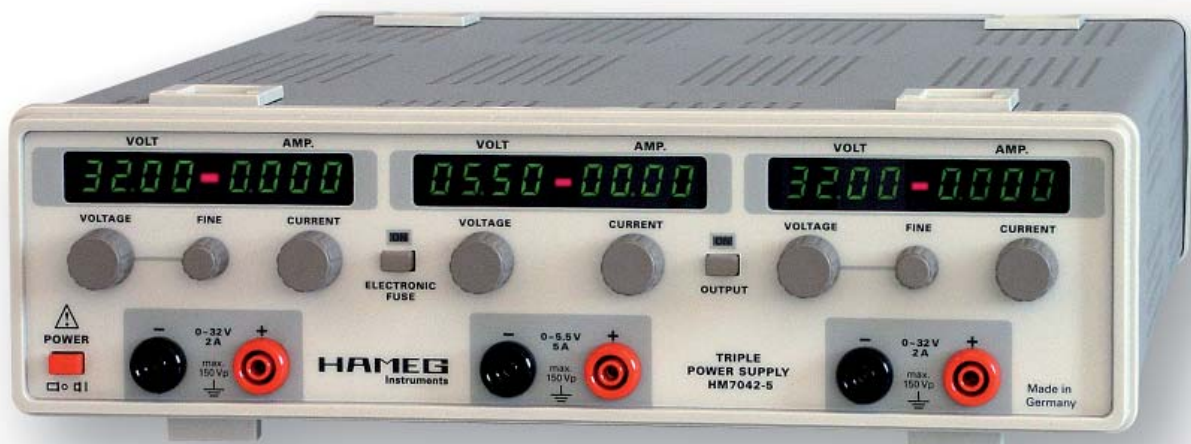


Power supply HM7042-5

Service-Manual



		KONFORMITÄTSERKLÄRUNG DECLARATION OF CONFORMITY DECLARATION DE CONFORMITE	
Hersteller Manufacturer Fabricant	HAMEG Instruments GmbH Industriestraße 6 D-63533 Mainhausen	Angewendete harmonisierte Normen / Harmonized standards applied / Normes harmonisées utilisées	
Die HAMEG Instruments GmbH bescheinigt die Konformität für das Produkt The HAMEG Instruments GmbH declares conformity of the product HAMEG Instruments GmbH déclare la conformité du produit		Sicherheit / Safety / Sécurité EN 61010-1:2001 (IEC 61010-1:2001)	
Bezeichnung / Product name / Designation: Dreifach-Netzgerät/Triple Power Supply/ Alimentation triple		EN 61010-1: 1993 / IEC (CEI) 1010-1: 1990 A 1: 1992 / VDE 0411: 1994 Überspannungskategorie / Overvoltage category / Catégorie de surtension: II Verschmutzungsgrad / Degree of pollution / Degré de pollution: 2	
Typ / Type / Type: HM7042-5		Elektromagnetische Verträglichkeit / Electromagnetic compatibility / Compatibilité électromagnétique EN 61326-1/A1 Störaussendung / Radiation / Emission: Tabelle / table / tableau 4, Klasse / Class / Classe B. Störfestigkeit / Immunity / Immunité: Tabelle / table / tableau A1.	
mit / with / avec: - Optionen / Options / Options:		EN 61000-3-2/A14 Oberschwingungsströme / Harmonic current emissions / Émissions de courant harmonique: Klasse / Class / Classe D.	
mit den folgenden Bestimmungen / with applicable regulations / avec les directives suivantes		EN 61000-3-3 Spannungsschwankungen u. Flicker / Voltage fluctuations and flicker / Fluctuations de tension et du flicker.	
EMV Richtlinie 89/336/EWG ergänzt durch 91/263/EWG, 92/31/EWG EMC Directive 89/336/EEC amended by 91/263/EWG, 92/31/EEC Directive EMC 89/336/CEE amendée par 91/263/EWG, 92/31/CEE		Datum / Date / Date 01.09.2004	
Niederspannungsrichtlinie 73/23/EWG ergänzt durch 93/68/EWG Low-Voltage Equipment Directive 73/23/EEC amended by 93/68/EEC Directive des équipements basse tension 73/23/CEE amendée par 93/68/CEE		Unterschrift / Signature / Signatur  Manuel Roth Manager	

General remarks regarding the CE marking

HAMEG measuring instruments comply with the EMI norms. Our tests for conformity are based upon the relevant norms. Whenever different maximum limits are optional HAMEG will select the most stringent ones. As regards emissions class 1B limits for small business will be applied. As regards susceptibility the limits for industrial environments will be applied.

All connecting cables will influence emissions as well as susceptibility considerably. The cables used will differ substantially depending on the application. During practical operation the following guidelines should be absolutely observed in order to minimize EMI:

1. Data connections

Measuring instruments may only be connected to external associated equipment (printers, computers etc.) by using well shielded cables. Unless shorter lengths are prescribed a maximum length of 3 m must not be exceeded for all data interconnections (input, output, signals, control). In case an instrument interface would allow connecting several cables only one may be connected.

In general, data connections should be made using double-shielded cables. For IEEE bus connections the double-shielded HAMEG cables HZ72S and HZ72L are suitable.

2. Signal connections

In general, all connections between a measuring instrument and the device under test should be made as short as possible. Unless a shorter length is prescribed a maximum length of 3 m must not be exceeded, also, such connections must not leave the premises.

All signal connections must be shielded (e.g. coax such as RG58/U). With signal generators double-shielded cables are mandatory. It is especially important to establish good ground connections.

3. External influences

In the vicinity of strong magnetic or/and electric fields even a careful measuring set-up may not be sufficient to guard against the intrusion of undesired signals. This will not cause destruction or malfunction of HAMEG instruments, however, small deviations from the guaranteed specifications may occur under such conditions.

HAMEG Instruments GmbH

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Triple Power Supply HM7042-5



2x 0-32V/0-2A 0-5.5V/0-5A

Separate voltage and current displays for each output:
4 digits at channel I+III; 3 digits at channel II

Display resolution:
10 mV/1 mA at channel I+III; 10 mV/10 mA at channel II

Adjustable current limiting and electronic fuse for each output

Pushbutton for activating/deactivating all outputs

Low residual ripple, high output power, very good regulation

Temperature-controlled fan

Silicone test cable HZ10



Triple Power Supply HM7042-5

Valid at 23 °C after a 30 minute warm-up period

Outputs

2 x 0 – 32V and 0..5.5V	ON/OFF pushbutton control, SMPS followed by a linear regulator, floating outputs for parallel/serial operation, current limit and electronic fuse.
-------------------------	--

Channel I + III (32 V)

