Produktions- und Vertriebs GmbH
für Stromversorgungsanlagen

Hans-Sachs-Str. 2
63755 Alzenau
Telefon 06023/9798-0
Telefax 06023/9798-18
Email info@quel.de
Homepage www.quel.de

Description	**DC-DC Converter**
Type	**P550**
Variant No	**238B**
Date	**23.08.2019**
Page	**1**
Pages total	**1**

Input

Input voltage	DC220V +15%-15%
Inrush current	< 30Apk limited with NTC
Nominal Input Power	600VA max
Hold up time	>20ms at full load and nominal Input voltage
RFI line conducted	Curve A Filter in accordance with EN 55011 u. EN55082
Isolation	8mm input – output / 3mm input – case / 2mm output – case
Efficiency	typ. 80%
High voltage test	EN 60950 without Y-Caps
Safety	EN 60950,
ESD	EN 61000 -4 - 2 :8kV
Burst	EN 61000 -4 - 4 :4kV

Output

Output ripple rms/pp	0,2% rms	1%pp bandwith 30MHz
Dynamic voltage regulation	±2%	load changed ±10% (50% load)
Line regulation	0,02%	
Output voltage	26.0V	
Output current	18A	
Output voltage adjustment range	24-28V	
Temperatur-Koeffizient	0,02%/℃	

Safety Functions and Control signals

Power limitation	510W ±5%	
DC good relay	30V/1A (gold coated)	contact closed: <21V/ contact open:>23V
Current limitation	constant current	>110%
Overvoltage protection	120-130%	reset: line disconnection

Ambient

Temperature range	0-70℃ without derating
Storage temperature range	-25℃ to + 85℃
Rel Humidity	0-90% not condensed

Mechanic

Dimensions	see drawing
Input Terminal	screw terminals max 4.0mm^2 (X1/3 way)
Output Terminal	screw terminals max 4.0mm^2 (X1/8 way)
Fitting screws	4 fixing screws M3 must not penetrate by more than 5mm

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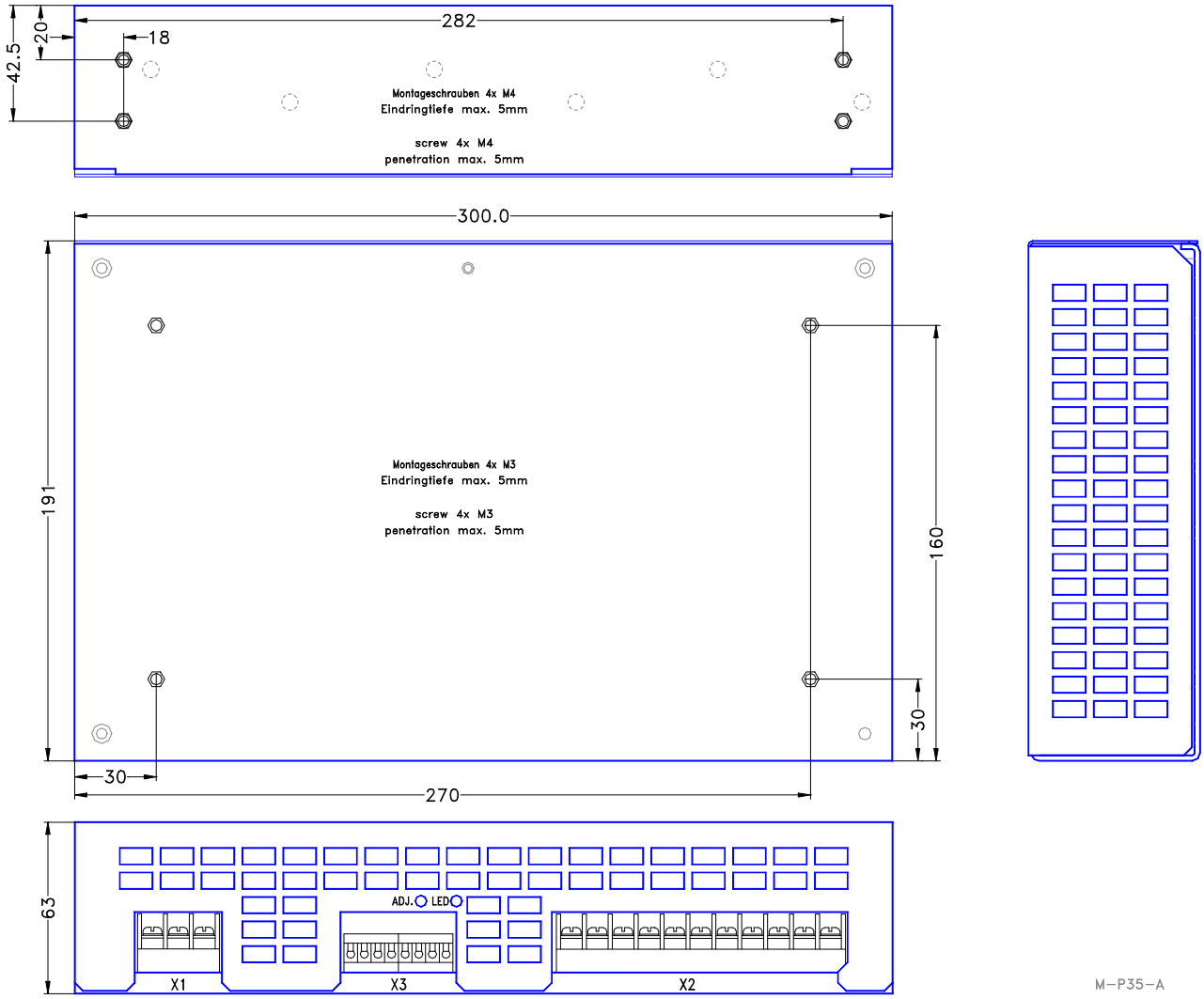
Mechanik/Mechanic	**DC-DC Konverter**
Typ/Type	**P350**
Variante/n No	
Datum/Date	**26.11.2001**
Seite/Page	**1**
Seiten/Pages	**1**



