

ATO LVDT Sensor User Manual

ATO-LVDT-SMW-WYDC-100L

1. Specification:

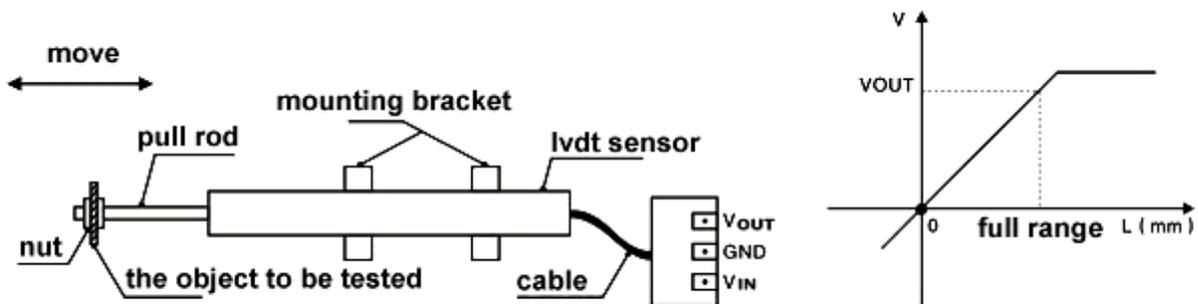
Model	ATO-LVDT-SMW-WYDC-100L
Measurement range	0-50mm
Accuracy	±0.2%FS
Power supply	DC24V
Output signal	0-10V
Diameter of shell	Ø26mm
Type of operation	Pull rod type,
Wiring	Red: DC 24V, black: common, yellow: 0-10V+

2. Mounting:

The pull rod type lvdt sensor can be installed in any direction.

- The lvdt sensor housing should be placed in the mounting bracket hole of the reference object to keep the direction of the sensor housing and the object to be the same.
- The approximate gap should be estimated according to the range of the lvdt sensor.
- Use the nut to fix the tie rod and the object to be tested.
- After power on, wait for the lvdt is stabilized, and then slowly move the sensor housing so that the output zero of the lvdt sensor corresponds to the mechanical zero of the object.
- Clamping the sensor housing (not loose).

If it is installed well, the displacement signal can be detected or monitored by computer or PLC for system control. The installation method of the spring loaded type lvdt sensor is basically similar to the pull rod type lvdt sensor.



3. Notes:

- When installing the lvdt sensor, be careful not to let the iron core and the measuring rod be deformed and bent due to the large lateral forces, otherwise, the flexibility of the rod activity will be seriously affected. The housing of the sensor is a highly magnetically permeable material and should be protected from falling and impact.

- B. The sensor rod (head) should be consistent with the moving direction of the object to be tested, and the concentricity should be good. The contact surface of the rebound type displacement sensor and the object should be a certain smoothness plane because an uneven plane will affect the measurement accuracy.
- C. The effective working section of the lvdt sensor is generally in the middle of the movement area of the measuring rod. When the rod is in the full extension and full compaction, the nearby areas are not an effective working area. When installing the sensor, adjust (move) the sensor housing and estimate the approximate clearance based on the measuring range. Make sure the displacement is in a predetermined range of variation. The digital voltmeter can also be used to calibrate the electrical zero point and then detected the movement area.
- D. The external positive and negative power supply is recommended to use a linear regulated power supply. If a switching power supply is used, the clutter (interference) voltage in the signal output will increase significantly. The actual power consumption of each PCB is not more than $\pm 30\text{mA}$. (However, the power supply should have a margin, preferably not less than $\pm 50\text{mA}$).
- E. If the rod activity is not smooth by dust or oil adhesion, wipe and clean the rod with alcohol cotton, but the lvdt sensor should not be disassembled to avoid damage sensor or reduce the measurement accuracy.