

INDEPENDENT HOBS

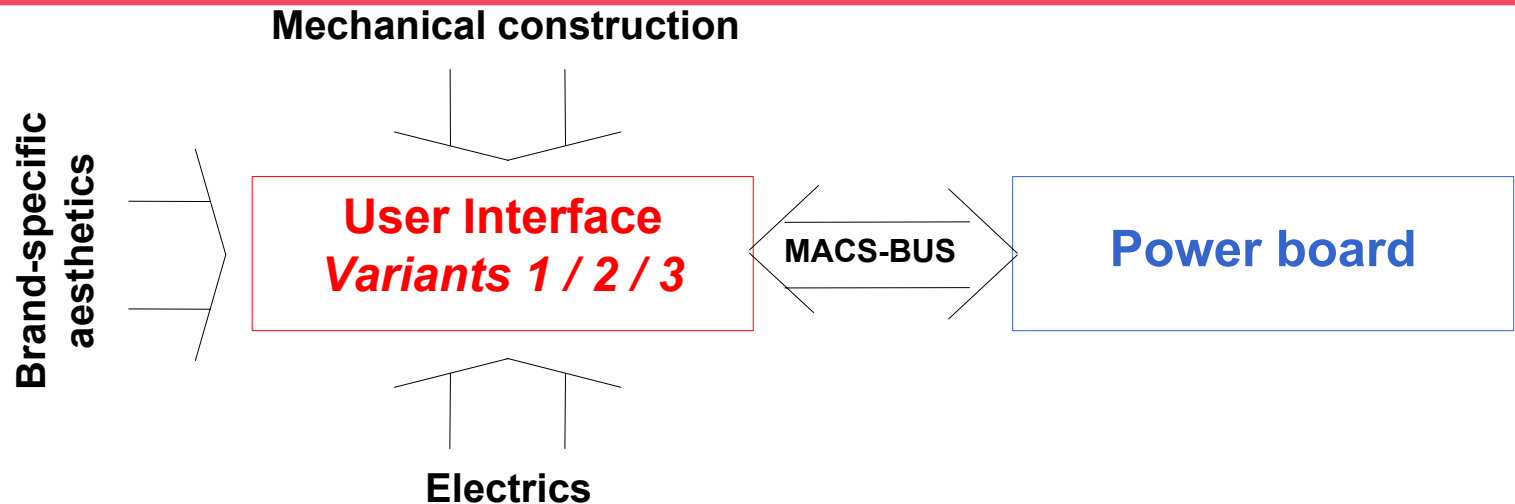
WITH HIC ELECTRONIC CONTROL



What is HIC?

- **HIC = Hob Independent Control**
- **New touch-control electronic for independent hobs, with new user interface philosophy**
- **Electronic modules with reduced width and height allow a new build-in philosophy, with higher flexibility in kitchen planning**

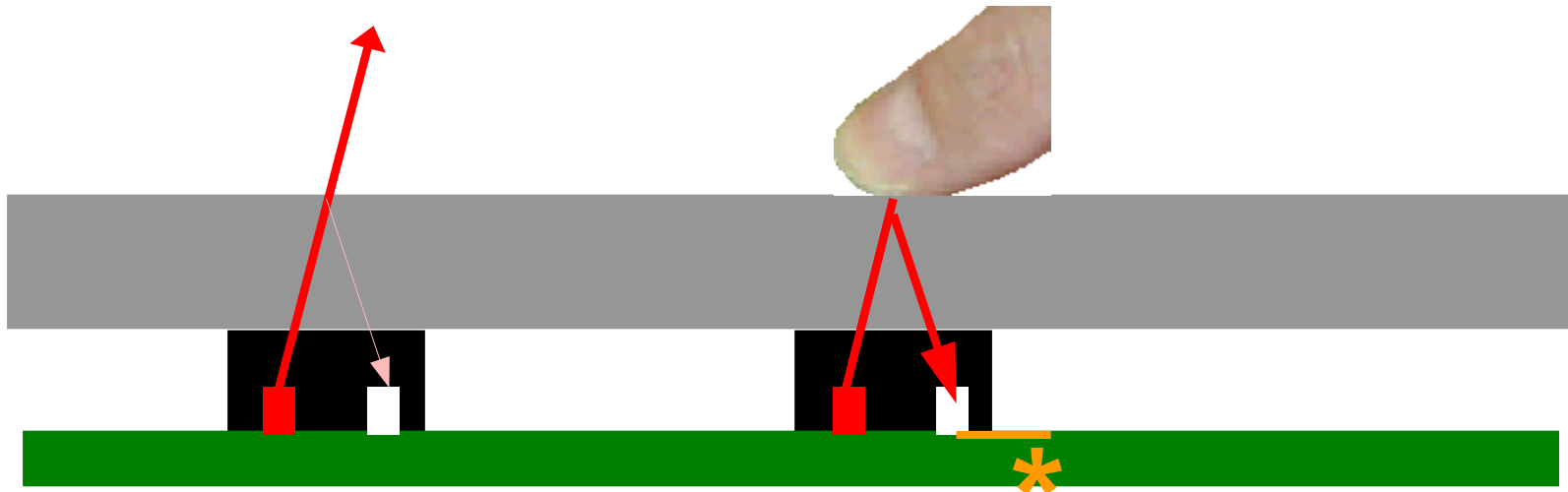
Schematic



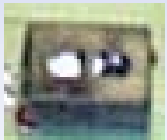
- 1 circuit board for control and power supply to the elements = Power Board (**PB**)
- User Interface (**UI**) with touch control:
 - single board (variants 1 and 2)
 - double board (variant 3)

HIC Touch Control Principle

- Touch Control is not capacitive, but works with **Infrared Reflexion**

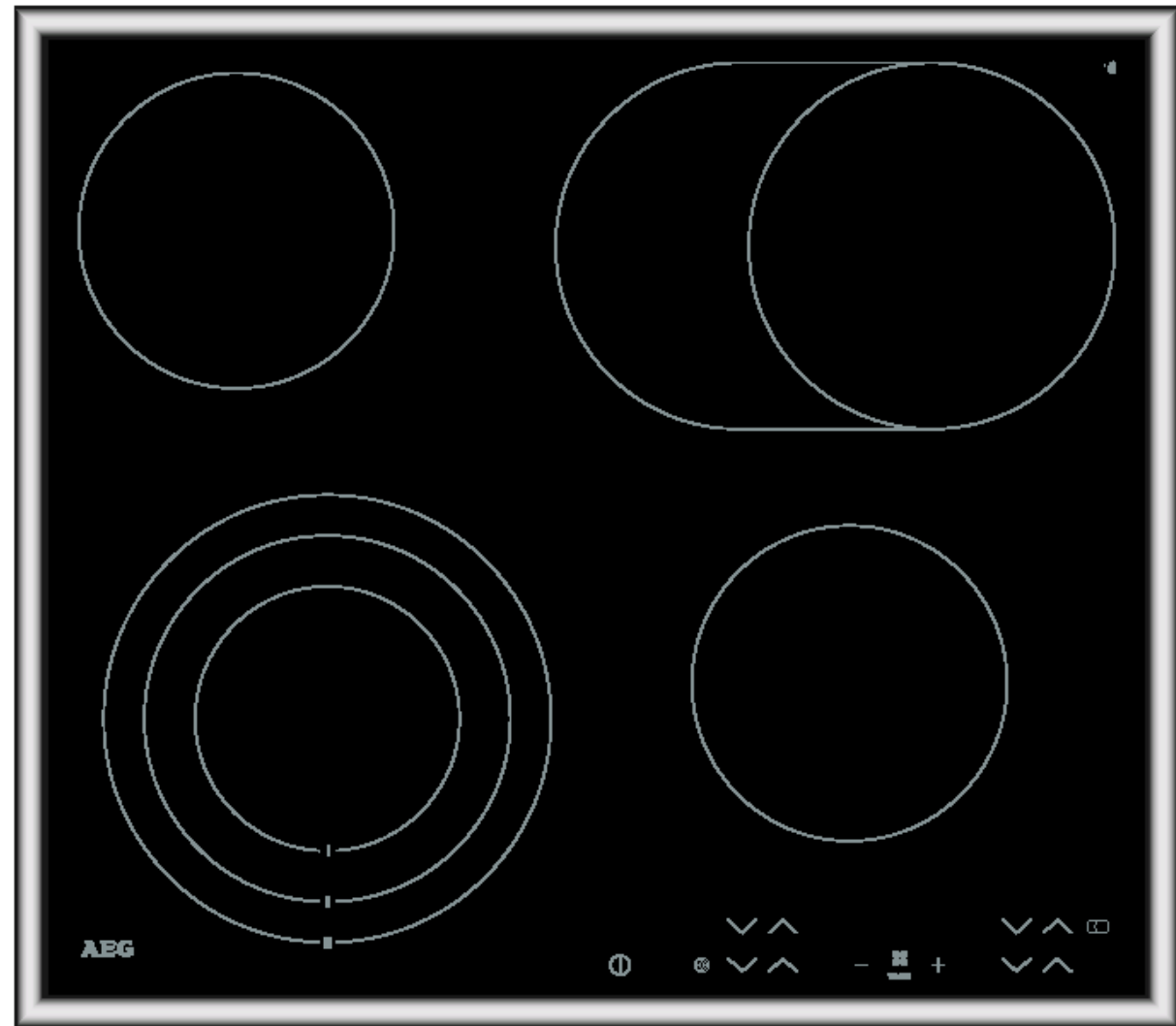


Positioning of sensor relative to vitro-ceramic surface important for correct function



