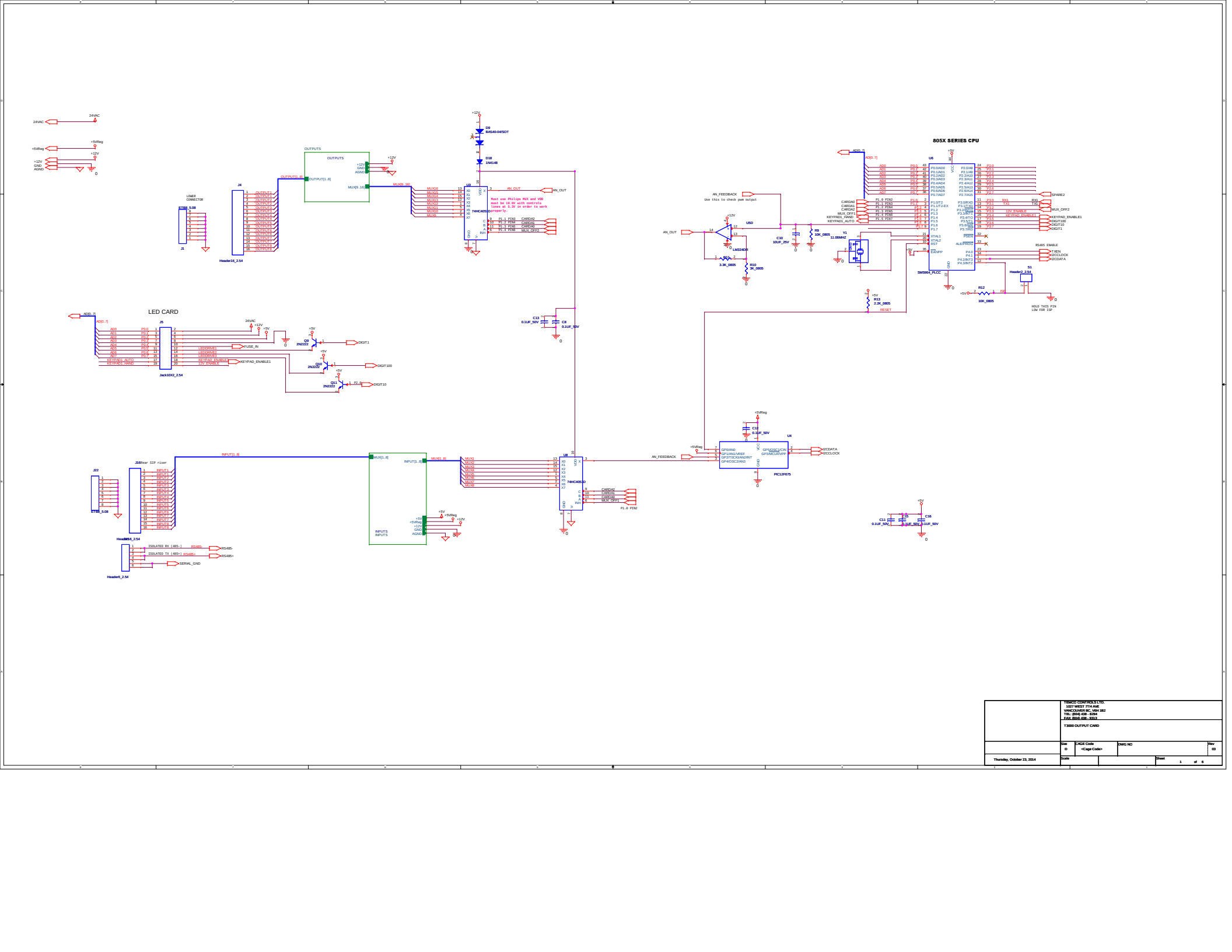
805X SERIES CPU
LED CARD
OUTPUTS
INPUTS
Must use Philips MUX and VDD must be 10.0V with controls lines at 5.3V in order to work properly.
Use this to check pwm output
Jack10X2_2.54
Header16_2.54
Header8_2.54
Header2_2.54
74HC4051D
LM324DR
SM5964_PLCC
PIC12F675
TRICO CONTROLS LTD.
1027 WEST 7TH AVE
VANCOUVER BC, V6H 1B2
TEL: (604) 438 - 5284
FAX: (604) 438 - 2213
T3000 OUTPUT CARD
Thursday, October 23, 2014
Size: D
CAGE Code: <Cage Code>
DWG NO
Rev: 03
Sheet: 1 of 6

