



## Signal Amplifier - Technical Data

Parameter	9-B5950-004	9-B5950-005	9-B5950-007	9-B5950-008
Supply Voltage	9.0V DC min. - 32 VDC max.			
Supply Current	45 mA max. (no load)			
Input Control Signal				
Control Voltage	2 - 10 VDC		1 - 5 VDC	
Control Current	4 - 20 mA		4 - 20 mA	
PWM Frequency	1.2 KHz fixed			
Output Leap to 1 min.	@ 2V or 4 mA control +/- 15%		@ 1V or 4 mA control +/- 15%	
Dithering Frequency	30 - 300 Hz			
Dithering Aplitude	0 - 500 mA peak to peak			
Voltage Reference	5.0V +/- 5% regulated			
Operating Temp.	-25 to 85° C			
<b>Output Current @ 25° C</b>				
Continuous	2.0 A	300 mA	2.0 A	300 mA
Peak Pulsed (16 ms)	17.0 Amps max.			
1 min	0 - .67A	0 - 100 mA	0 - .67 A	0 - 100 mA
1 max	1 min + 1.33 A	1 min + 200 mA	1 min + 1.33 A	1 min + 200 mA
Regulation $\Delta V$	+/- 0.2% / V			
Regulation $\Delta T$	+/- 0.1% / 0° C			

### Function

**Minimum Current & Maximum Current** - These two adjustments will vary the minimum and maximum output current limits. The minimum current can be set between 0 - .67A (0 - .10 A). The maximum current can be set in the range between the minimum current setting and the minimum current setting plus 1.33A (.20 A). The minimum current must be set first as described below.

**Minimum Current Adjustment** - Set both min (I min) and max (I max) current adjusters max counterclockwise (18 turns). Apply the minimum input command signal. Adjust the min current adjuster (I min) for a minimum current or to a desired system response. Proceed to max current adjuster.

**Maximum Current Adjustment** - Increase the input command signal maximum. Adjust max current adjuster (I max) for a maximum current limit or to a desired system response

**Note:** To minimize any effect of supply voltage, load resistance or temperature variation, make setup adjustments when these parameters are at the midpoint of the expected operating range for a particular installation. For example, if the expected operating temperature range is 20°C to 60°C make final setup adjustments when system is approximately 40° C. If the supply voltage has a tolerance of 22 to 32 volts, make adjustments when the supply voltage is approximately 27 VDC.



**PWM Frequency** - The output is pulse-width modulated to control output current within the minimum and maximum current settings. The frequency of the modulation is fixed at 1.2 KHz.

**Dither** - The coil is sine wave modulated with adjustable frequency (30 - 300Hz) and amplitude (0 - .5 A peak to peak).

**Reference Voltage** - A regulated 5.0 VDC voltage is available for on site command voltage. Use of a 5K - 100K potentiometer connected from 5.0 VDC Reference to Supply Voltage (-) is recommended.

**Output** - The output is current regulated and will remain constant at the level set by the input command signal. Variations in supply voltage and load resistance have little effect as long as these values satisfy the equality stated below.

**Maximum Required  
Currents**

$$\leq \frac{\text{Min. Supply Voltage}}{\text{Max. Load Resistance}}$$