

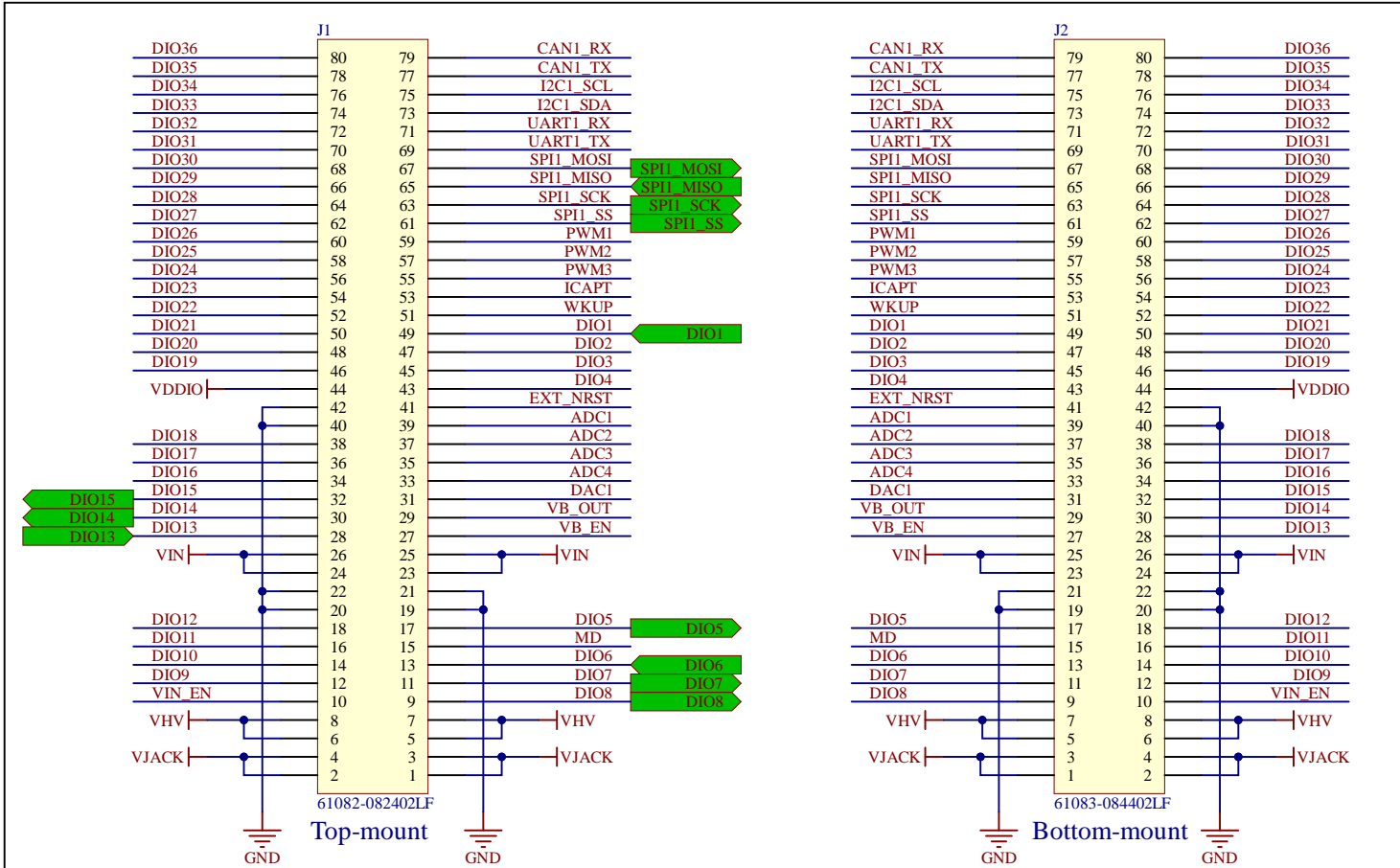


Title: <i>Block Diagram</i>	Version: <i>1.1.0</i>	
Board: <i>Zest_Sensor_4-20mA</i>	Size: <i>A4</i>	
Project: <i>6TRON</i>	Sheet: <i>1 of 5</i>	
Author: <i>ACH</i>	Date modified: <i>25/10/2022</i>	



