



CEBEX
Scandinavian Ceramics



MANUAL

SE DK EN

Instruction manual

SC-TOP





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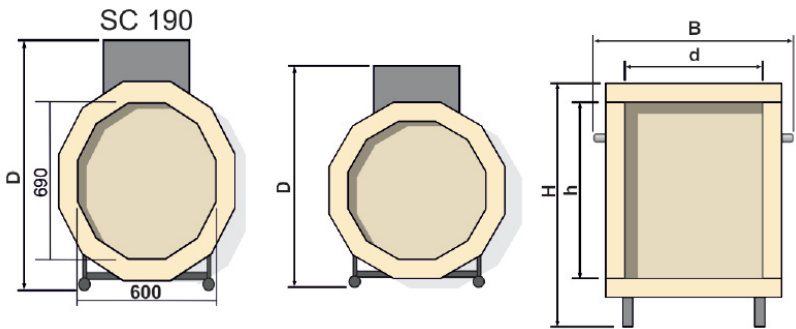


1.0 Preface

Congratulations, you have chosen a Rohde kiln - a high-quality product meeting the highest requirements.

This instruction manual will help you to familiarise yourself with your new kiln. Please read the instruction manual carefully before using your kiln for the first time.

Make sure you understand the features and functions of the kiln and control unit.



2.0. The SC-family:

Type	Volume, L	Weight, kg	Power, kW	Fuse	Int. dim (dxh)	Ext. dim (BxDxH)	Connection	S-batt	Controller	MWL* (kg)
SC 45	43	70	2,9	13 A	Ø400 x 340	610 x 775 x 725	230V/J	Ø350 x 10	G20-06	18
SC 65	62	100	5,0	10 A	Ø400 x 490	610 x 775 x 870	3x400/N/J	Ø350 x 10	G20-20	25
SC 100	99	115	7,0	13 A	Ø470 x 570	680 x 850 x 870	3x400/N/J	Ø420 x 16	G20-20	40
SC 150	151	140	10,0	16 A	Ø580 x 570	780 x 975 x 870	3x400/N/J	Ø520 x 18	G20-20	60
SC 190	188	150	10,5	16 A	600 x 690 x 570	780 x 1085 x 870	3x400/N/J	Special	G20-20	75
SC 200	201	160	12,0	20 A	Ø670 x 570	910 x 1035 x 870	3x400/N/J	Ø550 x 20	G20-20	80

We reserve us the right for changes without further notice. *MWL = Maximum workload (total weight incl. refractories).







4 Safety

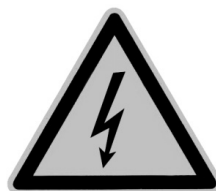
4.1 General

Please make sure that you fully understand both the safety instructions and the safety icons before starting to operate the kiln. For your own safety only use original spare parts! Cebex AB does not assume any liability for damage resulting from incorrect or defective heating elements from other manufacturers. Use only original spare parts - otherwise all warranty claims become void.

4.2 General safety instructions



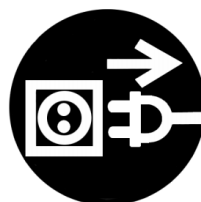
Caution: Hot surface.
Do not open while hot.



Caution: Dangerous electrically live components.



The CE marking indicates that the inspections for conformity have been correctly carried out in accordance with EC standards:
Directive 2004/108/EC
Directive 93/68/ECC relating to CE marking.



Caution: Disconnect power plug before opening the switch box! (BGV A8).

4.3 Operating safety instructions

The kiln can only be operated safely if the safety instructions are carefully followed:

- When operated industrially, the kiln and controller must undergo a safety check to ensure correct functionality. This should be carried out by a qualified electrician before the initial operation and then at 4-year intervals in accordance with BGV A3.
- Maintenance and repair of electronic components must be carried out by a qualified electrician.
- For safety reasons the kiln must be disconnected from the mains supply before any maintenance work is carried out.
- The kiln must not be operated with an extension cable!



5. START UP

5.1 Delivery / Unpacking of kiln

The Toploader will usually be delivered on a pallet by a freight-forwarding agent. Immediately after delivery check the packaging for any visible damage. Should you detect any damage, unpack the pallet together with the driver and check the goods again for damage. If you detect any damage please enter details on the delivery note and let the driver countersign your remarks.

Keep one copy of the complaint for yourself. Inform the freight-forwarding agency immediately of the damage. Complaints submitted at a later date cannot be taken into consideration.

