HSCMS - https://www.ti.com/lit/an/sboa310b/sboa310b.pdf?ts=1747110239805&ref_url=https%253A%252F%252Fwww.ti.com%252Fdocument-viewer%252Flit%252Fhtml%252FSBOA347

Design Steps

1. The full transfer function of the circuit is provided below.

$$V_o = I_{in} \times R_1 \times \frac{R_5}{R_4}$$

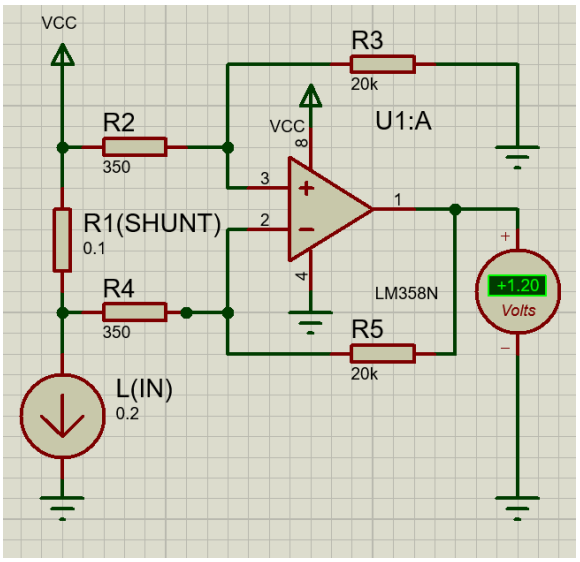
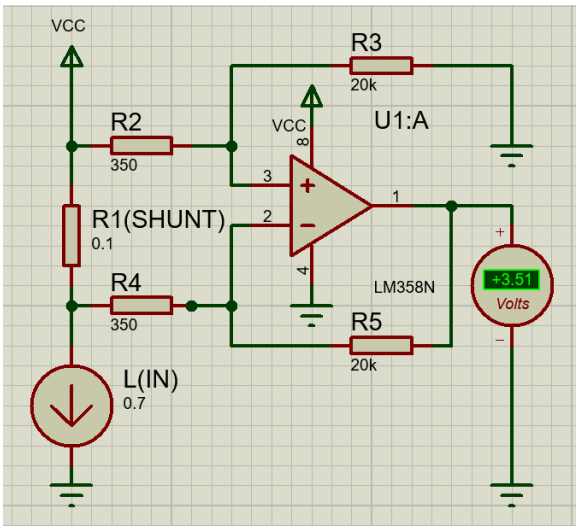
Given $R_2 = R_4$ and $R_3 = R_5$

Full transfer udregning

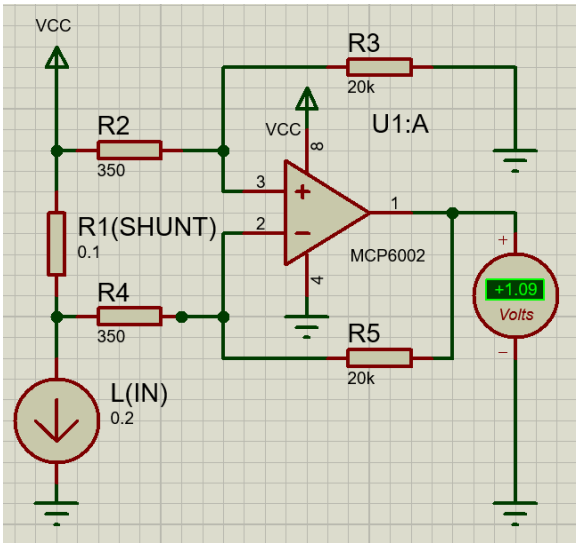
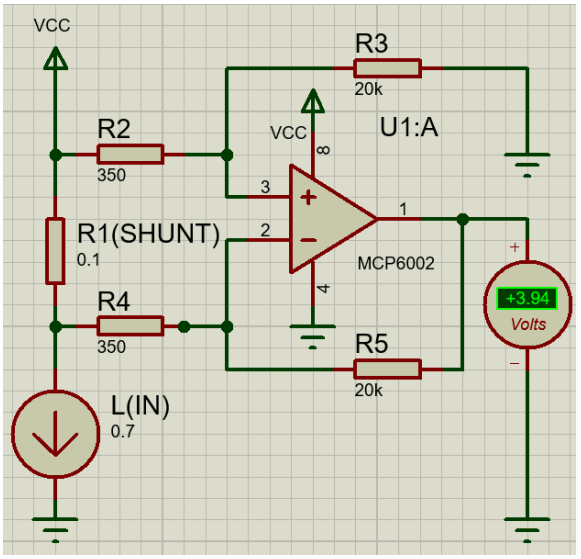
I(in)	R1 (shunt)	R5	R4	Vo
0,2	0,1	20000	350	1,142857143
0,7	0,1	20000	350	4