6TRON connectors : FCI/Amphenol, 0.8A, 7.7mm height (12mm board to board)

BOLD = MOUNT BY DEFAULT

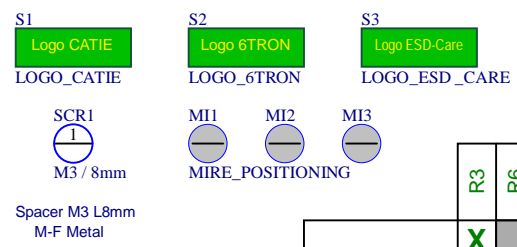
	R21	R22	R23	
ADS131A04	X			SPI1_SS
SPI_SS		X		DIO7
			X	DIO14

	R28	R29	R30	
ADS131A04	X			DIO1
DRDY		X		DIO6
			X	DIO13

	R31	R32	R33	
ADS131A04	X			DIO5
RESET		X		DIO8
			X	DIO15

	R18	R19	R20	
ADS131A04	X			SPI1_SS
DONE		X		DIO7
			X	DIO14

(Use only if chaining multiple zest_sensor_4-20mA)
(See "Configuration_chainage_zest_sensor.docx" for more info)



	R8	R10	
ADS131A04	X		SPI word 32bits
M1		X	SPI word 24bits
			SPI word 16bits

	R63	R64	
ADS131A04	X		Hamming code ON
M2		X	Hamming code OFF
			DO NOT USE

ADS131A04	X		Asynchronous interrupt mode
M0		X	Synchronous master mode
			Synchronous slave mode

