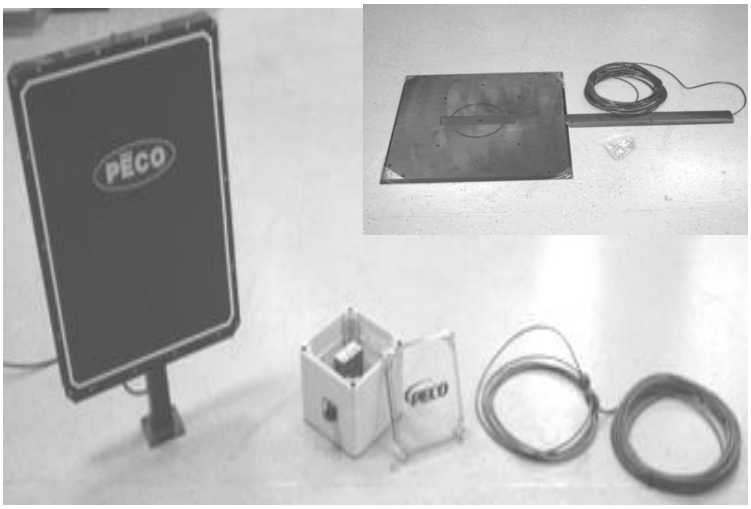
LDC Loop Detector Control

Installation & Operations Manual



Model No.: **LDC**

Part No.: **901125 24VAC or 901125B 120VAC**

Description: **Loop Detector Control / Inductive Loop**

Release Date: **November 15, 2004**

Revision Date: **September 26, 2012**

LDC Loop Detector Control

General Warning

READ ENTIRE MANUAL CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THE PECO Equipment. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION AND ADDITIONAL INSTRUCTIONS INCLUDED WITH THIS EQUIPMENT. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

Product Description & Specification

System Description:

The **Loop Detector Control "Presence Detector"** is designed to detect vehicles at the entrance or exit of the car wash tunnel. At the entrance of the wash it is used as a gate switch to measure the length of a vehicle. At the exit of the wash it is used as an Exit Security Anti Collision feature.

System Technical Data: LDC

Construction: Aluminum Structure/Clear Plastic Electrical Control Station.
Enclosure Dimensions: 6" X 6" (15.12 X 15.12 cm)
Electrical: 24 VAC 1 amp or 120VAC 1 amp
Computer Function: None Required
Shipping Weight: 25 lbs.

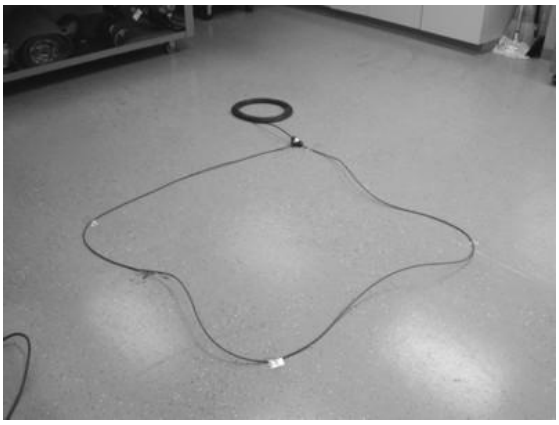
System Includes

The system consists of a Loop Detector Control and an inductive loop. The loop may be one of three configurations, Logo Loop, In-Ground Loop, or Pad Loop.

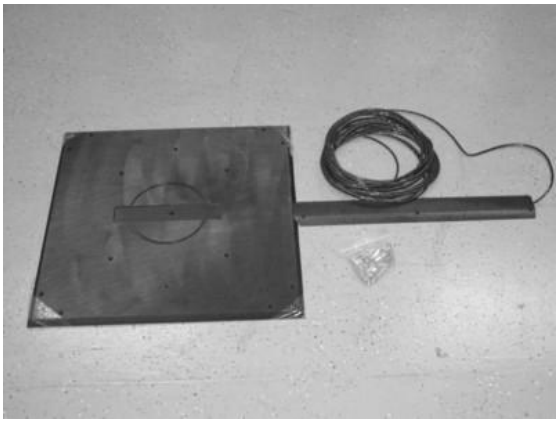
LDC Loop Detector Control

Loop Detector Control (24v: 901125; 120v: 901125B)

Logo Loop (901124)



In-Ground Loop (901123)



General Safety Information

All **WARNINGS, CAUTIONS, AND SAFETY TIPS** below concern the safe operation of you PECO Equipment. Please abide by this information; it is listed for you protection. Review thoroughly with all personnel.