5.2 Disposal of packing material

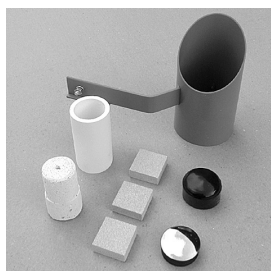
Contribute to a clean environment by disposing of wood, cardboard and plastic packaging material in your nearest waste disposal plant.

5.3 Installation environment / Location

When selecting a suitable place for your kiln, please note the following guidelines and prepare the kiln environment accordingly:

- **Place the kiln on an even surface.**
- **The distance to fire proof wall vägg should be at least 30 cm.**
- **The distance to non fire proof wall should be at least 50 cm.**
- **The distance to non fire proof ceiling should be at least 150 cm.**
- **The floor or kiln base where the kiln is placed must be made of fire proof material.**
- **Make sure that the kiln environment can be properly ventilated. Otherwise a ventilation system must be installed. Please consult a qualified ventilation specialist to find out whether a ventilation system is necessary.**
- **The protection foil on the kiln must be removed before the kiln is taken into operation.**
- **Keep away from children when the kiln is in operation or in the cooling down phase after firing.**

5.4 Assembly of kiln

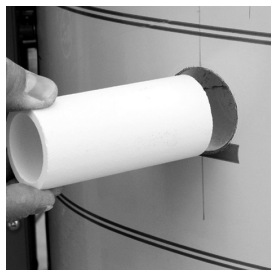


Pict 1

Note! Remove the protection foil and check that the accessories stated below was enclosed in the delivery (Pict 1).

- 3 pcs cordierite blocks
- 1 pcs ceramic tube for exhaust air
- 2 pcs sealing plugs (1 pcs is an extra spare part)
- 2 pcs plastic cap for kiln stand (1 pcs is an extra spare part)
- 1 pcs exhaust air socket and fixing screws

You will also find enclosed the controller, refractories and instruction manual for the controller and the kiln. Take the ceramic tube out of the box and plug it onto the exhaust air opening on the left side of the kiln (pict 2 and 3).



Pict 2



Pict 3



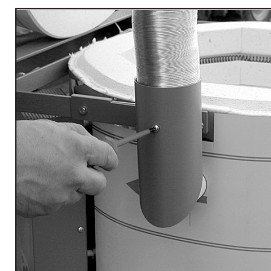
5.5 Installation of ventilation system

Screw the exhaust air socket (figure 4) into the hole on the left side of the kiln. The opening has been located in a position that will allow fumes and gases to be released through an exhaust air socket (optional accessory). Plug the exhaust air tube into the exhaust air socket (figure 5) and use the fixing screw to fix it to the socket.

Please note that the exhaust air tube only evacuates the main part of the fumes from the kiln and has no capacity for evacuating the heat. For that reason the exhaust air tube must not block or replace the room ventilation. If the room already is well ventilated we recommend that the exhaust air tube is not being installed.



Pict 4



Pict 5

5.6. Air supply handle

All SC-models are equipped with an air supply handle (figure 6) on the kiln base. When the handle points to the left, the air supply is cut off. When the handle points to the right, the air supply is open. You can significantly increase the service life of the heating elements by opening the air supply up to a temperature of 600 – 700°C.

Note! - The air inlet is only functional if the air outlet is fully open (no prop).



Pict 6

5.7. Connecting to power supply / controller

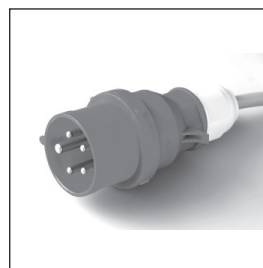
The kiln is equipped with a mains supply cable and CEE-stickpropp (pict 7). The power supply data can be seen on the type plate. The power supply must be suitable for the requirements of the kiln. The plug must be located next to the kiln. Do not use extension cables! The mains supply cable must not come into contact with the hot kiln!

Regional voltage fluctuations are possible and will lead to fluctuations in the nominal output. In Sweden, the nominal voltage of 230 / 400 is subject to voltage fluctuations of 10%. If the voltage drops from 230 to 210 under load, the output of the kiln will be reduced by 16%.

Pict 8 shows the 14-pin plug and screw connection for the controller, pict 9 or 9A. You will find the black socket (figure 8) next to the electric connection on the side of the switch cabinet.

First plug in the black plug of the controller. You might need to turn it a little until it locks into position. Then turn the screw connection ring, in order to protect the connection.

Note! Never use force, the pins in the plug can be damaged.



