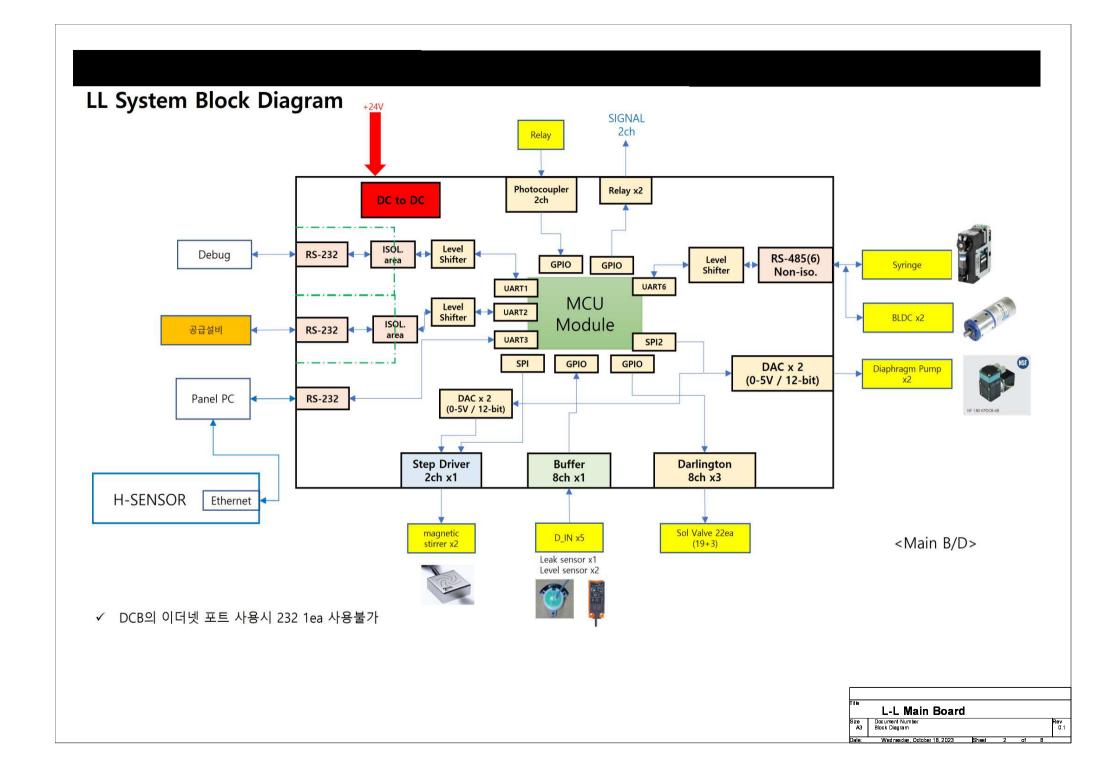
## L-L MAIN BOARD

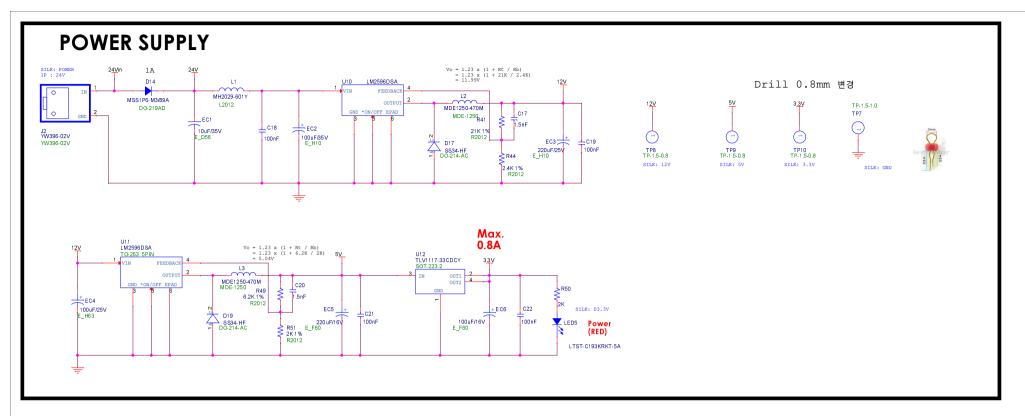
**Revision History** 

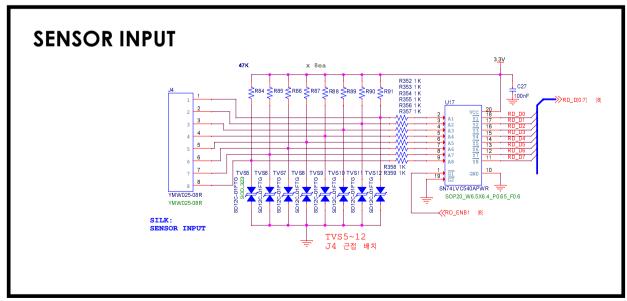
Version 0.1

REVISION	DESCRIPTION
Main_V0.1_20230831A	new design

L-L Main Board										
Size A3	Document Number Title/Rev_History				Rev 0.1					
Date	Wednesday October 18 2023 Sheet	1	of	8	-					