May2: 2001

DONE Pin7 No ground on U7

DONE Analog output from DAC needs to be routed to output mux, missing wire

DONE LED card needs ot be really checked over, not working

Added spares to connector, moved pins around, moved connectors around

DONE 15V fused, doest make it out to led card, renamed it to 15V, all are on the fuse now

DONE Q2n222 for 5V regulated, its backwards

DONE CardSelect can go directly to Pjn 6 of small output mux

DONE Chip select for mux for inputs, U??, can go to ground all the time since there are separate In lines for each input card. Actually its just done in parallel with the other mux

DONE No room: moved MOV's to terminal block card

Rev8

Rework to plastic enclosure

Rev9

Add local controller, modbus port
USB...???

Rev11

Switched + and - 485 pins

Added +5Reg to VREF of PIC

Fixed the positioning of connectorboard1

Made mounting holes bigger

More room for input/output connectors

Moved power and fuse LEDs to top board

Added latches for both switch banks on LED board

Rev12

Switched 485 + and - on upper header

made traces on 485 protection wider

moved pin labelling to bottom of board

Added 4148 protection diodes to +V on inputs and outputs

Removed 1W resistors on output lines

moved 485 to top and made thru-hole (use a socket)

Rev13

added 30R resistors to the 485 lines

connected reset pin to one pin of the PIC chip

moved shunting diodes on input lines to CPU side of 100K resistor

got rid of J7 and J8 - TTL no longer necessary

Rev14

TBD: move flash jumper to location accessable when board is in enclosure

TBD: make hardware rev visible on board while inside the enclosure

Rev15

Done: make sure LED board connector complies with new rev (led rev14)

Done: add a 5Vreg and take out op-amps

Done: remove 470ohm current limitting resistor such that can obtain zero voltage level

Done: the 100k resistors were reduced to 1K on the input. don't remember why though

Done: change current sensing resistors to 1/2W thru-hole

Done: use new crystal footprint

Done: add current limiting resistor to gnd line of com485

Done: use 10K packet resistors for pull-up

Done: check footprint of various chips

Done: use BAS40 for protection on inputs and outputs

Done: when uploading the code make sure using analog. Never been tested so probably modification needed.

Done: move flash jumper to location accessable when board is in enclosure

Done: make hardware rev visible on board while inside the enclosure

Rev16 (make 35 for data Nab)

Done: BAS40 on RS485 line to flip. layout incorrect!

Done: need 1M pull down resistor on all outputs

Done: Bigger footprint for 1/2 watt 250 ohm R's

Done: Bigger footprint for RS485 transorbs

Rev17

Done: put pull-up on reset line. PIC will pull it down
Done: add pullup for isp line, noticed NC module was going into ISP mode sometimes.
Done: remove pull up and pull down on RS-485 lines
Done: wider spacing for 250 Ohm resitors
Done: smt for PIC chip
Done: add RS485 optoisolator module
Done: move PWM cap away from connector
Done: add fuse to neutral on power connector

Not done: 10uF AO caps can be changed to 100uF.

TODO: make 9 for Malaysia

Rev18

Done: The RS485 module need to be moved toward U6 about 1-2mm, moved toward R30, R32 a little to shun J4(the erected PCB), and R30,R32 also need to be keep away from the RS485 module

Done: the footprint of C1 - C7, C9 is too narrow, need to be extended

TBD: the 78L12 in the LED borad is too hot, change to 7812

Done: check the ground of two RS485 connectors to see whether they are connected to the ground of RS485 module

Done: the voltage of U3(mux) need to be decreased to 10v to adapt 5v supply required by RS485 module, in series with an extra diode to the supply

Rev19

TBD: the polarity of C1 - C7, C9 should be annotated in silk layer

TBD: delete the temco controls on the top board.

TBD: Add RS485 TXEN Signal , From U6 PIN23 to J6 pin8 .

