



Model 7021U High Voltage Current Transformer

*Operating Voltage 100 kV
With Stand Voltage 185 kV
Partial Discharge < 10 PC
2000 : 1 Ratio < 10 ppm
2000 or 4000 Amps*

General Description:

The Model 7021U series of High Voltage Current Transformers was designed for the current input to MI's ALMS 4100 or ALMS 2100 Loss Measurement Systems. For voltages above 100 kV see the Model 7022U. This design meets the requirements of both CEI/IEC 44-1 and IEEE STD C57.12.00-2000. The bushing is filled to approximately 150 kPa absolute of SF6 and is fitted with a pressure indicator or with an optional pressure transducer with a 4-20 mA output for continuous monitoring. Connections to the primary winding of the current transformer are made via a copper bar, machined at both ends. Utilizing passive two stage compensated technology, errors of less than 10 ppm can be achieved at high voltages.

The main advantage of a two stage compensated CT is that the effective burden is 0 when feeding into another compensated CT such as the current input on the Model 2010A Wattmeter. As a result, the errors of the CT are effectively reduced to zero in both magnitude and phase. Lead length becomes unimportant and there is no further concern for any additional active components. If the 7021U is connected to a wattmeter that has only a two wire input, the secondary and auxiliary leads must be connected together as close as possible to the input of the wattmeter. Typical errors for burdens at 1Ω are less than 100 ppm. For more accurate data on errors related to burdens above 100 mΩ contact the factory.

The Model 7021U is a four-wire single range passive-two-stage current transformer, which can be supplied to operate at primary currents of either 2000 or 4000 amperes and secondary currents of 1 and 2 amps respectively. The secondary and compensation

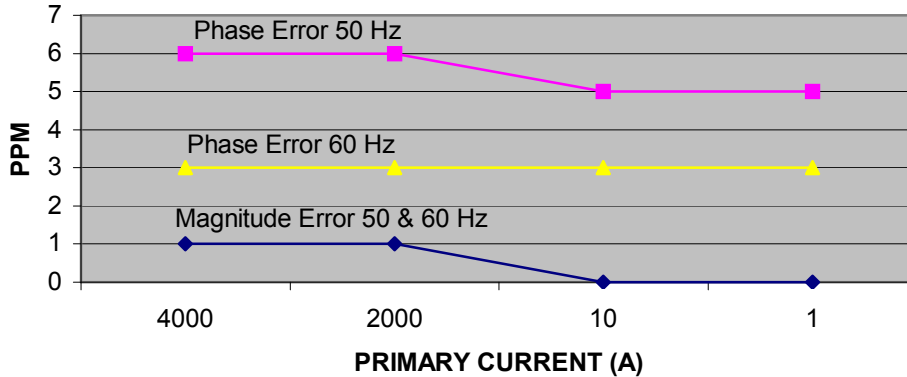
Model 7021U

windings are brought out through a tube and connector in the base of the structure for easy connection. All current transformers have 50% over range capabilities.

The Model 7021U can also be used as a Range Extender for the Model 7010 series of Capacitance/Inductance Bridges for measuring losses in reactors.

Revision 6

**Typical Error Chart for 0 to 100 milli-ohm Burden
(Report # E01-003)**



Specifications:

Nominal Ratio: 2000:1

Ratio Error < 10 ppm in magnitude and phase

Operating Voltage: 100 kV rms @ 50/60 Hz
Withstand Voltage: 185 kV rms @ 50/60 Hz
Partial Discharge: < 10 pC @ 100 kV
Operating Temperature: -5°C to 40°C
Humidity: Up to 95%, non-condensing
Environmental Conditions: Indoor Use Only

Dimensions: Diameter 1m x 1.8m ht.
Weight: 200 kg

Distributed By:

How to Order:

Model: 7021U/xxxx
HV Current Transformer

Data Subject to Change

Printed in Canada



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