Pict 7



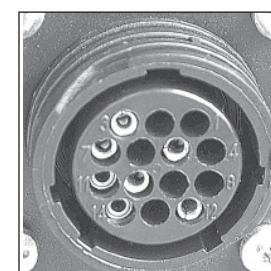
Pict 8



Pict 9



Pict 9A



Pict 10



5.8 Wall installation for controller G20-20

G20-20 is being delivered with a special wall fixing device.
Please follow the manual enclosed with the controller.

5.9 Kiln and furniture initial firing

WARNING: First check that the protective foil has been removed from the entire kiln !!

Before starting to use the kiln in every day firing, you must carry out a dry firing. For this purpose make sure the exhaust air opening on the side of the kiln is open. The "burning-in" by means of a dry firing is important, in order to remove residual moisture from the kiln walls. It also generates a protective oxide layer on the heating elements which will considerably improve the service life of these components.

The ventilation handle must be in position "open" during this firing process.

Settings for initial firing:

- 1) With controller G20-20: Choose program P2 "Normal biscuit firing".
- 2) With other controller: Set the heating time to 100°C/h and the top temperature to 1050°C. Set the soak time to 60 minutes.

IMPORTANT!

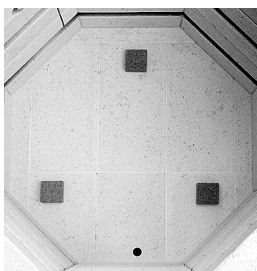
After the first firing the tensioning belts of the stainless steel casing must be tightened with the straps, see part 8.

6.0 Exemple of kiln setting

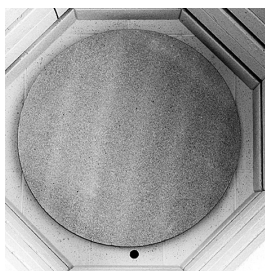
Place the three (3) enclosed corderite blocks according to pict 21.
Place the first batt on the blocks and make sure it is centered in the kiln (pict 22).

The batts are place on a 3-way point support. It is very important that the tubes are placed straight on top of each other and the corderite blocks (pict 23).

This is a precaution in order to minimize the risk for cracked and bended batts. The batts will bend after some time of usage and must be replaced.



Pict 21



Pict 22



Pict 23



7.0 Generell firing instructions

7.1 The controller

Please read the controller instruction manual carefully. The kiln is ready for operation after it has been connected to the mains supply and the controller.

During the first firing of the kiln we recommend that it is frequently checked.

7.2 Important about firing

- Do not place flammable objects near the kiln.
- The kiln may only be used in a well-ventilated room. In order to guarantee safe operation, the kiln may be only operated up to an environmental temperature of 40°C.
- The kiln must be placed in a free-standing position in the room. Make sure that the heat release is not blocked.
- Do not place any objects on top of, or around, the kiln.
- Never open the kiln during operation or before it has cooled down completely. High temperatures are released and might cause physical injury and material damage. The manufacturer of the kiln does not assume any liability in such cases!
- When firing materials which release hazardous gases and fumes, an exhaust air system must be installed that directs these into the open air.
- Never use your kiln for firing inflammable materials or food.
- Keep away from children when the kiln is operating or in the cooling down phase of the firing process.
- Do not fire with reduced atmosphere in the kiln.

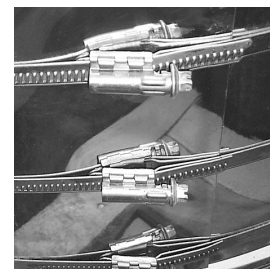


8.0 MAINTENANCE / CARE AND CLEANING

As the fire bricks give off residual moisture during the first operation the volume of the kiln might change slightly. It is therefore essential to readjust the tensioning belts of the stainless steel casing of the cover (figure 24) and main ring (figure 25) after the first firings (not applicable for Quattro and square or rectangular Toploader models).



Pict 24



Pict 25

8.1 Heating elements

Heating elements are subject to wear. Their resistance (Ohm) increases with every firing. Over the course of time this will lead to delays in the firing cycle due to a drop in performance, especially in the upper temperature range. If there is excessive wear we recommend that you replace the complete set of heating elements rather than just single elements.

Replacing individual elements might lead to variations in temperature inside the kiln.

Have a qualified electrician replace the heating elements!

Proper precautions for optimizing the life time of the heating elements:

- Avoid glaze contamination/spill on heating elements and bricks. In case this occurs, the glaze must be removed before next firing.
- Make sure there are no clay contamination/spill in the brick channels for the heating elements.
- Remove clay and stone dust regularly using a soft broom and a vacuum cleaner.
- Do not fire higher in temperature than necessary.
- Make sure the kiln chamber is well ventilated up to 600°C
- Avoid reduction glaze firing.
- Do not use the kiln for wax melting.

