LINDSEY

Installation Guidelines

Busbar Style Current and Voltage Sensor

Insulation Class	2-Hole Pad P/N	4-Hole Pad P/N
15kV	965x/Syz02	965x/Syz03
25kV	966x/Syz02	966x/Syz03
35kV	967x/Syz02	967x/Syz03
46kV	9680/Syz02	9680/Syz03

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.

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.

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. If a HIPOT test is necessary, contact Lindsey for alternate product intended for HIPOT.

Specifications:

ELECTRICAL RATINGS				
Catalog Number Sequence	965x/S...	966x/S...	967x/S...	9680/S...
Insulation Class	15kV	25kV	35kV	46kV
Impulse (BIL)	110kV	150kV	200kV	250kV
Leakage Distance	15.0 in.	19.3 in.	28.1 in.	39.0 in
Dry Arc Distance	8.3 in.	10.4 in.	15.0 in.	17.1 in.
Overall Height	14.1 in.	16.2 in.	20.3 in.	22.5 in.
Withstand* (60Hz, 1 min.)	34kV	40kV	50kV	65kV
Corona (extinction)	11kV	19kV	26kV	33kV

*Current only sensors

MECHANICAL RATINGS				
Insulation Class	15kV	25kV	35kV	46kV
Cantilever Strength	2,800 lbs.	2,800 lbs.	2,800 lbs.	2,800 lbs.
Weight	37 lbs.	45 lbs.	59 lbs.	52 lbs.
Shipping Weight	40 lbs.	48 lbs.	62 lbs.	61 lbs.

Characteristics:

The Lindsey Busbar Style Current and Voltage Monitoring Insulator (CVMI) is designed to be installed on a de-energized line. The sensor is available with either 2-hole or 4-hole NEMA pads. Connection of the line to both sides of the sensor produces both current and/or voltage sensing. The CVMI can be installed in either a horizontal or vertical line post configuration, depending on the accessory hardware used. Following the instructions below will insure a safe and simple installation.

Table 1: Accessories for Busbar Style Sensor

PART #	DESCRIPTION
2004	Horizontal mounting base
2040	¾" x 2 3/16" mounting stud for metal cross-arms
2041	¾" x 7" mounting stud for wood cross-arms

Installation:

1. Using the sensor catalog number, use the Specifications tables to ensure the sensor is being applied in accordance with its ratings.
2. Pre-assemble any required hardware accessories to the insulator. When used on a pole, this may include the bottom-mounting stud and/or the horizontal mounting base. See Table 1. The actual hardware will depend on the specific installation.
3. If the CVMI is replacing an existing insulator, raise the conductor away from the insulator using approved utility practices and remove the existing insulator.
4. Mount the Lindsey CVMI with H1 identification labeled on the sensor body (opposite side of connector) closest to the supply or the substation direction.
5. Connect the base of the CVMI to ground.
6. Depending upon installation, either secure the signal cable with wood staples to the crossarm or route inside conduit, being careful not to crimp or damage the signal cable. Plug the signal cable into the connector at the base of the insulator.
7. Attach conductor to the two- or four-hole NEMA pads with suitable connectors for the type of conductor used (not included). Note that this type of connection works best in a dead end configuration. When installing the connectors, all of the normal procedures to minimize contact resistance, such as brushing the conductor and applying anti-corrosion grease, should be used.

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