Compact Horizontal

60 cm width, UI on R.H. front side



Compact Horizontal

60 cm width, UI on R.H. front side



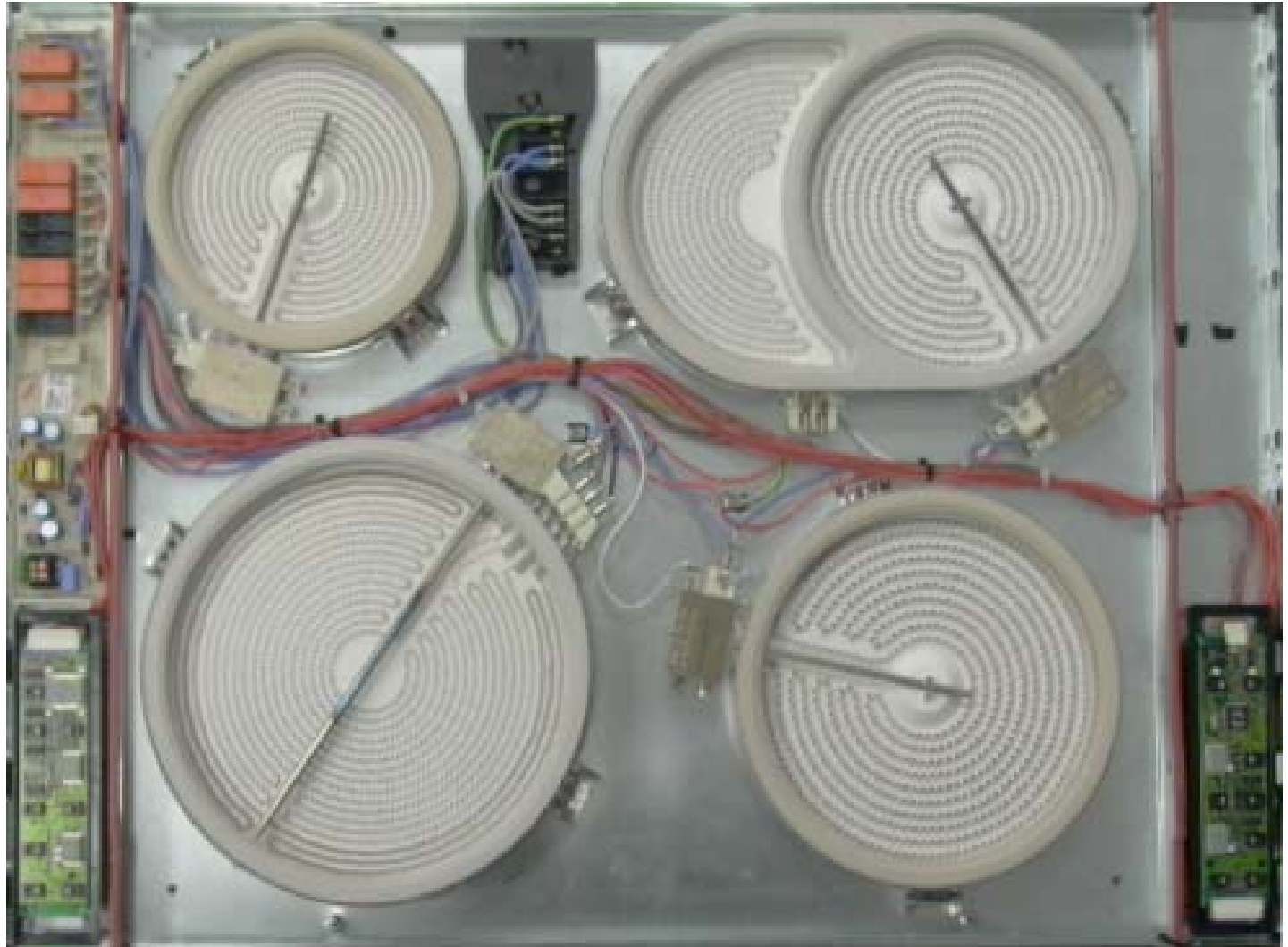
Split Vertical

68 cm width, split lateral UI

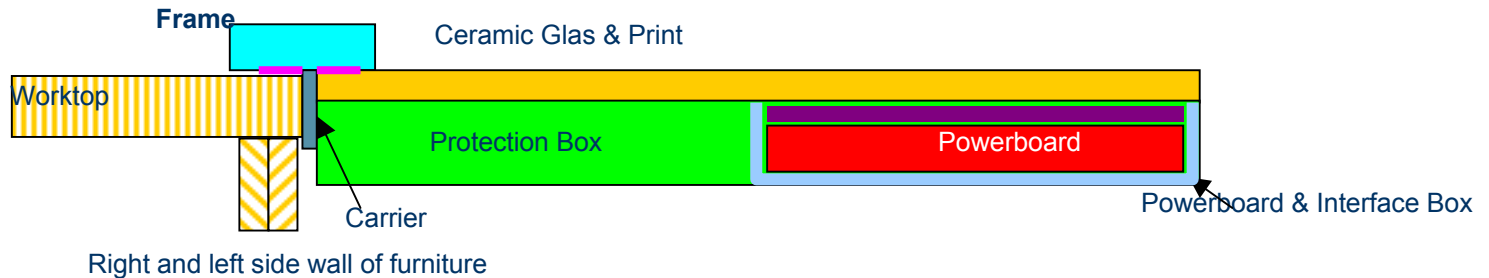


Split Vertical

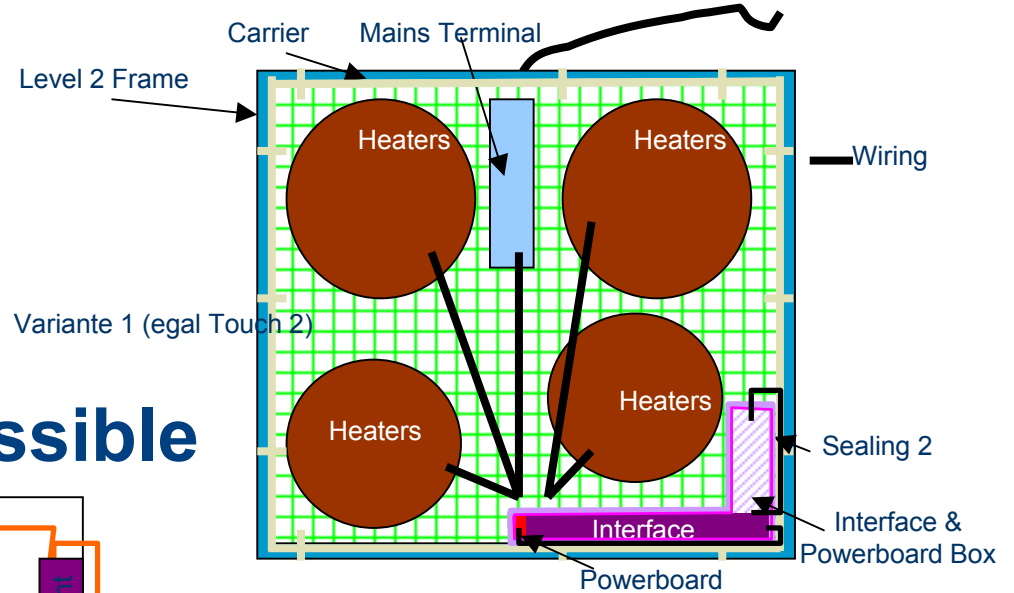
68 cm width, split lateral UI



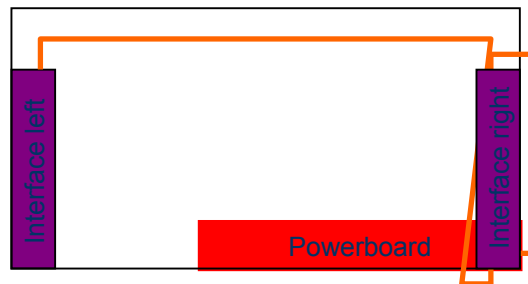
Compact Horizontal* 60 cm width, UI on R.H. front side