A tip for the firing professional: Always keep a spare set of heating elements! In case of an emergency this will save you unnecessary delay and allow you to continue firing as quickly as possible.



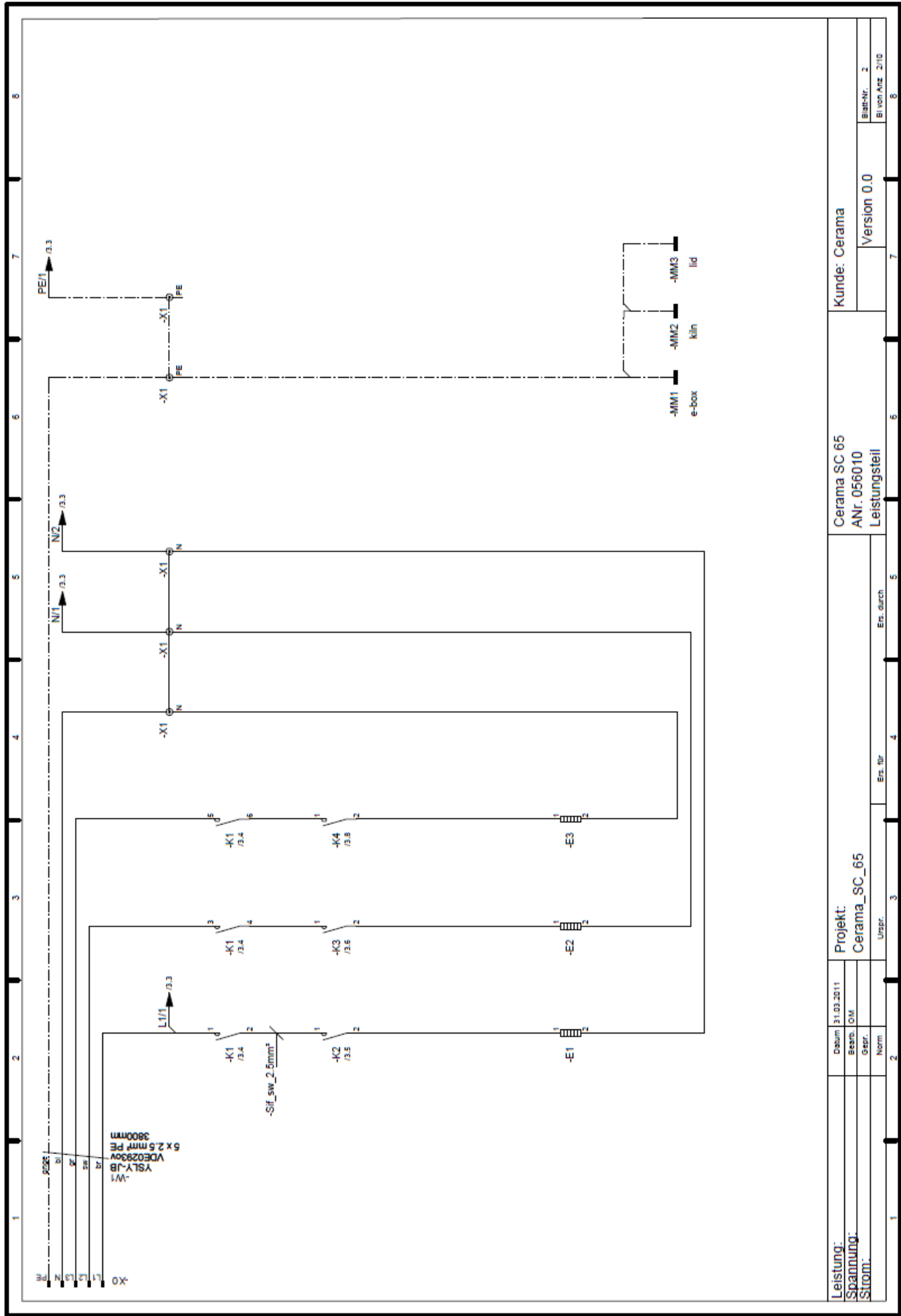
Pict 26

9.0 Good to know

- After the initial firings small cracks appear in the bricks. These are so called hair cracks and are a normal development since the bricks are shrinking a bit when being dried out.
- Small brick particles are falling down on the top batt when opening and closing the air outlet. This is normal for a new kiln but will reduce after some time of usage.
- When the kiln is firing in a high temperature, a thin streak of light appears in the gap between the lid and the kiln. This is normal for top loaded kilns with this lid construction but has no negative effects on the kiln performance.

