

## ORD-20

DDX-, Spax-, and CDE Booster 20 Ampere  
ORD-20  
Bill Of Materials

Revised Sept 23, 2015  
Revision: 1.0  
Revisor: Peter Giling

Qty	Ref	Part
4	R1,R2,R3,R4	4,7 KOhm
3	R6, R9,R10	1 KOhm
1	R7	3,3 Kohm
1	R8	220 Kohm
1	R11	330 Ohm
3	R12,R13,R19	470 Ohm
1	R20	10 Kohm
2	C1,C2	RAD 1000/35V radial
8	C3,C5,C6,C7,C13,C13,C14,C15,C16	100 nF 2,5 mm pitch
2	C4,C11	10 uF /16V radial
2	C8,C9	15 pF 2,5 mm potch
1	C10	100 uF 16V radial
1	C12	100 nF 7,5 mm pitch
4	D1..D4	Zener diode 5V1 400 mW
1	R5	100 Ohm 2 Watt
1	L1	LED-B-3rt
1	L2	LED-B-3ge
1	L3	LED-B-3gr
2	D5,D6	DIODE 1N4148
1	D9	Diode 1N4003
2	T1,T2	SUP90P06-09L-E3
2	T3,T4	SUP90N06-6MOP-E3
1	Tr5	BS170
1	VR1	TSR 1-2450
1	Th1	MCP9701
1	IC1	6N137 with socket DIL08
2	IC2,IC3	PIC16F688 with socket DIL14
1	IC4	PC817
1	IC5	L293D with socket DIL16
1	IC6	PIC12F675 with socket DIL08
1	CDE1	AKL382-04 + AKL369-04
4	RAIL1,Rail2,PWR1,PWR2	FS-P 6,35
1	SH1	Shunt 15 mOhm
1	Ind1	Inductor 100 uH
3	St1,St2,St3	MEBP6-6
1	RS232	D-SUB BU 09EU
1	FB1	PSS254-2G + PSK254-2W + Pins
1	X1	CRYSTAL 20 mHz
1	F1	Fuse PFRA050
2	Fan1,Fan2	PSS254-3G + PSK254-3W + pins
1	m	Solid wire 1,5 mm <sup>2</sup>
1	Cooling	V PR127/94-M3
1	Isolation strip	Reichelt order nr: SI 6018
1	Cooling conduction grease	
5	Clips	MC 725
4	PCB Support with fasteners M4x8	DA 4-10
1	PCB	ORD-20
4	Faston clamps Yellow 6mm <sup>2</sup>	
2	Fan	Fan-ML 4020 24V
4	Fasteners	M4x50
3		PSK 254-2W with pins

Remarks:

Use minimal 6mm<sup>2</sup> wires for power and rail connections.

Take care to connect + and – from DC Power correctly.

Drill a hole at the left hand side in cooling to force some air in direction of SH1 shunt.

Set maximum current of power supply to approx 24-25Amp, for extra security.

Use isolation strip between transistors/temp sensor and cooling device.

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Use cooling conduction grease between transistors/temp sensor and isolation strip.

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