2 variants to place the intercaes in der hob with impact on Plastic Boxes and positioning of powerboard and wiring

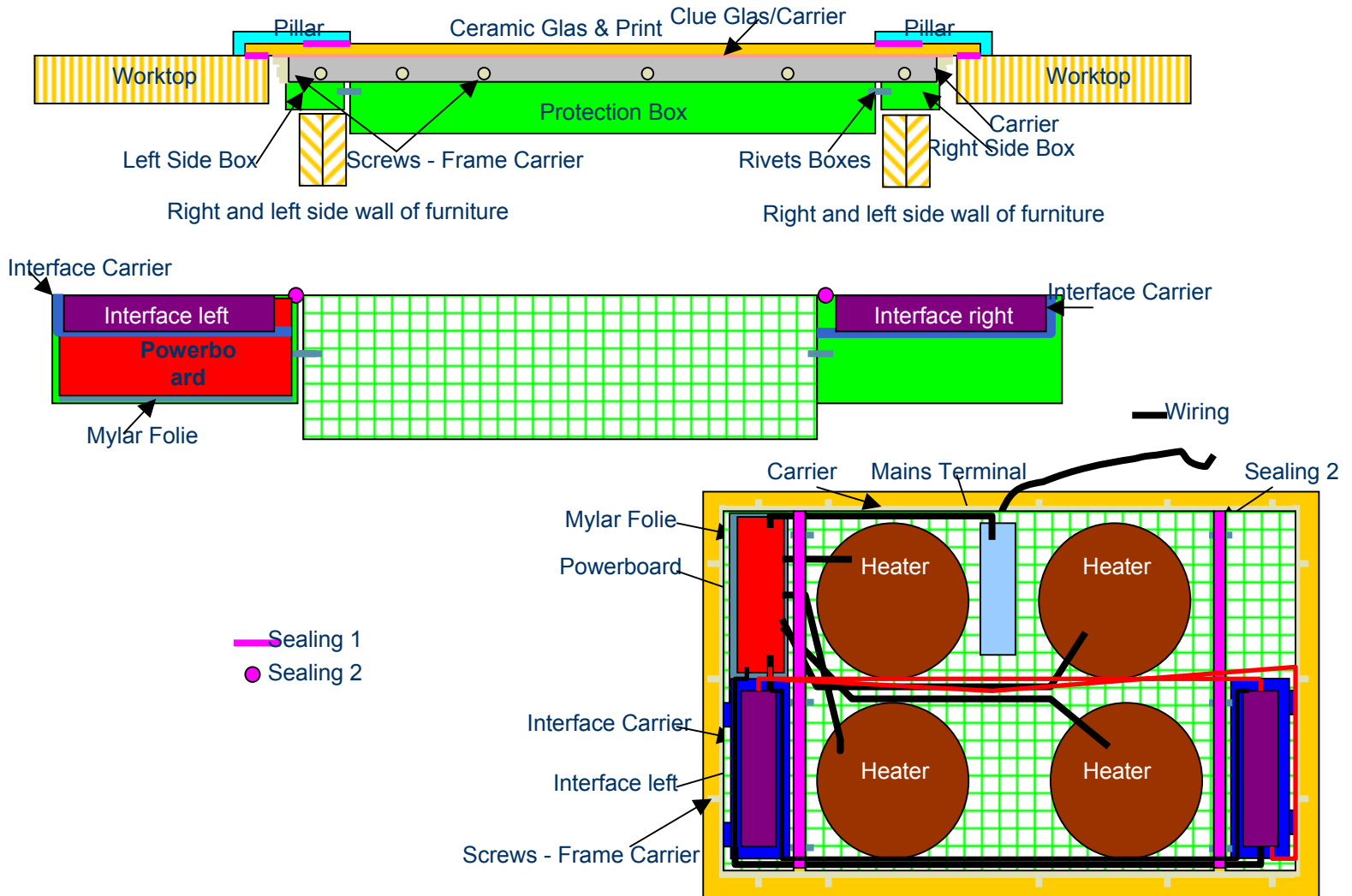


* split variant possible



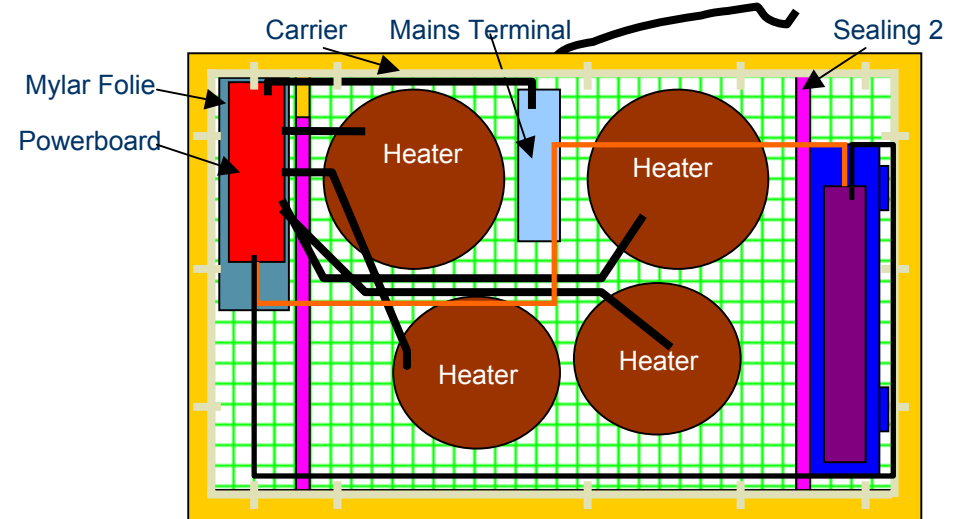
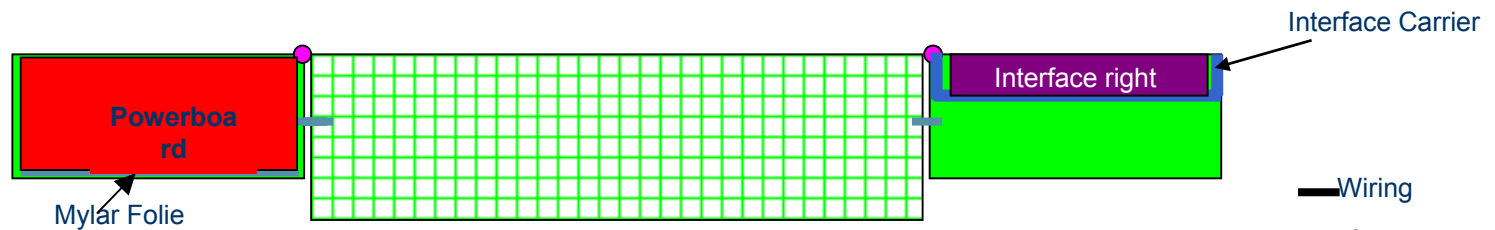
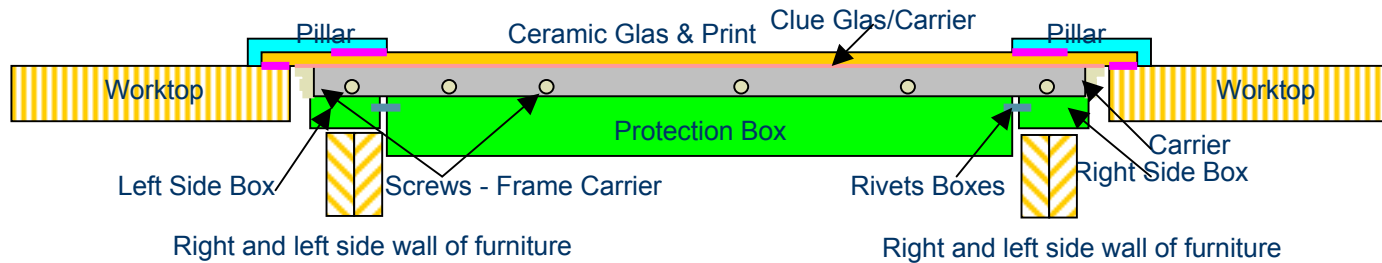
Split Vertical