Range:	2 x 0 – 32V, continuously adjustable 2 knobs (coarse/fine)
Ripple:	≤ 100 μV _{rms} (3 Hz – 300 kHz)
Current:	max. 2 A
Current limit/electronic fuse:	0 – 2 A, continuously adjustable (knob)
Recovery time (10% - 90% load variation):	80 μs within ±1 mV of nominal value 30 μs within ±10 mV of nominal value 00 μs within ±100 mV of nominal value
Max. transient deviation:	typ. 75 mV
Recovery time (50% basic load, 10% load variation):	30 μs within ±1 mV of nominal value 05 μs within ±10 mV of nominal value 00 μs within ±100 mV of nominal value
Max. transient deviation:	typ. 17 mV
Display	
7-segment LED:	32.00V (4 digit) / 2.000A (4 digit)
Resolution:	0.01V / 1 mA
Display accuracy:	±3 digit voltage / ±4 digit current
LED:	indicates current limit

Channel II (5.5 V)

Range:	0 – 5.5V, continuously adjustable (knobs)
Ripple:	≤ 100 μV _{rms} (3 Hz – 300 kHz)
Current:	max. 5 A
Current limit / electronic fuse:	0 – 5 A, continuously adjustable (knob)
Recovery time (10% - 90% load variation):	80 μs within ±1 mV of nominal value 10 μs within ±100 mV of nominal value
Max. transient deviation:	typ. 170 mV
Recovery time (50% basic load, 10% load variation):	30 μs within ±1 mV of nominal value

15 μs within ±10 mV of nominal value
00 μs within ±100 mV of nominal value

Max. transient deviation: typ. 60 mV

Display

7-segment LED:	5.50V (3 digit) / 5.00 A (3 digit)
Resolution:	0.01V/10 mA
Display accuracy:	±3 digit voltage / ±1 digit current
LED:	indicates current limit

Maximum ratings

Max. voltage applicable to output terminals (ON/OFF):

CH I + CH III:	33V
CH II:	6V

Reverse voltage: max. 0.4V

Reverse current: max. 5A

Voltage to earth: max. 150V

Miscellaneous

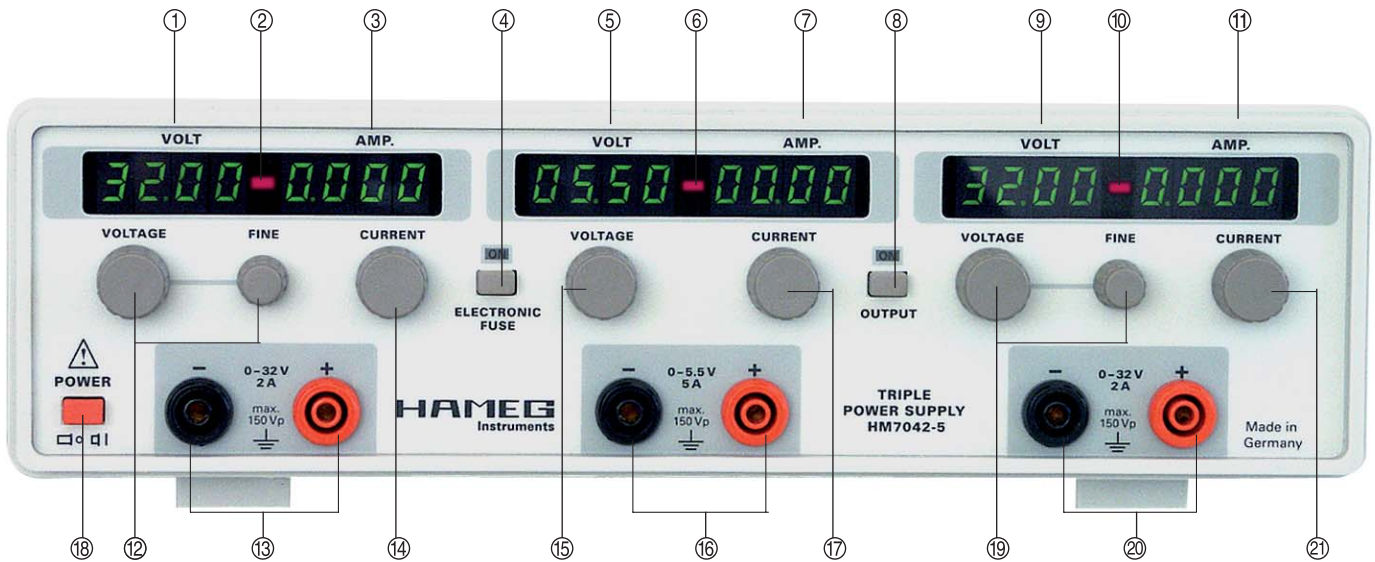
Safety class:	Safety class I (EN61010-1)
Mains supply:	115V/230V ± 10%; 50/60 Hz
Mains Fuse:	115V: 2 x 5 A slow blow 5 x 20 mm 230V: 2 x 2.5 A slow blow 5 x 20 mm
Power consumption:	max. 330 VA/250 W
Operating temperature:	0° to +40 °C
Storage temperature:	-20 °C to +70 °C
Max. relative humidity:	< 80% (without condensation)
Dimensions (W x H x D):	285 x 90 x 389 mm
Weight:	approx. 7.4 kg

Subject to change without notice.