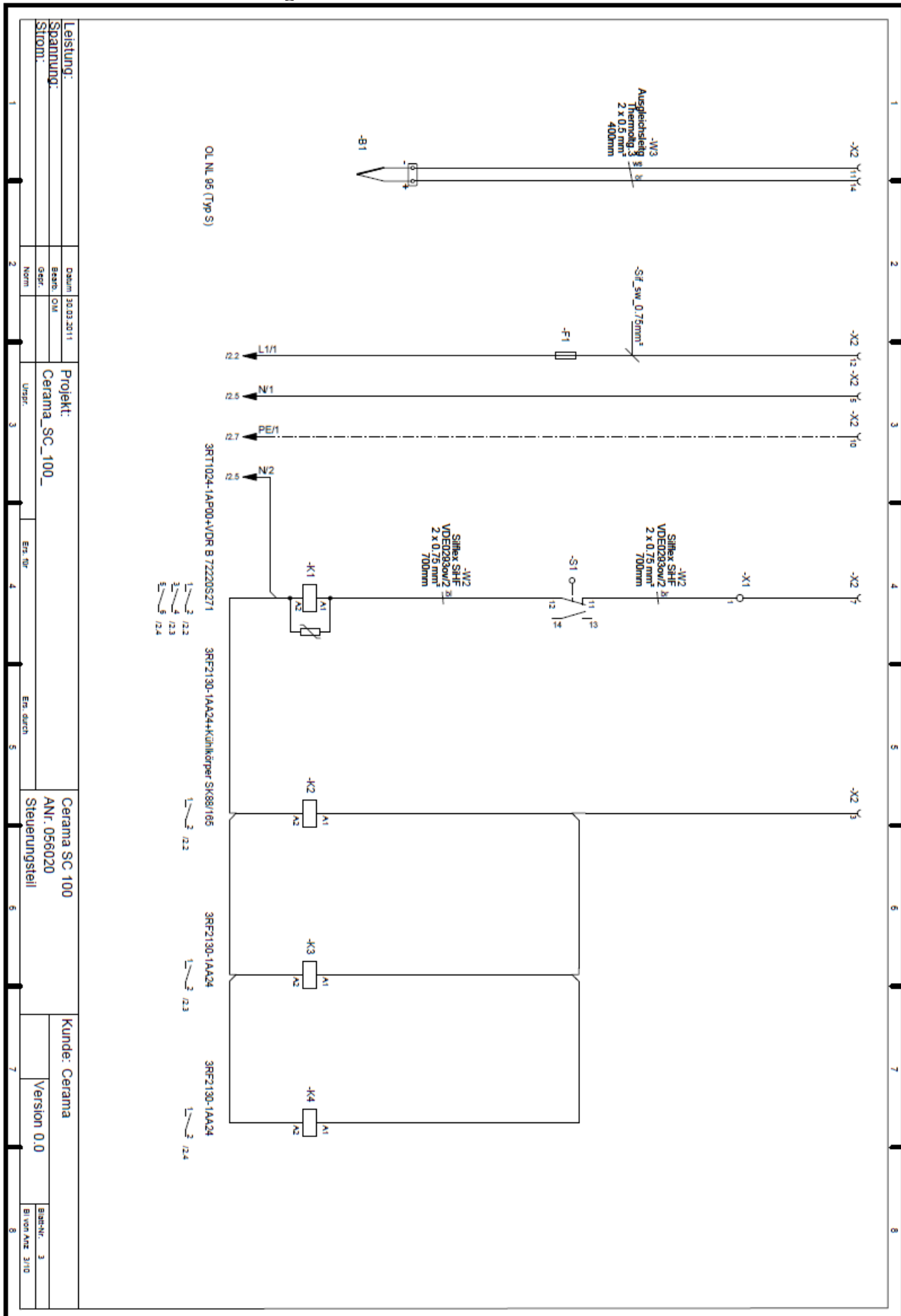


SC 65 Main electrical diagram



