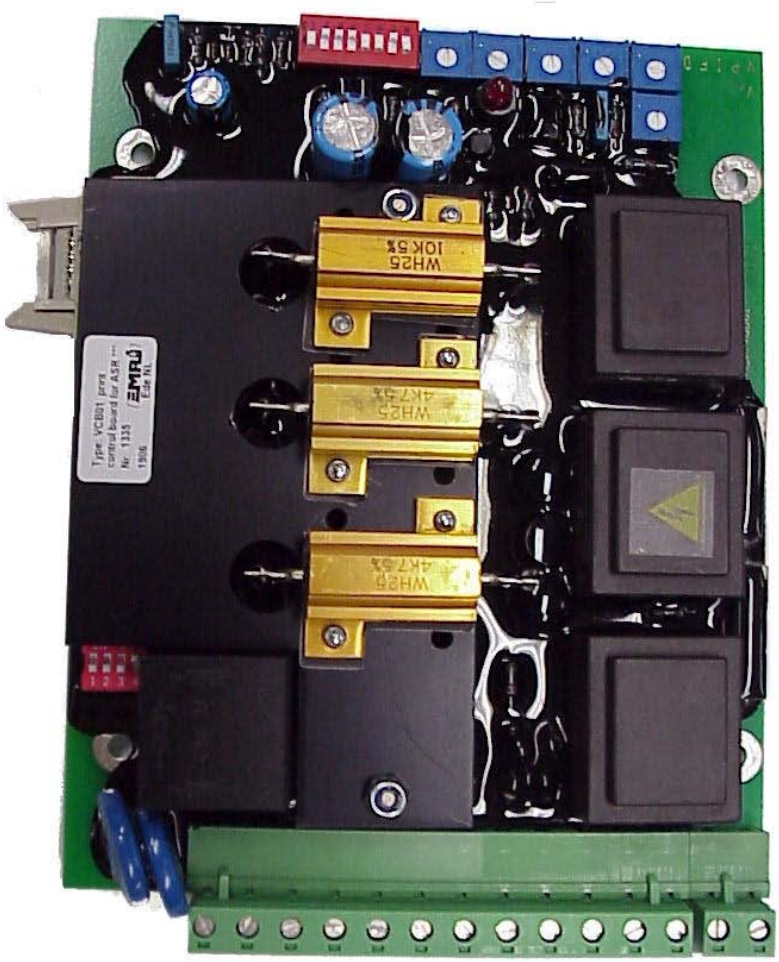
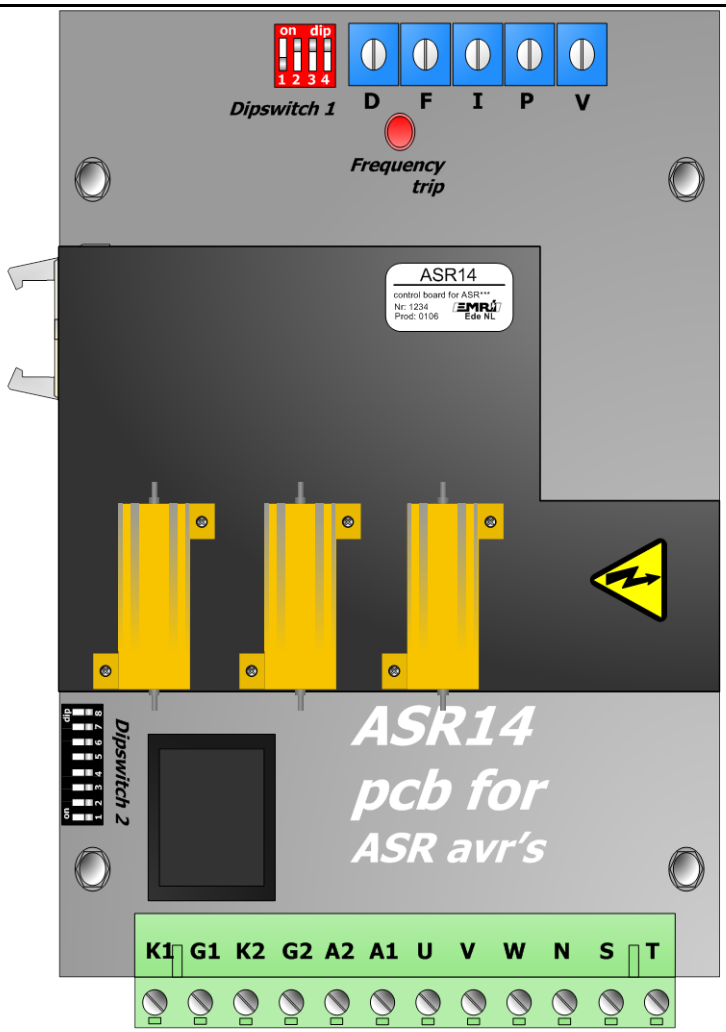
ASR-VCB V1.2 (ASR14)

