

DCA SET UP & SCALING

The Excitation Voltage and Output of the DCA are Jumper selectable. The Excitation voltage default jumper is set to 10 VDC and the output default jumper is set to ± 10 VDC. If these settings need to be changed:

- a.) Remove the top cover by carefully unscrewing the top covers screws.
- b.) For jumper pins in the middle center of board: (Excitation Setting)
 - 10 V Excitation = the left and center pins are jumpered
 - 5 V Excitation = the right and center pins are jumpered
- c.) For jumper pins in the middle right of board: (Output Setting)
 - ± 10 VDC Range = the left and center pins are jumpered
 - ± 5 VDC Range = the right and center pins are jumpered

Once the jumper settings have been selected, the DIP switch (SW2) on the side of the unit must be set. Based upon the output of the load cell at full scale (in mV/V) and the excitation voltage of the load cell, set the four positions of SW2 using the settings table on the DCA or at the bottom of this page.

EXAMPLE: A load cell with 3 mV/V output and excitation voltage of 10 V = SW2 setting of 0010.

1. Connect a 10-28 VDC power supply to J1 terminals #1 and #2.
2. Connect the -Excitation wire of the load cell to J2 terminal #3.
3. Connect the +Excitation wire of the load cell to J2 terminal #4.
4. Connect the -Signal wire of the load cell to J2 terminal #2.
5. Connect the +Signal wire of the load cell to J2 terminal #1
6. If the desired analog out from the DCA is ± 5 VDC or ± 10 VDC, then connect the voltmeter or instrumentation to J3 terminals #3 (Ground) and #4 (Vout ± 5 or ± 10)
7. If the desired analog out from the DCA is 4-20 mA, then connect the appropriate meter or instrumentation to J3 terminals #1 (Ground) and #2 (Iout 4-20mA)

SCALING

For the ± 5 VDC or ± 10 VDC setting, with NO load on the transducer, check the instrument or voltmeter and adjust the COARSE ZERO or FINE ZERO adjustment screw on the top of the DMA until 0VDC shows on the instrumentation. Apply the full-scale load to the transducer and adjust the FINE SPAN adjustment screw until 5 VDC or 10 VDC shows on the instrumentation. Remove the load from the transducer and if necessary, adjust the FINE ZERO until 0 VDC shows on the instrumentation. Apply the full-scale load to the transducer again and adjust the FINE SPAN adjustment screw to 5 VDC or 10 VDC shows. Repeat this process until the desired readings are achieved.

For the 4-20 mA out setting, with NO load on the transducer, check the instrument or meter and first adjust the COARSE ZERO and the 4 MA adjustment screw on the top of the DCA until 4 mA shows on the instrumentation. Apply the full-scale load to the transducer and adjust the 20 MA adjustment screw until 20 mA shows on the instrumentation. Remove the load from the transducer and if necessary, adjust the 4 MA screw again. Apply the full load to the transducer and adjust the 20 MA screw until 20 mA is shown on the instrumentation. Repeat this process until the desired readings are achieved.

Vexc = 5 V	Sensitivity (mV/V) Vexc = 10 V	SW2			
		1	2	3	4
7.0-11.0	3.5-5.5	0	0	0	1
4.6-7.0	2.3-3.5	0	0	1	0
3.0-4.6	1.5-2.3	0	1	0	0
2.0-3.0	1.0-1.5	1	0	0	0
1.5-2.0	0.75-1.0	1	0	1	0
1.0-1.5	0.50-0.75	1	1	0	1
0.90 - 1.0	0.45-0.50	1	1	1	1