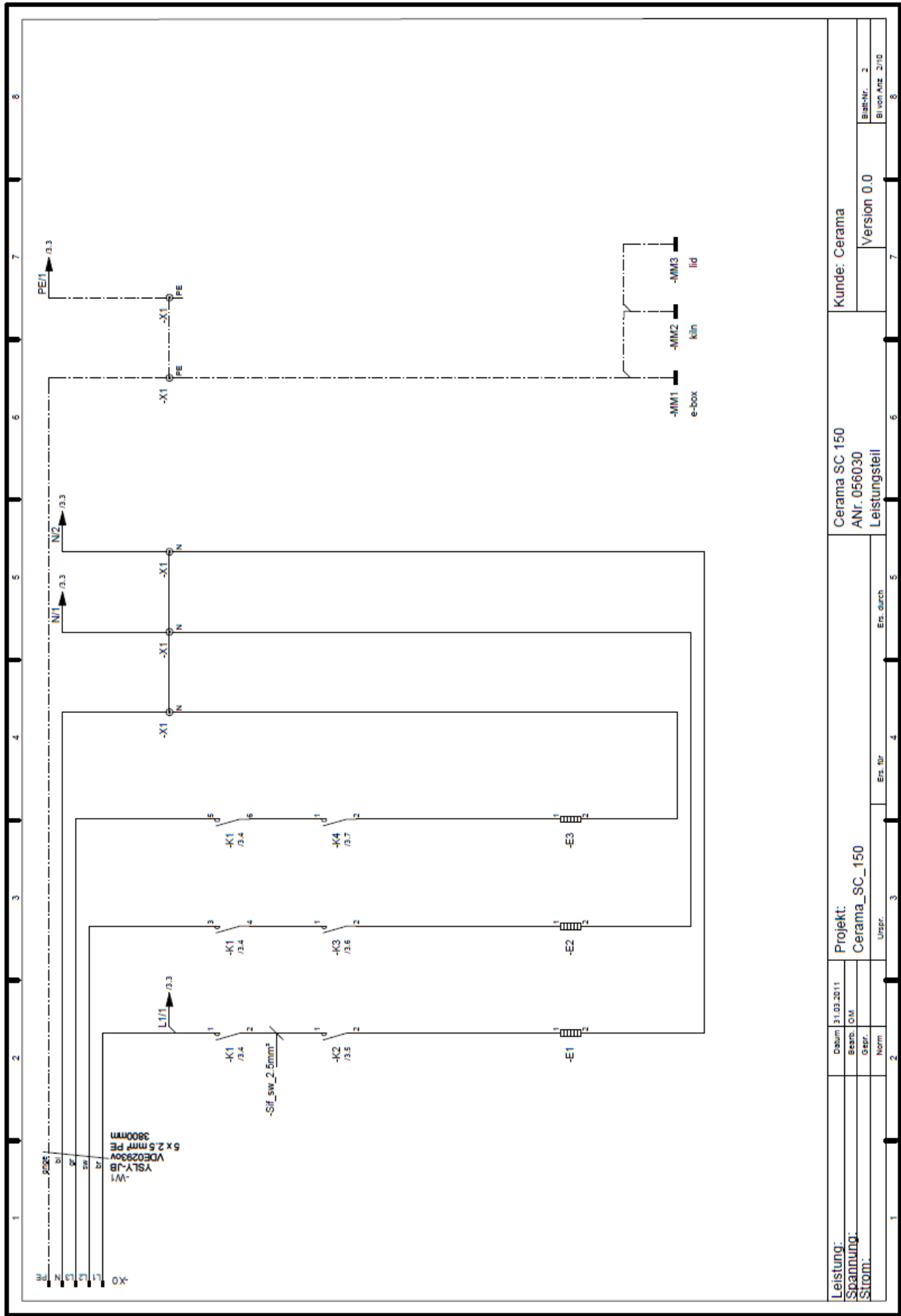