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Description	**DC-DC Converter**
Type	**P550**
Variant No	**238**
Date	**15.10.2001**
Page	**1**
Pages total	**1**

Input

The line is protected by fuse F1 and is taken to connector X1 of converter P550V238 via screw terminals. The high switch-on currents of the input capacitors are reduced via the NTC R1.R1 is bypassed by relay K1 when output voltage rise DC-supply filtering is ensured by components , L1, L2 together with capacitors C1, C3 between the plus and minus lines. Primary Y capacitors C4, 5 ,C62,C63 and secondary capacitor C6 also serve for suppressing unbalanced spurious components with reference to the protective-earthing potential.The DC Supply is protected against reverse voltages with a Diode fuse combination . For the symetric filtering between the plus and minus and the Hold up time of the unit are placed reservois tank capacitors C8, 9,58,59.

Input terminals:

X1/1 + Input Voltage (220Vdc)
X1/2 - Input Voltage
X1/3 PE

Output

The pulsing rectangular AC voltage is rectified by power diodes V13, 14 and integrated via choke L6. The LC modules after the choke are for filtering the DC voltage (C23,24,25,26).

Output terminals

X2/2-4	V1=26V/18A (default setting)
X2/5-7	0V

Voltage regulation

For voltage regulation, a voltage is tapped off the output +26V and routed to SMD subassembly A2 for the comparison of nominal/actual values.Voltage deviations are converted into a mark-to-space variation via the error amplifier and the following stages; this variation acts on the bases of primary switching transistors V5, 6 via driver transformer T3. Load resistors R23 ensure unimpaired open-circuit characteristics.

Primary Switching Circuit

The halved DC voltage is applied to switching transistors V5 and V6 via splitting capacitors C10, 11, current, driver and main transformers (T4, 3, 5). The switching transistors operate in push-pull half-wave circuit at a switch-mode frequency of approx. 42 kHz. The components fitted in the base circuit of the switching transistors ensure the generation of optimum base current and their protection. When the transistors V5, 6 are conducting, energy is transferred from T5 to the secondary through the primary windings.

Current Regulation

The primary current is monitored via current transformer T4. R31 is the load of the secondary winding for the current signal. The current signal is connected to SMD subassembly A2 the same as for the voltage regulation and compared with the nominal value. In the current-limiting mode, the mark-to-space ratio is reduced by the control circuit depending on the current signal and routed to the driver circuit. The current-limiting circuit has a constant current characteristic.

Overvoltage, Overtemperature

Overvoltage inside and outside the unit or overtemperature causes the converter to be set to the low-power mode. The overvoltage is detected via a second voltage path on the SMD subassembly A2; a small-signal thyristor inhibits the output stage. After eliminating the overvoltage or overtemperature, the power supply has to be reset by switching off the DC supply.

