

# Installation Guidelines

## Underground Current Sensors

### Ring CT P/N 9510

### Split-core CT P/N 9520/101X

**⚠ DANGER**

Sensor must be applied within its electrical and mechanical ratings. Application of sensor in excess of its ratings can result in immediate or delayed electrical or mechanical failure. Failure to apply the sensor within its ratings can result in serious injury or death, or in premature failure of the sensor.

**⚠ WARNING**

The current sensor is designed for installation on fully insulated cables. The sensor is insulated for 600V application. Serious injury or death can result if installed on any conductor that is not fully insulated from ground.

**⚠ CAUTION**

Sensor must remain in packaging during transportation to installation site. Transportation of the sensor without its protective packaging may result in chips, cracks, or fractures to the sensor body. Physical damage can result in premature failure of the sensor or reduced electrical ratings.

**⚠ CAUTION**

Both the sensor cable connectors and the cable connector located on the sensor must remain dry and protected from inclement weather. The connectors are weatherproof once joined, but may allow moisture in the cable when the male or female connectors are left exposed to the elements. Moisture in the cable will result in inaccurate measurement readings.

Ring CT : P/N 9510



Split-core CT : P/N 9520/101X



### Specifications:

MECHANICAL		
SENSOR STYLE	RING	SPLIT-CORE
WEIGHT	4 LBS. (1.8 KG)	4 LBS. (1.8 KG)
SHIPPING WEIGHT	6 LBS. (2.7KG)	6 LBS. (2.7KG)

ELECTRICAL RATINGS					
CATALOG NUMBER SEQUENCE	9510 / 1 xxx	9510 / 3 xxx	9510 / 4 xxx	9510 / 5 xxx	9520/101X
OUTPUT RATIO (PRIMARY INPUT: SECONDARY OUTPUT)	600A:10V	600A:5A	600A:1A	300A:5A	600A:10V
OUTPUT BURDEN LIMITS	100K Ohm MIN	0.9 Ohm MAX	22.5 Ohm MAX	0.22 Ohm MAX	100K Ohm MIN
OPEN CIRCUIT VOLTAGE @ 600A PRIMARY	10V	14.5V	88V	8V	10V
ACCURACY	1%				
PHASE SHIFT	0 degrees nominal, +/- 0.5 degrees				
OPERATING TEMPERATURE RANGE	-40° to +65°C				
INSULATION CLASS	600V				

**Characteristics:**

Lindsey 600V ElbowSense current sensors are specially designed for use with 200A and 600A underground elbow connectors. Both sensors feature a 3.125" (79mm) inside diameter.

- **The Ring-style** current sensor is watertight and suitable for use in pad-mad, metal enclosed, and submersible vault applications. It offers very high accuracy (+/- 1%), no phase shift, and excellent harmonic response (flat through the 20th harmonic).
- **The Split-core** sensor provides additional installation flexibility and is suitable for use in padmount and metalclad applications. The split-core sensor is high accuracy (1%) and has no phase shift. The split-core sensor is not recommended for harmonic sensing applications.

Both sensors are provided with a watertight 10 foot (3m) cable.

**Installation Instructions:****Current Monitoring Ring Installation:**

1. The system must be de-energized before attempting installation, retrofit, or removal.
2. Remove the elbow assembly and slip the Current Monitoring Ring over the bushing side of the elbow.
3. Plug in and hand tighten the waterproof signal cable and connect it to the input of the electronic monitoring device that you are using.
4. Re-install the elbow assembly, or proceed with Voltage Monitoring Plug Installation.

**Current Monitoring Split-core Installation:**

1. The elbow does not need to be removed for the installation of the split-core Style Current Monitoring Ring.
2. Use an 1/8 inch Allen wrench to remove the stainless steel screw that locks the split-core together.  
**Note:** Do not attempt to remove the stainless steel pin that acts as a hinge for the split-core.
3. Open the split-core and place it around the elbow, either where the elbow connects to the bushing or depending on the diameter, after the bend in the elbow.
4. Do not place the split-core over bare conductor. It is only insulated for 600 volts isolation and must be used in conjunction with a standard elbow to provide a safe installation.
5. For best calibration, the elbow (or conductor) should be centered inside the split-core when it is closed.
6. Use the stainless steel screw to lock the split-core closed, being careful not to over-tighten.