Printed circuit control board for ASR XX Voltage regulators for generators



Version 1.1

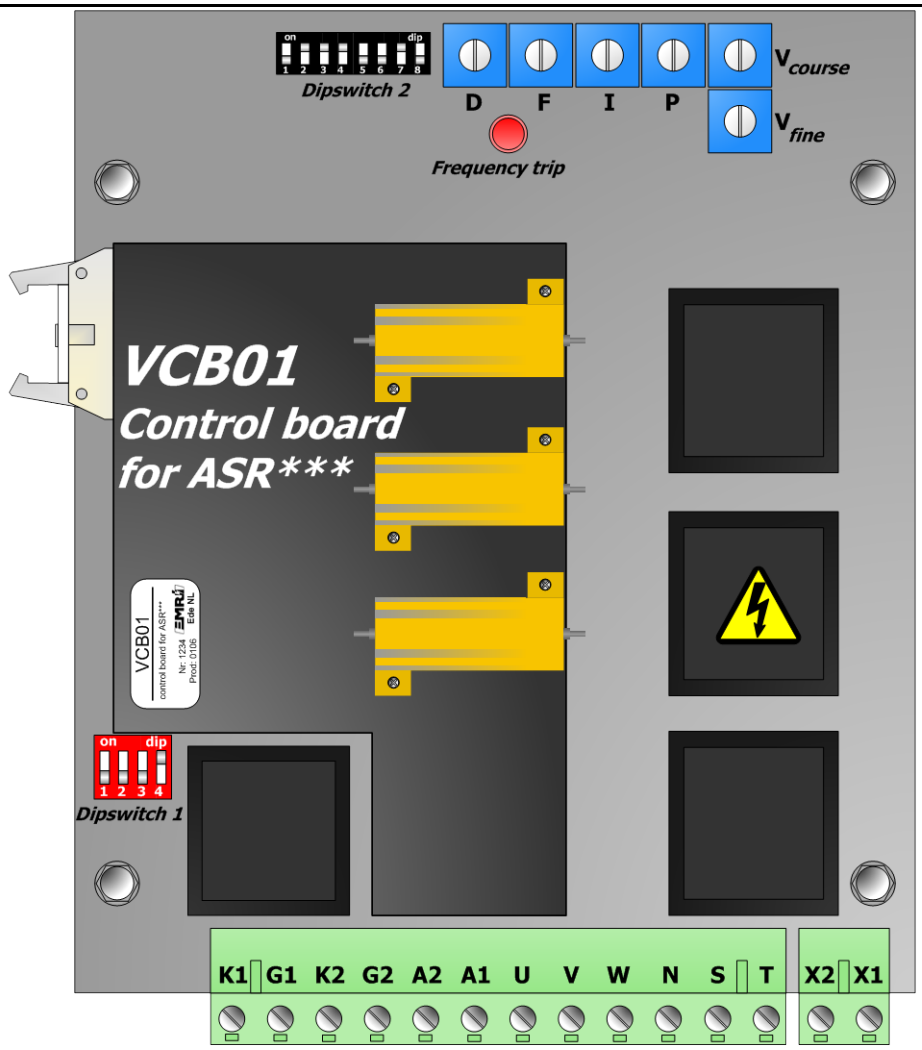


Dipswitch 1		
Switch	**Position**	**Setting**
1	off	Maximum output is 100%
2	on	Fast rising voltage at start
3	on	Frequency trip enabled
4	on	S&T short circuited

