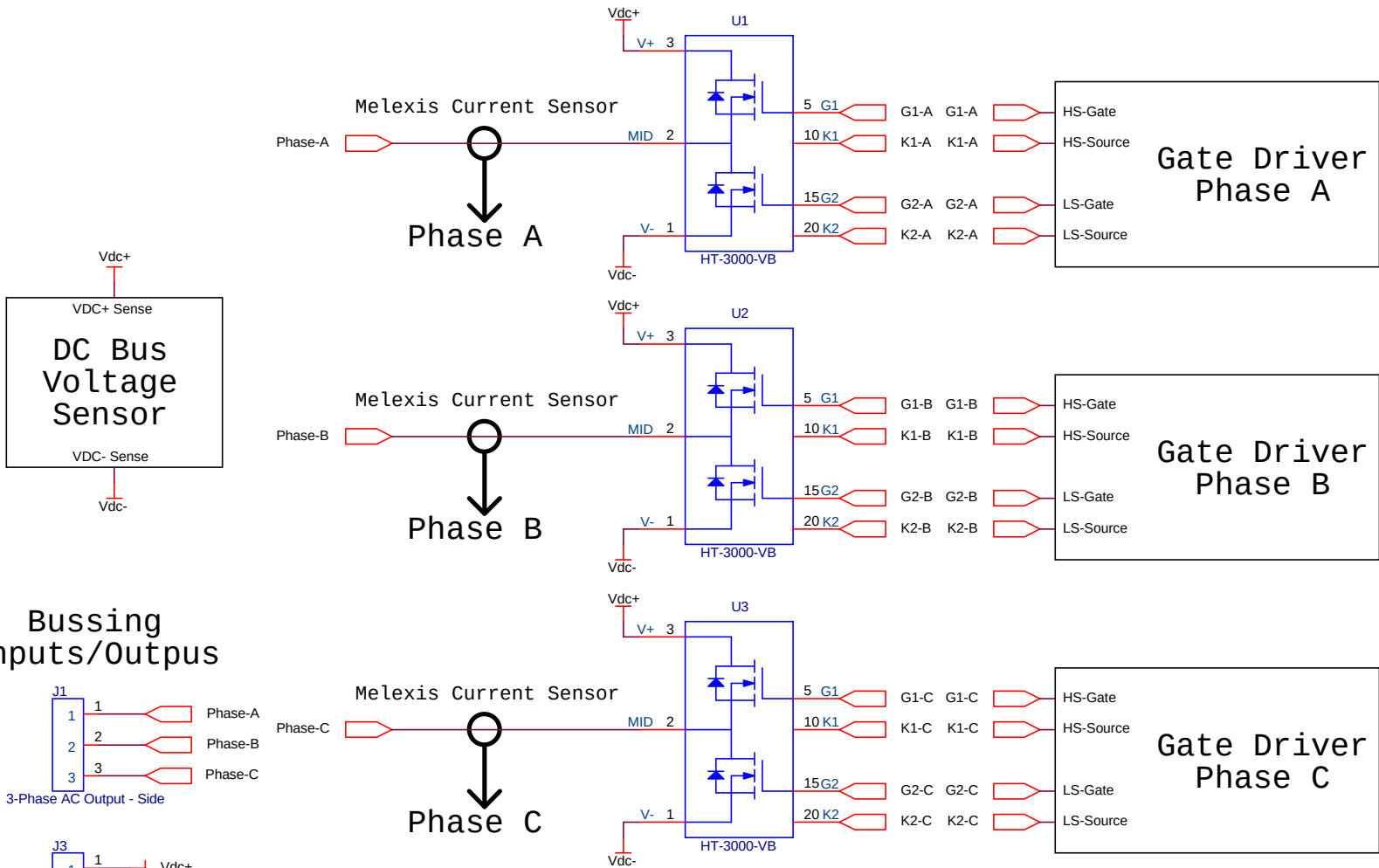
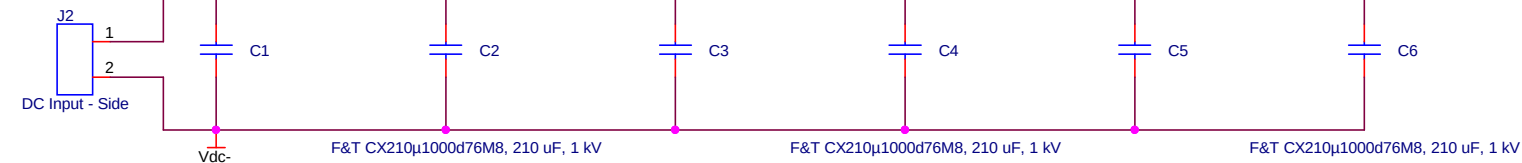
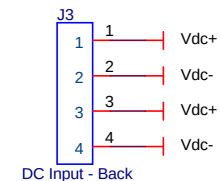
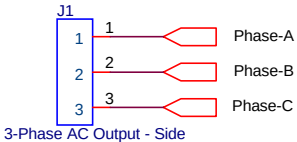
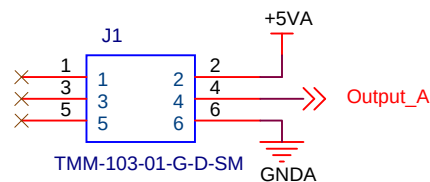