20k (R5)	LM358N	MCP6002	NE5532
0,2 A	1,2 v	1,09 v	3,01 v
0,7 A	3,51 v	3,94 v	1,9 v

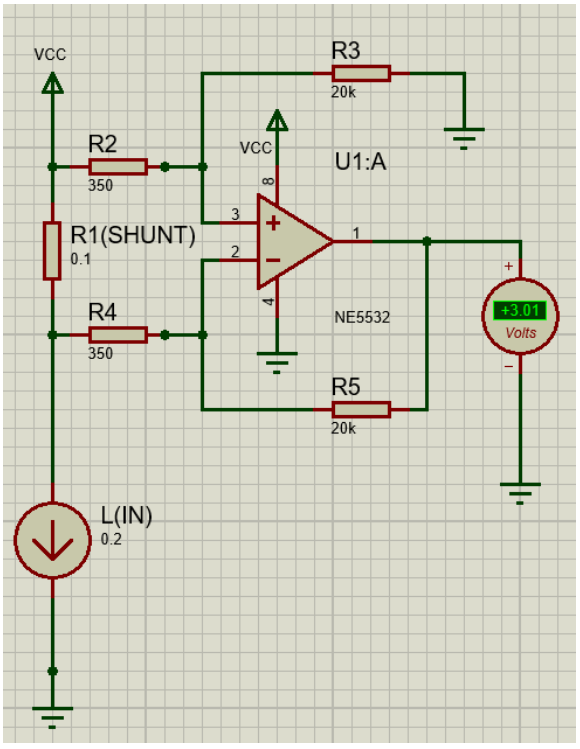
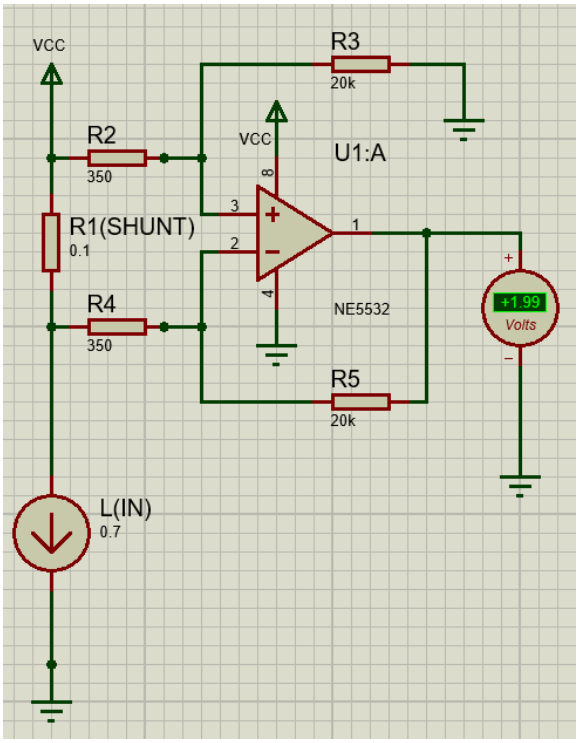
LM358N