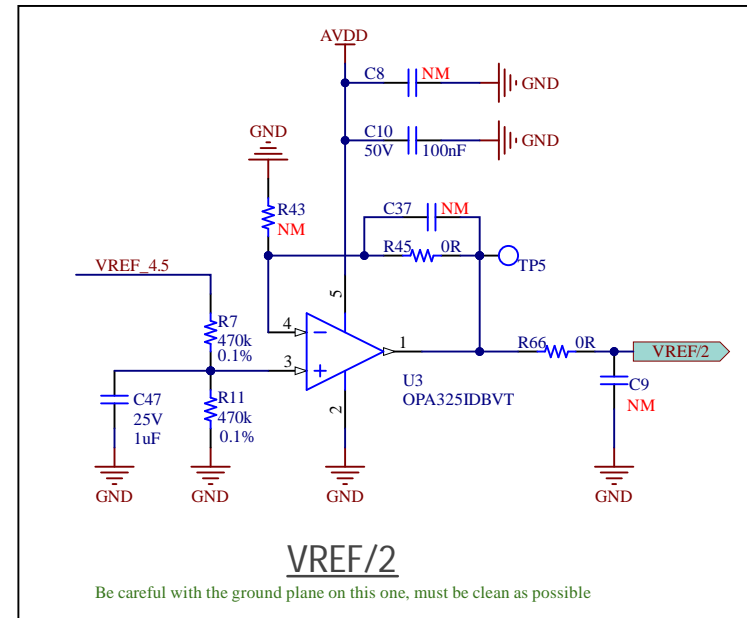
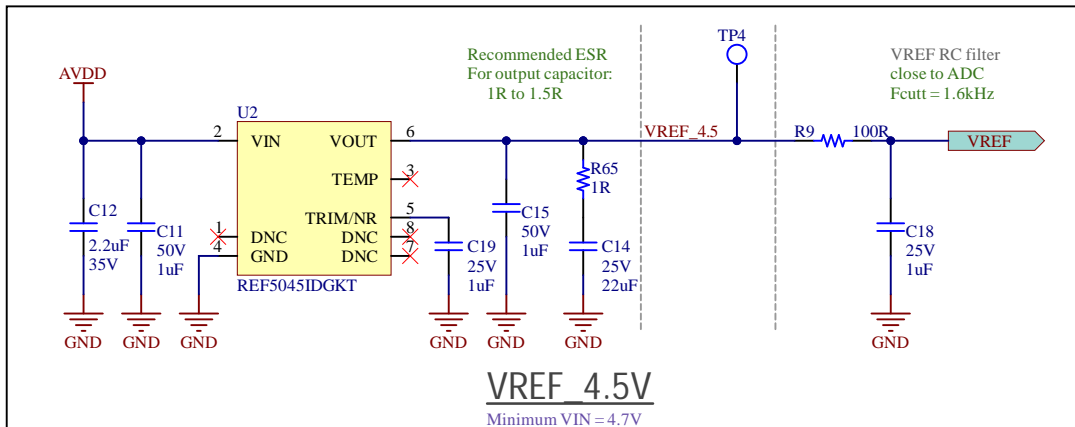
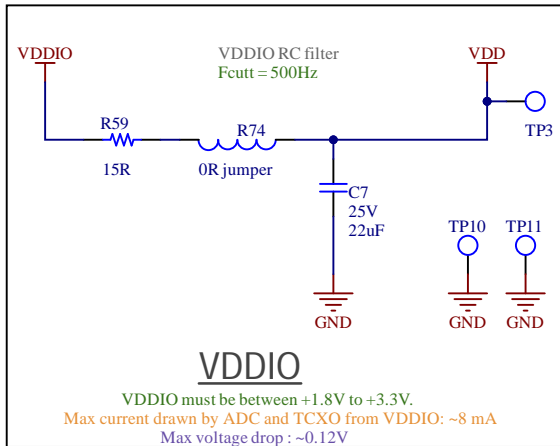
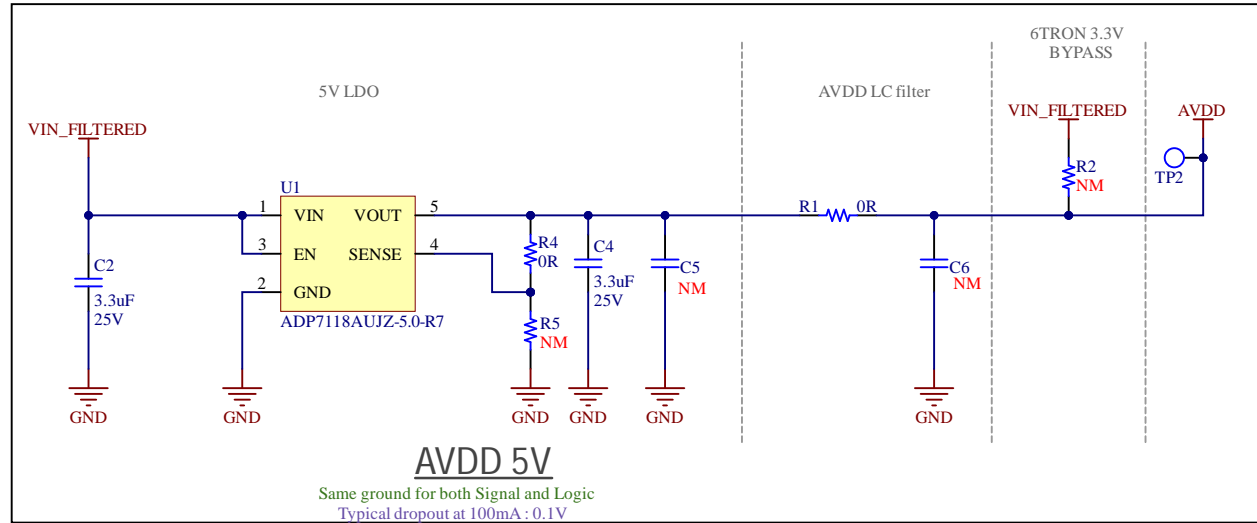
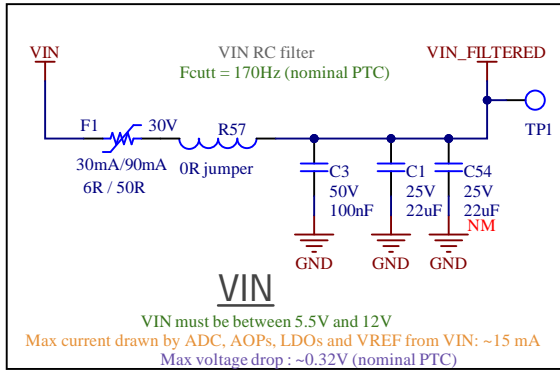
In case of VIN = 5V (typically stack powered from USB), the zest_sensor_4-20mA could still work, but AVDD need to be bypass :
- remove R1
- mount R2

