LINDSEY

Installation Guidelines

Multicore Current and Voltage Sensor

15kV p/n 9650/E1004, 25kV p/n 9660/E1004, & 35kV p/n 9670/E1004

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 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.

DANGER

Do not drop. While extremely durable, the sensor is cast from a material that can fracture if dropped onto a hard surface. Fractures can result in either catastrophic failure of the sensor upon energization resulting in serious injury or death, or in premature failure of the sensor.

WARNING

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 accurate 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	965x/E1x04...	966x/E1x04...	967x/E10x4...
INSULATION CLASS	15kV	25kV	35kV
IMPULSE (BIL)	110kV	150kV	200kV
LEAKAGE DISTANCE	16.4 in.	24.5 in.	36.5 in.
DRY ARC DISTANCE	8.8 in.	12.6 in.	17.2 in.
OVERALL HEIGHT	13.2 in.	16.7 in.	21.8 in.
WITHSTAND* (60Hz, 1 min.)	34kV	40kV	50kV
CORONA (extinction)	11kV	19kV	26kV

MECHANICAL RATINGS			
INSULATION CLASS	15kV	25kV	35kV
CANTILEVER STRENGTH	2,800 lbs	2,800 lbs	2,800 lbs
WEIGHT	39 lbs	49 lbs	59 lbs
SHIPPING WEIGHT	44 lbs	54 lbs	64 lbs

Characteristics:

Lindsey Multicore sensors offer a greatly simplified installation procedure. Designed specifically for 15 to 35kV systems, this sensor does not require any special calibration for conductor diameter to produce its 1% accurate output. It can be mounted vertically or horizontally to replace any standard insulator with the conductor held precisely by dual clamps. The deep groove design places the current path at the center of multiple sensing cores that are embedded inside the solid insulator. Overall symmetry of the internal sensing system ensures high accuracy when used with conductor diameters from 0.25 to 1.25 inches. To retain compatibility with existing cap controllers and RTU's, the current signal output ratio has been set to 600A:10V with zero phase shift.

Installation:

The Multicore Sensor is designed to be installed without de-energizing or cutting the main utility conductor.

DANGER

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WARNING

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CAUTION

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1. Using the sensor catalog number, use the Specifications tables to ensure the sensor is being applied in accordance with its ratings.
2. Requires Lindsey Part No. 2041, Line Post Mounting Stud for wood crossarm. If replacing an existing insulator, remove the existing insulator using approved work methods. Mount the Multicore sensor. Install the Line Post Mounting Stud in the base of the sensor and install on the crossarm. Rotate the sensor to place "H1" towards the feeder source. "H1" is always opposite the signal cable connector. "H1" is marked adjacent to the conductor groove.

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3. Grounding procedure: Tighten nut against square washer on crossarm. Add two square washers, double coil lock washer and square nut to stud and loop a No. 6 (typical) solid copper ground wire between washers and tighten nut. A positive ground must be maintained. Connect grounding jumper to a low resistance pole ground.
4. Connect signal cable to the sensor. Hand-tighten to 18-20 ft -lb. Secure with wood staples to crossarm or route inside conduit being careful not to crimp or damage the signal cable. Now, connect cable to controller.
5. Install conductor into the top groove of the Multicore sensor. Conductor keepers are reversible: one side accepts conductors ranging from 0.25 inch to 0.73 inch diameter; flipping over the keeper will allow it to accept conductors from 0.73 to 1.25 inch diameter. If preferred, armor rod may be used without affecting accuracy. Tighten clamping bolts.
6. Installation is complete.

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