes requisitos:

Compatibilidade electromagnética 2004/108/EG

Directiva de baixa voltagem2006/95/EG

Normas harmonizadas aplicadas, especialmente: **1)**

S **CE- försäkran**

Härmed förklarar vi att denna maskin i levererat utförande motsvarar följande tillämpliga bestämmelser:

EG–Elektromagnetisk kompatibilitet – riktlinje 2004/108/EG

EG–Lågspänningsdirektiv 2006/95/EG

Tillämpade harmoniserade normer, i synnerhet: **1)**

N **EU-Overensstemmelseserklæring**

Vi erklærer hermed at denne enheten i utførelse som levert er i overensstemmelse med følgende relevante bestemmelser:

EG–EMV–Elektromagnetisk kompatibilitet 2004/108/EG

EG–Lavspenningsdirektiv 2006/95/EG

Anvendte harmoniserte standarder, særlig: **1)**

FIN **CE-standardinmukaisuusseloste**

Ilmoitamme täten, että tämä laite vastaa seuraavia asiaankuuluvia määräyksiä:

Sähkömagneettinen soveltuvuus 2004/108/EG

Matalajännite direktiivit: 2006/95/EG

Käytetyt yhteensovitetut standardit, erityisesti: **1)**

DK **EF-overensstemmelseserklæring**

Vi erklærer hermed, at denne enhed ved levering overholder følgende relevante bestemmelser:

Elektromagnetisk kompatibilitet: 2004/108/EG

Lavvolts-direktiv 2006/95/EG

Anvendte harmoniserede standarder, særligt: **1)**

H **EK. Azonossági nyilatkozat**

Ezennel kijelentjük,hogy az berendezés az alábbiaknak megfelel:

Elektromágneses zavarás/türés: 2004/108/EG

Kisfeszültségü berendezések irány-Elve: 2006/95/EG

Felhasznált harmonizált szabványok, különösen: **1)**

CZ **Prohlášení o shodě EU**

Prohlašujeme tímto, že tento agregát v dodaném provedení odpovídá následujícím příslušným ustanovením:

Směrnicím EU–EMV 2004/108/EG

Směrnicím EU–nízké napětí 2006/95/EG

Použité harmonizační normy, zejména: **1)**

PL **Deklaracja Zgodności CE**

Niniejszym deklarujemy z pełną odpowiedzialnoscią że dostarczony wyrób jest zgdony z następującymi dokumentami:

Odpowiedniość elektromagnetyczna 2004/108/EG

Normie niskich napięć 2006/95/EG

Wyroby są zgodne ze szczegółowymi normami zharmonizowanymi: **1)**

RUS **Деклация о соответствии Европейским нормам**

Настоящим документом заявляем, что данный агрегат в его объеме поставки соответствует следующим нормативным документам:

Электромагнитная устойчивость 2004/108/EG

Директивы по низковольтному напряжению 2006/95/EG

Используемые согласованные стандарты и нормы, в частности : **1)**

GR **Δήλωση προσαρμογής της Ε.Ε.**

Δηλώνουμε ότι το προϊόν αυτό σ' αυτή την κατάσταση παράδοσης ικανοποιεί τις ακόλουθες διατάξεις :

Ηλεκτρομαγνητική συμβατότητα EG-2004/108/EG

Οδηγία χαμηλής τάσης EG–2006/95/EG

Εναρμονισμένα χρησιμοποιούμενα πρότυπα, ιδιαίτερα: **1)**

TR **EC Uygunluk Teyid Belgesi**

Bu cihazın teslim edildiği şekliyle aşağıdaki standartlara uygun olduğunu teyid ederiz:

Elektromanyetik Uyumluluk 2004/108/EG

Alçak gerilim direktifi 2006/95/EG

Kısmen kullanılan standartlar: **1)**

1) EN 60204-1,

EN 60439-1,

EN 61000-6-1,

EN 61000-6-2,

EN 61000-6-3,

EN 61000-6-4.

i. V.

Erwin Prieß
Quality Manager

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