- NEVER ATTEMPT TO WORK ON THE EQUIPMENT WHILE IT IS RUNNING.
- PERSONNEL MUST BE TRAINED IN SAFE OPERATING PROCEDURES. ALL PERSONNEL SHOULD REVIEW THIS MANUAL PERIODICALLY.
- EMERGENCY STOP BUTTONS MUST BE WELL MARKED AND THEIR LOCATION AND OPERATION REVIEWED WITH ALL PERSONNEL.
- MAINTENANCE OR REPAIR WORK ON EQUIPMENT MUST BE PERFORMED ONLY BY TRAINED EMPLOYEES ASSIGNED BY THE CAR WASH OPERATOR.
- DO NOT WEAR LOOSE FITTING CLOTHING WHEN WORKING ON OR AROUND EQUIPMENT.
- ALL CAR WASHES SHOULD HAVE A HORN OR ALARM THAT SOUNDS PRIOR TO EQUIPMENT STARTING.
- NO UNAUTHORIZED INDIVIDUALS SHOULD BE PERMITTED NEAR THE EQUIPMENT AT ANY TIME. CLEAR THE AREA OF PEOPLE AND ANY LOOSE DEBRIS PRIOR TO STARTING THE WASH.
- HAVE A LICENSED ELECTRICAL CONTRACTOR PERFORM THE WIRING INSTALLATION OF PHOTO EYES AND PEC CONTROL UNIT.

LDC Loop Detector Control

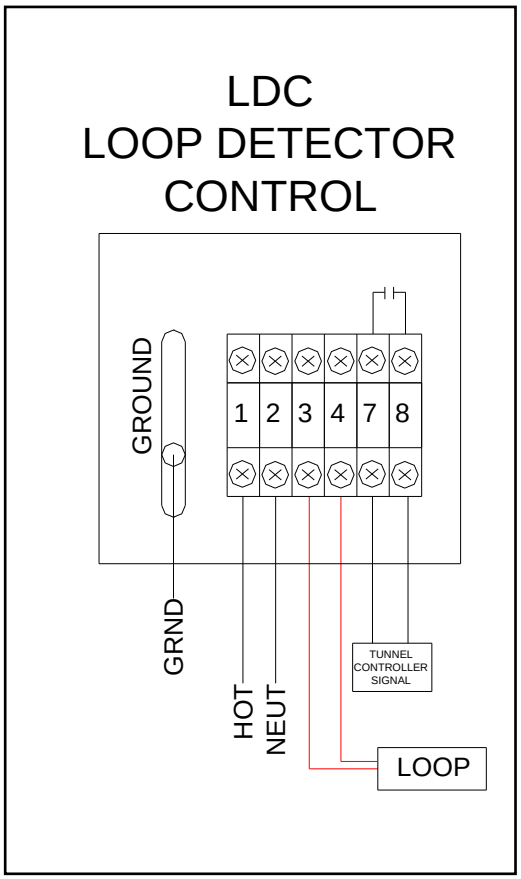
Installation Procedures

Mounting Location: LDC Loop Detector Control

1. Mount 6” X 6” enclosure 48” to 60” above the finished floor. Use the supplied lags to secure the enclosure to the tunnel wall. Locate wall space near the loop to be controlled by this device.

Wiring: LDC Loop Detector Control

1. Supply 24 VAC (120 VAC Optional) to terminals #1 and #2.
2. Terminate the Loop wire leads to #3 and #4.
3. Terminate the Tunnel Controller input wires to # 7 and #8. This is the normally open contact that closes when the loop is activated.