68 cm width, split lateral UI



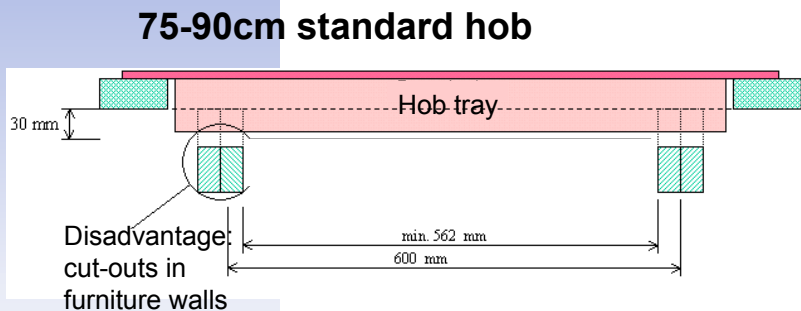
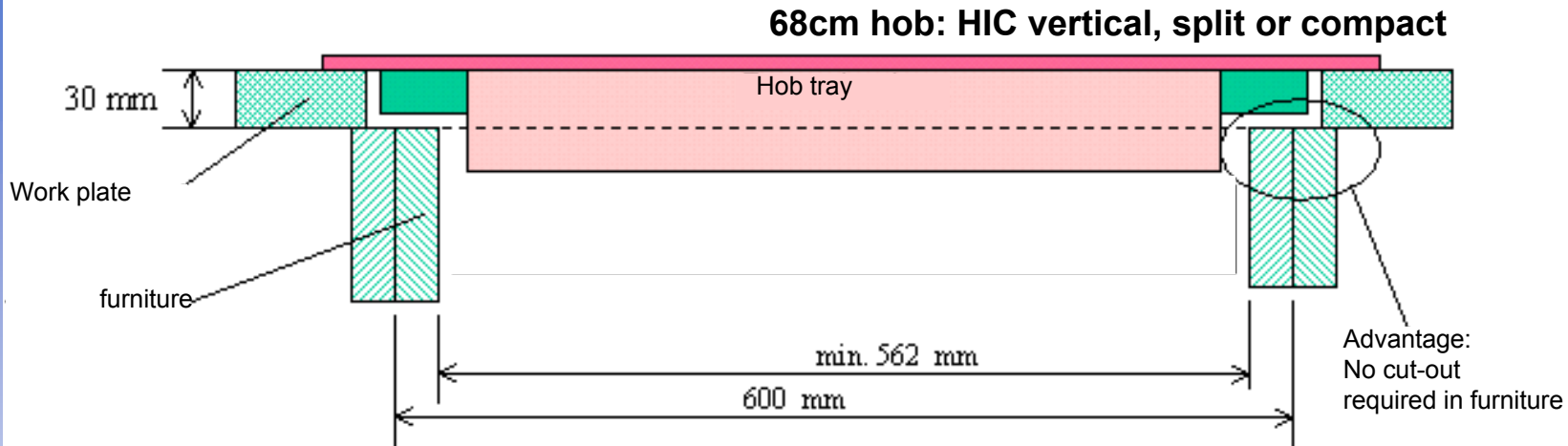
Compact Vertical

68 cm width, lateral UI on R.H. side



— Sealing 1
 ● Sealing 2

Build-in Philosophy of 68 cm Hob

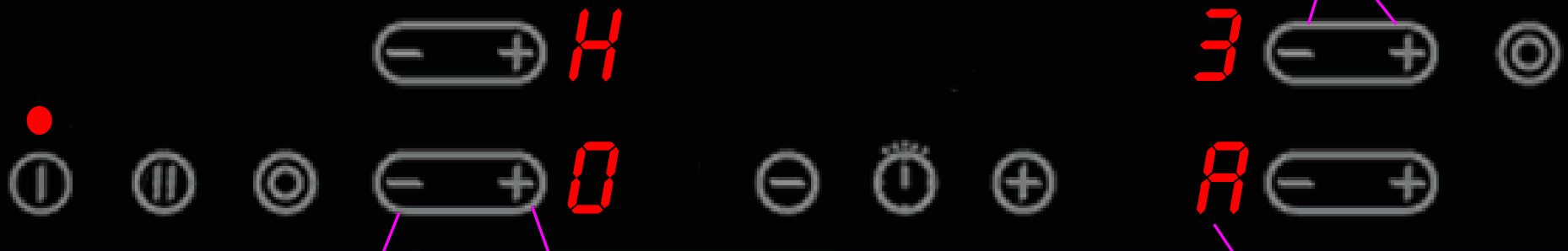


- Lateral bays containing the circuit boards not thicker than work plate
- Adjacent furniture is fully usable, e.g. for building-in a dishwasher (!)

User Philosophy

Zone hot, booster
not possible !

Touch both fields to
switch of zone

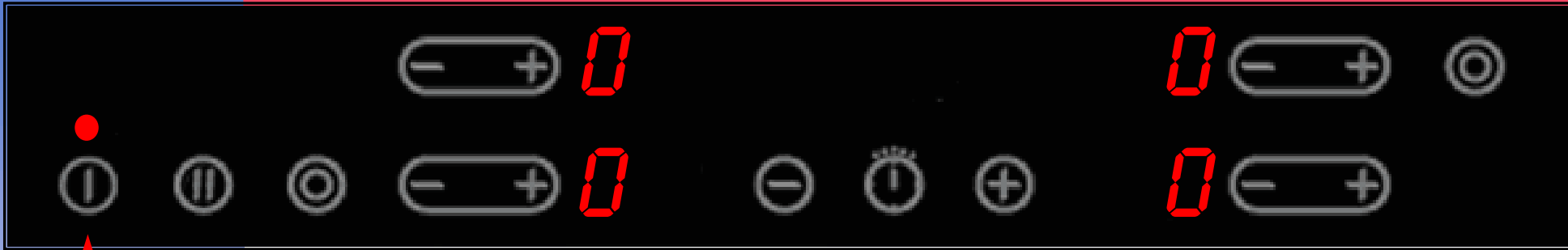


Decrease
setting

Increase
setting

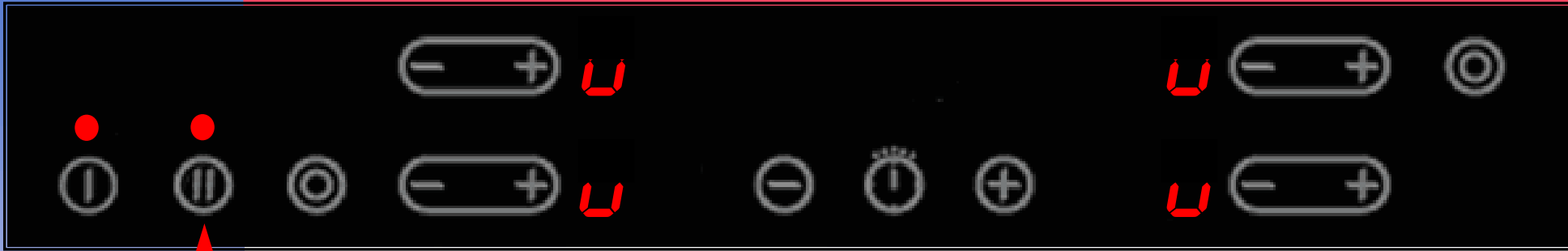
Booster active

ON/OFF



- touch ON/OFF for about 2 sec
- automatic safety switch-off if:
 - neither a cooking zone nor the timer are switched on within the next 10 sec
 - permanent touch (e.g. object on touch fields) for more than 10 sec
- touch ON/OFF for about 2 sec for manual switch-off

Stop & Go / Keep Warm



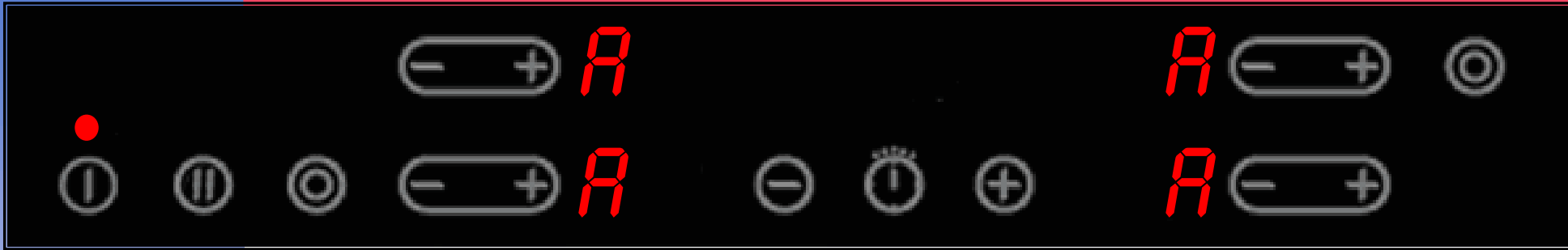
- all zones switch to „keep-warm“ setting *u* when touching 2nd „button“ (if configured as „Keep Warm“, or „Stop&Go“)
- back to previous settings at next touch

Function Lock (Key Symbol)



