BDLoops
Simply the Best

Preformed 3/16” Saw-cut Loop

Used for saw-cut installations where a 3/16” groove is cut into the concrete or asphalt and the wire wire is stuffed and sealed (using loop sealent) into the surface. Custom polyethylene outer jacket protects a micro-dusted nylon coated inner jacketed 16AWG stranded wire. The saw-cut loop has a built in backer-rod securely fitting a 3/16” saw-cut groove eliminating the need to apply backer-rod to hold the loop to the bottom of the saw-cut groove and requires 30-40% less loop sealant to seal the groove. The entire loop including the lead-in fits within a 3/16” saw-cut groove preventing wasted time spent double saw-cutting or doubling blades to cut the home run lead-in.

Preformed Direct Burial Loop

Used for installations under concrete, asphalt, pavers, or gravel roads. The most common installation is the loop tied directly to the rebar before concrete is poured. Wire is UL 493 certified designed for a direct burial application. Unlike loops wrapped through PVC, The BD Loop does not have an air pocket resulting in fewer repeat service calls due to phantom detections caused by ground vibration. Built with a high quality solid 14AWG wire out performing other preformed loops with twice as much copper per foot allowing higher detections. Solid 14AWG wire also results in the loop being very ridged giving the the installer the opportunity to easily set-up and layout the loop and prevents the loop from falling in-between the rebar patter. Twisted jacketed lead-in prevents “coil back” from normal twisted lead-in, preventing wasted time untangling lead-in wires. The loop wire has arrows indicating the direction of current allowing easy understanding instructions, cable ties for installation on top of rebar, ground stakes forunder gravel roadsand stickers for easy identification after the loops have been installed.

Inductance Loops And How They Work

When Direct current passes through a wire an Electric Magnetic Field or Flux (EMF) is created around the wire. A good example is when a wire is coiled around a metal rod then energized with a battery; current flows through the wire and causes the rod to act like a magnet. The more turns in the coil or increases in current flow the greater the magnetic field or pull.

If the current is removed, the magnet field collapses back into the wire. In the case of Alternating Current such as AC, the current changes direction and sets up a magnetic field opposite of the same when the current was passing in the opposite direction. In an AC circuit, the field that is collapsing is pushing against the new developing field. This pushing back is a form of resistance known as Inductance. Anytime you have AC passing through a wire you will have this special resistance of Inductance. All detection loops will have AC current applied to them. That is why detection loops are referred to as Inductance loops. This inductance is measured in units of Henrys. A common range of inductance for a detection loop is 40 to 300 micro Henrys. When a detector energizes a loop with an AC current. The size of the loop, number of winding in the loop, length of lead-in wire and wire size will determine the total resistance or inductance of the loop circuit. The detector will determine how much current is flowing through the loop and set that amount as the standard. When a metal object enters the EMF field created by the loop current, the metal object absorbs some of the clasping EMF fields. Because some of the clasping EMF field is now absorbed, it lowers the resistance in the loop circuit. This causes an increase in current flow through the wire that is detected by the detector. When this happens, the detector will either open or close a relay switch that activates a command in the gate operator such as open for exit, reverse for safety, or hold open or close for a swing gate with a center or shadow function.