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## LDD - RS232 Protocol

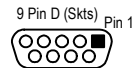
The RS232 interface for Lumina supplies has the following characteristics:

**Baud rate:** 9600

**Command format:** ASCII characters terminated by carriage return

**Reply formats:** ASCII characters terminated by carriage return

**Connection:** 9 Pin "D" Female (Tx: Pin 2, Rx: Pin 3, GND: Pin 5)



The interface supports programming the output current and power limit of the supply and reading back the output current and voltage. The output can be turned on and off with a command as well.

The LDD is configured as indicated in the model name:

LDD-(600/100/1500)-Imax-Vmax-(OPTIONS)

<u>Command</u>	<u>Reply</u>	<u>Function</u>
Pxx.xx<cr>	<cr>	Program output current to max rated output current xx.xx between 0 and 10.00 = 0 – Imax A
I<cr>	xx.xx<cr>	Read output current xx.xx between 0 and 10.00 = 0 – Imax A
V<cr>	xx.xx<cr>	Read output voltage xx.xx between 0 and 10.00 = 0 – Vmax V (Note: If Vmax < 10V then Reading =Vout)
ON<cr>	<cr>	Enable supply output (Rise times are typically 25 usec)
OFF<cr>	<cr>	Disable supply output
Jhkhkh<cr>	?<cr>	Response to unrecognized command

Numbers sent to the supply should be in fixed point decimal format. The numbers sent back will have four digits and a decimal point, but the resolution is limited to 12 bits and the accuracy is limited by the specifications of the supply.

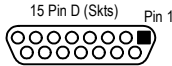


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## LDD Analog Interface with RS Interface

Analog OR RS Interface can be used

### Connector Type: 15 pin D-sub Female



(Refer to Figure 2, LDD Interface Schematic)

Pin #	Pin Name	Functional Voltage Level / Scaling	Description
1	<b>Enable</b> (input)	High = RUN = +5V to +15V Low = OFF = 0V	The <b>Enable</b> function turns the output section of the power supply ON and OFF. When the power supply is enabled, current is delivered to load as programmed via <b>Iprogram(+)</b> , Pin 7. Rise times resulting from <b>Enable</b> are approximately 25msec.
2	N/C		
3	<b>Interlock</b> (input)	Open = OFF Connect to GND = RUN	The <b>Interlock</b> function can be connected to external interlock switches such as door or overtemp switches. <b>Must be used with RS Interface</b>
4	GND		Interface Return
5	<b>Vout Monitor:</b> (output)	0 – 10V = 0 – Vmax V Vmax <10 = Vout Direct	The output voltage of the supply can be monitored by <b>Vout Monitor</b> .
6	<b>Iout Monitor</b> (output)	0 – 10V = 0 – Imax A	The output current of the supply can be monitored by <b>Iout Monitor</b> .
7	<b>Iprogram(+):</b> (input)	0 – 10V = 0 – Imax A	The power supply output current is set by applying a 0-10V analog signal to <b>Iprogram(+)</b> .
8	N/C		
9	GND		Interface Return
10,11	<b>+5V @ 0.25A</b> (output)		Auxiliary +5V power supply for user. Up to 0.25A output current capability.
12	<b>-15V @0.25A</b> (output)		Auxiliary -15V power supply for user. Up to -0.25A output current available.
13,14	<b>+15V @0.25A</b> (output)		Auxiliary +15V power supply for user. Up to 0.25A output current available.
15	GND		Interface Return