Bussing Inputs/Outputs

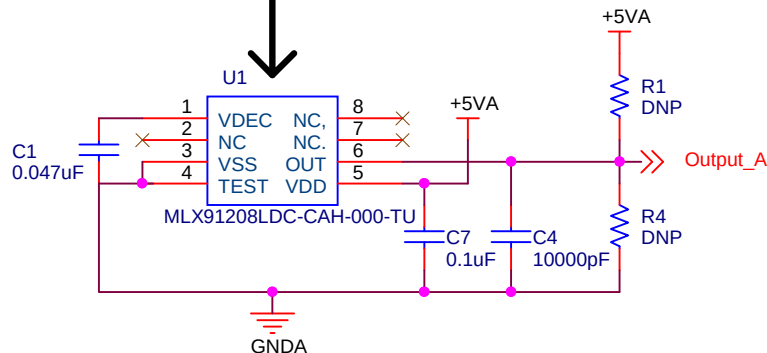


Inverter and Bussing		
Gen2 CRD200DA12E System Schematic		Rev v1
Sheet	1	of 1

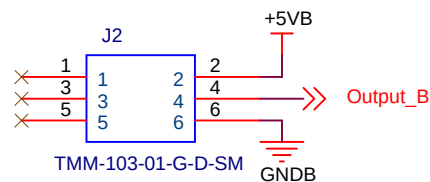


Mating Part - ICD/Ribbon Connector
Samtec TCSD-03-01

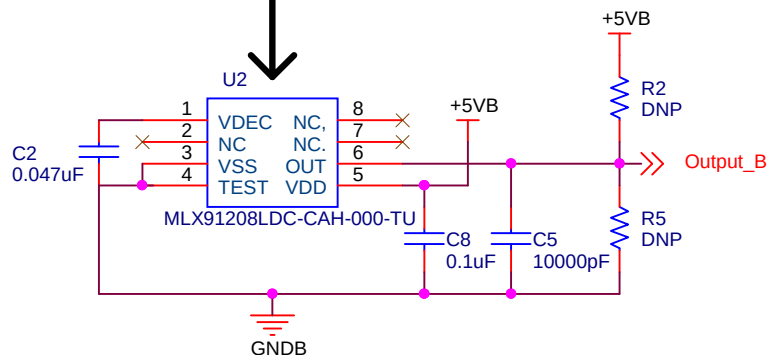
Phase A



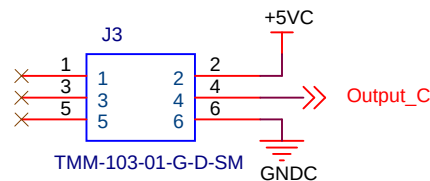
Phase B



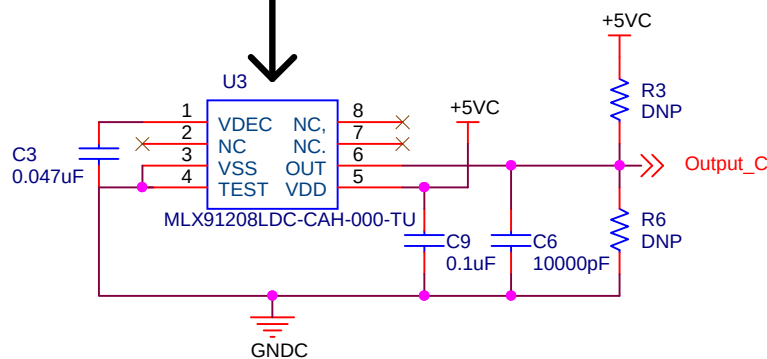
Mating Part - ICD/Ribbon Connector
Samtec TCSD-03-01



Phase C



Mating Part - ICD/Ribbon Connector
Samtec TCSD-03-01



*Refer to MLX91208 datasheet for operation
Nominal Operational Field Range: +/- 20 mT
Maximum Operational Field Range: +/- 25 mT
Output: 100 mV/mT, 2.5 V offset

Current measurement range depends
