

# Application Notes

## for Powdec BSL600 Series

### 1.0 Protection Characteristics

#### 1.1 Over Current Protection

An overcurrent protection circuit is built-in and activated at 120~150% of the rated current of V1. Please do not use a unit in short circuit and/or an overcurrent condition.

STANDARD MODELS: Output will go into hiccup mode until the fault condition is removed, max 4 second intervals.

"L" OPTION MODELS: Output will Latch Off, toggle remote on/off control or recycle AC input to reset.

#### 1.2 Over Voltage Protection

An overvoltage protection circuit is built-in and activated at 120~150% of the rated Voltage (V1 only).

STANDARD MODELS: Remove AC to reset

"L" OPTION MODELS: Toggle remote on/off control reset

#### 1.3 Over Temperature Protection (Optional: Suffix T)

An optional thermal protection circuit can be built-in to the supply. The thermal protection circuit would shut-down the power supply when the internal temperature of the power supply exceeds maximum parameters. The supply shall automatically recover once the overtemperature condition is removed.

### 2.0 Status / Control Functions

#### 2.1 Voltage Adjustment:

To increase output voltage, turn potentiometer clockwise. To decrease output voltage, turn it counterclockwise.

#### 2.2 Remote On/Off Control:

The Control Signal APPLIED may be a TTL Compatible Signal or Ground connection applied to Pin 7 of CN3.

STANDARD MODELS: The default condition of the power supply is ON and may be inhibited OFF.

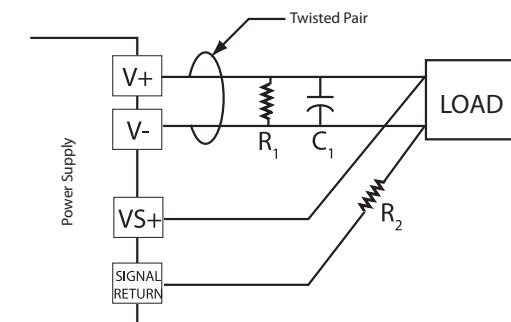
RA OPTION MODELS: The default condition of the power supply is OFF and may be enable ON.

#### 2.3 Remote Sense ("S" Option):

STANDARD MODELS: Remote Sense is not built-in to standard models.

"S" OPTION MODELS: You must tie +VS (CN3-8) to V+ for proper regulation of supplies with the "S" Option. When using the remote sense function, please note the following:

- \* Loose connection can cause load current to flow through the sense lines and damage internal circuits.
- \* Use appropriate AWG wire to connect between the power supply and the load to keep the line drop to <250mV.
- \* If sense lines are long, connect appropriate capacitance and resistance between V+ and V- (see figure 1)
- \* Use a twisted pair wire or a shielded wire as the sensing line.
- \* If output voltage of the power supply is oscillating or fluctuates under an impedance or load conditions, we suggest:
  - Connect Signal Return Directly to the V-.
  - Connect C1, R1 and R2.
  - Consult us for additional support



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### 2.0 Status / Control Functions (continued)

- 2.4 **AC Fail**  
TTL compatible logic signal. Signal high when Input is present, will go low upon loss of input at least 5 ms before loss of DC regulation.
- 2.5 **Power Good**  
TTL compatible signal. Signal is high when V1 output is within 5% of nominal. Signal will go low within 20ms of loss of DC regulation.

### 3.0 Parallel Operation

Power Supplies may be connected in parallel for more power and/or redundant operation. For 1+1 redundant operation where total power will not exceed 600 watts, simply tie the outputs in parallel (remote sense connections are not required). For applications where the load is in excess of 600 watts, remote sense lines should be utilized. All of the sense lines should be tied locally with one pair of sense lines tied to the load. Please refer to the designer's manual for more details on this. OR'ng Diodes should be utilized to ensure continued operation through the failure of one supply. Output power should be de-rated 10% when supplies are paralleled for more power. No more than 4 supplies should be tied in parallel.