Dipswitch 2		
Switch	**Position**	**Setting**
1	off	2 SCR's enabled
2	off	No function
3	off	Voltage for SCR's is not 400 Hz
4	off	Voltage for SCR's is not 150 Hz
5	off	Disable option by option PCB disabled
6	off	No function
7	off	No function
8	off	Phase loss detection enabled

ASR14 Printed circuit board	
ENG	P.Lodder
DATE	25-07-08
VERSION	1.0
PAGE	1

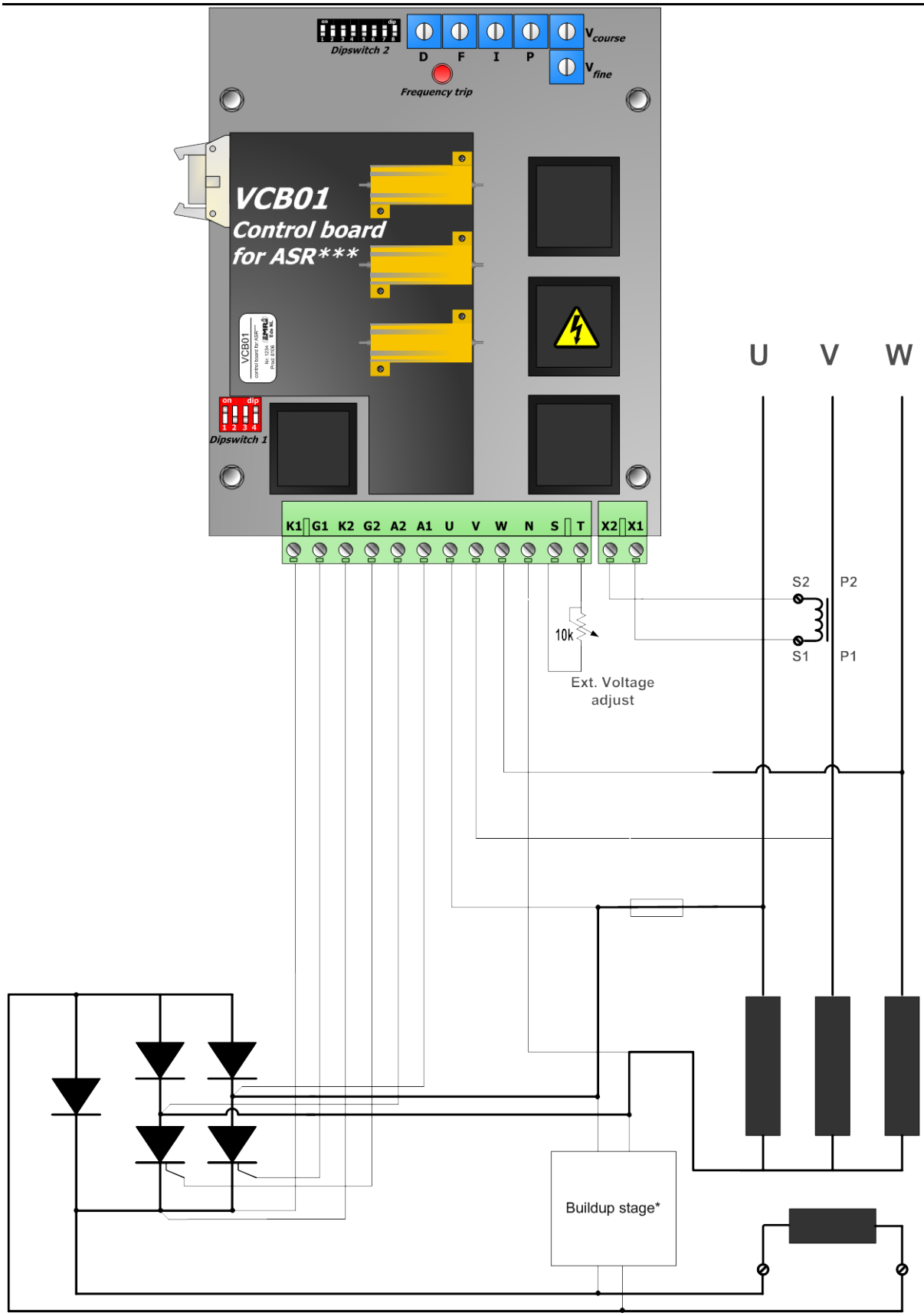
DISCONTINUED



Dipswitch 1		
Switch	**Position**	**Setting**
1	off	Disable option by option PCB disabled
2	off	50Hz supply
3	off	
4	on	2 SCR's enabled