TBD: xx.dsn and xx.max will change 2n2222 to stardard footprint (SM/SOT23_123)

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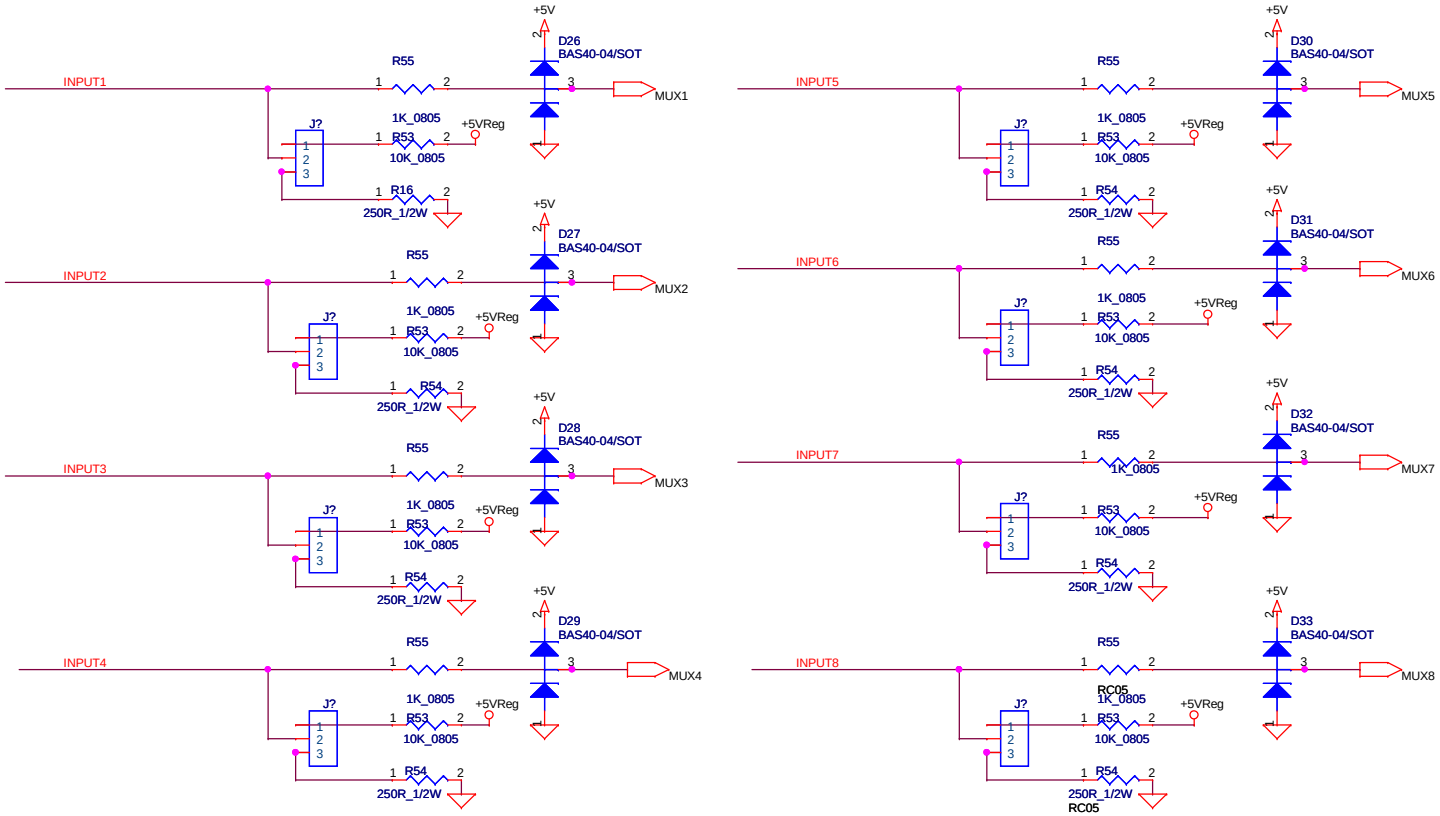
Size: C	Document Number: <Doc>	Rev: <RevCode>
Date: Thursday, October 23, 2014	Sheet 1 of 1	



