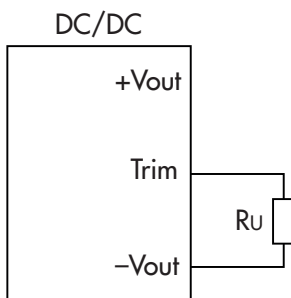


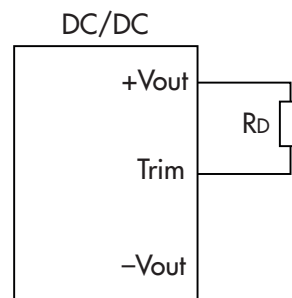
Output Voltage Adjustment

Output voltage set point adjustment allows the user to increase or decrease the output voltage set point of the single output module. This is accomplished by connecting an external resistor between the Trim pin and either the +Vout or -Vout pins. With an external resistor between the Trim and -Vout pin, the output voltage set point increases. With an external resistor between the Trim and +Vout pin, the output voltage set point decreases. The external TRIM resistor needs to be at least 1/16 W of rated power.

Connection of trim up resistor



Connection of trim down resistor



Trim-Up equation

$$R_U[\Omega] = \frac{G \times L}{V_{out_up} - L - K} - H$$

Trim-Down equation

$$R_D[\Omega] = \frac{(V_{out_down} - L) \times G}{V_{out_nom} - V_{out_down}} - H$$

Trim constants

Model	G	H	K	L
THN 30-xx10WIR	5'110	2'050	0.8	2.5
optional models with 5.0 Vout			2.5	
THN 30-xx11WIR			2.6	
THN 30-xx12WIR	10'000	5'110	9.5	
THN 30-xx13WIR			12.5	
THN 30-xx15WIR	56'000	13'000	21.5	
optional models with 54 Vout	66'000	27'400	51.5	

Trim-Tables for single output converters

THN 30-xx10WIR										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	3.333	3.366	3.399	3.432	3.465	3.498	3.531	3.564	3.597	3.630
R _u [kOhm]	385.071	191.511	126.99	94.73	75.374	62.47	53.253	46.34	40.963	36.662
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	3.267	3.234	3.201	3.168	3.135	3.102	3.069	3.036	3.003	2.970
R _p [kOhm]	116.719	54.779	34.133	23.81	17.616	13.486	10.537	8.325	6.604	5.228

optional models with 5.0 Vout										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	5.05	5.1	5.15	5.2	5.25	5.3	5.35	5.4	5.45	5.5
R _u [kOhm]	253.45	125.7	83.117	61.825	49.05	40.533	34.45	29.888	26.339	23.5
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	4.95	4.9	4.85	4.8	4.75	4.7	4.65	4.6	4.55	4.5
R _p [kOhm]	248.34	120.59	78.007	56.715	43.94	35.423	29.34	24.778	21.229	18.39

THN 30-xx11WIR										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	5.151	5.202	5.253	5.304	5.355	5.406	5.457	5.508	5.559	5.61
R _u [kOhm]	248.44	123.195	81.447	60.573	48.048	39.698	33.734	29.261	25.782	22.999
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	5.049	4.998	4.947	4.896	4.845	4.794	4.743	4.692	4.641	4.59
R _p [kOhm]	253.35	123.095	79.677	57.968	44.942	36.258	30.056	25.404	21.786	18.891

THN 30-xx12WIR										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	12.12	12.24	12.36	12.48	12.60	12.72	12.84	12.96	13.08	13.20
R _u [kOhm]	203.223	99.057	64.334	46.973	36.557	29.612	24.652	20.932	18.038	15.723
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	11.88	11.76	11.64	11.52	11.40	11.28	11.16	11.04	10.92	10.80
R _p [kOhm]	776.557	380.723	248.779	182.807	143.223	116.834	97.985	83.848	72.853	64.057

Trim-Tables for single output converters

THN 30-xx13WIR										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	16.50
R _u [kOhm]	161.557	78.223	50.446	36.557	28.223	22.668	18.7	15.723	13.409	11.557
	11 %	12 %	13 %	14 %	15 %	16 %	17 %	18 %	19 %	20 %
V _{out} [V]	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	18.00
R _u [kOhm]	10.042	8.779	7.711	6.795	6.001	5.307	4.694	4.149	3.662	3.223
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	14.85	14.70	14.55	14.40	14.25	14.10	13.95	13.80	13.65	13.50
R _p [kOhm]	818.223	401.557	262.668	193.223	151.557	123.779	103.938	89.057	77.483	68.223

THN 30-xx15WIR										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	24.24	24.48	24.72	24.96	25.20	25.44	25.68	25.92	26.16	26.40
R _u [kOhm]	570.333	278.667	181.444	132.833	103.667	84.222	70.333	59.917	51.815	45.333
	11 %	12 %	13 %	14 %	15 %	16 %	17 %	18 %	19 %	20 %
V _{out} [V]	26.64	26.88	27.12	27.36	27.60	27.84	28.08	28.32	28.56	28.80
R _u [kOhm]	40.03	35.611	31.872	28.667	25.889	23.458	21.314	19.407	17.702	16.167
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
V _{out} [V]	23.76	23.52	23.28	23.04	22.80	22.56	22.32	22.08	21.84	21.60
R _p [kOhm]	4947.67	2439.33	1603.22	1185.17	934.333	767.111	647.667	558.083	488.407	432.667

optional models with 54 Vout										
Trim-Up										
	1 %	2 %	3 %	4 %	5 %	6 %	n/a			
Vout [V]	54.54	55.08	55.62	56.16	56.70	57.24				
R _u [kOhm]	278.156	125.378	74.452	48.989	33.711	23.526				
Trim-Down										
	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	10 %
Vout [V]	53.46	52.92	52.38	51.84	51.30	50.76	50.22	49.68	49.14	48.60
R _p [kOhm]	6'201.04	3'053.82	2'004.75	1'480.21	1'165.49	955.67	805.81	693.41	605.98	536.04
	11 %	12 %	13 %	14 %	15 %	16 %	17 %	18 %	19 %	20 %
Vout [V]	48.06	47.52	46.98	46.44	45.90	45.36	44.82	44.28	43.74	43.20
R _p [kOhm]	478.82	431.14	390.79	356.20	326.23	300.00	276.86	256.29	237.89	221.32