In this configuration :
Min VIN = 4.7V
Max VIN = 5.5V

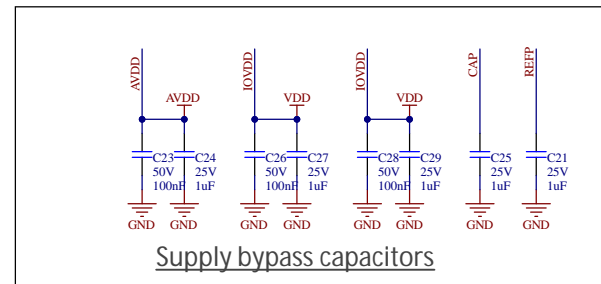
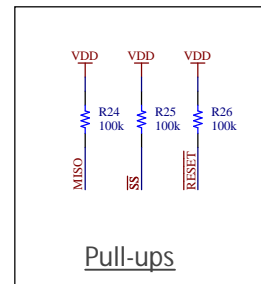
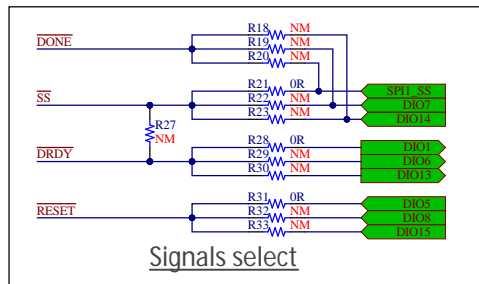
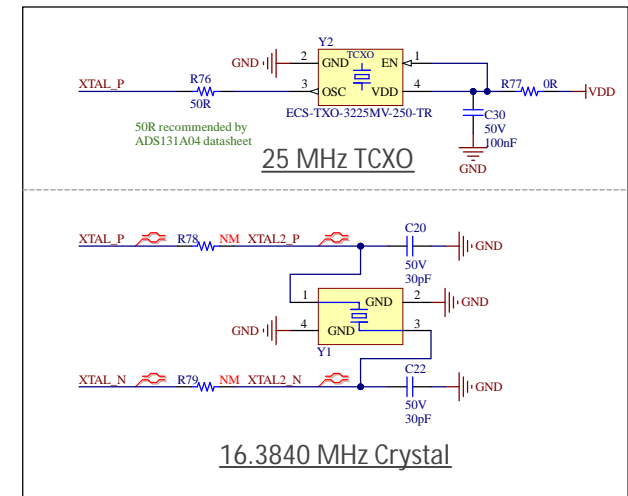
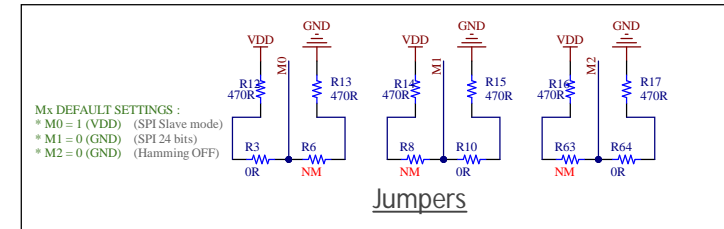
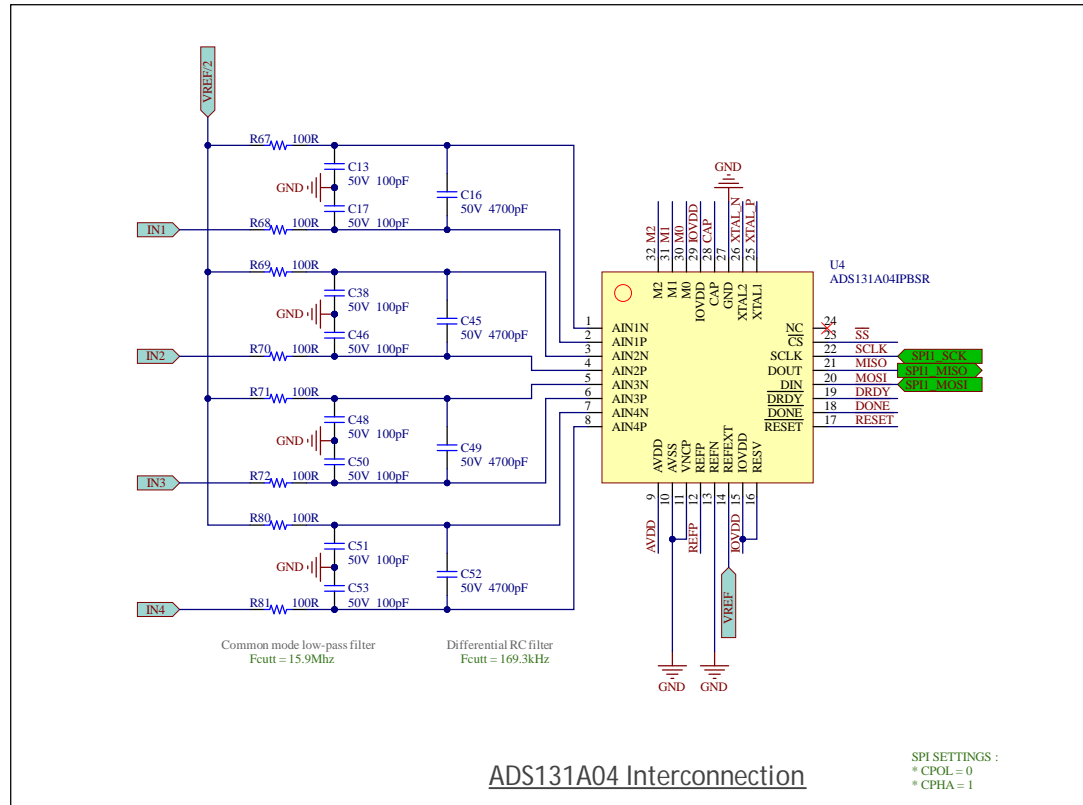
Even if it is not recommended, the zest_sensor_4-20mA can also work in 3.3V. To do so :
- remove R1
- remove R9
- remove R62
- mount R73
- mount R2
- Remove R66
- Replace C9 by 0R resistor (GND shunt)
- use internal ADS131A04 VREF (2.442V)
- 6TRON VIN must be between 3.0V & 5.5V