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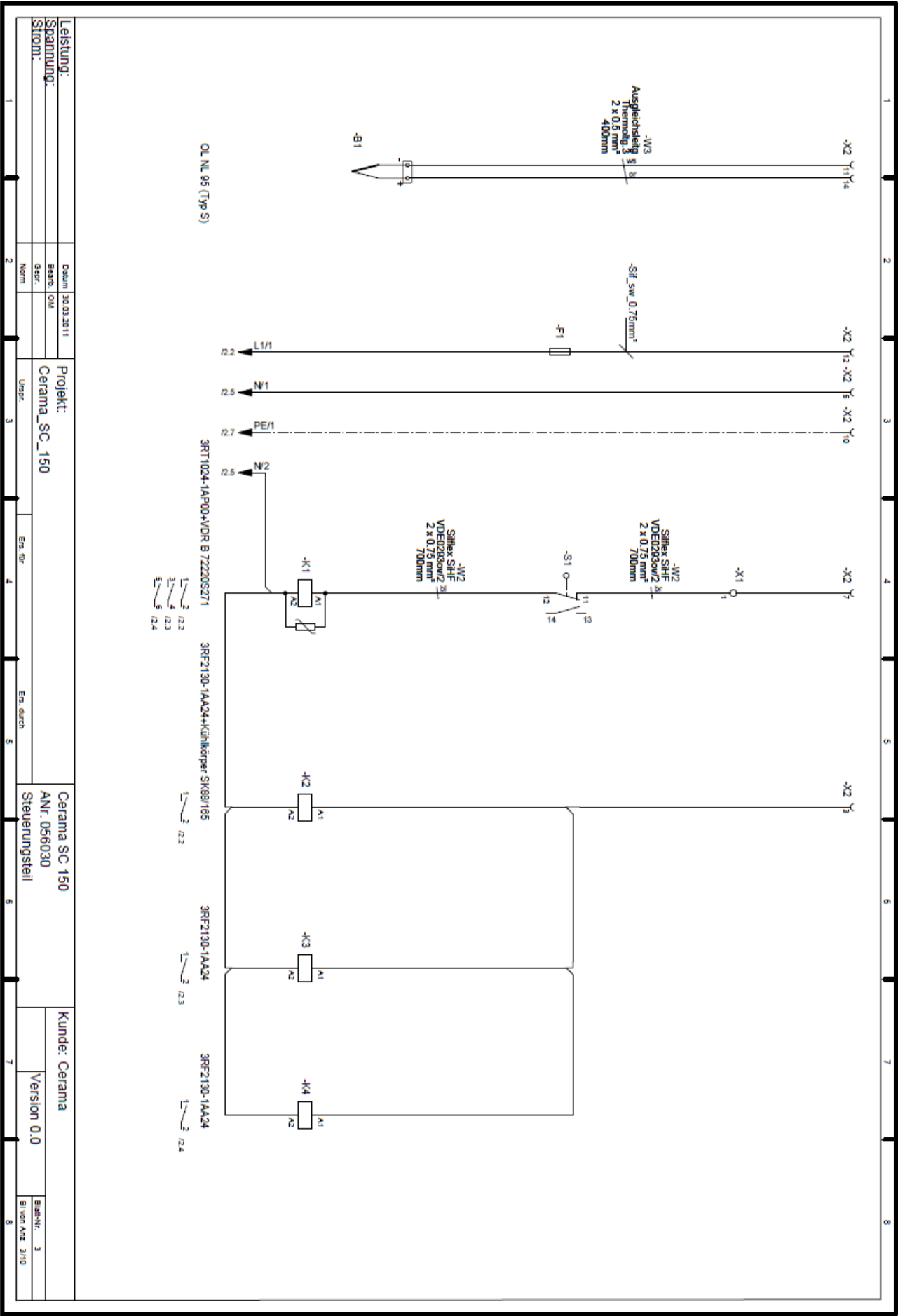