Dipswitch 2		
Switch	**Position**	**Setting**
1	off	100% output
2	on	Fast voltage ramp up
3	on	Frequency trip enabled
4	on	Terminals S&T shortened
5	off	No additional filtering on sensing
6	off	3 x 400V sensing
7	on	Phase loss detection disabled
8	off	not used

VCB printed circuit board		
ENG	ing. B. Lucassen	
DATE	25-07-08	
VERSION	1.0	
PAGE	1	



BASIC CONNECTION DIAGRAM :
ASR VCB Control printed circuit board

visiodocument

1.0 Functional description:

The printed circuit board ASR-VBC is intended for use on automatic voltage regulators (static exciters) for avr's with B2 SCR bridges.
The basic static exciter diagram is shown above.
Static exciters / AVR;s for predefined maximum excitation values are available;
ASR35
ASR100,
ASR150,
ASR250,
ASR350.

1.1 Electrical characteristics printed circuit board ASR VCB

Symbol	Parameter	Condition	Min	Typ	Max.	Unit
U,V,W	Voltage sensing input	50-60 Hz	150	400	500	V_{AC}
(U,V,W),N	Power supply input	@ 50 Hertz	90	230	288	V_{AC}
G1, G2	Gate pulse				200	mA
T_{AMB}	Operating temperature	95 % RHD non condensing	-20		+70	°C
	Accuracy	@ sinusoidal waveform		1		%
S1,S2	Droop	Isolated CT	-	0.5	1 (<30S)	A_{AC}
S,T	External Volt adjust		-	10	∞	kΩ

Table 1. Electrical characteristics

The previously supplied printed circuit board ASR14 is discontinued.

The ASR14 printed circuit board is replaced by the ASR VCB printed circuit board.

1.2 Electrical characteristics complete ASR avr's with PCB ASR-VCB

Symbol	Parameter	Condition	Min	Max.	Unit
U,V,W	Voltage sensing input	50-60 Hz	250	500	V_{AC}
+,-	AVR field current ASR 35 ASR 100 ASR 150 ASR 250 ASR 350		 - - - - -	 40 100 150 250 350	 A_{DC} A_{DC} A_{DC} A_{DC} A_{DC}
T_{AMB}	Operating temperature[1]	95 % RHD non condensing	0	+45	°C
	Accuracy	sinusoidal waveform		1	%
S1,S2	Droop	Isolated CT	-	0.5	A_{AC}
S,T	External Volt adjust		-	10	kΩ

Table 1. Electrical characteristics

1.3 Absolute maximum ratings

Symbol	Parameter	Condition	Min.	Max.	Unit
U,V,W	Supply / Voltage sensing input	< 30 s.	- 40	500 65	V_{AC} Hz
+,-	AVR field voltage AVR field current ASR 35 ASR 100 ASR 150 ASR 250 ASR 350	DC % of supply voltage(RMS) < 10 s.	- - - - - -	170 60 150 225 375 525	V_{DC} A_{DC} A_{DC} A_{DC} A_{DC} A_{DC}
Fuse	Fuse rating ASR 35 ASR 100 ASR 150 ASR 250 ASR 350	Type: Ultra Rapid (UR)		 50 125 160 400 400	 A_{UR} A_{UR} A_{UR} A_{UR} A_{UR}
Fuse 2.1 Fuse 2.2	Fan fuse	Type: Time Delay ASR 250/350 only		2	At
T_{AMB}	Operating temperature[1]	95 % RHD non condensing	0	+50	°C
S1,S2	Droop set current	Isolated CT < 30 s	-	1	A_{AC}
S,T	External Volt adjust		-	10	kΩ