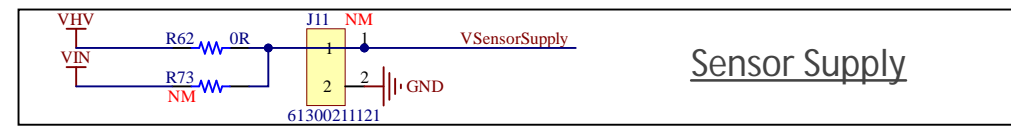
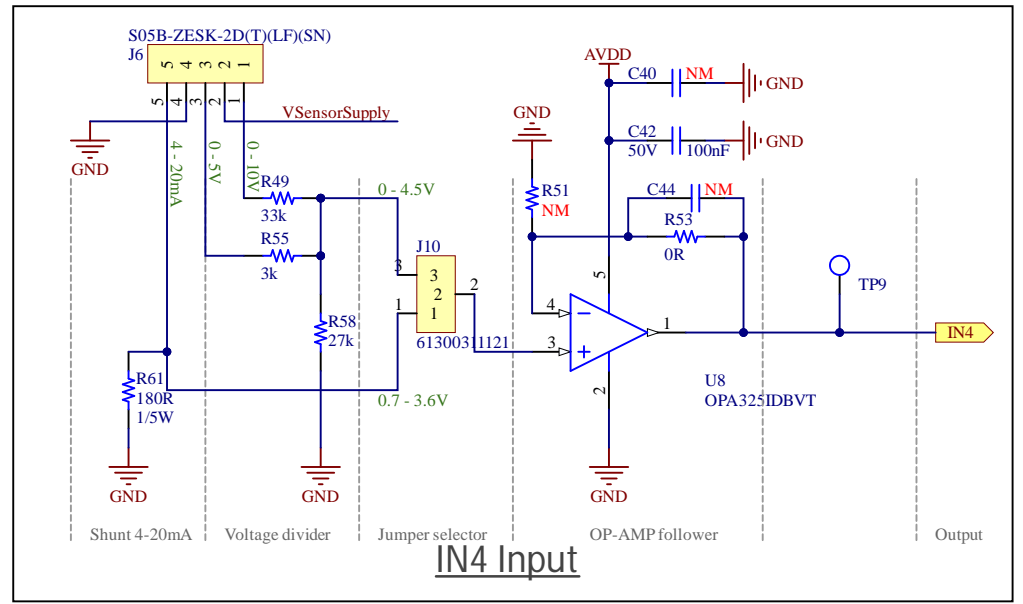
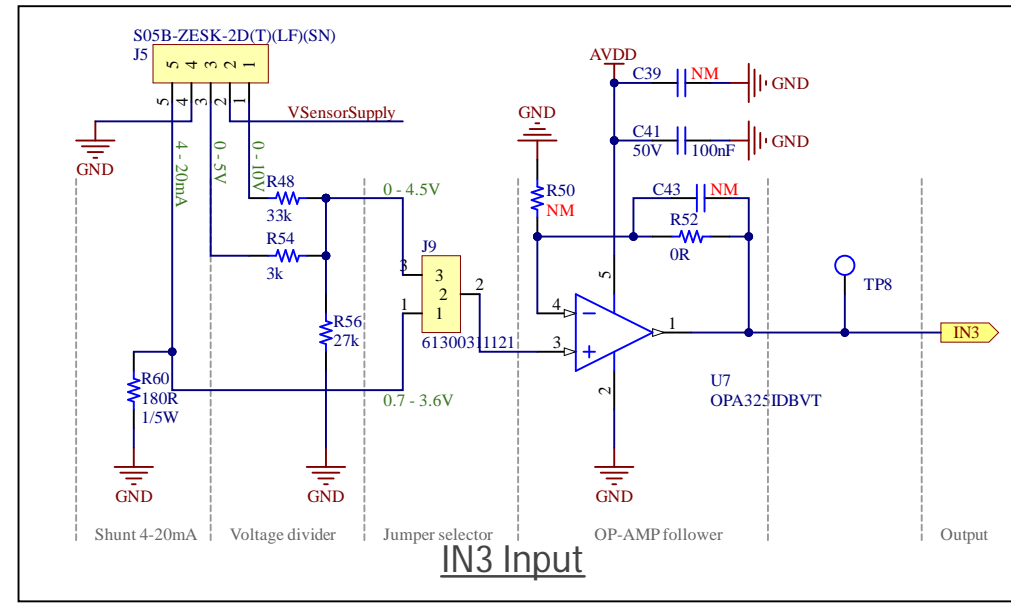
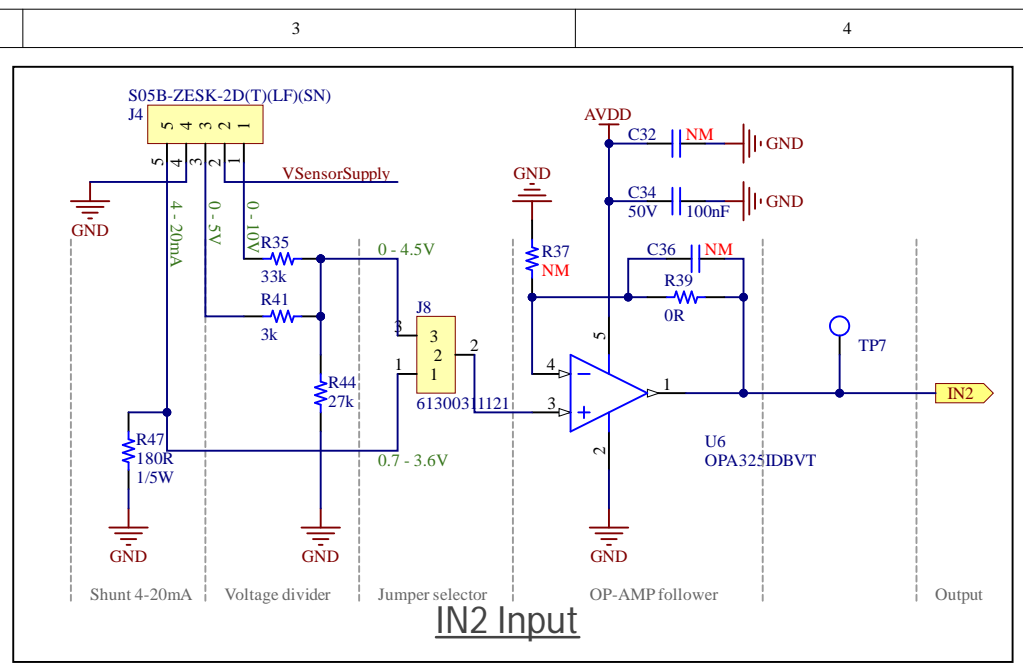
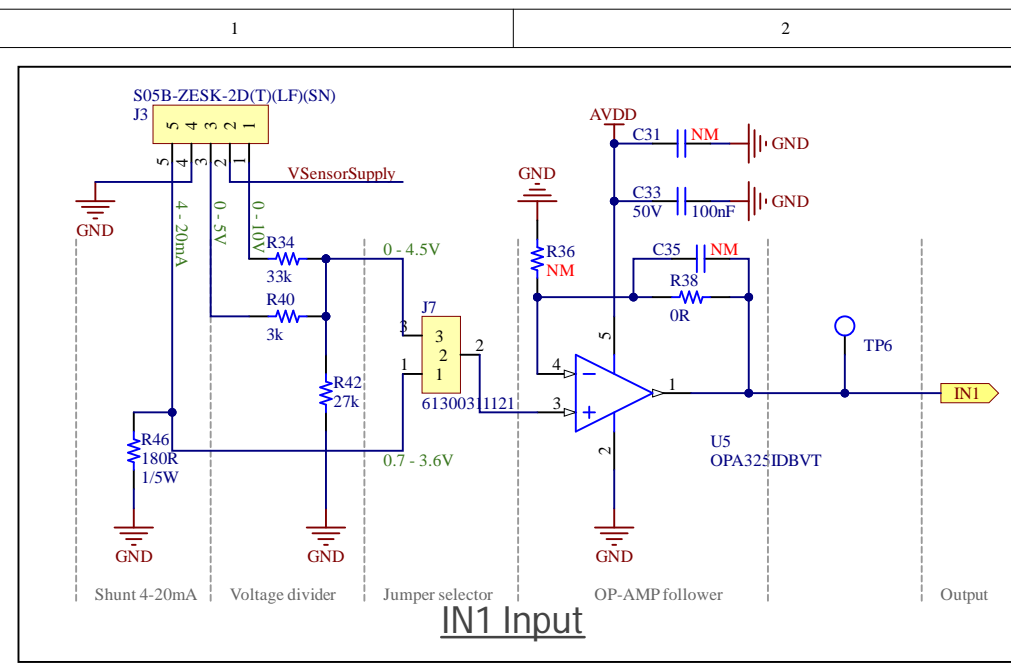
Title: <i>Interconnect</i>	Version: <i>1.1.0</i>	
Board: <i>Zest_Sensor_4-20mA</i>	Size: <i>A4</i>	
Project: <i>6TRON</i>	Sheet: <i>2 of 5</i>	
Author: <i>ACH</i>	Date modified: <i>28/10/2022</i>	





Title: Supply	Version: 1.1.0	
Board: Zest_Sensor_4-20mA	Size: A4	
Project: 6TRON	Sheet: 3 of 5	
Author: ACH	Date modified: 02/11/2022	





Title: <i>Inputs</i>	Version: <i>1.1.0</i>	
Board: <i>Zest_Sensor_4-20mA</i>	Size: <i>A4</i>	
Project: <i>6TRON</i>	Sheet: <i>5 of 5</i>	
Author: <i>ACH</i>	Date modified: <i>02/11/2022</i>	

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