SC 150 Main electrical diagram



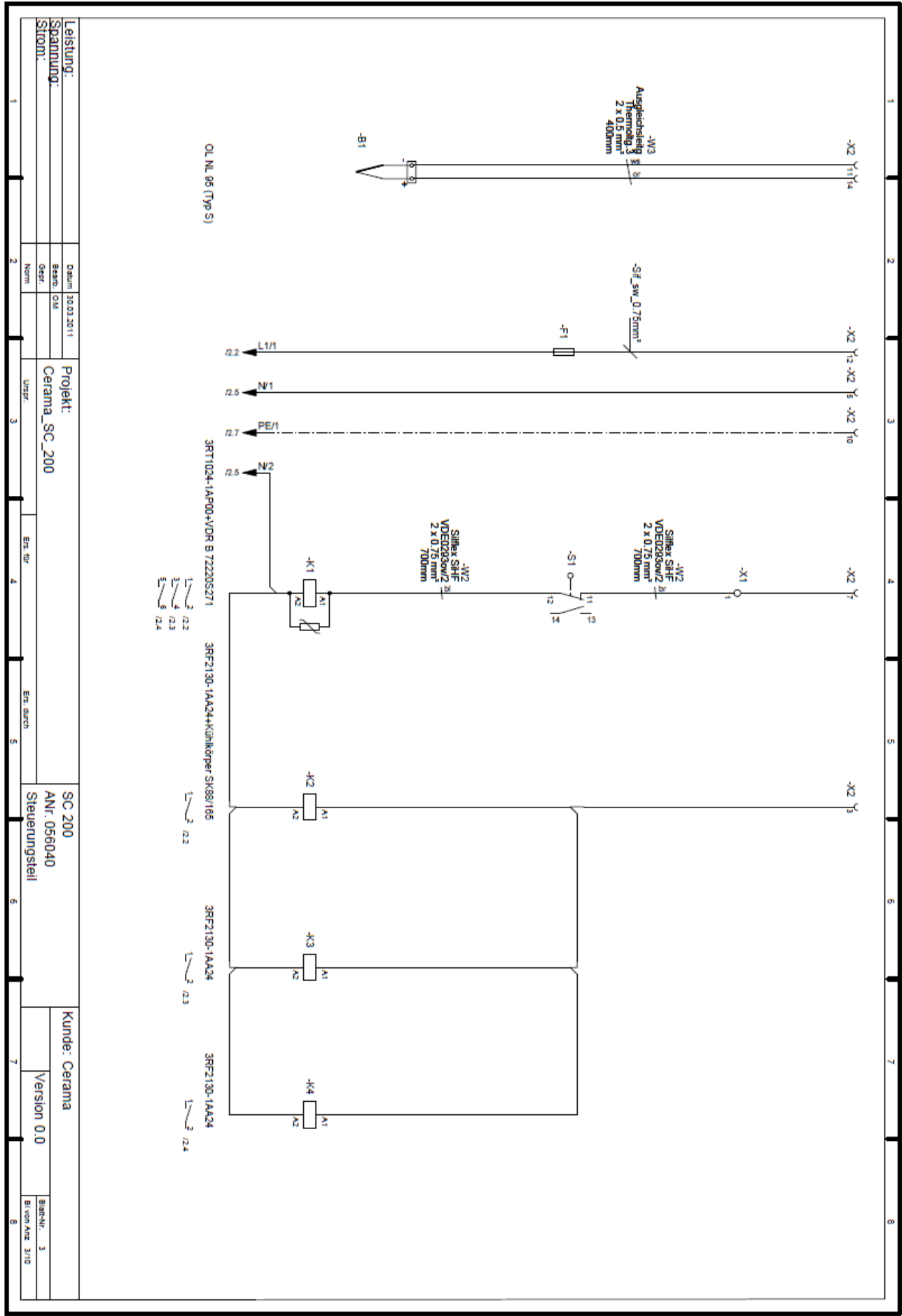


SC 150 Control electrical diagram





SC 200 Control electrical diagram





11.0 Spareparts

SC 65:

Item no.	Product name	Remarks
52VSC065-12	Heating element SC 65 – 1 & 2	1 & 2 are identical
52VSC065-3	Heating element SC 65 – 3	
52-SC-KRAMPE	Staple/clamp for element fixing	All SC-kilns
52PK-1-10	Element clam, 1-pole, 10 mm ²	All SC-kilns
54TFPT-SC	Thermocouple	All SC-kilns
56LIFT-SC65100	Pressure spring for lid - SC 65 and SC 100	For SC 65 and SC 100
51SC-HJUL-1	Wheel for SC 65 and SC 100	For SC 65 and SC 100

SC 100:

Item no.	Product name	Remarks
52VSC100-12	Heating element SC 100 – 1 & 2	1 & 2 are identical
52VSC100-3	Heating element SC 100 – 3	
52-SC-KRAMPE	Staple/clamp for element fixing	All SC-kilns
52PK-1-10	Element clamp, 1-pole, 10 mm ²	All SC-kilns
54TFPT-SC	Thermocouple	All SC-kilns
56LIFT-SC65100	Pressure spring for lid - SC 65 and SC 100	For SC 65 and SC 100
51SC-HJUL-1	Wheel for SC 65 and SC 100	For SC 65 and SC 100

SC 150:

Item no.	Product name	Remarks
52VSC150-12	Heating element SC 150 – 1 & 2	1 & 2 are identical
52VSC150-3	Heating element SC 150 – 3	
52-SC-KRAMPE	Staple/clamp for element fixing	All SC-kilns
52PK-1-10	Element clamp, 1-pole, 10 mm ²	All SC-kilns
54TFPT-SC	Thermocouple	All SC-kilns
56LIFT-SC150200	Pressure spring for lid - SC 150 og SC 200	For SC 150 and SC 200
51SC-HJUL-2	Wheel for SC 150 and SC 200, without brake	For SC 150 and SC 200
51SC-HJUL-3	Wheel for SC 150 and SC 200, with brake	For SC 150 and SC 200

SC 200:

Item no.	Product name	Remarks
52VSC200-12	Heating element SC 200 – 1 & 2	1 & 2 are identical
52VSC200-3	Heating element SC 200 – 3	
52-SC-KRAMPE	Staple/clamp for element fixing	All SC-kilns
52PK-1-10	Element clamp, 1-pole, 10 mm ²	All SC-kilns
54TFPT-SC	Thermocouple	All SC-kilns
56LIFT-SC150200	Pressure spring for lid - SC 150 og SC 200	For SC 150 and SC 200
51SC-HJUL-2	Wheel for SC 150 and SC 200, without brake	For SC 150 and SC 200
51SC-HJUL-3	Wheel for SC 150 and SC 200, with brake	For SC 150 and SC 200