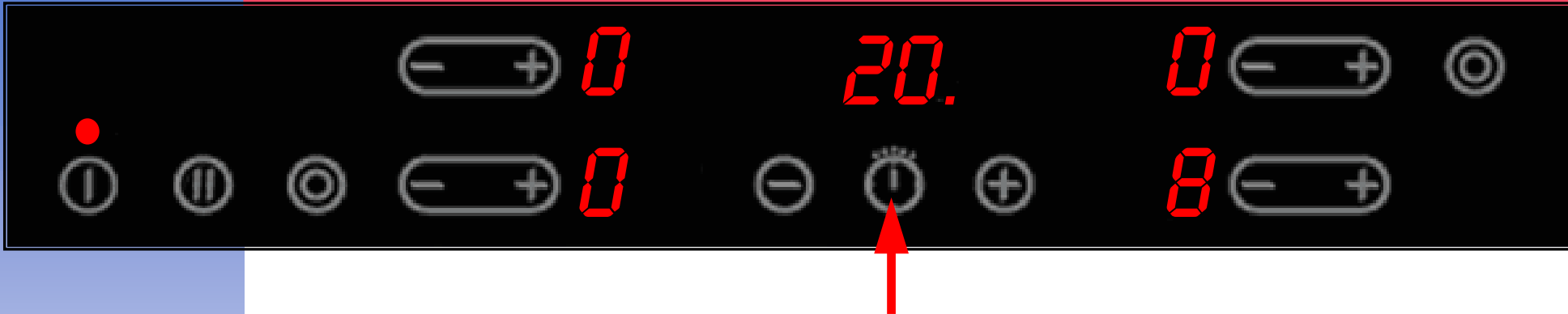
- neither cooking zone settings nor timer can be changed after touching 2nd „button“ configured as „Function lock“ (key symbol printed on panel)
- only main switch (ON/OFF) and function lock still active
- unlock by pressing key symbol again

Booster



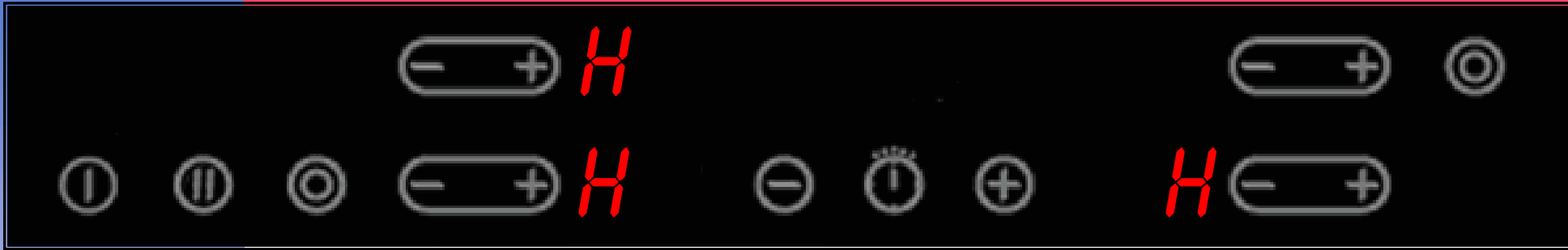
- **activation depends on model definition:**
 - either with dedicated touch zone,
 - or automatically if zone setting is selected with **+ only**
- **not possible if zone still hot (*H* shown)**
- **for duration see settings table**

Timer



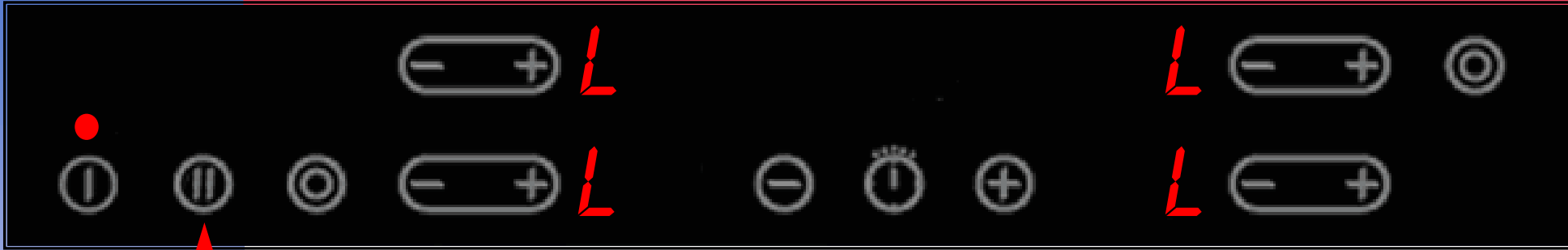
- touch timer symbol repeatedly to select desired zone, set time with + or -
- acts as switch-off timer for cooking zone indicated by flashing dot,
- or as minute minder if activated without switching on any cooking zone

Residual Heat Indicator



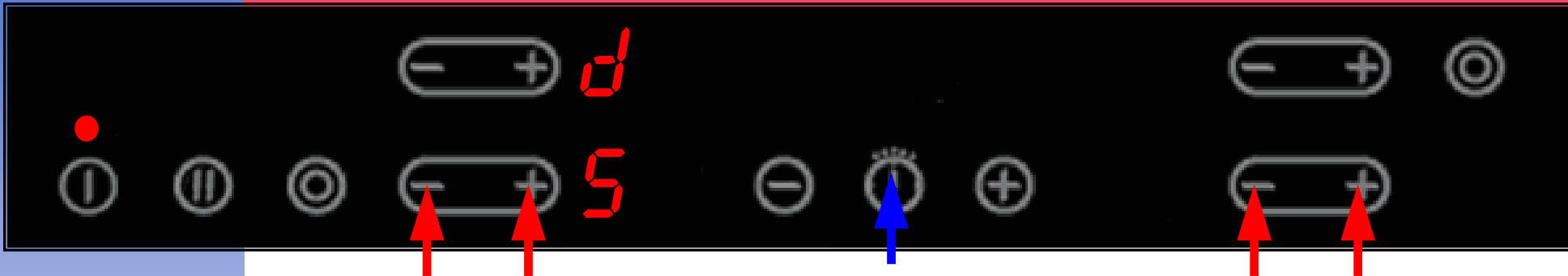
- duration controlled by software with simple algorithm using preceding ON and OFF times
- Attention: residual heat indicator will not be re-activated after a power failure !

Child Lock



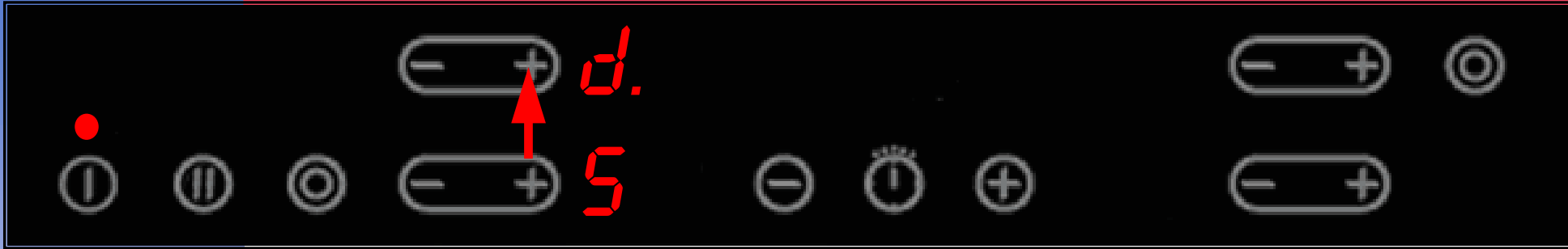
- switch ON hob
- touch 2nd „button“ (which, depending on model, is configured either as „Lock“, „Keep Warm“, or „Stop&Go“) for 3 secs
- touch one of the + „button“
→ **L** shows in display
- use same sequence with - „button“ to de-activate
- to override once: touch + und - of one cooking zone simultaneously for 1 sec

Demo and Service Mode



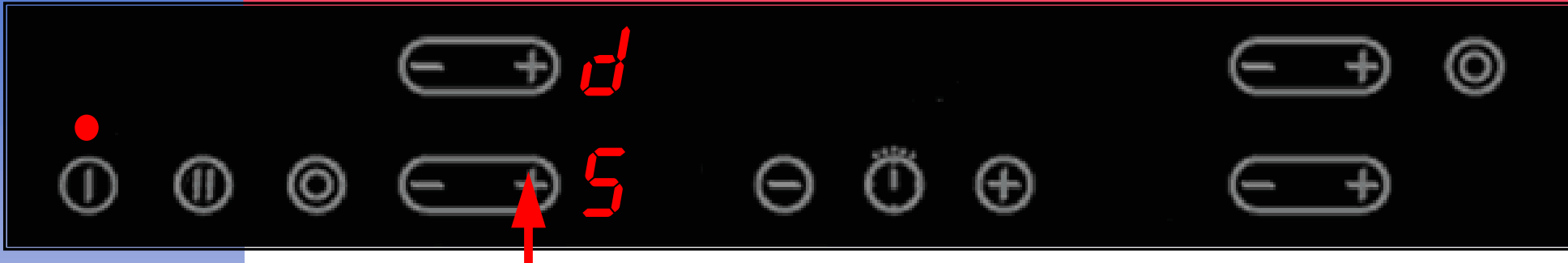
- touch ON/OFF until display will go OFF again
- touch + and - for the front zones (→ short beep) simultaneously for 3 sec (→ short beep again)
- touch timer symbol
- **d** and **S** are shown in display
- either of the 2 modes can now be selected as shown on next slides

