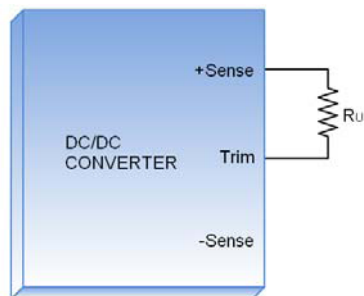
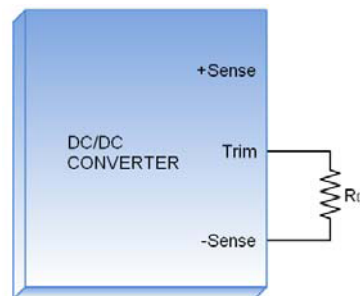


**Output Voltage Adjustment**

Output voltage is adjustable for 10% trim up or -20% trim down of nominal output voltage by connecting an external resistor between the Trim pin and either the +Sense or -Sense pins. With an external resistor between the Trim and -Sense pin, the output voltage set point decreases. With an external resistor between the Trim and +Sense pin, the output voltage set point increases. Maximum output deviation is +10% inclusive of remote sense. The value of external resistor can be obtained by equation or trim table shown in next page. The external TRIM resistor needs to be at least 1/8W of rated power.



TRIM-UP



TRIM-DOWN

Output voltage adjustment configurations

TRIM EQUATION

$$R_U = \left( \frac{V_{OUT}(100 + \Delta\%)}{1.225\Delta\%} - \frac{100 + 2\Delta\%}{\Delta\%} \right) k\Omega$$

$$R_D = \left( \frac{100}{\Delta\%} - 2 \right) k\Omega$$

TRIM TABLE

| □□S3P3W     |  | TRIM-UP |        |        |        |        |        |        |        |        |        |
|-------------|--|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Trim-Up (%) |  | 1       | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     |
| Vout (V)    |  | 3.333   | 3.366  | 3.399  | 3.432  | 3.465  | 3.498  | 3.531  | 3.564  | 3.597  | 3.630  |
| RU (kΩ)     |  | 170.082 | 85.388 | 57.156 | 43.041 | 34.571 | 28.925 | 24.892 | 21.867 | 19.515 | 17.633 |

| □□S05W      |  | TRIM-UP |         |         |        |        |        |        |        |        |        |
|-------------|--|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| Trim-Up (%) |  | 1       | 2       | 3       | 4      | 5      | 6      | 7      | 8      | 9      | 10     |
| Vout (V)    |  | 5.05    | 5.10    | 5.15    | 5.20   | 5.25   | 5.30   | 5.35   | 5.40   | 5.45   | 5.50   |
| RU (kΩ)     |  | 310.245 | 156.163 | 104.803 | 79.122 | 63.714 | 53.442 | 46.105 | 40.602 | 36.322 | 32.898 |

| □□S12W      |  | TRIM-UP |         |         |         |         |         |         |         |         |        |
|-------------|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| Trim-Up (%) |  | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10     |
| Vout (V)    |  | 12.12   | 12.24   | 12.36   | 12.48   | 12.60   | 12.72   | 12.84   | 12.96   | 13.08   | 13.20  |
| RU (kΩ)     |  | 887.388 | 447.592 | 300.993 | 227.694 | 183.714 | 154.395 | 133.452 | 117.745 | 105.528 | 95.755 |

| □□S15W      |  | TRIM-UP  |         |         |         |         |         |         |         |         |         |
|-------------|--|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Trim-Up (%) |  | 1        | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      |
| Vout (V)    |  | 15.15    | 15.30   | 15.45   | 15.60   | 15.75   | 15.90   | 16.05   | 16.20   | 16.35   | 16.50   |
| RU (kΩ)     |  | 1134.735 | 572.490 | 385.075 | 291.367 | 235.143 | 197.660 | 170.886 | 150.806 | 135.188 | 122.694 |

| □□S24W      |  | TRIM-UP  |         |         |         |         |         |         |         |         |         |
|-------------|--|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Trim-Up (%) |  | 1        | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      |
| Vout (V)    |  | 24.24    | 24.48   | 24.72   | 24.96   | 25.20   | 25.44   | 25.68   | 25.92   | 26.16   | 26.40   |
| RU (kΩ)     |  | 1876.776 | 947.184 | 637.320 | 482.388 | 389.429 | 327.456 | 283.190 | 249.990 | 224.168 | 203.510 |

| □□S28W      |  | TRIM-UP  |          |         |         |         |         |         |         |         |         |
|-------------|--|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Trim-Up (%) |  | 1        | 2        | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      |
| Vout (V)    |  | 28.28    | 28.56    | 28.84   | 29.12   | 29.40   | 29.68   | 29.96   | 30.24   | 30.52   | 30.80   |
| RU (kΩ)     |  | 2206.571 | 1113.714 | 749.429 | 567.286 | 458.000 | 385.143 | 333.102 | 294.071 | 263.714 | 239.429 |

**Output Voltage Adjustment (Continued)**

| □□S48W      |  | TRIM-UP  |          |          |         |         |         |         |         |         |         |
|-------------|--|----------|----------|----------|---------|---------|---------|---------|---------|---------|---------|
| Trim-Up (%) |  | 1        | 2        | 3        | 4       | 5       | 6       | 7       | 8       | 9       | 10      |
| Vout (V)    |  | 48.48    | 48.96    | 49.44    | 49.92   | 50.40   | 50.88   | 51.36   | 51.84   | 52.32   | 52.80   |
| RU (kΩ)     |  | 3855.551 | 1946.367 | 1309.973 | 991.776 | 800.857 | 673.578 | 582.665 | 514.480 | 461.447 | 419.020 |

| □□S□□W        |  | TRIM-DOWN |        |        |        |        |        |        |        |       |       |
|---------------|--|-----------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| Trim-Down (%) |  | 1         | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9     | 10    |
| RD (kΩ)       |  | 98.000    | 48.000 | 31.333 | 23.000 | 18.000 | 14.667 | 12.286 | 10.500 | 9.111 | 8.000 |
| Trim-Down (%) |  | 11        | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19    | 20    |
| RD (kΩ)       |  | 7.091     | 6.333  | 5.692  | 5.143  | 4.667  | 4.250  | 3.882  | 3.556  | 3.263 | 3.000 |

**Remote Sense**

To minimize the effects of distribution losses by regulating the voltage at the Remote Sense pin. The voltage between the Sense pin and OUTPUT pin must not exceed 10% of Vout, i.e.

$$[+Vout \text{ to } -Vout] - [+Sense \text{ to } -Sense] \leq 10\% Vout$$

The voltage between +Vout and -Vout terminals must not exceed the minimum output overvoltage protection threshold. This limit includes any increase in voltage due to remote sense compensation and trim function.

If not using the remote sense feature to regulate the output at the point of load, then connect +Sense to +Vout and -Sense to -Vout.

