

ANYLOAD[®]

A2A

Load Cell Amplifier

Product Manual (V1611)



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1. Introduction

Thank you for choosing Anyload A2A load cell amplifier (Watertight Amplifier). A2A strain gage amplifier provides load cell and transducer signal conditioning. It is designed for converting mV signal from load cell output into a 4~20mA or 0~10V signal. The A2A strain gage amplifier is AC and DC powered and can drive up to 4 x 350Ω load cells or 8 X 700Ω load cells. It can be connected directly to 1 or 2 load cells or to more than 2 load cells through a junction box. The amplifier is equipped with individual adjustable resistors and an installation clamp for single point fixing. The A2A strain gage amplifier is watertight with an aluminum casting enclosure and has a wide output signal of 0-10V or 4-20mA. The manual here provides the installation, operation and calibration procedures of the product.

2. Installation

Single point fixing / all round fixing (out-door):

Only simple tools like small size slotted screw driver and Philips screwdriver are required for connecting cables during installation, adjusting the unit during calibration and installation of enclosure cover.

3. Connection and Switch Diagrams

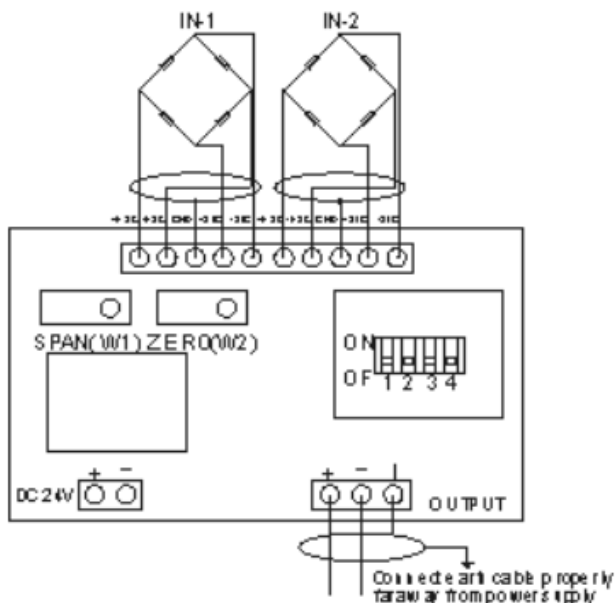
3.1. Connection Diagram

Red: EXC+

Black: EXC-

Green: SIG+

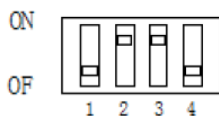
White: SIG-



3.2. Output Mode Switch

OUT: 4~20mA
(Output Current)

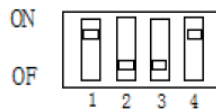
1	2	3	4
OFF	ON	ON	OFF



3=ON Excitation Voltage
4=OFF to Load-cell 5V
+E=5V

OUT: 0~10V
(Output Voltage)

1	2	3	4
ON	OFF	OFF	ON



3=OFF Excitation Voltage
4=ON to Load-cell 12V
+E=12V

Shift Excitation voltage according to the sensitivity of load cell, the bigger excitation voltage, the more output would be.

4. Specifications

Power Supply: DC24V \pm 20%、 $<3W$

Input Range: 0~30 mV

Output Signal: 0~10V / 4~20mA (adjustable \pm 20%)

Max. Overload Current Protection:

Power Voltage $> DC30V, 2.5A$

Output Signal $> 20V$ or $> 40mA$

5. Commissioning (Calibration)

- 1) Zero setting (Self-weight shall not exceed 30% of full capacity),
- 2) Adjust ZERO variable resistor to a output of 0V or 4mA
- 3) SPAN Capacity setting - Add standard load of full capacity to load-cell,
- 4) Adjust SPAN variable resistor to a output of 10V or 20mA

Remarks: Suggested to repeat the adjustment 3 times; added load shall be 20% over the full capacity

6. Parallel Deviation Rectification

- 1) Variable resistor to the same output when two load-cells have the same load.
(Skip the # 1 procedure when there is only one load-cell input.)
- 2) Calibrate three times, to make sure the data is repeatable.
- 3) If no full capacity load is available (since the load cell and amplifier have their own linearity), calibrating with part of capacity weight would be acceptable, but remember the lower rate of weight/capacity is, the lower accuracy.

7. Operation

7.1 Except during commissioning/calibration, always keep the enclosure cover on and ensure the seal is in its proper place when installing the cover.

7.2 Always keep the amplifier clean from dirt to avoid affecting the values of the ZERO and SPAN variable resistors.

7.3 For stable amplifier signal output, always use safe and reliable AC/DC power supply.

7.4 When output reading changes, re-calibrate the amplifier according to Section 5, Calibration.

8. Troubleshooting

- No output from the amplifier: Check all wire connections and the DC power supply.
- Output signal is abnormal: Re-calibrate according to Section 5, Calibration.
- Problem cannot be resolved: Contact supplier