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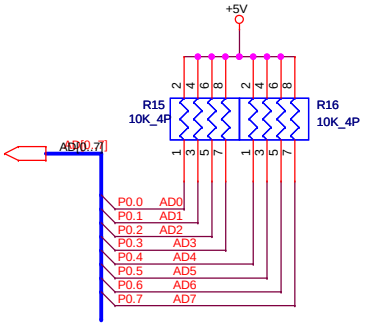
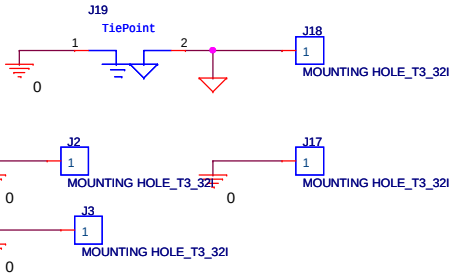
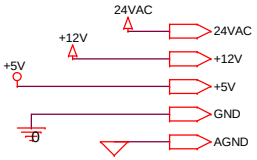
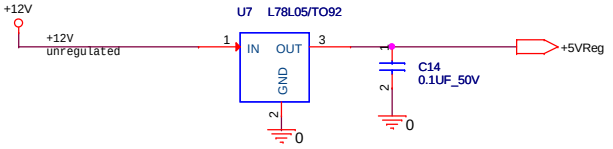
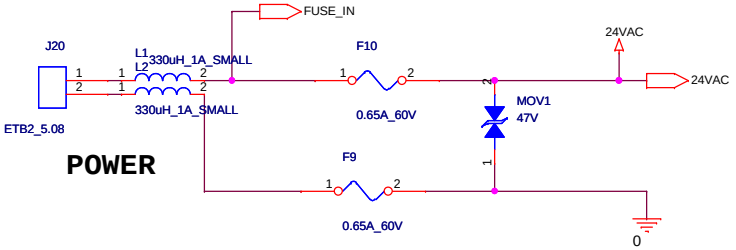






Mounting Holes





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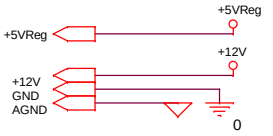

POWER

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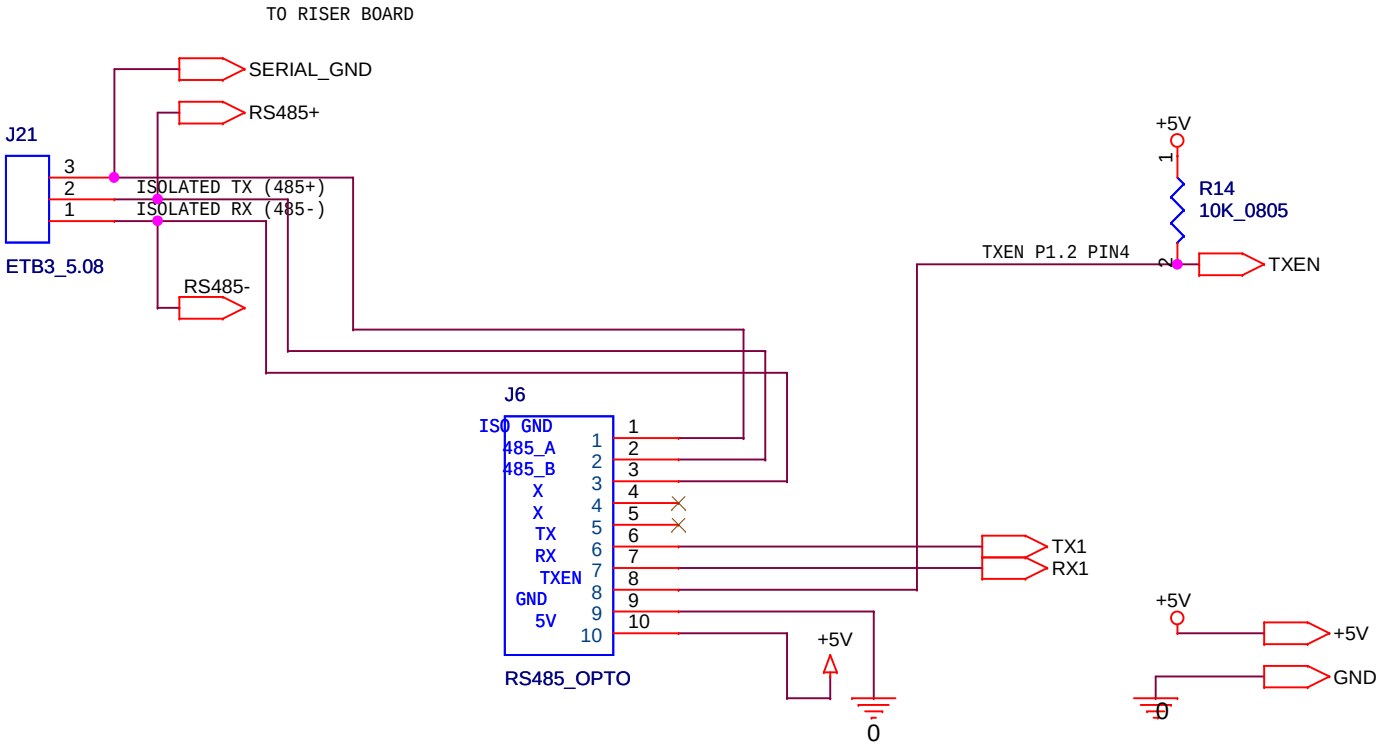