Table 2. Absolute maximum ratings

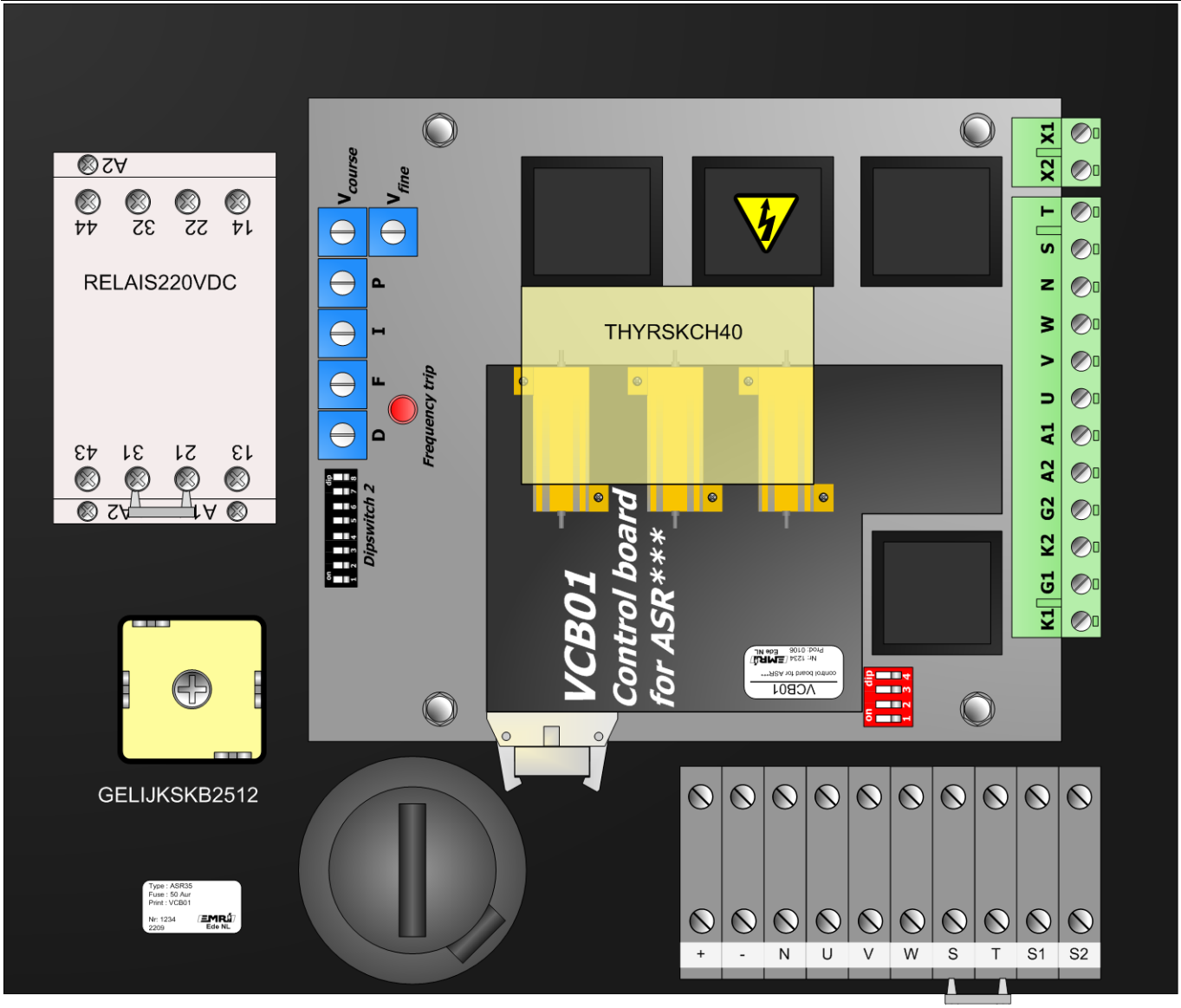
[1] Conditions without forced air flow @ full load excitation current.

T heatsink

T Heatsink, may never exceed 80 ^{0}C

Stresses above those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device at those or any other conditions above those indicated in the operation listings of this specification is not implied. Exposure to maximum rating conditions for extended periods may affect device reliability and lifetime.

Spare / parts for ASR avr’s can be supplied according the designations found in the drawing on the next page.

