



PLC Series

PREFORMED LOOPS FOR RAILWAY APPLICATIONS

Prefabricated loop / lead-in assembly with an integral check loop, making it ideal for use in Railway applications when connected to a detector with the check loop feature.

FEATURES

- Wire insulation and cable jackets are formulated from Cross-linked Polyethylene (XLPE)
- Cables are filled with water block gel to prevent water penetration
- All splice connections are soldered, sealed, and tested
- Splice enclosure is constructed of high impact glass impregnated plastic

HIGHLIGHTS

- Integral check loop to confirm functional status and operational integrity of detection loop
- Loop and lead-in cables are flexible for easy handling and installation
- Can be configured to suit any geometry; rectangular, round, or Quadropole
- Model PLC-R high visibility (red) outer jacket is formulated from Thermoplastic Elastomer (TPE) for superior abrasion resistance



Function

The test loop consists of a single turn of wire that runs the entire perimeter of the loop. The detector periodically shorts the test loop simulating a vehicle detection. If the inductance change generated during a test loop check does not match a stored reference value, the detector displays a message indicating a failure of the loop.

Design

The Model PLC is designed to be overlaid with hot asphalt or embedded in concrete. The Model PLC-R is designed for use in direct burial applications. Each component is designed to maximize durability, minimize water penetration, and maintain a flexible form that is easy to install and handle.

Durability

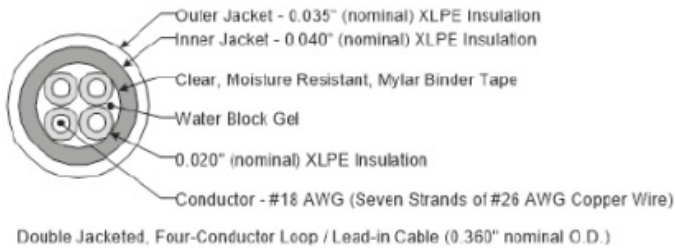
The low profile loop cable and lead-in cable are 0.360" O.D. to resist the effects of reflective cracking that can occur in asphalt. Wire insulation and cable jackets are constructed with the optimal thickness of Cross-linked Polyethylene (XLPE) necessary to ensure a long, trouble free life. XLPE insulation provides excellent thermal, electrical, and physical properties and is recognized for its outstanding resistance to moisture and chemicals.

Model Options

Model	Installation
PLC	Hot Asphalt / Cement
PLC-R	Gravel / Rural Roads



Specifications

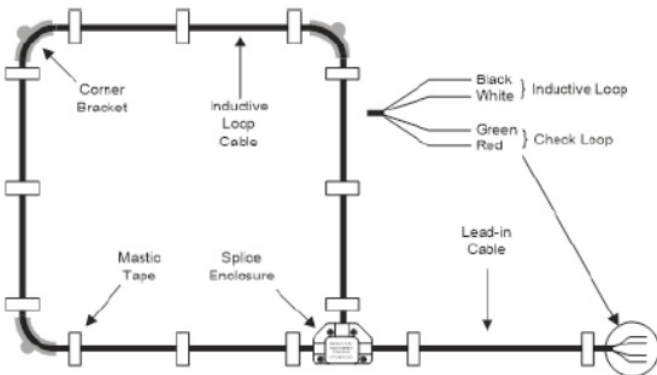


Installation

Loop Installation - Asphalt Overlay

1. Place the PLC Preformed Loop in the proper position and orientation on the asphalt base lift.
2. Route the lead-in cable to the desired termination point.
3. Cut the fiberglass backed mastic tape (included with the PLC) into 2" x 4" or 3" x 4" strips. Use the mastic tape (and optional corner brackets) to hold the loop and lead-in cable in place.
4. Apply the top lift.

Note: When applying the top lift, make certain that the loop cable does not get pulled into the augers on the paving machine.



Loop Installation - Pured Concrete

1. Place the PLC Preformed Loop in the proper position and orientation on top of the concrete reinforcing steel.
2. Route the lead-in cable to the desired termination point.
3. Cut an appropriate number of 1/2" poly tees as shown in Figure 1. Cut an equal number of lengths of 3/8" rebar.
4. Use the tees, rebar, and nylon cable ties to hold the loop cable in place at least 2" above the concrete reinforcing steel. See Figure 2. The lead-in cable can be tied directly to the concrete reinforcing steel.
5. Pour the concrete making certain not to disturb the loop cable.

Note:

- The rebar should be cut long enough to allow it to be driven firmly into the ground to hold the tee securely at the correct height above the concrete reinforcing steel.
- Spacing of the Tee / rebar supports should be such that no more than 2 feet of cable is unsupported.
- If the thickness of the concrete slab and/or the depth of the reinforcing steel below the top of the slab is such that the minimum dimensions shown in Figure 2 cannot be achieved, contact Technical Support.

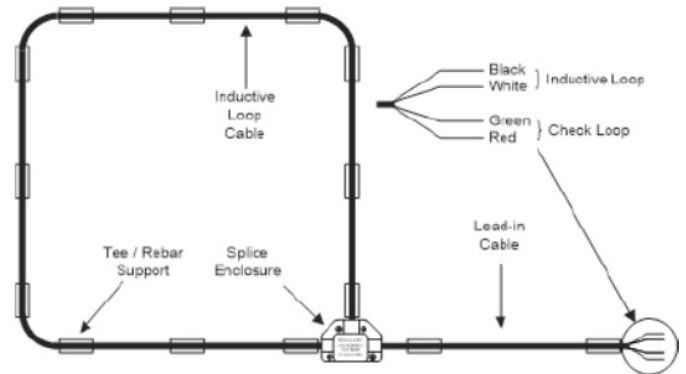


Figure 1

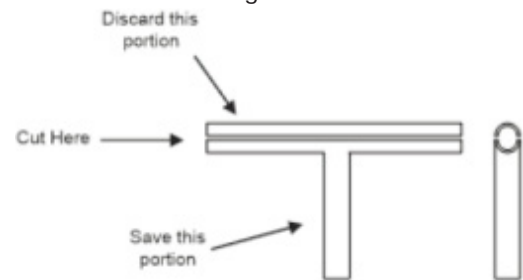


Figure 2

