Installation Guidelines
200 A Loadbreak Voltage Sensor

⚠ DANGER

The sensor must be solidly grounded to earth before it is energized. Connection to the phase conductor will energize the sensor and will result in high voltage across the output unless grounded. Failure to ground before energizing can result in serious injury or death.

⚠ DANGER

Sensor must be applied within its electrical 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.

⚠ CAUTION

Sensor must remain in packaging during transportation to installation site. Transportation of the sensor without its protective packaging may result in damage 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.

⚠ WARNING

DO NOT HIPOT. HIPOT (high potential) testing will thermally damage the resistor assemblies in the sensor causing permanent damage. HIPOT testing voids the sensor's warranty.

Specifications

		15kV	25kV	35kV
Catalog Number Sequence	0.5% Accuracy	9532	9533	9534
	0.3% Accuracy	95M32	95M33	95M34
	0.15% Accuracy	95R32	95R33	95R34
	Color Band	Black	Blue	Grey
	Voltage Accuracy	0.5%, 0.3% or 0.15%		
	Ratio	By Catalog Number		
	Operating Temperature Range	-45°/+80°C		
	Stated Accuracy Temperature	-40°/+55°C		
	Insulation Class	15kV	25kV	35kV
	Impulse (BIL)	95	120	150
	Max Line-Ground (kV)	8.3	15.2	21.1
	Corona (kV extinction)	11	19	26
Weight (lbs./kg)				
	Elbow Sensors	4/1.8	4/1.8	N/A

Characteristics:

Lindsey ElbowSense™ 200A voltage sensors are available at 15kV, 25kV, and 35kV in IEEE 386-type elbow connectors for simple, fast, and flexible installation. Lindsey 200A class sensors are suitable for padmount and metal clad applications. Lindsey ElbowSense are designed and tested per applicable IEEE-386 and other industry standards.

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Installation:

These instructions apply for either an energized or a de-energized installation.

1. Using the sensor catalog number, use the Specifications tables to ensure the sensor is being applied in accordance with its ratings and utility underground construction and safety standards.
2. Secure the green grounding wire from the Voltage Monitoring Sensor to the ground bus.
3. Apply a light, uniform coat of supplied grease, working thoroughly into the mating surface.
4. Remove the existing elbow or insulated cap from the bushing with a hotstick.
5. Firmly tighten a hotstick to the elbow sensor operation eye.* See Figure 1.
6. Position the elbow sensor so that the grounding end points are in a downward direction. Place the elbow sensor receptacle area over the bushing, inserting the probe into the loadbreak interface until the first slight resistance is felt.
7. Turn your face away and firmly thrust the elbow sensor home with a fast, straight motion, which will engage the internal lock of the elbow sensor into the loadbreak interface.
8. Plug in and hand tighten the waterproof signal cable and connect it to the input of the electronic monitoring device being used. The red wire is the output signal, and the white wire is the ground.
9. Installation is complete. The system can now be re-energized if it was de-energized for installation.

Figure 1.

Elbow Operating Eye

Sensing Elbow Removal Process: To remove the Lindsey Voltage Sensor, follow normal underground loadbreak connector procedures for your company.

Note:

Occasionally, the grease used with elbow connections may harden making it difficult to remove the Loadbreak Voltage Sensor. When this happens, repeated removal attempts may pull out the elbow operating eye.

To prevents this possible scenario, a cap pulling tool can facilitate elbow removal. Figure 2 shows one such elbow cap removal tool.

Please see the manufacturer's instructions for any such cap pulling tool to ensure proper and safe use of the tool.

Figure 2.

Speed Systems' Elbow and Cap Pulling Tool (Part # PT1525)

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