

# HOW (NOT) TO KILL A LINEAR POSITION SENSOR



Our Linear Position Sensors (LVITs) are designed to survive in tough applications. But they still are vulnerable to improper actions.

When it comes to destroying linear position sensors, we have seen and heard a lot over the years. Here is some practical advice based upon tales from the field.

## MECHANICAL

- Consider the maximum range of motion for your application; not just the measuring range during normal operation. What's the worst case scenario? Choose a sensor that meets worst case. The front bearing of the linear position sensor is not going to stop the hydraulic cylinder that just extended 2 extra inches beyond "normal operation".
- It takes a lot of force to pull the cable out of the sensor by the roots. But an excessive pull or yank may cause an intermittent connection. Avoid carrying the sensor by the cable. Also, when installing, be sure to leave a service loop and follow proper cable tie down procedures.
- If the sensor is mounted on a machine in a tempting spot to use as a foothold during servicing, probably best to install a cover to protect the sensor. Linear position sensors are expensive steps.
- Consider the operating environment. Choose a linear position sensor with the proper IP rating if the application is outdoors or in a wash-down area. Areas with misting oils, high humidity or condensation, and hot steam should all be considered a undesirable liquid environment.

## ELECTRICAL

- Before applying power to the linear position sensor, double check both the minimum and maximum operating voltage specification. Compare this to the DC power supply output voltage. Under or over voltage power to sensor can cause harm to its internal circuits.
- DC powered linear position sensors are not circuit protected from AC line power. Poof!
- Linear Potentiometers are not circuit protected from direct connection of the signal output wire to the power supply. Poof and smoke!
- If you have a 4 to 20 mA, 2-wire current loop powered circuit, **never** connect a 3-wire 4 to 20 mA linear position sensor.

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Contact our technical support team for application-specific recommendations on LVIT linear position sensors.