Accessories supplied: Operator's Manual and power cable

Optional accessories: HZ10 Silicone test leads, HZ42 19" Rackmount Kit 2RU

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Control Elements

Front Panel

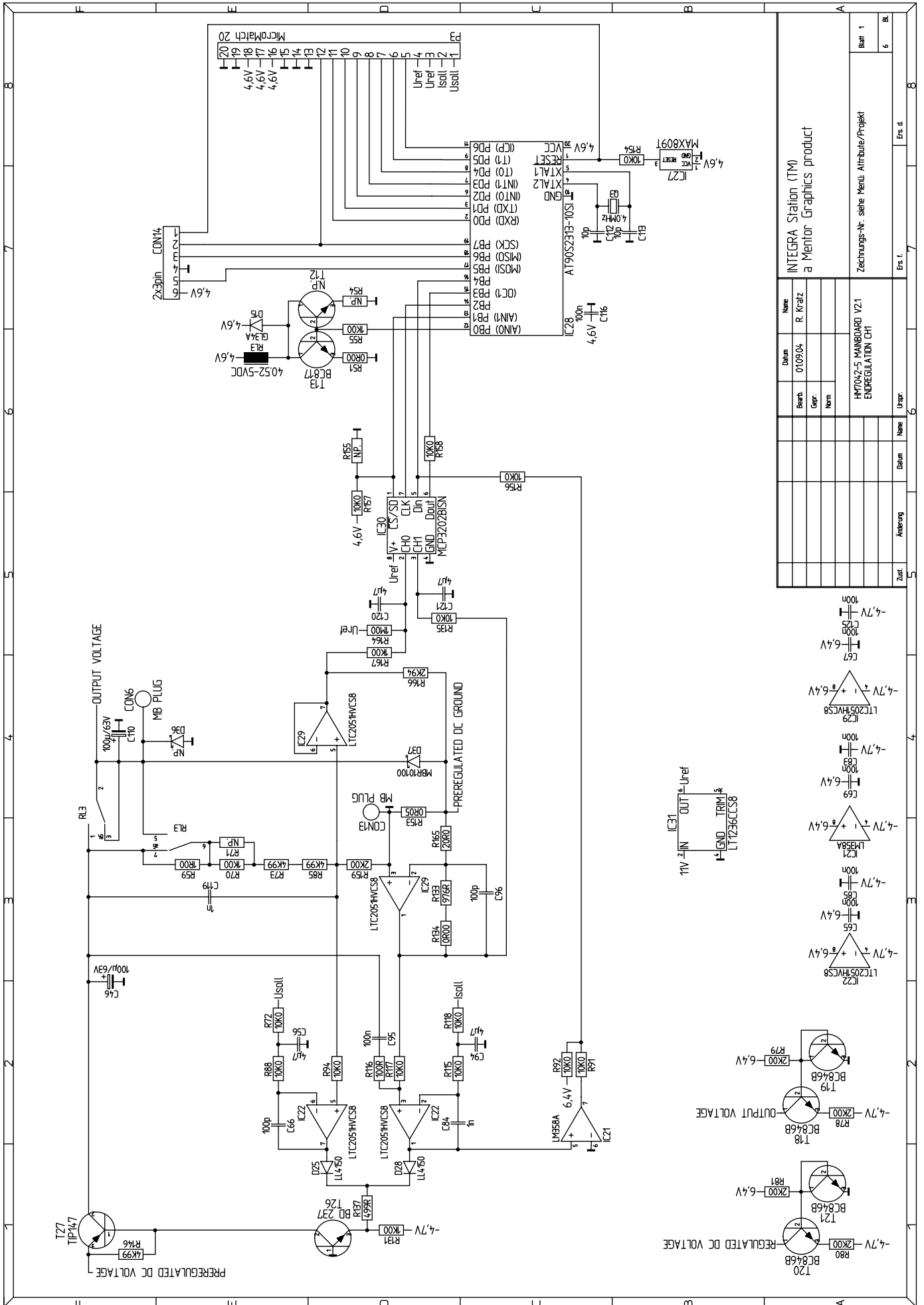
- ① ⑤ ⑨ **VOLT** Voltage display
- ③ ⑦ ⑪ **AMP.** Current display
- ② ⑥ ⑩ **LED** Current limit indicator
- ④ **ELECTRONIC FUSE** Selector of functions electronic fuse/current limit
LED will light if electronic fuse function enabled
- ⑧ **OUTPUT** Switching ON/OFF of all channels
LED indicates status on
- ⑫ ⑲ **VOLTAGE/FINE** Fine/coarse adjustment of output voltage 0...32V

- ⑮ **VOLTAGE** Adjustment of output voltage 0...5.5V
- ⑭ ⑰ ⑳ **CURRENT** Adjustment of current limit I_{max} of both current limit and electronic fuse threshold
- ⑬ ⑳ **0 - 32V / 2A** Safety terminals of the 32-V-outputs
- ⑯ **0 - 5.5V / 5A** Safety terminals of the 5-V-output
- ⑱ **Power button**

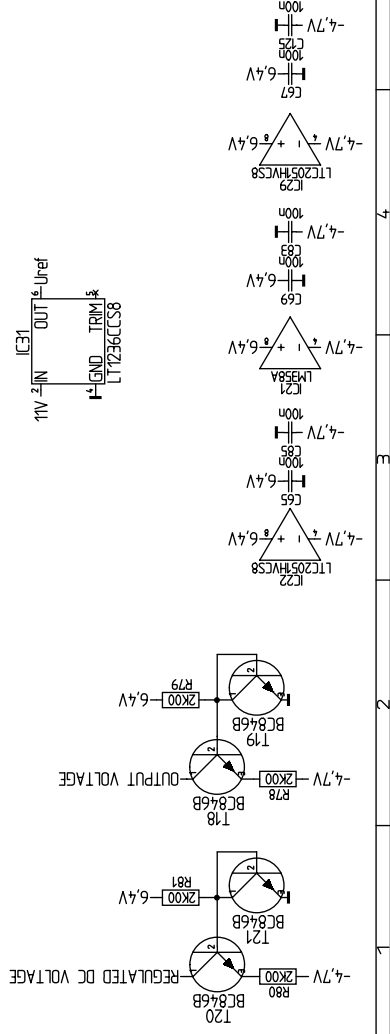
Rear panel

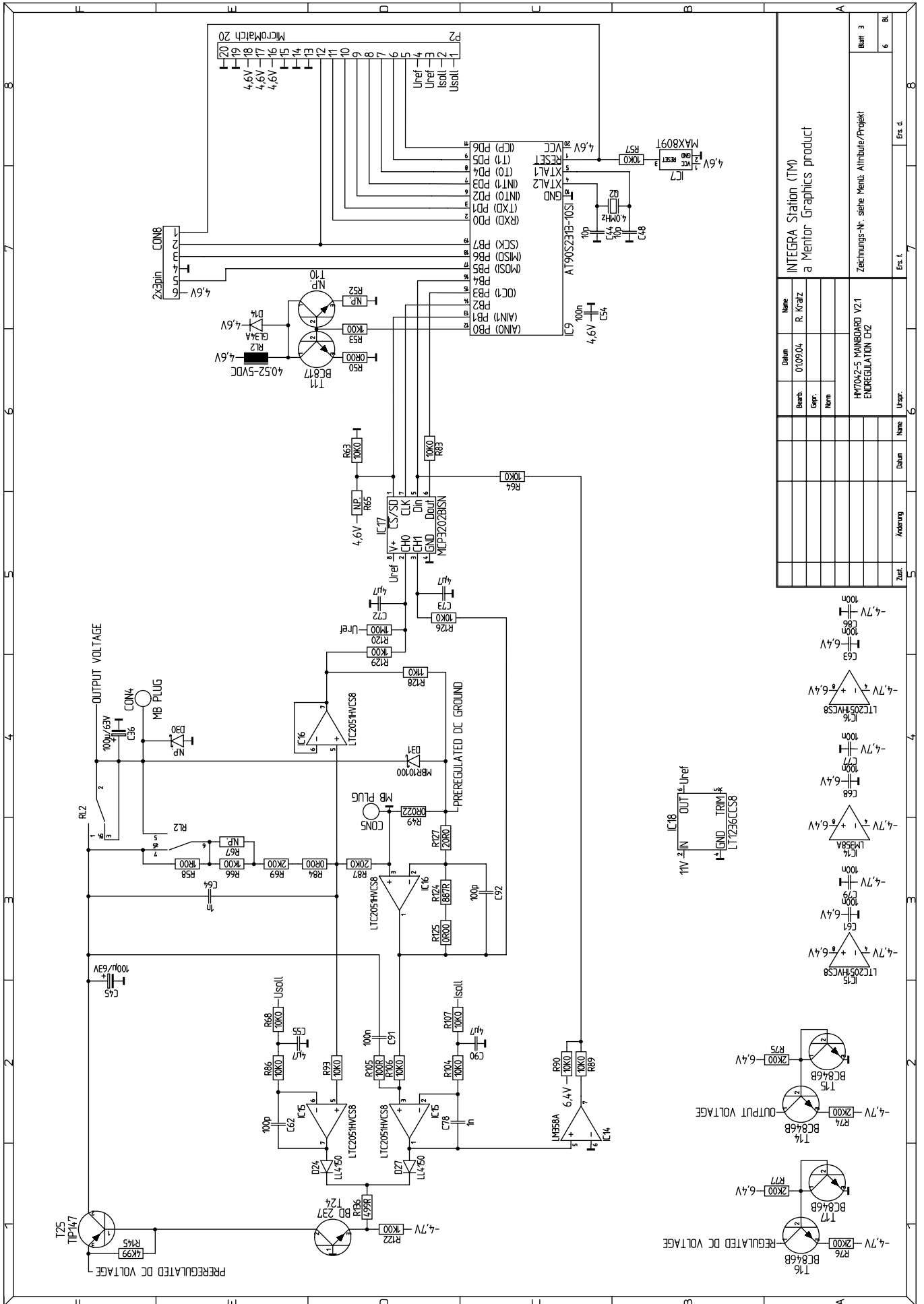
- ⑳ **Voltage selector** Choice of mains voltage (115V/230V)
- ㉓ **Power receptacle with line fuse**



