

Post Insulator Current Sensors

Lindsey post insulator current sensors consist of a high accuracy (better than 1%), current sensor contained in a body with full electrical and mechanical post insulator ratings. Depending on model, these sensors are completely flat up through the 40th harmonic.

This sensor is available in four terminal packages:

- **Multicore-style** design allows the conductor to be lifted into the sensor, eliminating the need to cut the conductor or make a jumper. This style sensor is not recommended for applications requiring accurate harmonic current measurements.
- **Busbar-style** design is fitted with standard 2-or 4-hole NEMA pads, ideal for many substation applications.
- **Tube-type** design for where a conductor can be threaded through and clamped to the stainless steel tube; practical for many switchgear and substation applications.
- **Clamp-top** style eliminates the need to cut the phase conductor while providing flat-frequency response up the 40th harmonic. Clamp-top style sensors can be used in place of any horizontal or vertical line post insulator.



Busbar-style Clamp-top style Tube-type Multicore-style

NEUTRAL CURRENT SENSOR

The Lindsey neutral current sensor is commonly used to sense neutral current in small capacitor banks, including both pole mounted and padmount banks. The CT has a tilt-top that opens for easy installation around conductors up to 30mm (1.25") in diameter. The neutral current sensor has 1% accuracy and comes complete with a 10.5m (35 ft) cast in cable. The sensor is watertight.



Ordering Information

Part number	R-22981
Insulation Voltage Class	600V
Output Ration	50A=5VAC

Ordering Table

Part Number Sequence 96AB/CD0FGH

Where:

Code	Description	Options
A	Insulation Class	5=15kV (110kV BIL) 6=25kV (150kV BIL) 7=35kV (200kV BIL) 8=46kV (250kV BIL)
B	Leakage Distance	0= Standard (13" for 15kV, 20" for 25kV, 29" for 35kV, 33" for 46kV) (330mm for 15kV, 510mm for 25kV, 740mm for 35kV, 840mm for 46kV) 2=additional 6" (150mm) creep above standard 3= additional 9" (225mm) creep above standard 4= additional 12" (300mm) creep above standard
C	Top Configuration	C=Clamp-top/Tube-Top E=Multicore (Only available with 600A/10V output option) S=Substation/Busbar
D	Current Output Signal	1 = 600A:10V (required when selecting Multicore top) 2 = 600A:6V 3 = 600A:5A 4 = 600A:1A 5 = 300A:5A 6 = 300A:10V X = Special
F	Clamp-Option	0 = No clamp top choke C = Clamp-top choke (required when selecting clamp-top option)
G	Terminal Option	0 = 1.185" I.D. stainless steel tube 1 = 1.185" I.D. stainless steel (SS) tube with SS bonding clamp 2 = Aluminum Bus Bar, 2 Hole Pads 3 = Aluminum Bus Bar, 4 Hole Pads 4 = Std. Conductor Keeper (required when selecting Multicore top)
H	Connector	Blank = Standard ITT Cannon Connector C = Cast-in cable G = 20" Cable with Amphenol Connector & Strain Relief A = Amphenol Connector

Example: 9650/S3002 is a 15kV, standard leakage distance, Substation/Busbar style with 2-hole NEMA pads, a 600A:5A ratio, and supplied with a standard Cannon connector.



Post Insulator Sensor Specifications

ELECTRICAL RATINGS:			
INSULATION CLASS	15kV	25kV	35kV
IMPULSE (BIL)	110kV	150kV	200kV
LEAKAGE DISTANCE (in.)	15.8	24.5	36.5
DRY ARC DISTANCE (in.)	8.8	12.6	17.2
OVERALL HEIGHT (in.)	13.2	16.6	21.8
WITHSTAND* (60Hz, 1 min.)	34kV	40kV	50kV
CORONA (extinction)	11kV	19kV	26kV
LOW FREQ. DRY FLASHOVER	70kV	100kV	125kV
LOW FREQ. WET FLASHOVER	50kV	70kV	95kV

*NOTE: Withstand test is not performed on sensors with a voltage divider. Specify 50hZ, 60hZ.

CURRENT SIGNAL OUTPUT:	
RATIO	600 Amps: 10 Volt
OUTPUT BURDEN / LOAD:	Calibrated for a 10,000 or greater load
ACCURACY:	+/- 1%
PHASE SHIFT:	0 degrees nominal, +/- 1.5 degrees
OPEN CIRCUIT VOLTAGE:	10 Volts at 600 Amps line current

VOLTAGE SIGNAL OUTPUT:	
OUTPUT IMPEDANCE:	Calibrated for a 1 megohm load
ACCURACY:	+/- 1% (+/- 0.5% available upon request)
PHASE SHIFT:	0 degrees nominal, +/- 1.5 degrees

Calibration of current and voltage signals is virtually unaffected by conductor material, size temperature, armor rod, adjacent phases, line angle or insulator contamination.

MECHANICAL:			
INSULATION CLASS	15kV	25kV	35kV
CANTILEVER STRENGTH (Ult. lbs.)	2,800	2,800	2,800
WEIGHT (lbs.)	37	48	59
SHIPPING WEIGHT (lbs.)	48	58	64

OPERATING TEMPERATURE:	
Temperature range:	-40°C to +65°C

CONDUCTOR DIAMETER RANGE:
The two sided keeper is made of aluminum and can accommodate a 0.25 inch to 1.25 inch diameter conductor.

BASIC CONSTRUCTION:
The Multicore Sensor is molded from POLYSIL, a high dielectric strength, anti-tracking polymer developed by Lindsey Manufacturing Company under EPRI contract.