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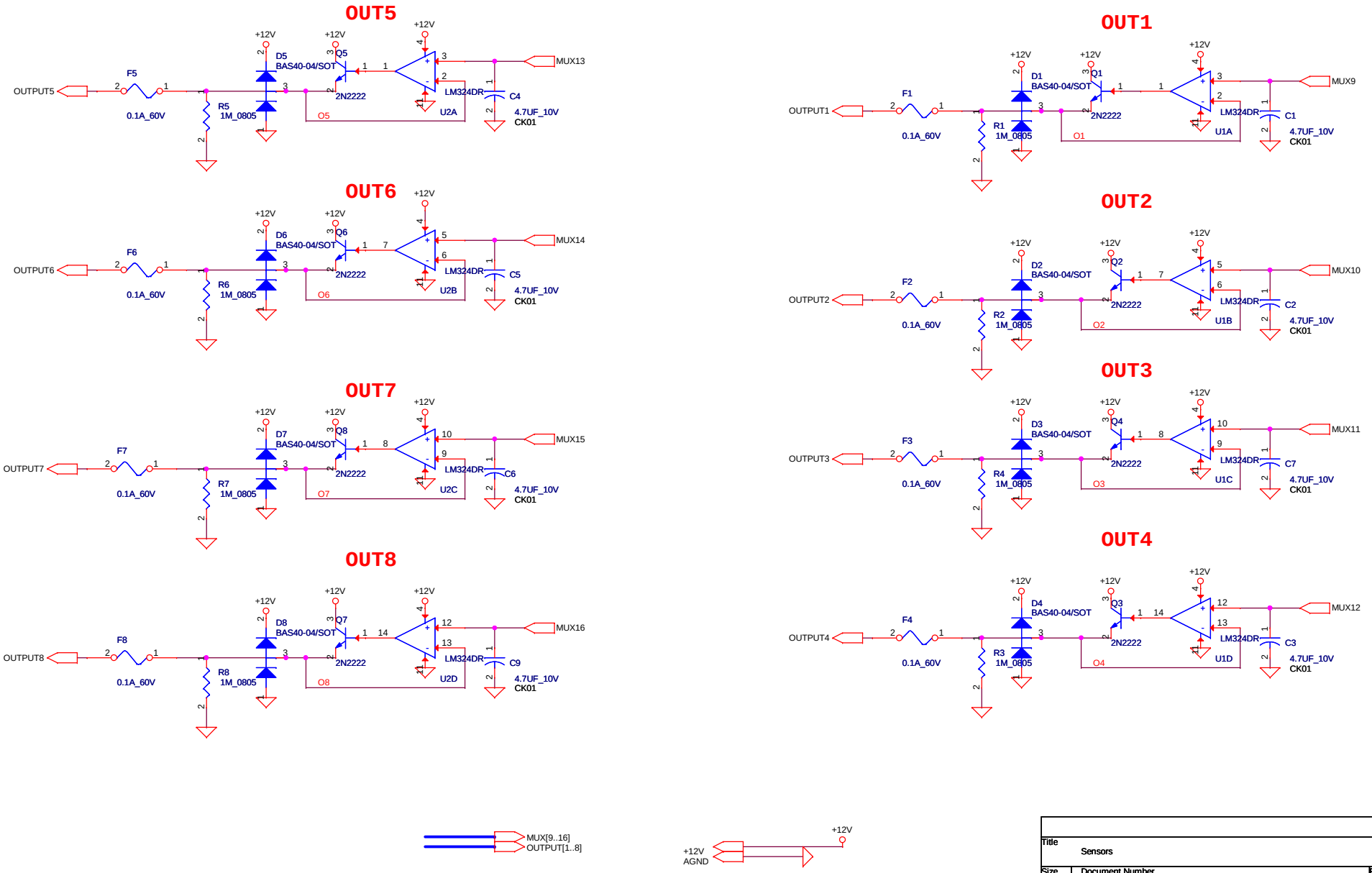

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