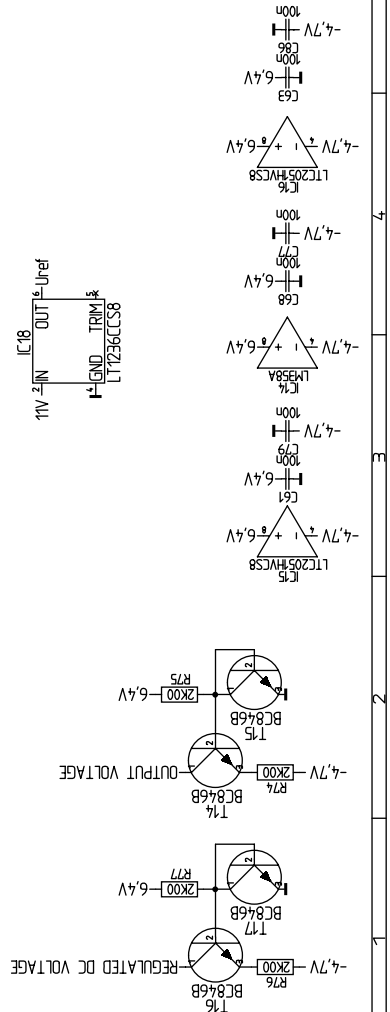


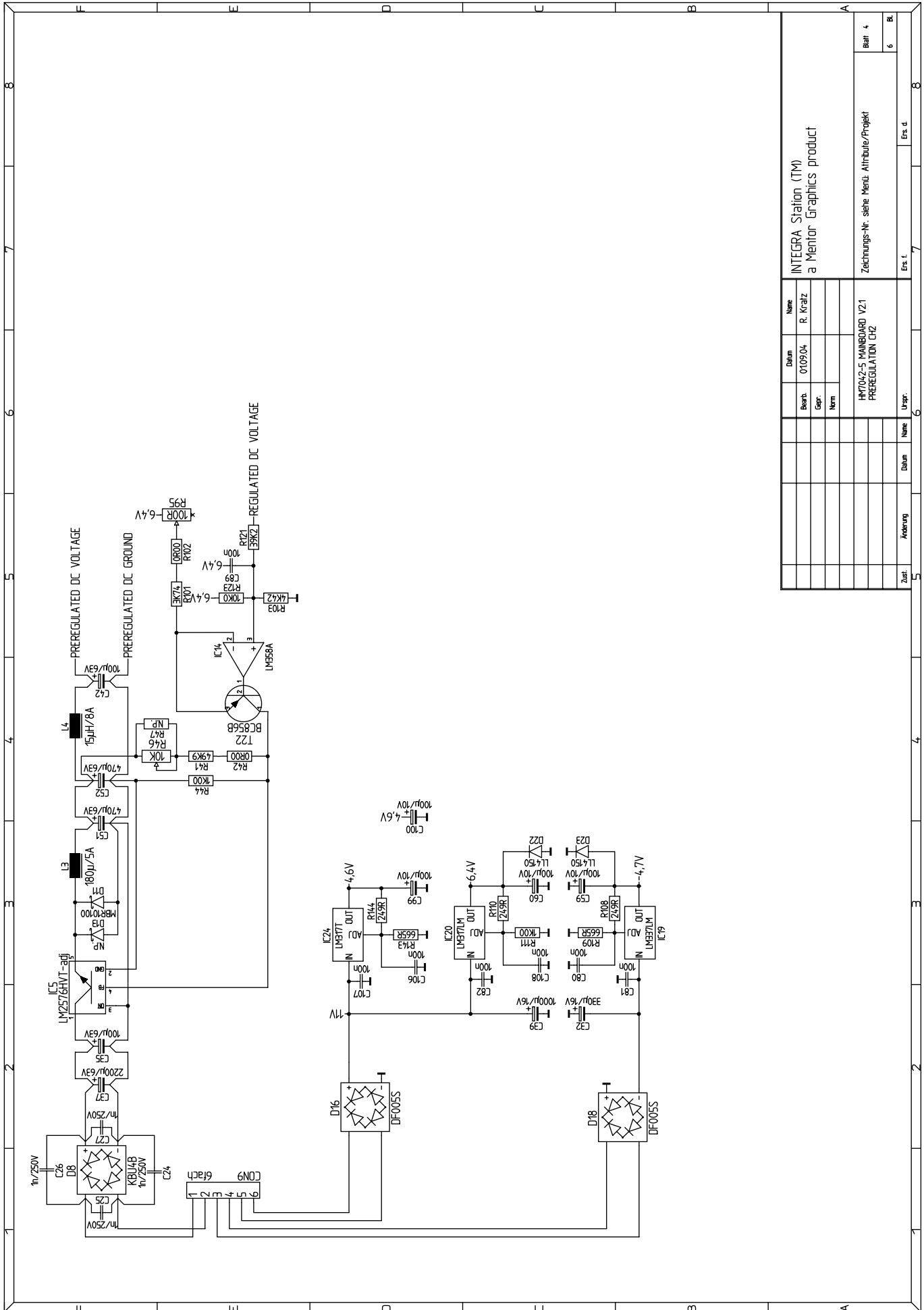
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a Mentor Graphics product											
Zeilungs-Nr.: siehe Menü Attribut/Projekt											
HM7012-5 MAINBOARD V2.1											
ENDREGULATION CH1											