LDC Loop Detector Control

Operation Adjustments

LDC Loop Detector Control:

1) Set the manual Over-Ride Switch to “Auto” for normal operation.
2) *In the event of a loop or amplifier failure*, use the Manual Over-Ride Switch to simulate the loop detection. When a vehicle enters the Loop Area, turn the switch “On”, as the vehicle exits the Loop Area, turn the switch back to “Off”.

Amplifier: Current Version (Sarasota 625X Plus)

1) Unplug the amplifier from the base.
2) Set Sensitivity Selector Dial to ’5’.
3) Set all DIP Switches to ‘OFF’.
4) Set DIP Switch 9 to ‘ON’.
5) Observe vehicle detections on the RELAY 1 LED. If vehicles are not detected, boost sensitivity by setting Dip Switch ‘4’ to ‘ON” or increase the sensitivity by turning up the Sensitivity Dial.
6) If cross-talk with an adjacent loop occurs, change Dip Switch ‘9’ and ‘10’ settings.

Amplifier: Early Version (Sarasota 625X Model)

1) Unplug the amplifier from the base.
2) Set Sensitivity Selector to M for Medium.
3) Set Frequency Selector to L for Low.
4) Plug in detector. It will automatically tune.
5) Observe vehicle detections on the PRESENCE LED. If vehicles are not detected, increase sensitivity until detection occurs.
6) If cross-talk with an adjacent loop occurs, use the FREQ switch to change the operation frequency.