on width of ferromagnetic shield.

$$B[\text{mT}] = 1.25 \times (I[\text{A}] / W[\text{mm}])$$

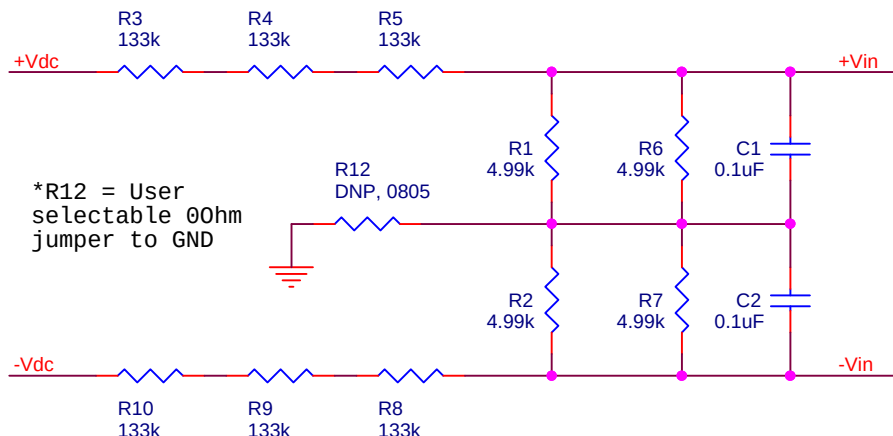
$$W = 35 \text{ mm} \rightarrow I = 700 \text{ Apk } (\sim 500 \text{ Arms})$$

Current Sensor

Gen2 CRD200DA12E System Schematic

Rev
v1

High impedance voltage divider to measure full DC bus voltage



DC bus voltage range: 0-800V

$R_3, R_4, R_5, R_8, R_9, R_{10} = 133K$

$R_{Hi} = R_3 + R_4 + R_5 + R_8 + R_9 + R_{10} = 798K$

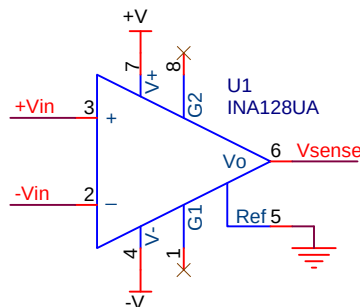
$R_{Lo} = (R_1 = R_2 = R_6 = R_7)$

$V_{in} = R_{Lo} / R_{Hi} (V/V_{dc})$

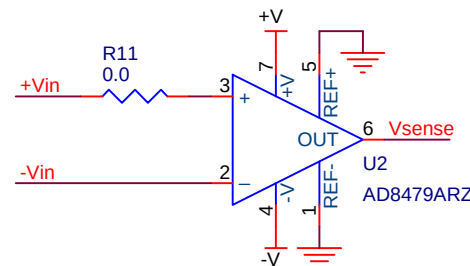
If $R_{Lo} = 3K$, V_{in} range is 0-3V for DC bus voltage range of 0-800V