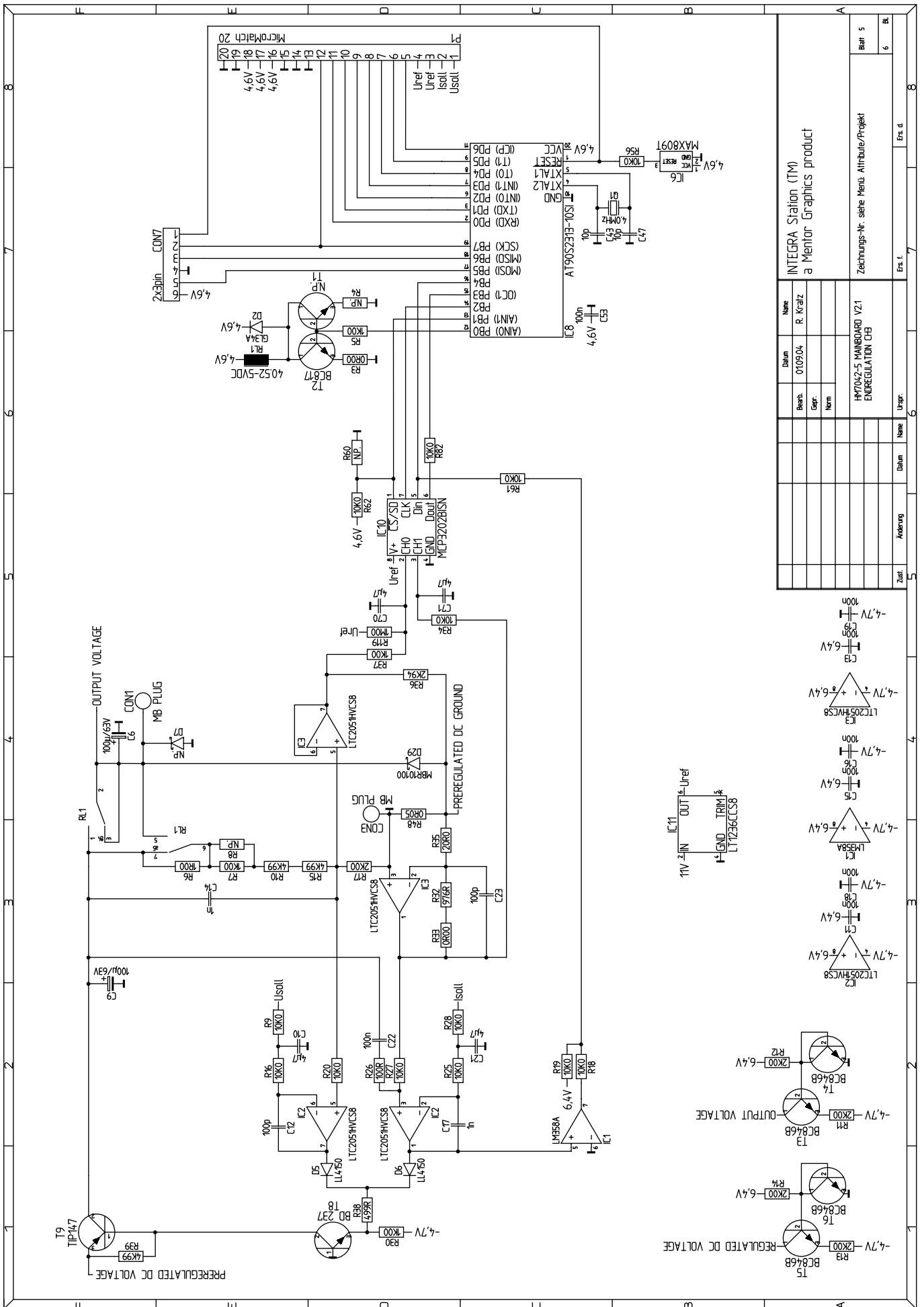


Name		R. Kraitz	
Datum		01/09/04	
Bezeichnung		HMT042-5 MAINBOARD V2.1 ENDREGULATION CH2	
Gepr.		Norm	
Zust.		Änderung	
Name		Datum	
Ers. I.		Ers. d.	
Bl.		Bl.	
Blatt 3		Blatt 3	
Zeichnungs-Nr. siehe Menü: Attribute/Projekt			