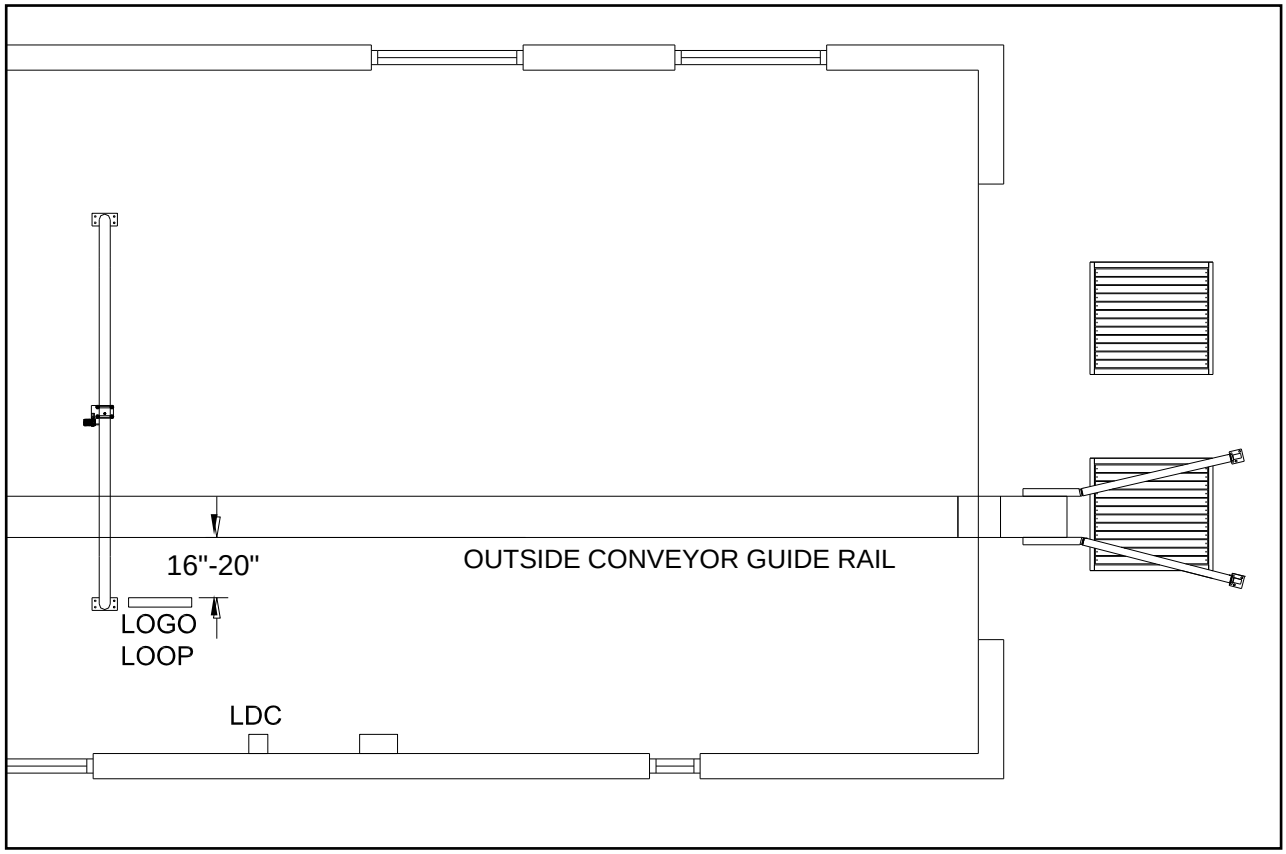
LDC Loop Detector Control

Installation Procedures

Logo Loop Installation

Typically the Logo Loop is used for the entrance gate switch. This device measures the length of a vehicle from the front to rear bumper. A metal object disrupts the field generated by the loop. This “detection” signals the controller that a vehicle is present.

1. Mount the Logo Loop Stand on the Driver Side of the conveyor.
2. The unit can be located between 16” to 20” from the outside guide rail of the conveyor.



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In-Ground Loop Installation

Loop Size:

The loop consists of a 12 to 18 gauge-stranded wire suitable for direct burial with low ac and dc resistance. The size of your loop will be determined by the width of the area you need detection in and the height of the vehicles you need to detect. If high-bed trucks will be detected not less than a 6-foot side should be used (i.e. 4' X 6' minimum). Smaller loops are suitable for car detection

Saw Cut:

The saw cut is typically 1 1/4" to 2" deep by 1/4" to 3/8" wide. Cut the corners of the loop to 45 degree angles to avoid trying to pull loop wires around a 90 degree and risk damaging the wires.

Do not push the loop wires into the saw cut with any sharp objects. Always stay a minimum of 2" above any rebar or wire mesh. The loop wire is wound to form a coil (usually 3 to 5 turns). Ideally there should NO splices in the loop.

Buried in Concrete:

When burying the loop in a concrete pad, keep the loop a minimum of 2" above metal rebar. The loop should be 1 1/4" to 2" below the finished floor.

In addition, do not run any other electrical conduit under the loop (electric signs, entry stations, etc…). If electrical conduit must run under the loop, make sure to be 48" below the loop to avoid interference.

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Pad Loop Installation

Pad Loop:

Lag the four corner of the pad to the concrete floor. Any slight movement in the pad will create a false detection.

Do not mount to any metal grate or metal angle of the conveyor trench.

It is best to locate in a position so vehicle tires do not roll over the pad. The life of the pad will be significantly reduced.

Maintenance Schedule

Maintenance Performed	Daily	Weekly	Monthly	6-Months	Yearly
Verify loop function		X			

Recommended Replacement Parts List

Part Number	Description	Comments
901101	625X Plus Amplifier	24v
901101B	625X Plus Amplifier	120v
901111	RL Relay	
901129	Pilot Light	Stand Loop
901170	Pad Loop	
901124	Stand Loop	
901123	In-Ground Loop	
1amp 250volt	Buss Fuse GMA	Non Peco Part

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Trouble Shooting Chart

Trouble	Possible Cause	Probable Remedy
Loop not detecting vehicles, Detector light blinks	Problem tuning loop	Open Loop
		Shorted Loop
Wash not starting when vehicle passes Loop	Tunnel controller not receiving signal that the LDC Unit is activated.	Verify loop with metal shovel or other large metal object.
Will not detect trucks	Low Sensitivity	Increase amplifier sensitivity
	Small Loop	Increase loop size, generally a loop can sense metal ½ to 2/3 the distance of the smallest side of the loop.