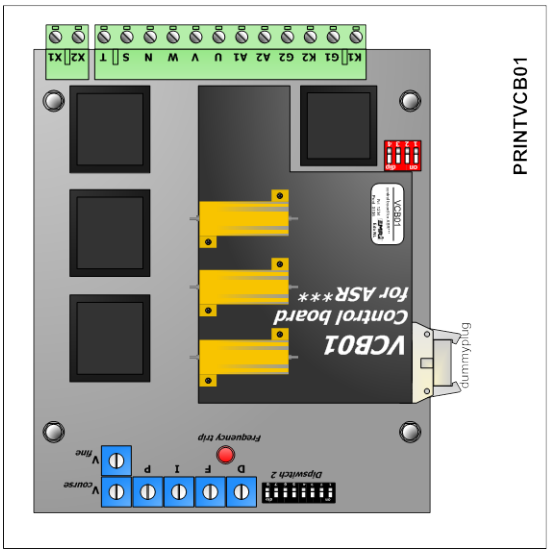


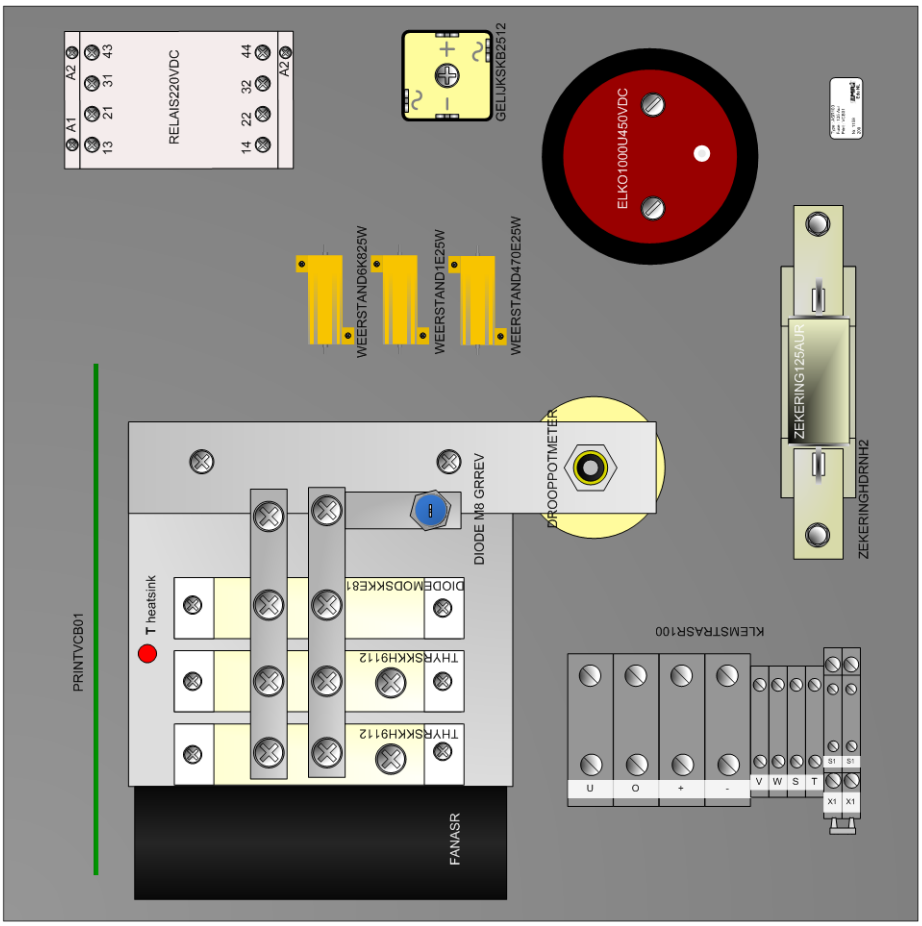
ZEKERINGHD2

ZEKERING50AURD2

KLEMSTRASR35

ASR35





SPARE PARTS ON THIS PAGE ARE
DESIGNATED WITH THE EMRI ORDER
REFERENCE CODE

ASR100 Spare parts List

ASR100

Manufacturer:

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6716 AH, Ede, Netherlands
Tel: (+31) 0318 620427
Fax: (+31) 0318 634615
Website: www.emri.nl
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See our website www.emri.nl for local suppliers