Installation Guidelines

600A Underground Plug Voltage Sensor

15kV P/N 9552, 25kV P/N 9553, 35kV P/N 9554

DANGER

The system must be de-energized and grounded before attempting installation or retrofit. Failure to de-energize and ground equipment can result in serious injury or death.

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

Use the bushing stud supplied with the sensor. Studs which are too long or too short can result in improper electrical connections. Using a bushing stud of the incorrect length can result in product or equipment failure.

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:

ELECTRICAL RATINGS:			
CATALOG NUMBER SEQUENCE	9552	9553	9554
INSULATION CLASS	15kV	25kV	35kV
IMPULSE (BIL)	95kV	125kV	150kV
INTERFACE	IEEE Std. 386 interface provides convenient connection with other 600A deadbreak devices.		

MECHANICAL:			
CATALOG NUMBER SEQUENCE	9552	9553	9554
INSULATION CLASS	15kV	25kV	35kV
WEIGHT (lbs.)	6 lbs.	6 lbs.	7 lbs.
SHIPPING WEIGHT (lbs.)	9 lbs.	9 lbs.	10 lbs.

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Characteristics:

The Lindsey ElbowSense™ 600A voltage sensor is available for 15kV, 25kV, and 35kV voltages in an IEEE Std. 386-type plug connector for simple, fast, and flexible installation.

Lindsey 600A class sensors are suitable for padmount and metal clad applications.

Lindsey ElbowSense sensors are designed and tested per applicable IEEE-386 and other industry standards.

Installation:

1. Referencing 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. The system must be de-energized and grounded before attempting installation or retrofit.
3. The sensor is shipped with an aluminum stud taped to the protective cap on the body of the sensor. See Figure 1. Loosen and remove the tape tape from the stud.
4. Remove the protective cap. See Figure 1.
5. Insert the **Lindsey supplied aluminum stud** into the threaded interface and tighten to a torque of 40-48 ft-lbs. using a 1/2" open end wrench.

IMPORTANT: If you are working with voltage sensors of different voltage ratings, it is important not to confuse the stud used for one voltage class sensor with that of another. See Figure 2 and Table 1 to identify the correct length stud for the voltage sensor you are using. If you do not have the correct stud, **STOP**, and contact Lindsey to order a replacement stud per Table 1.

Figure 1.
Voltage plug sensor as shipped, showing the protective cap and aluminum stud.

Installation (*continued*):

6. Remove the existing tap or plug from the grounded bushing per utility operating procedures.
7. Install current monitoring ring on "T" connector if it is to be used.
8. Apply a light, uniform coat of supplied grease, working thoroughly onto all mating surfaces.
9. Insert and tighten the 600A plug to an indicated torque of 40-48 ft-lbs. using a 1 1/8" hex socket and a torque wrench. Excessive torque will cause permanent damage.
10. Attach a #12 AWG or #10 AWG ground wire to the terminal provided on the shell of the voltage monitoring plug and connect it to the ground bus.
11. 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.
12. Installation is complete. The system can now be re-energized.

Figure 2.

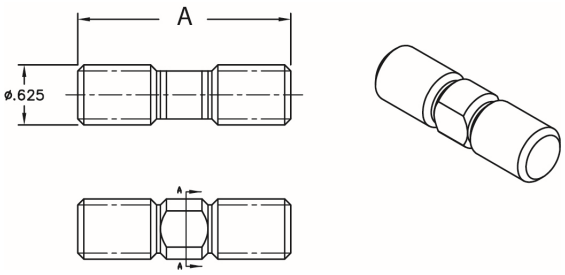

Table 1: Plug sensor stud lengths*

Voltage Class	A *as indicated in Fig. 2*	Part Number
15kV	2.215"	9406
25kV	2.215"	9406
35kV	2.465"	9407

*Ref. Figure 12, IEEE Std. 386-2016

Lindsey Systems
760 N. Georgia Ave., Azusa, CA 91702 USA
+1-626-969-3471

www.lindsey-usa.com
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