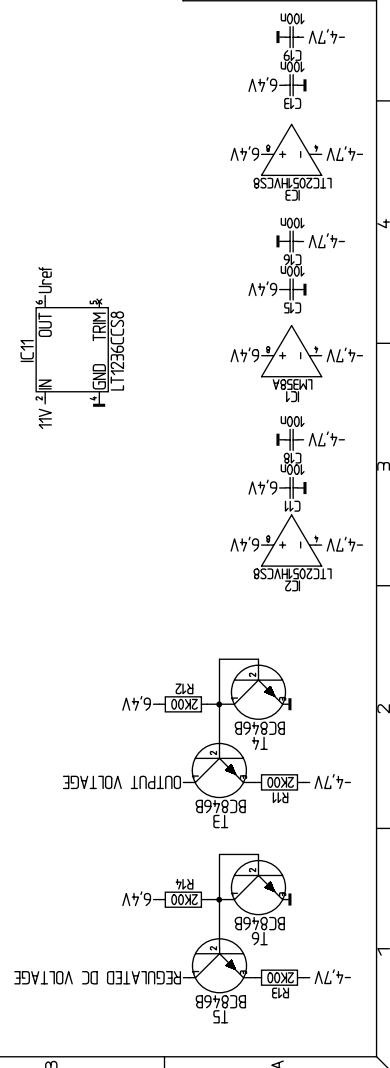


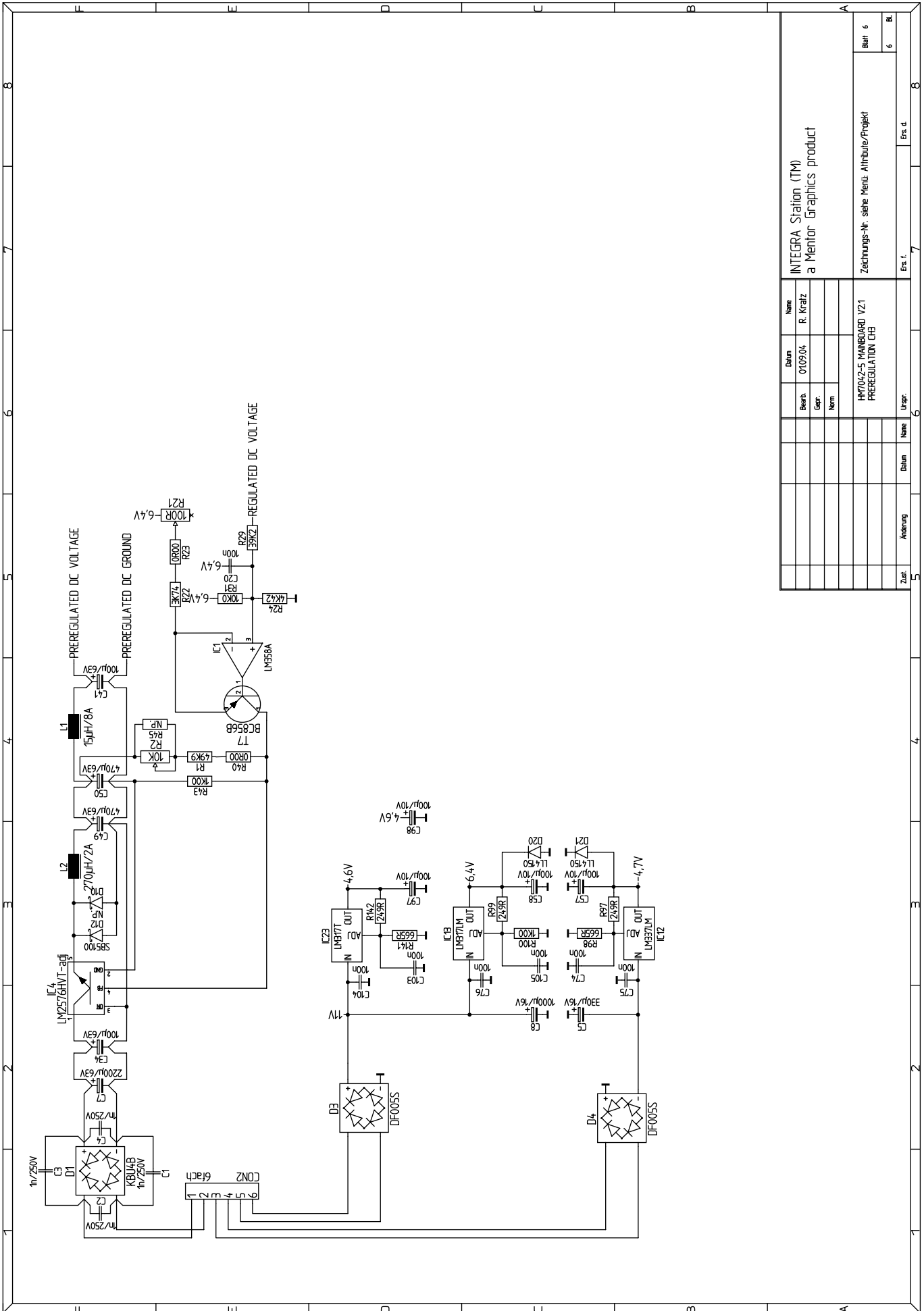


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Zust.		Änderung		Datum		Name		Urspr.	
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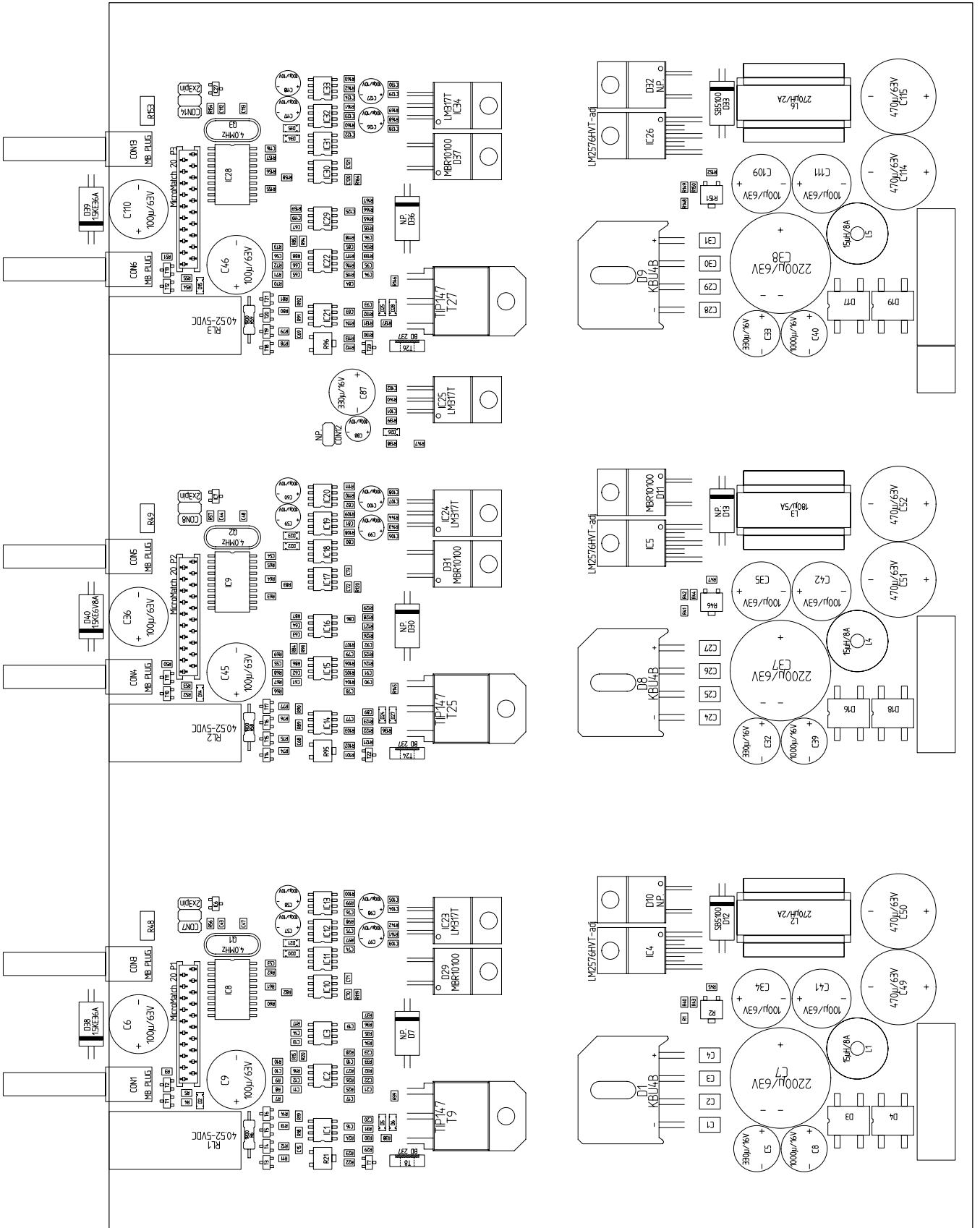