0,2 A	0,7 A
	

MCP6002

0,2 A - 1,09 v	0,7 A 3,94
	

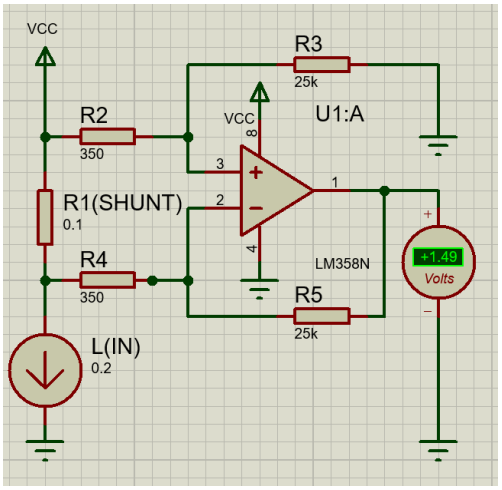
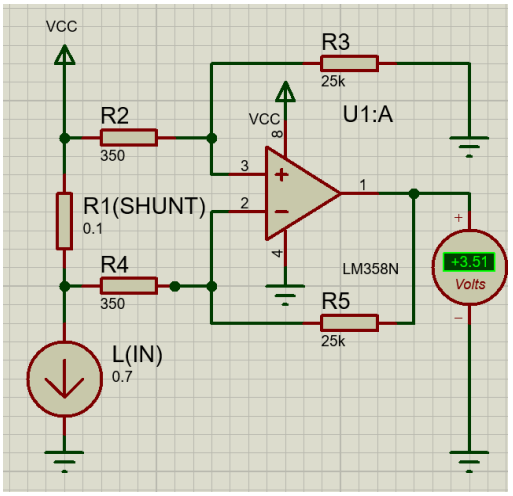
NE5532

0,2 A	0,7 A
	

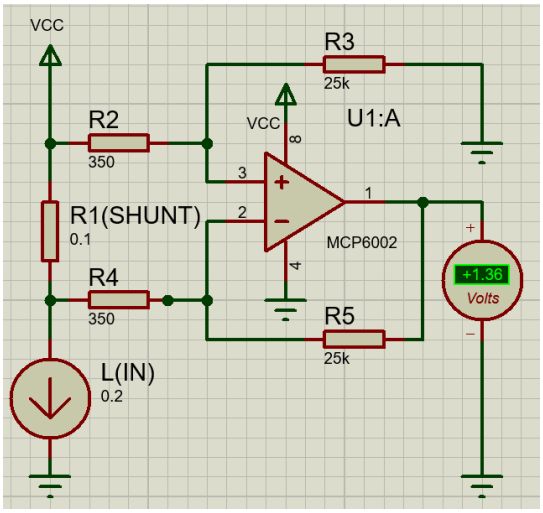
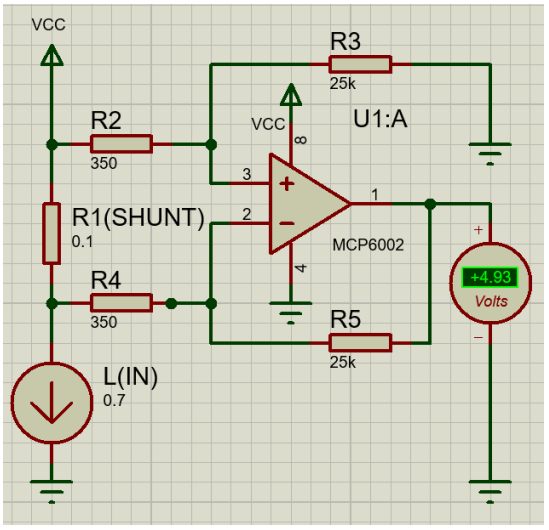
I(in)	R1 (shunt)	R5	R4	Vo
0,2	0,1	25000	350	1,428571429
0,7	0,1	25000	350	5

25k (R5)	LM358N	MCP6002
0,2 A	1,49 v	1,36v
0,7 A	3,51 v	4,93 v

LM358N

0,2 A	0,7 A
	

MCP6002

0,2 A	0,7 A
	

En anden design løsning kunne være:

I(in)	R1 (shunt)	R5	R4	Vo
0,2	0,5	5000	350	1,428571429
0,7	0,5	5000	350	5