Demo Mode



- touch + adjacent to *d* → a dot will show in the display (*d.*)
- display goes OFF
- full user interface functionality can be simulated without switching on the heating elements
- use same input sequence to de-activate demo mode
- **DISCONNECTING THE POWER SUPPLY WILL NOT DE-ACTIVATE THE DEMO MODE !**

Service Mode



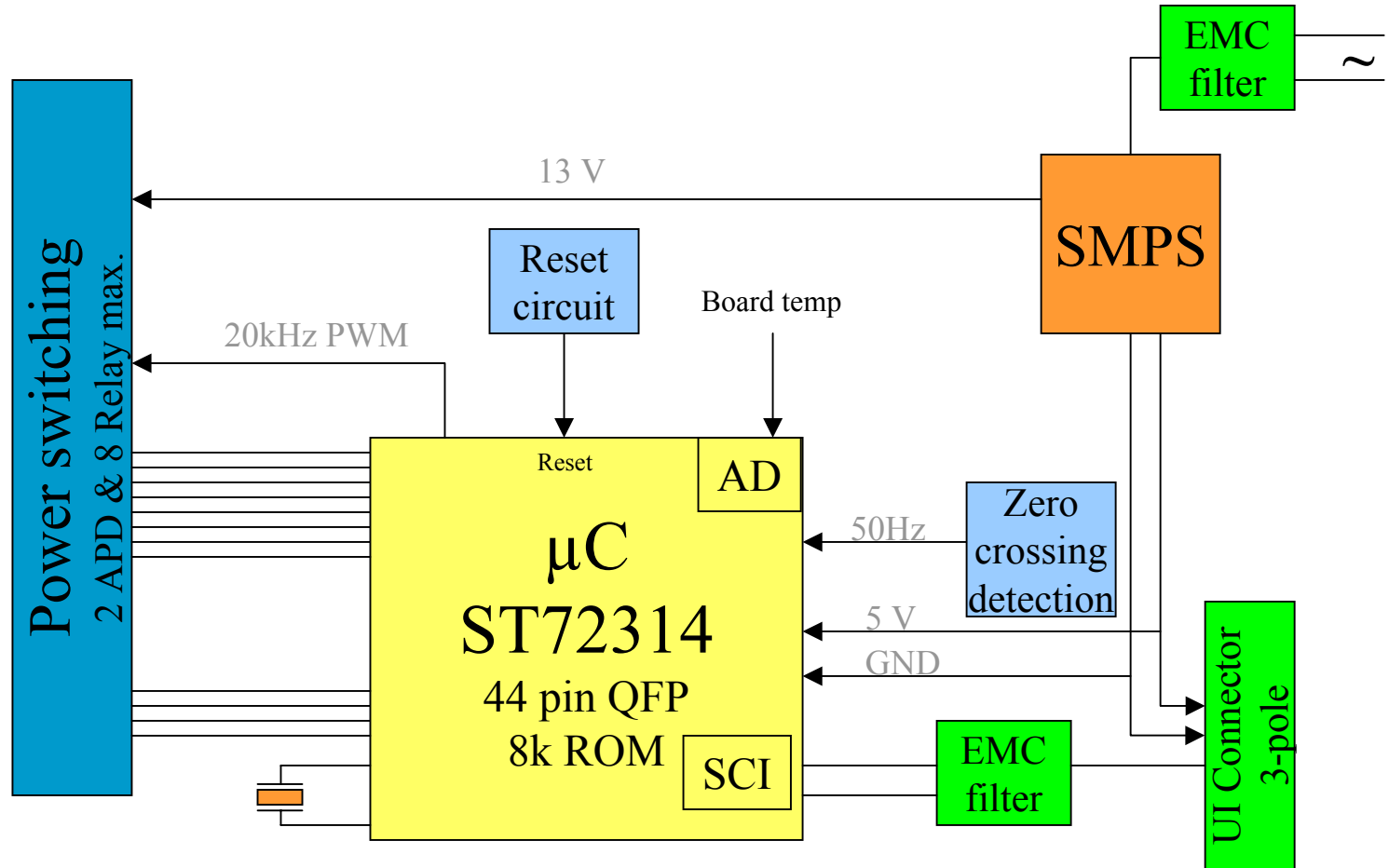
- touch + adjacent to S → automatic test sequence will start
 - relays switch on and off for 3 secs each
 - all LEDs ON
 - timer display shows software versions of the different boards
- **no Alarm Codes !!**
- hob switches off at the end of the test sequence

Settings

Settings (10 steps) "non-AEG"	Settings (15 steps) AEG	MACS power level	Duty cycle [%]	Cycle time normal [s]	<i>on</i> [s]	<i>off</i> [s]	Cycle time paella zone [s]	Booster time [min]	Automatic switch-off [h]
0	0	0	-	-			-	-	-
1	1	1	2.5	82	2.1	80.0	82	0.5	6
2	2	2	3.1	64	2.0	62.0	64	1	6
	2	8	6.3	41	2.6	38.4	48	1.7	6
	2	11	9.4	41	3.9	37.1	48	2.7	6
3	3	12	10.9	41	4.5	36.5	48	4.8	5
	3	14	14.1	41	5.8	35.2	48	5.5	5
4	4	15	15.6	41	6.4	34.6	48	6.5	5
	4	16	17.2	41	7.1	33.9	48	8.2	5
5	5	17	18.8	41	7.7	33.3	48	10.2	4
	5	18	20.3	41	8.3	32.7	48	12.3	4
6	6	19	25.0	41	10.3	30.8	48	2	1.5
	6	20	31.3	41	12.8	28.2	48	2.5	1.5
7	7	21	45.3	41	18.6	22.4	48	3.5	1.5
8	8	22	64.1	41	26.3	14.7	48	4.5	1.5
9	9	23	100	--			--	--	1.5