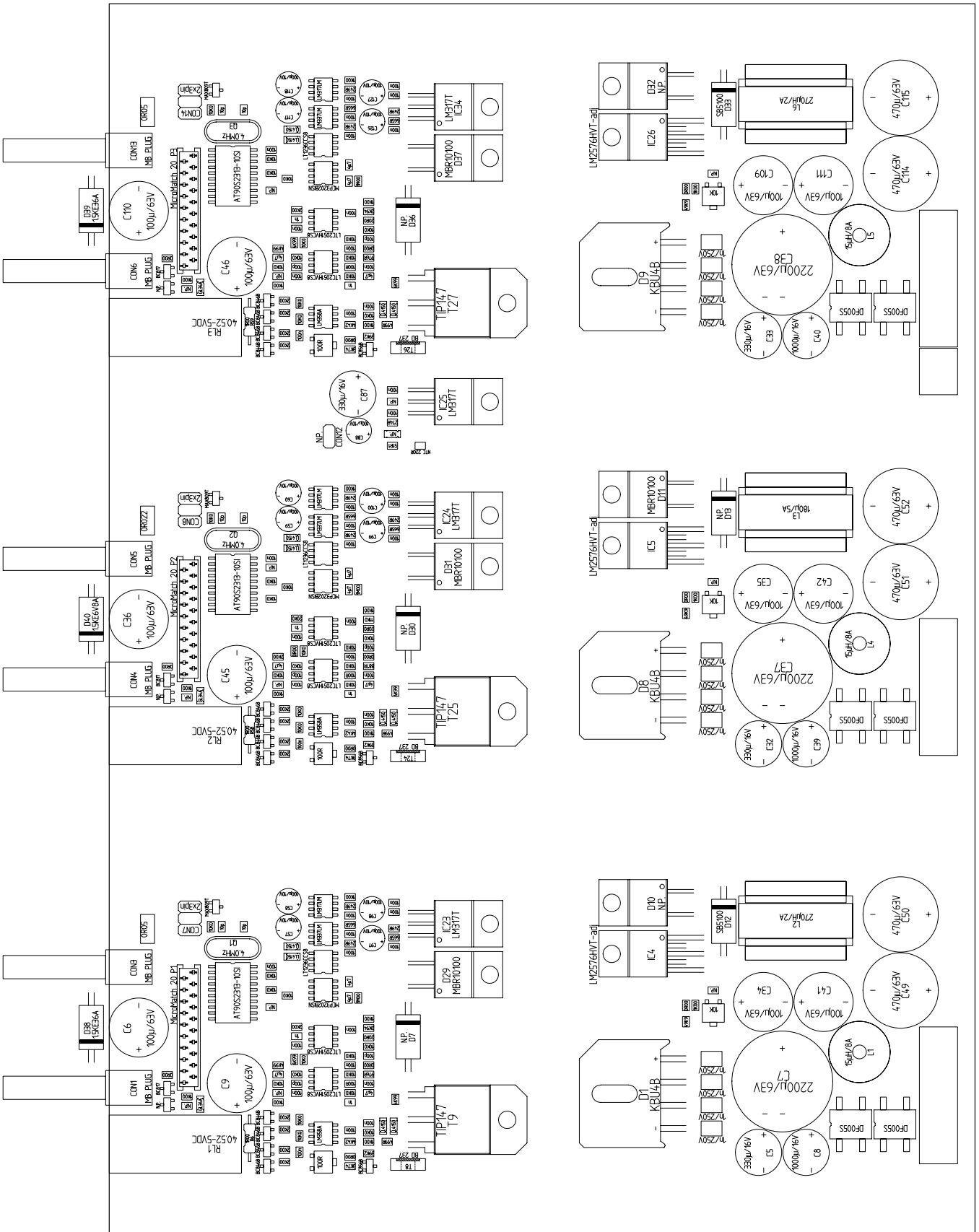
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Beerb.								7
Gepr.	Norm							8
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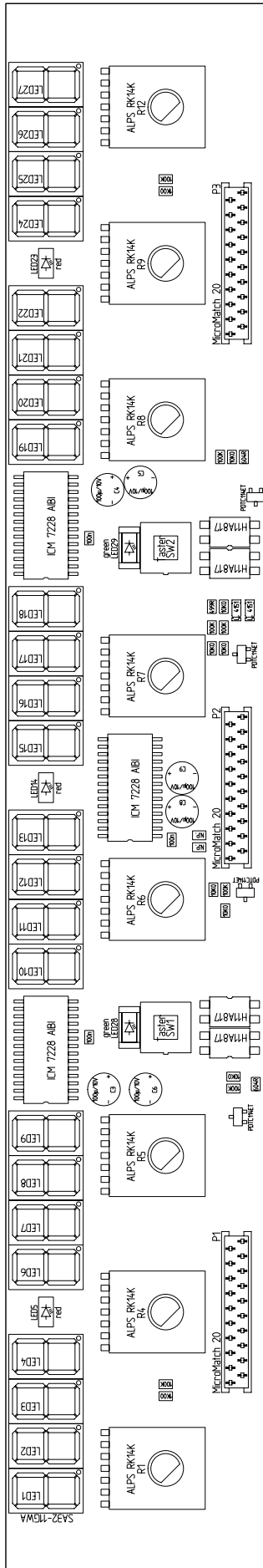




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R. Kraitz			Date			Date		
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Norm			Norm			6		
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R1			7			8		

