

OPTION D

REFLECTANCE DEPENDENT OUTPUT FOR RC SENSORS

Option D provides a reflectance dependent output for RC sensors in addition to the standard RC output. This output lets the sensor detect reflectance changes that are transparent to the RC output. It is insensitive to gap variations and therefore not intended for distance or motion measurements. An RC sensor with Option D is actually two different types of sensors in one package.

DISCUSSION

Reflectance Compensated (RC) sensors provide a gap dependent output signal independent of target reflectivity changes. There are times, in the use of RC sensors, when it is important to detect changes in target reflectivity, instead of being blind to them.

For example, consider a moving web material with a splice joining two sections. One problem is to detect the splice material as it passes the sensor. The splice material is very thin but its reflectivity is very different than the web material.

Because the splice material is very thin, the RC sensor signal output voltage will indicate only a minimal voltage change, one that could not be used to reliably flag the splice material.

With an additional output signal, **Option D**, the voltage change will be proportional to the ratio of reflectivities of the web and splice materials. This voltage change will be large enough to reliably flag the passage of the splice material.