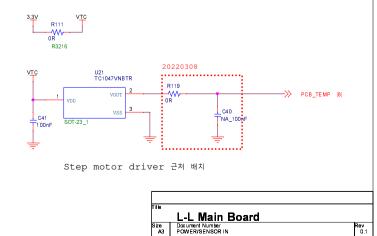




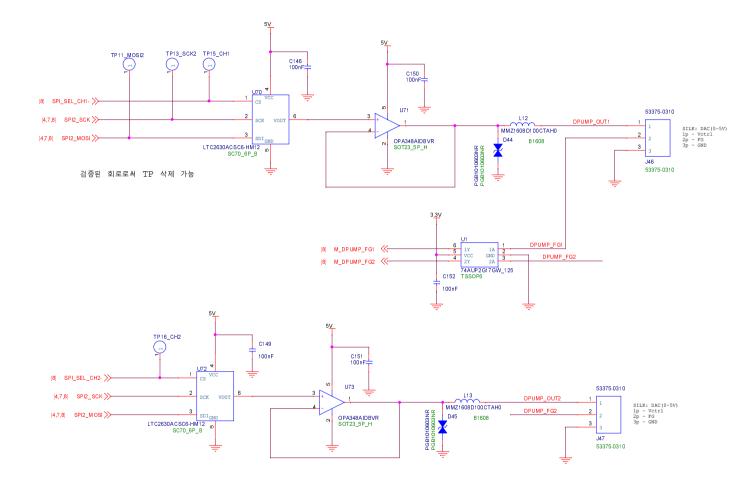
### PCB TEMP.

J7 근접 배치 및 U21.3번핀 R117 GND 근접배치

Wednesday, October 18, 2023 Sheet

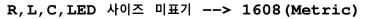


# DAC out ( Diaphragm Pump ) 0~5V Output ch #1~ #2

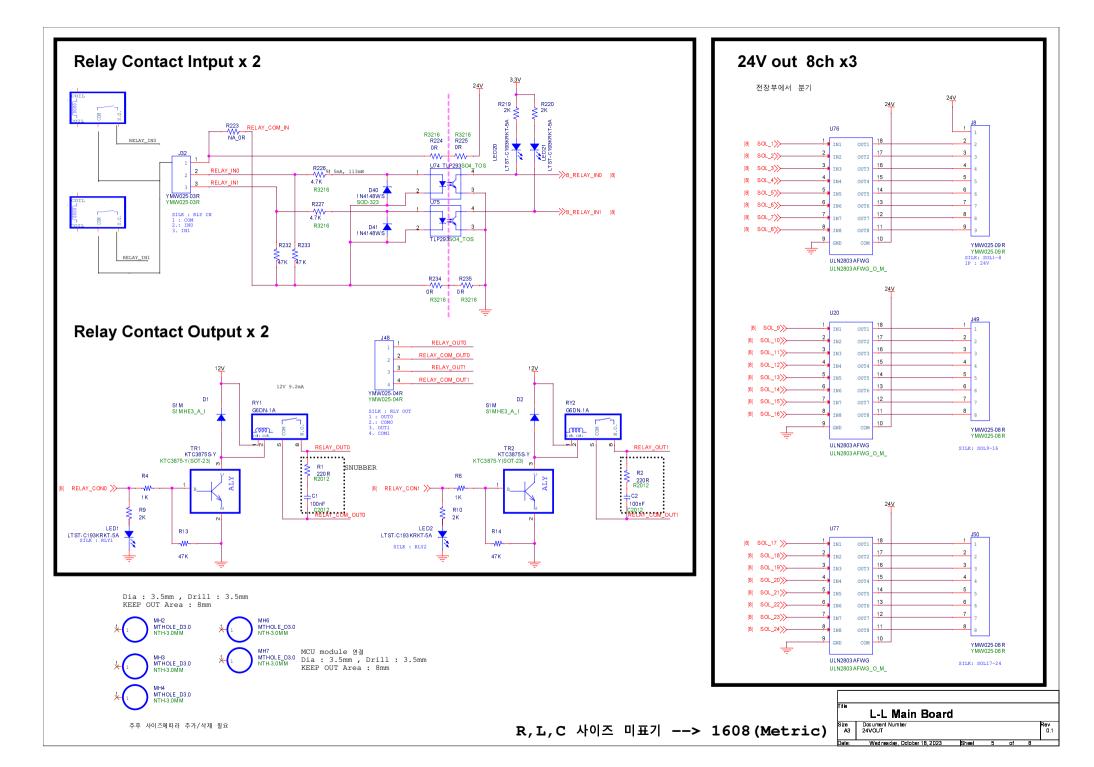


<b>ELECTRIC SPECIFICATIONS</b>						
Wires	AWG 24					
Wires assignment	red = +VS black = - VS/GND white = Vctrl-input green = FG-output					
Input signal	0-5 V					