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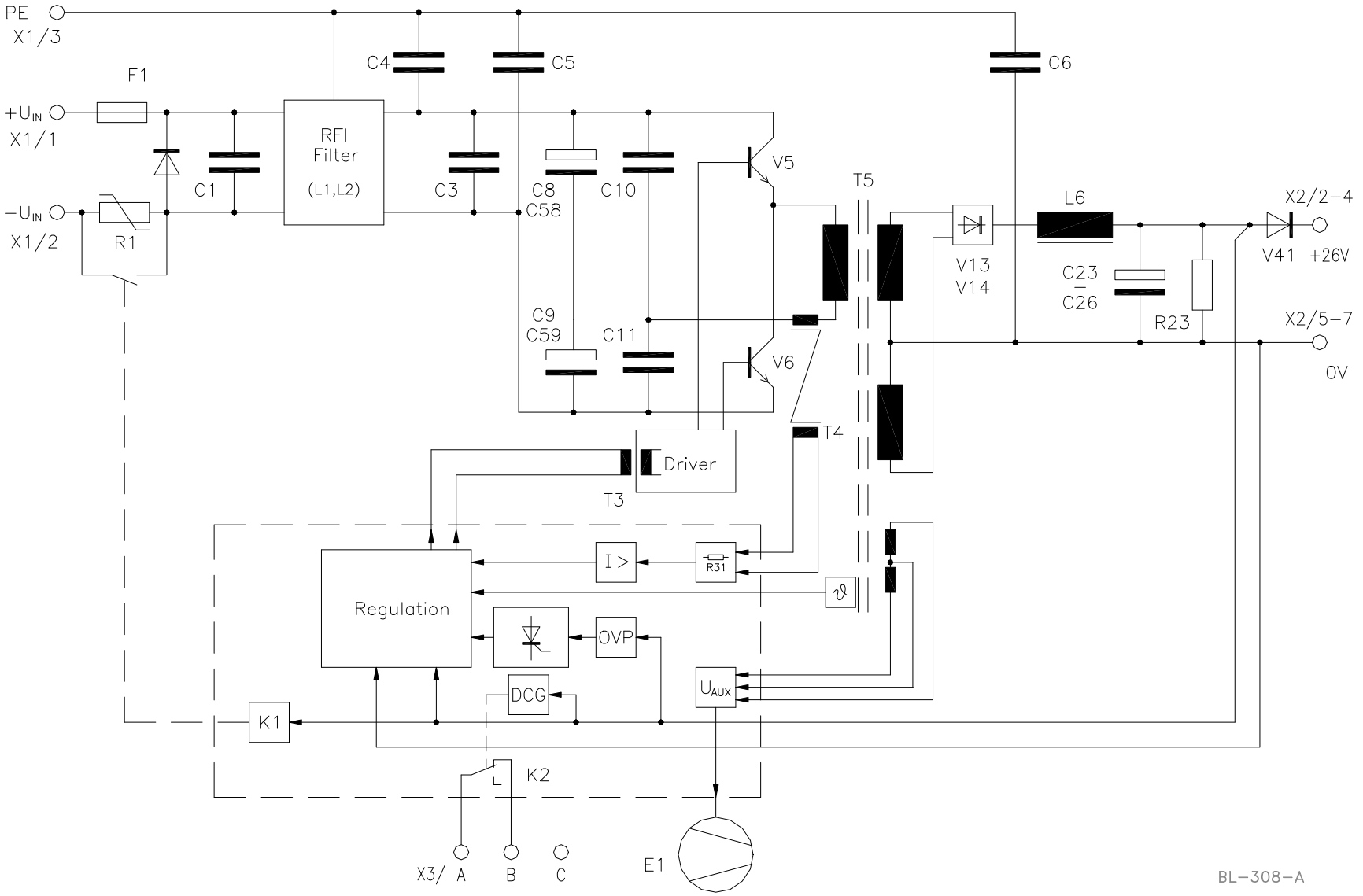
Blockschaltplan/ Block Diagram **Typ/Type** **P550** **Variante Nr /Variante** **No.: 308**
Seite/page 1 **Seiten/pages 1** **Datum/Date** **26.11.2002**



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vorbehaltlich Änderung : subject to change whithout