If $R_{Lo} = 5K$, V_{in} range is 0-5V for DC bus voltage range of 0-800V

Unity-gain instrumentation amplifier

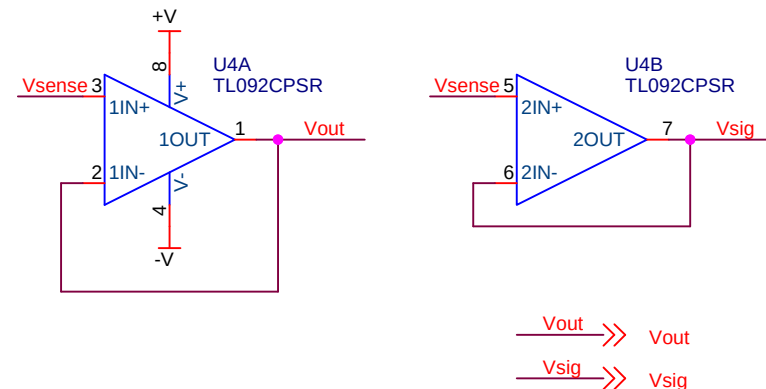


Very high common-mode voltage difference amplifier

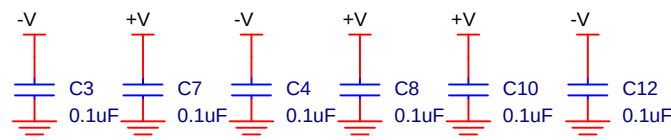


*Refer to AD8479 datasheet for R11

Unity-gain buffers for output signals



Decoupling capacitors for ICs

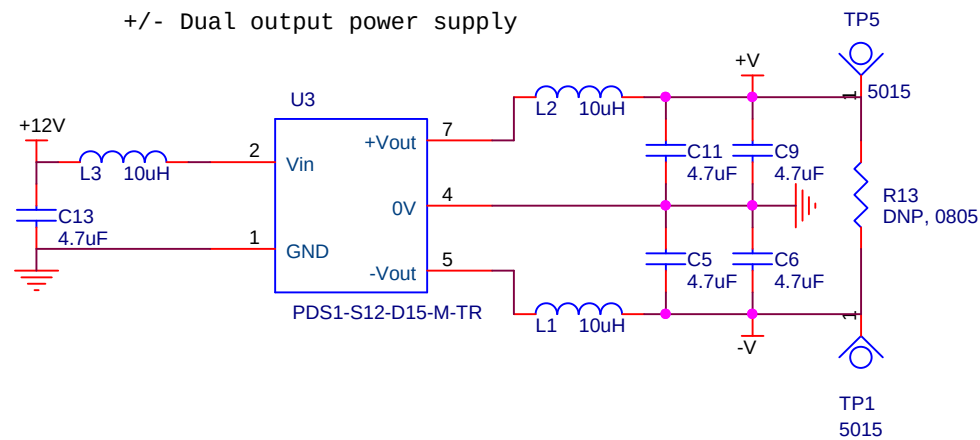
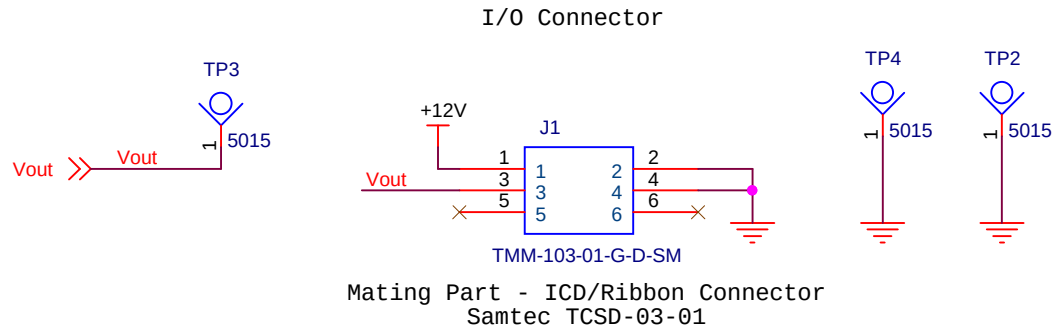