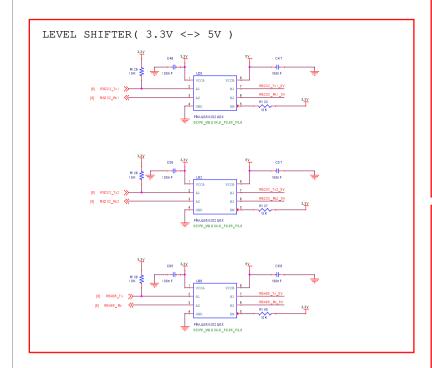




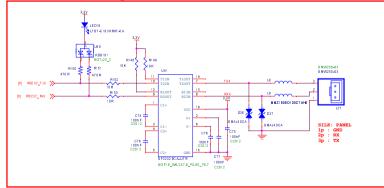
Tile						
~	L-L Main Board					
Size A3	Document Number DAC					Rev 0.1
Date:	Wednesday, October 18, 2023	Sheet	4	of	8	

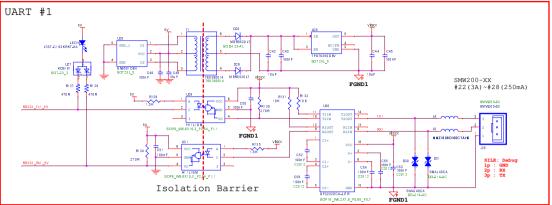


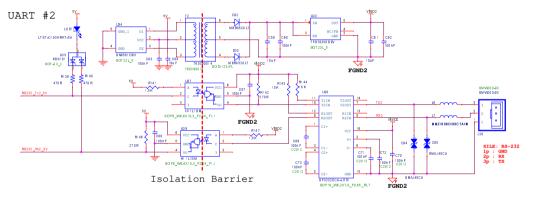
### RS-232/RS-485

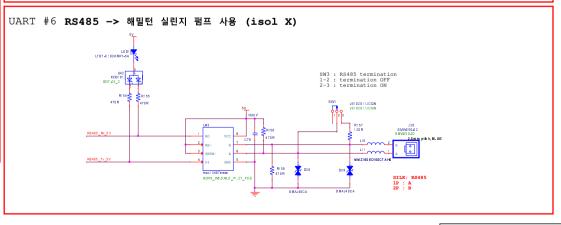


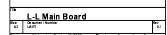












#### **DUAL STEP MOTOR DRIVER** 0~5V Output ch #3~ #4 J51 SMW200-04 TP17\_CH3 SILK: 1: A1 2.: A2 3: B1 4: B2 |8| SPI\_SEL\_CH3- >> U79 AB GVRE F BOUT1 [4,7,8] SPI2\_MOSI >> OPA348AIDBVR SOT23\_5P\_H LTC2630ACSC6-HM12 SC70\_6P\_B U2 DRV8823DCA SOP50P810X120-49N BISEN BOUT1 BISEN BOUT2 SCS NC\_4 RESETN NC\_3 NC\_2 PGND\_12 PGND\_10 PGND\_0 PGND\_0 PGND\_0 PGND\_0 TEST\_4 SDATA SSTB TEST\_2 COUT1 CISEN COUT2 100uF85V E\_H10 -≪STEP\_CS [8] C1 53 100 nF/35V STEP\_nRESET |8| STEP\_nSLEEP |8| C157 10nF C166 100nF PGND\_2 PGND\_3 PGND\_4 PGND\_5 PGND\_6 V3P3 ABVREF C167 100nF= C154 100nF/16V DNI R366 OR STEP\_SCLK [8] R367 OR [8] SPI\_SEL\_CH4- >> STEP SDI 181 C156 -≪STEP STB |8| 4.7uF/6.3V [4,7,8] SPI2\_SCK >>-CDGVREF DISEN CISEN OPA348AIDBVR SOT23\_5P\_H LTC2630ACSC6-HM12 SC70\_6P\_B Operational at VREF between 0 and 1V, but accuracy is degraded. COUT2 DOUT2 COUT1 ABVREF R364 64WR10KLF 64WR10KLF ABGVREF JUMPER HEADER-2.54P-1X3 J52 SMW200-04 SMW200-04 **₹** R363 ≹ R362 C159 = C161 = 100nF J.33R 1% 2W 0.33R 1% 2W R6432 0.33R 1% 2W 0.33R 1% 2W R365 64WR10KLF 64WR10KLF CDGVREF JUMPER HEADER-2.54P-1X3 L-L Main Board Document Number STEP MOTOR DRIVER

