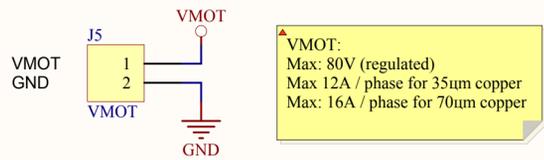
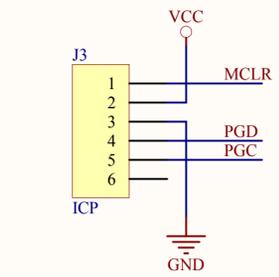


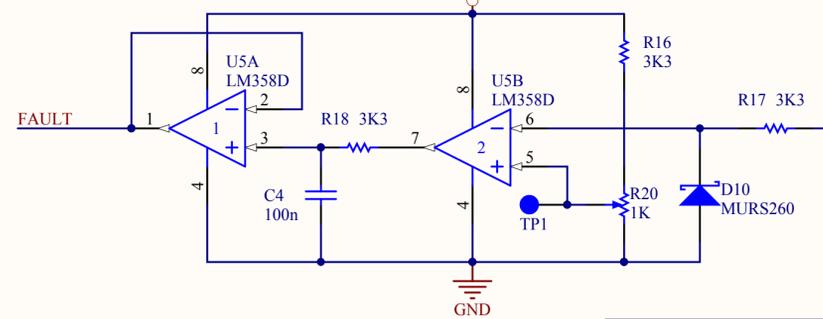
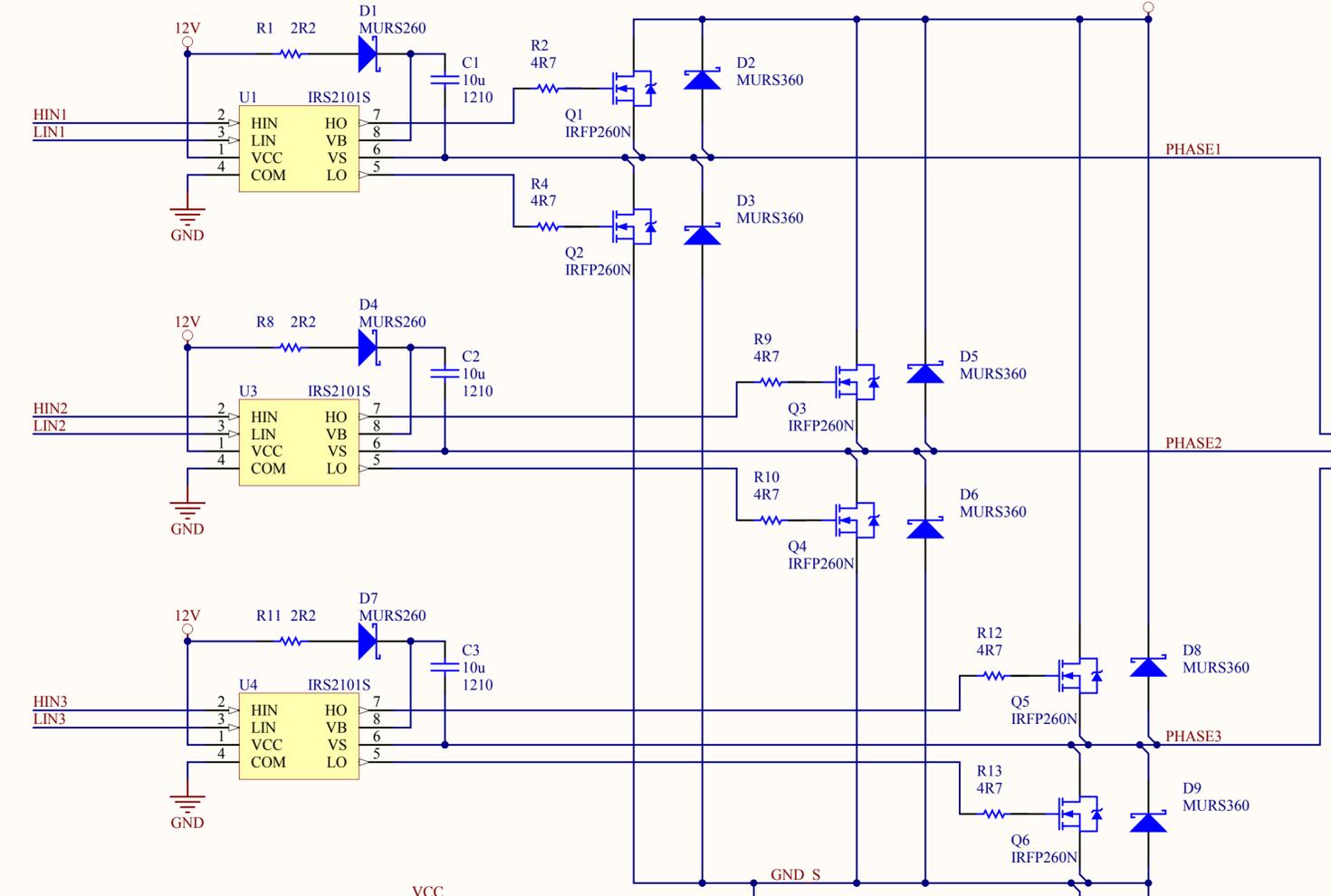
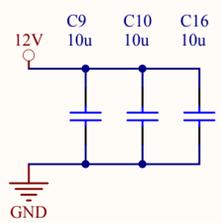
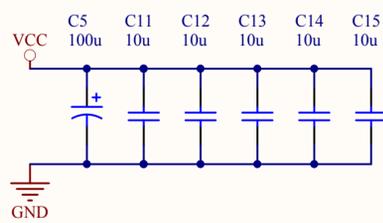
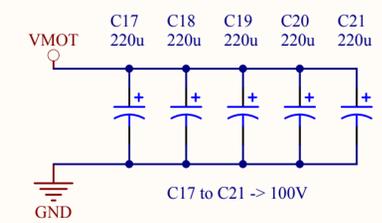
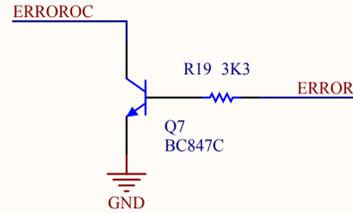
Motor control connector (J2):