Voltage Sensor DC Bus Voltage Sensor

Gen2 CRD200DA12E System Schematic

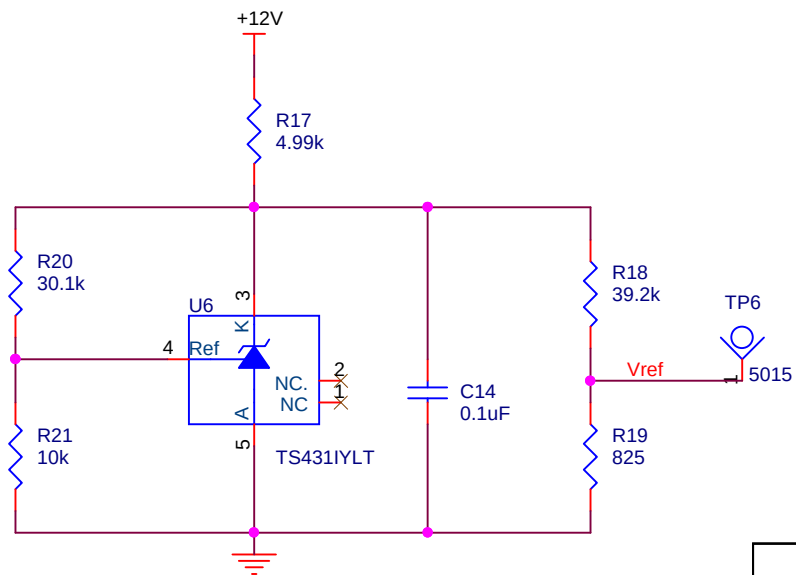
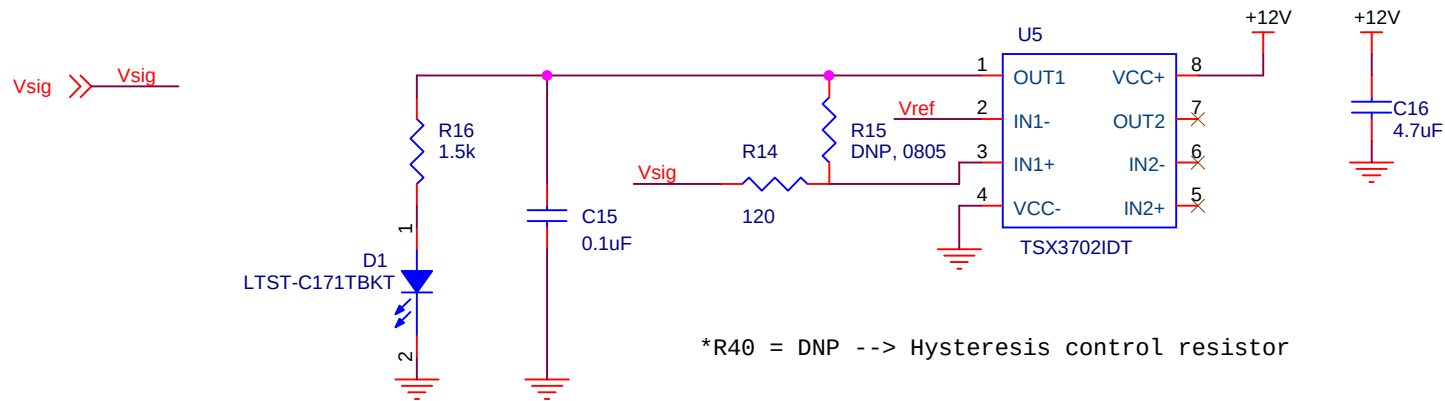
Rev v1

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Power supply interchangeable with dual output PDS1/PES1 series dc-dc converters from CUI Inc. Interchangeable voltage rails: +/-5V, +/-12V, +/-15V.

I/O + Power Supply		DC Bus Voltage Sensor
Gen2 CRD200DA12E System Schematic		Rev v1
Sheet 2 of 3		



DC Bus Voltage Level Indicator		DC Bus Voltage Sensor	
Gen2 CRD200DA12E System Schematic		Rev v1	
Sheet 3		of 3	

