



**OVERVIEW**

Voltage output is available from 0 to 5 volts with Uni-Polar or Bi-Polar output options. Current output is available in ranges from 5mA to 25mA, 0mA to 20mA, and 4mA to 20mA.

Sensor cable shield connections should be grounded on one end, either the sensor side or the instrument side, to avoid potential ground loops.

Shield should be connected to cable clamp of binder cable assembly when connecting on instrument side.

**OUTPUT CONNECTIONS**

PIN	SYMBOL	DESCRIPTION
1	IDAC	Analog Current Output Signal
2	REFERENCE	Analog Voltage Output Return
3	+R1	Solid State Relay 1 (Positive)
4	VDAC	Analog Voltage Output Signal
5	+R2	Solid State Relay 2 (Positive)
6	GND	Analog Current Output Return
7	-R1	Solid State Relay 1 (Negative)
8	-R2	Solid State Relay 2 (Negative)



## VOLTAGE OUTPUT

1. From the main measurement screen press MENU to enter the main menu.
2. Press ▼ to highlight OUTPUT CONFIG, and then press ENTER.
3. Press ▼ to highlight VOLTAGE CONFIG, and then press ENTER.
4. Select BI-POLAR or UNI-POLAR using the ◀ or ▶ arrow keys, and then press ENTER.
  - a. Uni-Polar: Uni-Polar will set the voltage range to 0 VDC to +5 VDC and shift the zero to 2.5VDC. This will result in a range of 2.5 VDC to 5 VDC for positive outputs, and a range of 2.5 VDC to 0 VDC for negative outputs from the load cell.
 

**Ex.** Compression can range from 2.5 VDC to 5 VDC, and Tension can range from 2.5 VDC to 0 VDC
  - b. Bi-Polar: Bi-Polar will set the voltage range from -5 VDC to +5 VDC with the zero load state at 0 VDC.
 

**Ex.** Compression can range from 0 VDC to +5 VDC, and Tension can range from 0 VDC to -5 VDC
5. The system will prompt: "WOULD YOU LIKE TO SAVE AS DEFAULT?" Press ENTER to save as default or BACK not to save as default.
6. Press BACK to navigate back into the main menu.
7. Press ▼ to highlight INTERFACES, and then press ENTER.
8. Press ▼ to highlight VOLTAGE OUTPUT, and then press ENTER.
9. Select ENABLE or DISABLE using the ◀ or ▶ arrow keys, and then press ENTER.
10. The system will prompt: "WOULD YOU LIKE TO SAVE AS DEFAULT?" Press ENTER to save as default or BACK not to save as default.
  - a. NOTE: If voltage output is ENABLED there will be a checkmark on the right hand side of the VOLTAGE OUTPUT option.
11. Press BACK to go back to the main menu.
12. Press BACK again to exit the main menu and go back to the main measurement display.

## CURRENT OUTPUT

1. From the main measurement screen press MENU to enter the main menu.
2. Press ▼ to highlight OUTPUT CONFIG, and then press ENTER.
3. Press ▼ to highlight CURENT VALUE, and then press ENTER.
4. Select the appropriate value using the ◀ or ▶ arrow keys, and then press ENTER.
  - i. NOTE: The values range from the following options: 5-25 mA, 0-20 mA, and 4-20 mA
5. The system will prompt: "WOULD YOU LIKE TO SAVE AS DEFAULT?" Press ENTER to save as default or BACK not to save as default.
6. Press ▼ to highlight CURRENT CONFIG, and then press ENTER.
7. Choose UNI-DIRECTION or BI-DIRECTION using the ◀ or ▶ arrow keys, and then press ENTER.
  - a. Uni-Direction: Selecting Uni-Direction will result in the chosen current range to output for the load cell's positive output only.
  - b. Bi-Direction: Selecting the Bi-Direction option will result in shifting the zero of the selected current range to the middle of the range selected. This will result in the positive output from the load cell starting from the middle of the current range to the highest value of the current range, and from the middle of the current range to the lowest value of the range for negative outputs from the load cell.
 

**Ex.** If the range selected is 4-20 mA, the zero would shift to 12mA and the positive output from the load cell will go from 12 mA to 20 mA, while the negative output from the load cell will go from 12mA to 0mA.
8. The system will prompt: "WOULD YOU LIKE TO SAVE AS DEFAULT?" Press ENTER to save as default or BACK not to save as default.
9. Press BACK to navigate back into the main menu.
10. Press ▼ to highlight INTERFACES, and then press ENTER.
11. Press ▼ to highlight CURRENT OUTPUT, and then press ENTER.
12. Select ENABLE or DISABLE using the ◀ or ▶ arrow keys, and then press ENTER.
13. The system will prompt: "WOULD YOU LIKE TO SAVE AS DEFAULT?" Press ENTER to save as default or BACK not to save as default.
  - a. NOTE: If current output is enabled, there will be a checkmark on the right hand side of the CURRENT OUTPUT option.
14. Press BACK to go back to the main menu.
15. Press BACK again to exit the main menu and go back to the main measurement display.

## Drawing Number: SP1188-A

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