PIN1	Power	10V-12V 100mA max see note below
PIN2	Power	10V-12V 100mA max see note below
PIN3	In	Step on H/L transition
PIN4	In	Direction (FWD/REV)
PIN5	In	Enable (act. low)
PIN6	Out OC	Error (act. low) see note below
PIN7	Out	Encoder Index signal
PIN8	NC	
PIN9	Power	GND
PIN10	Power	GND
PIN11	Power	5V 200mA max see note below
PIN12	Power	5V 200mA max see note below
PIN13	Out	RS232 TX (TTL level)
PIN14	Out	RS232 RX (TTL level)
PIN15	Power	GND
PIN16	Power	GND

Notes:
 Pin 6 is an open collector output (100mA max) that is low on error. It is also low on controller startup for max. 500ms. Positioning errors can be reset by disabling the device using the enable pin. Internal calculation errors cannot be reset.
 User proper and solid grounding techniques. Also connect heatsink to earth ground. Make sure to power 12V and VCC line first before motor power is applied.



VMOT:
 Max: 80V (regulated)
 Max 12A / phase for 35um copper
 Max: 16A / phase for 70um copper



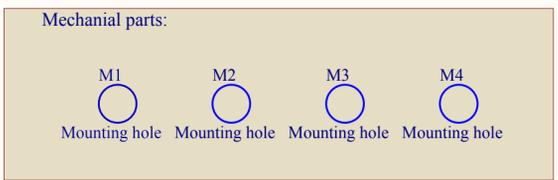
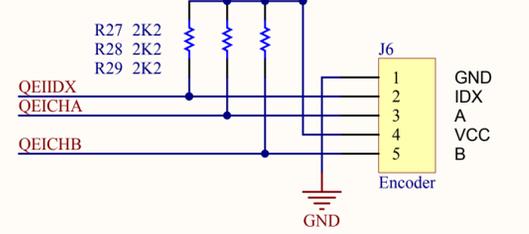
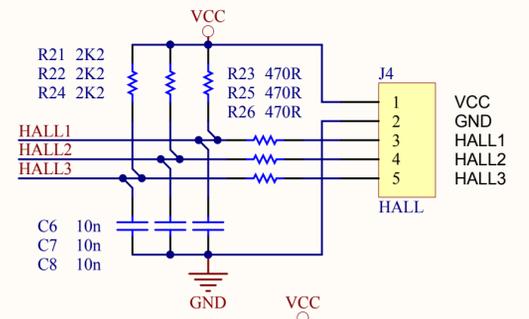
Adjusting R20 (overcurrent protection over all 3 phases):
 Measure TP1 against ground.
 $I(max) = V(TP2) / (1/(1/R14+1/R15))$

Note on encoders and motors:

Encoders:
 Relative A/B signal TTL level encoders. Index pulse is not used by UPCX 530 but can be evaluated by host.

DC-Servomotors:
 A DC-Servomotor is detected on power-up of the controller by finding all hall signals high (nothing connected to J4).

BLDC-Servomotors:
 BLDC-Servomotors must contain TTL level hall sensors for phase detection. The ratio of "hall phases per revolution" / "motor pole number" must be 3.
 A BLDC-Servomotor is detected on power-up of the controller by finding at least one hall signal low (hall sensors connected to J4).



Title		UPCX530 Power Board		by V. Besmens under CERN 0HL 1.2 www.vbesmens.de	
Size	A3	Number		Revision	
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				Drawn By:	

