

Digital Signal Distance Amplifier (DSDA)

The newest member of the AI-Tek family.

The new AI-TEK DSDA's are designed for use with active sensors and serve to reduce line impedance, allowing cable runs of up to 3000ft. In some cases this represents a 10X improvement over installations not currently using a DSDA.



Line impedance plays a major role in the distance an active sensor signal can be transmitted through cable and wire. Mutual capacitance of 25 Pico-farads/foot or more can exist between conductors. When sufficient resistance from the sensor, cabling and output load is placed in series with that capacitance signal rise times can increase to the point where the sensor can no longer switch. This condition becomes even worse due to higher target speeds that cause output signal frequency rises

Two versions were developed to allow use with either TTL or supply tracking output options. The DSDA will work with any AI-TEK active sensor and many other brands that support these output styles.

Construction is rugged. Each DSDA is potted into a cast aluminum box. Cables enter the box through weather-tight strain relief bushings and allow all cable connections, including shield, to be terminated inside the box.