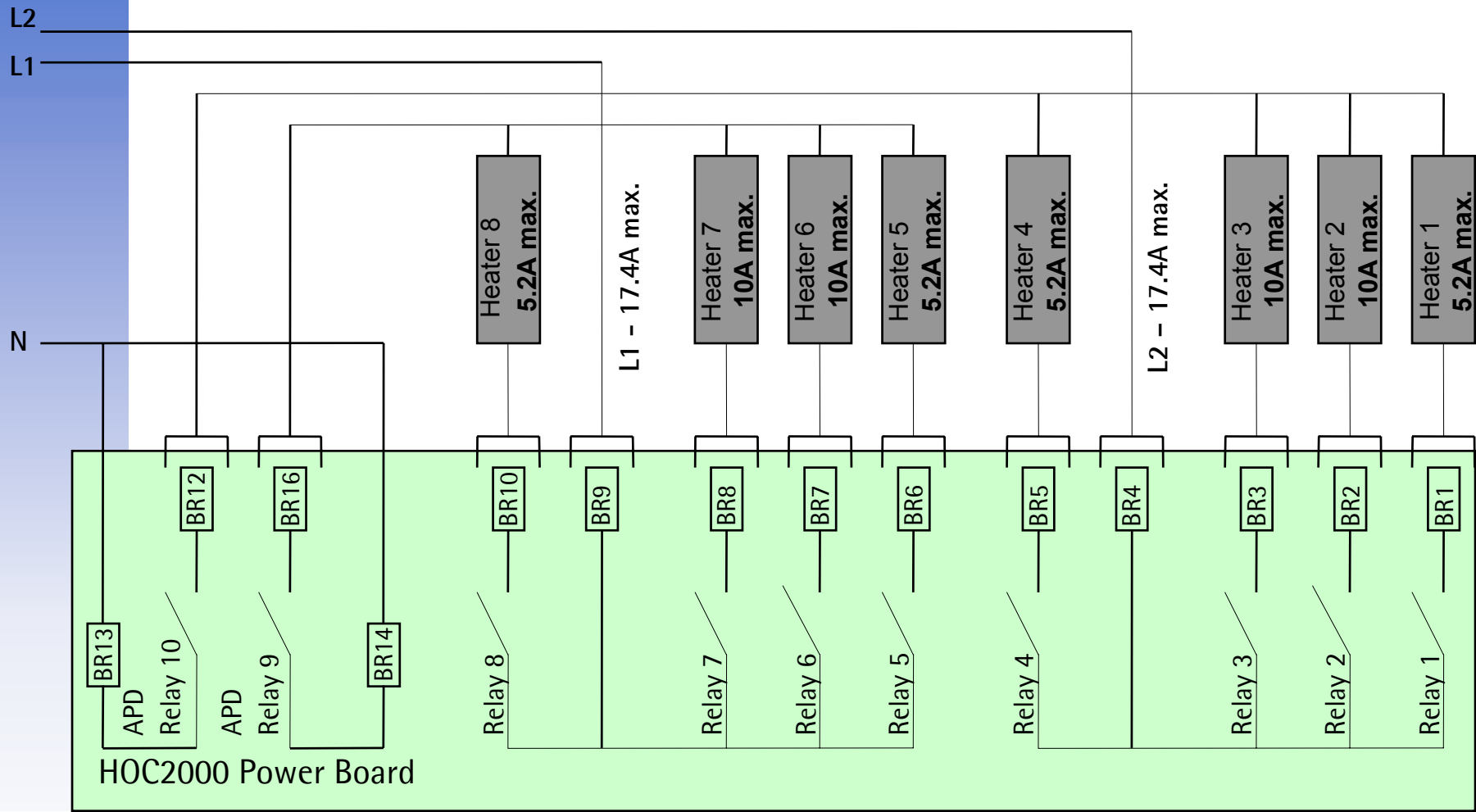
Flatpak Block Diagram

Intelligent Power Board



Mask $\mu\text{C} > 20\text{K}$
Flash for flexibility

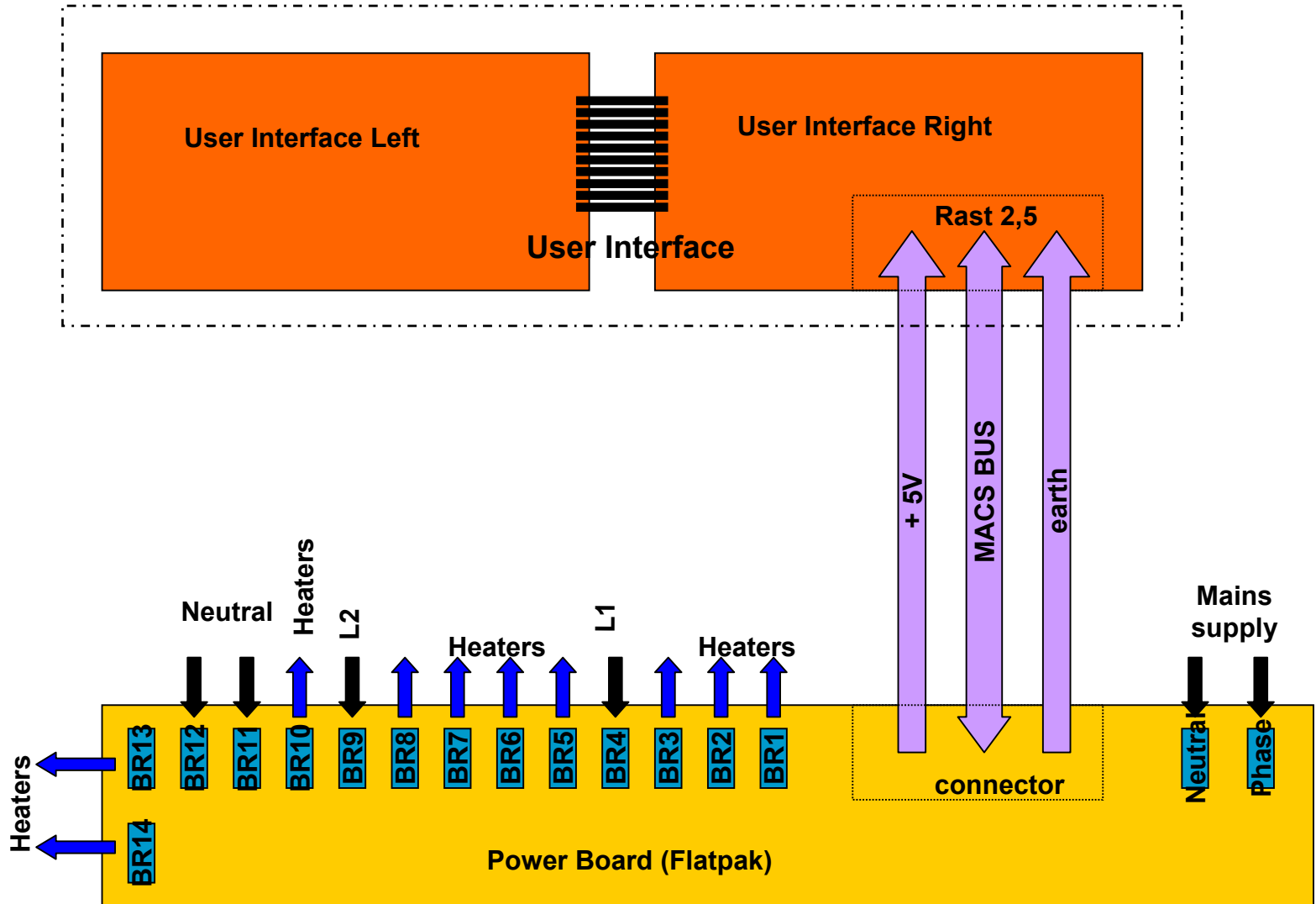
Power Board



Power Board

- **not possible to detect wrong connection (400 V), because power supply circuits are destroyed very quickly**
- **hob is switched off if power board temperature exceeds 130°C**

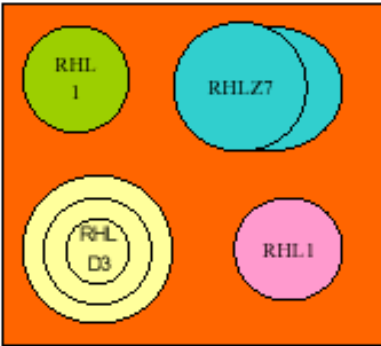
Communication UI - PB



Variants

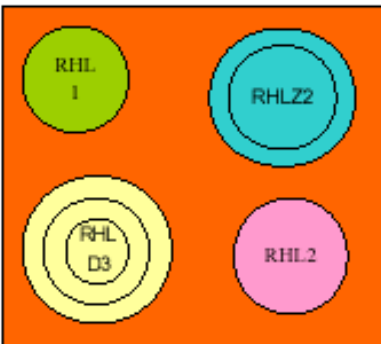
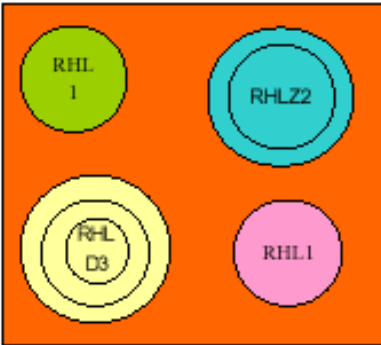
Max. relay current

	BR10	BR9	BR8	BR7	BR6	BR5	BR4	BR3	BR2	BR1
Max. relay current	5.2A	16.0 A	10.0 A	10.0 A	5.2A	5.2A	16.0 A	10.0 A	10.0 A	5.2A
leer 0.0 A		L2 14.8 A	RHL1 5.2 A	RHLZ7-s 6.5 A	RHLZ7-d 3.0 A	RHLD3-s 3.5 A	L1 15.2 A	RHL1 5.2 A	RHLD3-d 3.5 A	RHLD3-t 3.0 A
leer 0.0 A		L2 17.4 A	RHL2 7.8 A	RHLZ7-s 6.5 A	RHLZ7-d 3.0 A	RHLD3-s 3.5 A	L1 15.2 A	RHL1 5.2 A	RHLD3-d 3.5 A	RHLD3-t 3.0 A



Variants

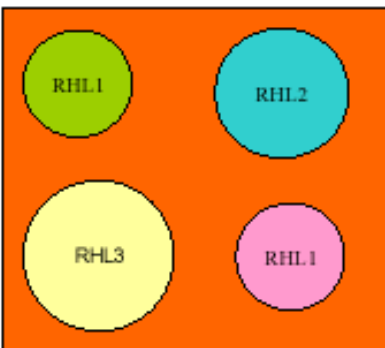
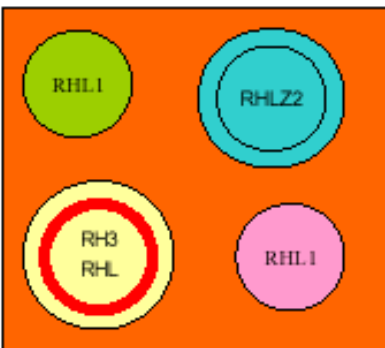
Max. relay current



