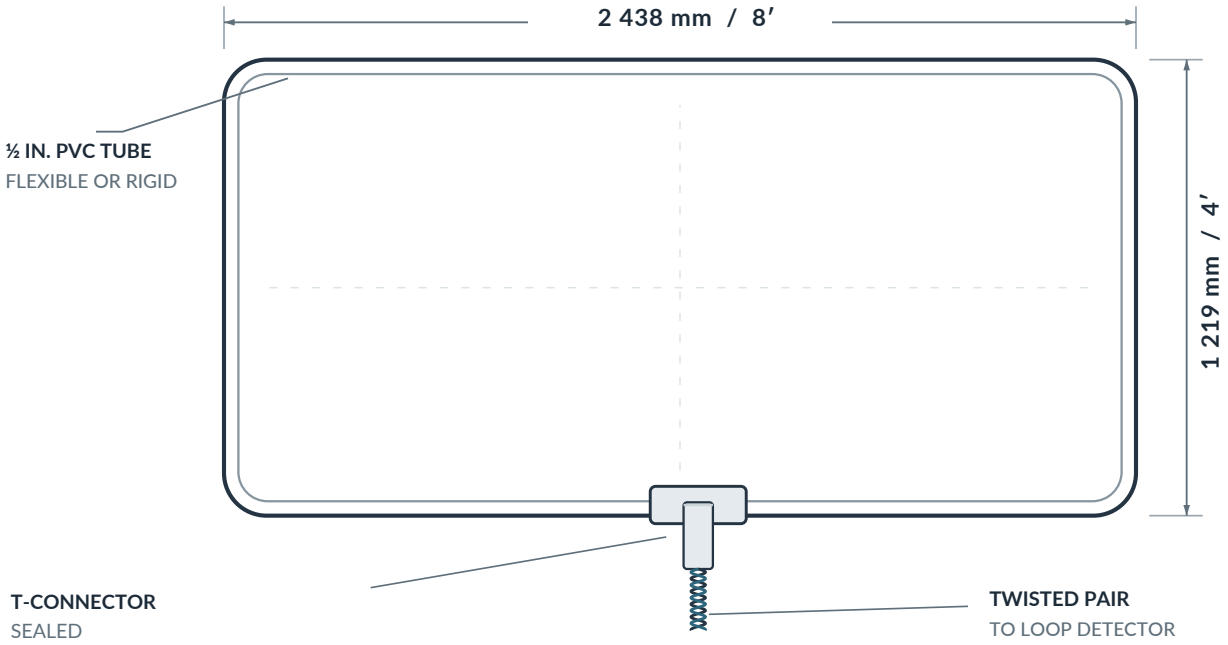
Preformed inductive loop

4′ × 8′ · Flexible or rigid PVC conduit

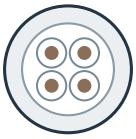
Vehicle detection for parking facilities, controlled access and automatic barriers.

01 / TOP VIEW

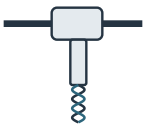
OVERALL DIMENSIONS · NOT TO SCALE



02 / CONSTRUCTION DETAIL



TYPICAL CROSS-SECTION
4 passes of insulated wire
in the same conduit



Sealed T-connector
18 AWG twisted pair
To loop detector

03 / SPECIFICATIONS

Nominal dimensions	4′ × 8′ (1,219 × 2,438 mm)
Protective conduit	Nonmetallic PVC, nominal ½ in.
Conduit type	Flexible or rigid
Loop conductor	Insulated stranded copper, 18 AWG
Number of turns	4 turns
Estimated inductance[1]	120 µH (loop only)
Lead-in cable	Twisted pair, 18 AWG
Standard lead length	50 ft (15.24 m) · custom lengths available
Operating temperature	−40 °C to +70 °C

[1] Theoretical inductance. Verify the actual value after installation.

Inductance and sizing

Turn selection guide for rectangular detection loops

The values below show theoretical loop inductance, excluding the lead-in cable.

01 / INDUCTANCE TABLE

CALCULATED VALUES IN µH

DIMENSIONS FT	PERIMETER FT	2 TURNS	3 TURNS	4 TURNS	5 TURNS
3′ × 6′	18	27	54	90	135
4′ × 4′	16	24	48	80	120
4′ × 6′	20	30	60	100	150
4′ × 8′	24	**36**	**72**	**120**	**180**
4′ × 10′	28	42	84	140	210
4′ × 12′	32	48	96	160	240
6′ × 6′	24	36	72	120	180
6′ × 8′	28	42	84	140	210
6′ × 10′	32	48	96	160	240
6′ × 12′	36	54	108	180	270

02 / CALCULATION METHOD

$$L = P \times (N^2 + N) / 4$$

P: perimeter (ft) · N: number of turns · L: µH

Example: 4′ × 8′ loop, 24 ft perimeter, 4 turns → 120 µH.

03 / CONDUIT TYPES

FLEXIBLE PVC



Nonmetallic conduit, nominal ½ in.

RIGID PVC



Nonmetallic conduit, nominal ½ in.

INSTALLATION

Use watertight connections and a continuous twisted pair to the detector.
Verify inductance, continuity and circuit insulation after installation.