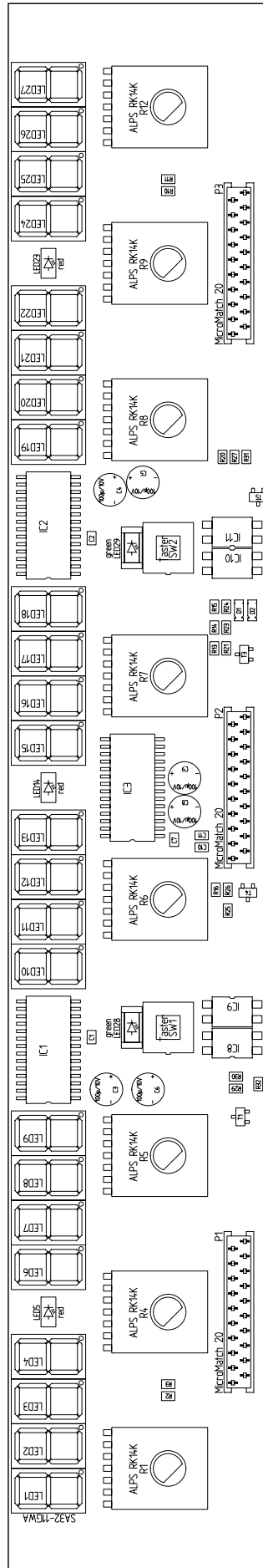






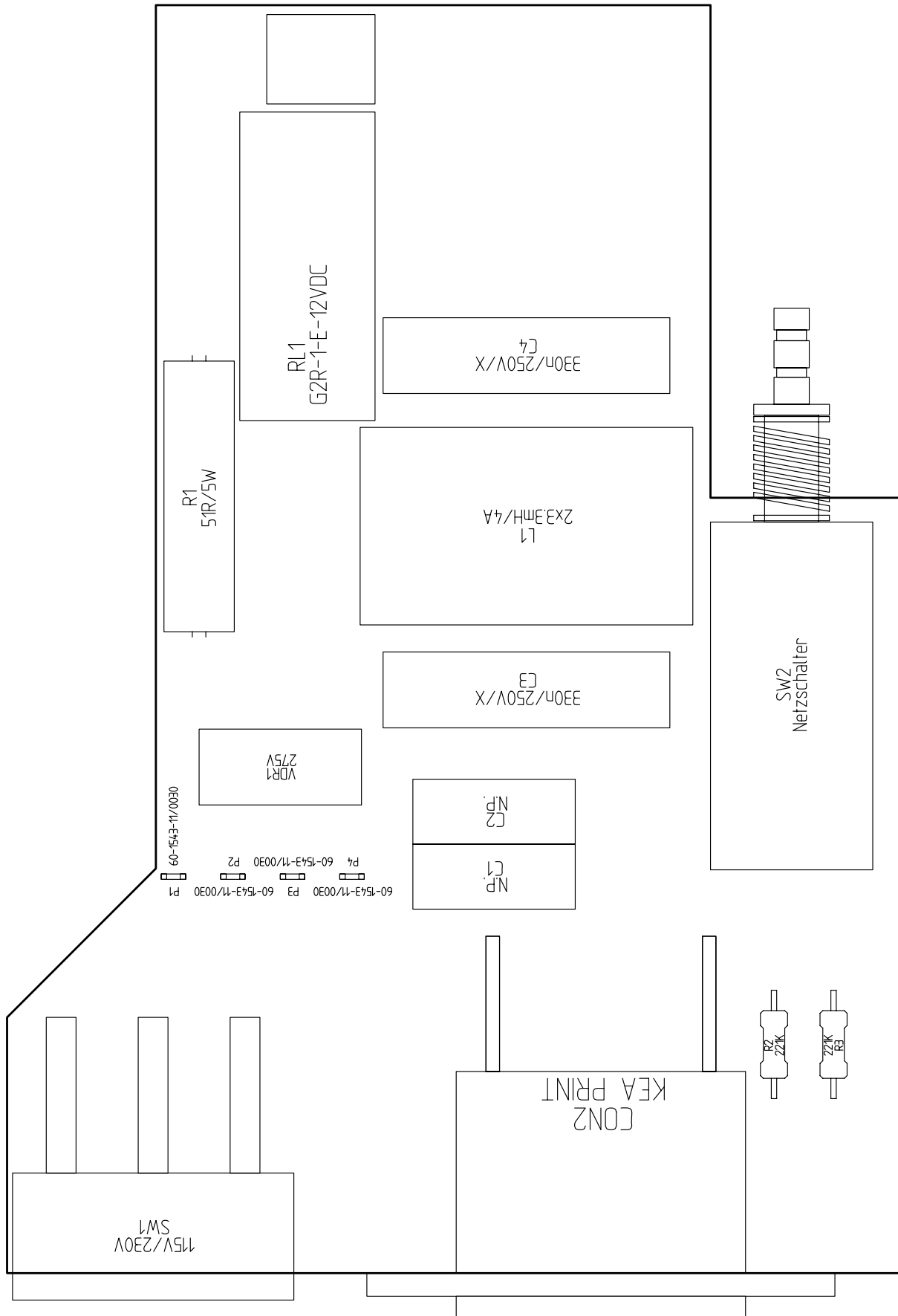
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INTEGRA Station Design



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INTEGRA Station Design



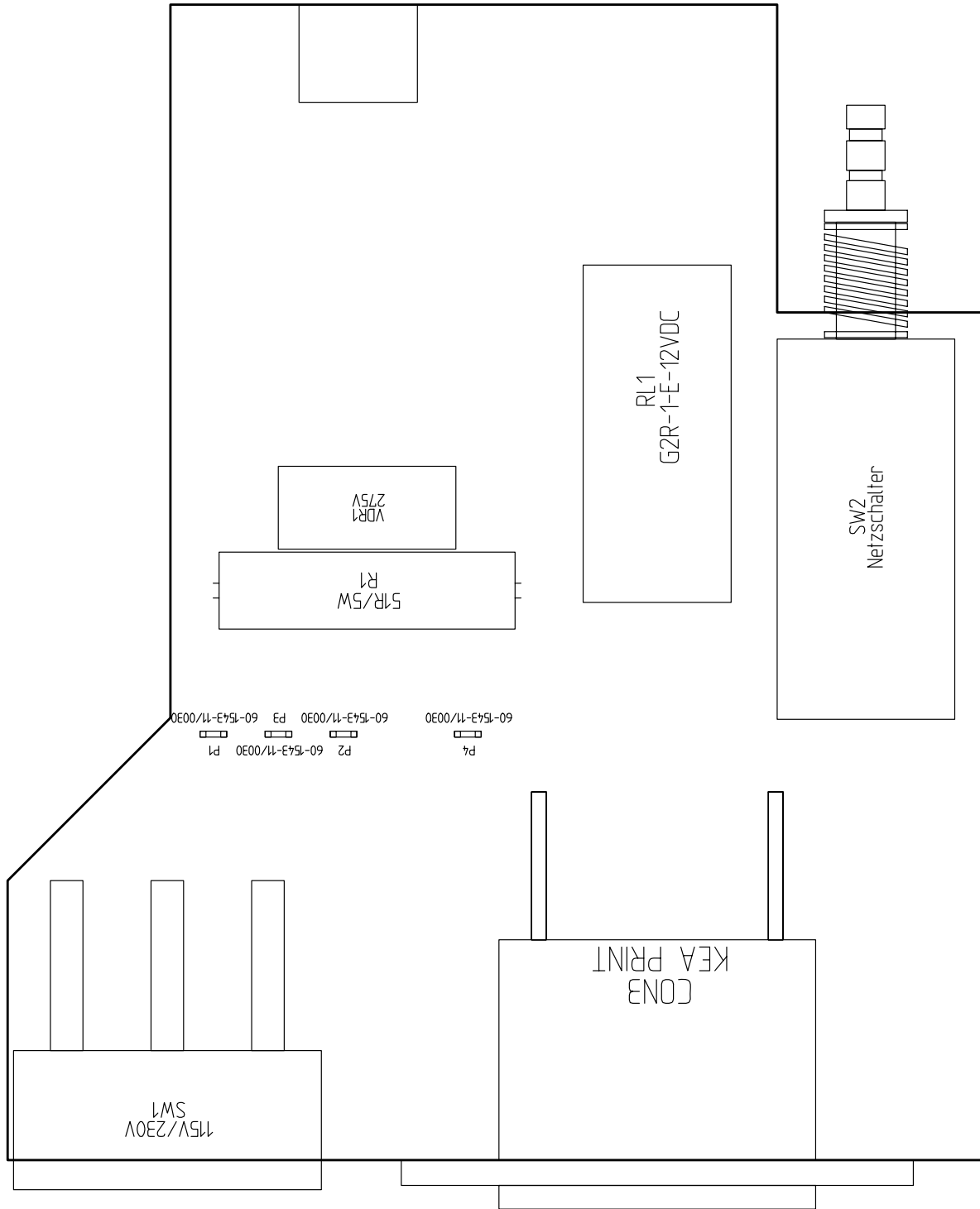
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INTEGRA Station Design



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Oscilloscopes



Spectrum Analyzer



Power Supplies



Modular System
Series 8000



Programmable Instruments
Series 8100



authorized dealer



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DQS-Certification: DIN EN ISO 9001:2000
Reg.-Nr.: 071040 QM

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