	BR10	BR9	BR8	BR7	BR6	BR5	BR4	BR3	BR2	BR1
Max. relay current	5.2A	16.0 A	10.0 A	10.0 A	5.2A	5.2A	16.0 A	10.0 A	10.0 A	5.2A
leer 0.0 A	L2 12.6 A	RHL1 5.2 A	RHLZ2-d 4.3 A	RHLZ2-s 3.0 A	RHLD3-s 3.5 A	L1 15.2 A	RHL1 5.2 A	RHLD3-d 3.5 A	RHLD3-t 3.0 A	
leer 0.0 A	L2 15.2 A	RHL2 7.8 A	RHLZ2-d 4.3 A	RHLZ2-s 3.0 A	RHLD3-s 3.5 A	L1 15.2 A	RHL1 5.2 A	RHLD3-d 3.5 A	RHLD3-t 3.0 A	

Variants

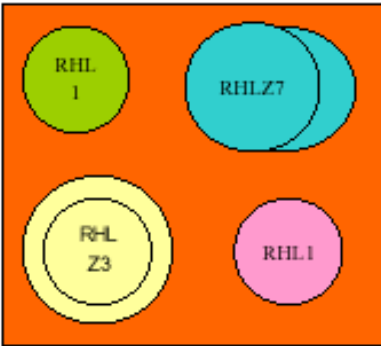
Max. relay current



	BR10	BR9	BR8	BR7	BR6	BR5	BR4	BR3	BR2	BR1
Max. relay current	5.2A	16.0 A	10.0 A	10.0 A	5.2A	5.2A	16.0 A	10.0 A	10.0 A	5.2A
	0.0 A	L2 12.6 A	RHL1 5.2 A	RHLZ2-d 4.3 A	RHLZ2-s 3.0 A	RHL1 5.2 A	L1 16.1 A	RH3RHL-HR 2.6 A	RH3RHL-LP 8.3 A	0.0 A
	0.0 A	L2 13.0 A	RHL1 5.2 A	RHL2 7.8 A	0.0 A	0.0 A	L1 15.2 A	RHL1 5.2 A	RHL3 10.0 A	0.0 A

Variants

Max. relay current



	BR10	BR9	BR8	BR7	BR6	BR5	BR4	BR3	BR2	BR1
Max. relay current	5.2A	16.0 A	10.0 A	10.0 A	5.2A	5.2A	16.0 A	10.0 A	10.0 A	5.2A
leer 0.0 A		L2 14.8 A	RHL1 5.2 A	RHLZ7-s 6.5 A	RHLZ7-d 3.0 A	RHLZ3-s 3.3 A	L1 14.8 A	RHL1 5.2 A	RHLZ3-d 6.3 A	leer 0.0 A
leer 0.0 A		L2 17.4 A	RHL2 7.8 A	RHLZ7-s 6.5 A	RHLZ7-d 3.0 A	RHLZ3-s 3.3 A	L1 14.8 A	RHL1 5.2 A	RHLZ3-d 6.3 A	leer 0.0 A

Variants

Max. relay current



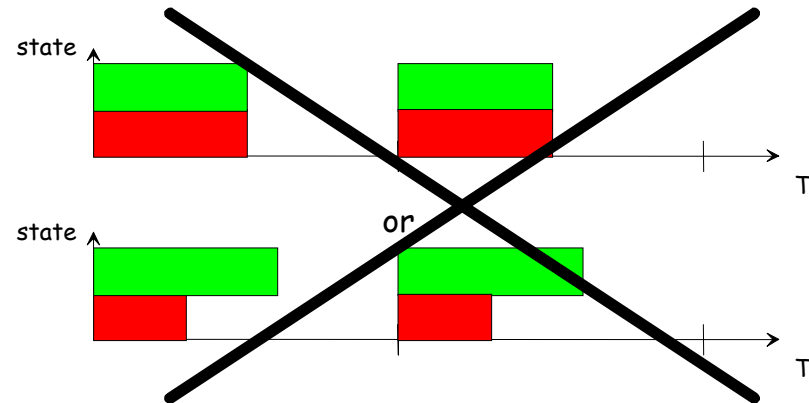
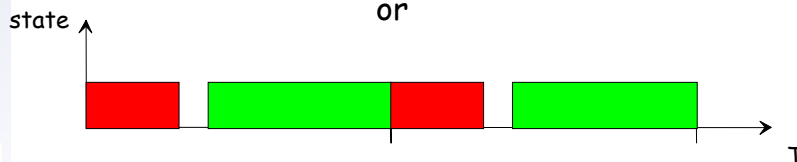
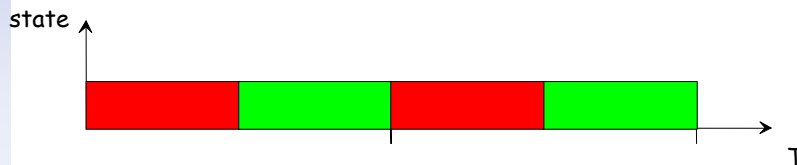
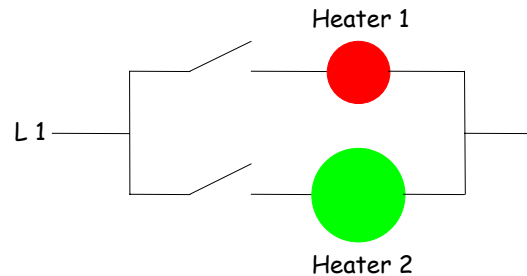
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Max. relay current	5.2 A	16.0 A	10.0 A	10.0 A	5.2 A	5.2 A	16.0 A	10.0 A	10.0 A	5.2 A
leer	0.0 A	L2 12.6 A	RHL1 5.2 A	RHLZ2-d 4.3 A	RHLZ2-s 3.0 A	RHLZ3-s 3.3 A	L1 17.0 A	RHLZ3-d 6.3 A	RHLZ2-d 4.3 A	RHLZ2-s 3.0 A
	RHLZ2-s 3.0 A	L2 17.0 A	RHLZ2-d 4.3 A	RHLZ3-d 6.3 A	RHLZ3-s 3.3 A	RHLZ3-s 3.3 A	L1 19.1 A	RHLZ3-d 6.3 A	RHLZ7-s 6.5 A	RHLZ7-d 3.0 A

Variants (Heater Codes)

1200 W	RHL1	5.2 A
1800 W	RHL2	7.8 A
2300 W	RHL3	10.0 A
800 W	RHLD3-s	3.5 A
800 W	RHLD3-d	3.5 A
700 W	RHLD3-t	3.0 A
700 W	RHLZ2-s	3.0 A
1000 W	RHLZ2-d	4.3 A
600 W	RHLZ20-s	2.6 A
1100 W	RHLZ20-d	4.8 A
750 W	RHLZ3-s	3.3 A
1450 W	RHLZ3-d	6.3 A
1000 W	RHLZ31-s	4.3 A
1200 W	RHLZ31-d	5.2 A
1500 W	RHLZ7-s	6.5 A
700 W	RHLZ7-d	3.0 A
600 W	RH3RHL-hp	2.6 A
1900 W	RH3RHL-lp	8.3 A

Power Management

- duty cycles of cooking zones are interlaced as far as possible



Faults

Zones still active after switch off

UI=
User
Interface

PB=
Power
Board

- **Reset possible by switching on and off**
 - **Communication error (poss. EMC problem)**
- **UI inactive, zones on**
 - **low sensitivity of touch fields**
 - **permanent touch detected**
 - **presumably faulty PB**
- **UI active, zones do not react to inputs:**
 - **presumably faulty PB**

Faults

Zones went off, UI still on

UI=
User
Interface

PB=
Power
Board

- **Reset possible by switching on and off**
 - Communication alarm caused relays to switch-off elements
- **Reset NOT possible by switching on / off**
 - EEPROM fault, change PB
- **UI can't be switched off:**
 - presumably faulty PB
 - possibly faulty UI,
 - or wrong positioning* of UI

*** N.B.: if UI is replaced, always use complete unit with new plastic support. Bending of old support can cause wrong position**

Faults

Zones and UI went off

UI=
User
Interface

PB=
Power
Board

- **Hob active again after approx. 30 secs.**
 - PB or UI reset
 - Touch zones covered → safety switch-off (beep)
 - Permanent touch detected although touch zones not covered → safety switch-off (beep).
Touch zones re-calibrated after switch-off.
- **Hob doesn't react any more:**
 - presumably faulty PB
 - possibly faulty UI
 - or wrong positioning* of UI
- **Hob active again after some time**
 - PB overheat

Faults

UI went off, zones still on

UI=
User
Interface

PB=
Power
Board

- **Reset possible by switching on and off**
 - **switch-off caused by timer, auto switch-off. or permanent touch; not transmitted due to communication error**
- **UI active, zones don't react:**
 - **presumably faulty PB**
- **UI not active, zones still on**
 - **low sensitivity of touch fields**
 - **permanent touch detected**
 - **presumably faulty PB**
 - **possibly faulty UI**