

Most Accurate High Current and High Voltage AC Measurement Transformers Available Today!



GUILDLINE INSTRUMENTS NEW 7223CT-2S Series of Precision AC Current Transformers provides very accurate AC current measurements at high current and for high voltages.

The 7223CT-2S 2000 A model on the left is designed with a 76.2 mm (i.e. 3 inch) diameter open window to allow the insertion of a high voltage insulating bushing as well as to pass a single cable, set of cables, or buss bar that carry the AC current to be measured.

**THE 7223CT-2S IS PART OF THE 7223CT SERIES WHICH ARE COMMERCIALY AVAILABLE HIGH PRECISION, LOW AND HIGH VOLTAGE, AC CURRENT INSTRUMENTS CAPABLE OF MEASUREMENT ACCURACY <5 PART-PER-MILLION (PPM) – ACCURACIES NO OTHER MANUFACTURER PROVIDES!**

The 7223CT-2S AC Current Transformer produces an output current that varies directly with the input current with a ratio of 1000:1. The 7223CT-2S-HV High Voltage model has a ratio of 2000:1.

Both the 7223CT-2S and 7223CT-2S/HV make measurements of current up to a maximum of 2000 A. Other ratios are available with reduced accuracy on special order. The full scale output is provided through five way binding post connectors on the front panel.

All 7223CT-2S Precision AC Current Transformers are packaged in a rugged metal enclosure.

### FEATURES

- High Precision AC Current Measurements!
- Fixed Permanent Accuracy!
- Measurement Accuracy <5 ppm at Power Frequencies for Both Ratio and Phase Angle!
- Stability Measurement < 5 ppm!
- High Voltage Isolated Measurement Capability When Used with a Suitable Insulating Bushing!
- High Accuracy with Burdens up to 1  $\Omega$ !
- 7223CT-2S Provides 1000:1 Transformation Ratio!
- 7223CT-2S/HV Provides 2000:1 Transformation Ratio!

## 7223CT-2S Precision AC Current Transformer Series

The 7223CT-2S-HV model, shown below, is larger with a 152 mm, (6 in.) diameter open window to allow the insertion of larger high voltage insulating bushing as well as to pass a single cable, set of cables, or buss bar that carry the AC current to be measured.

The larger open window size makes it easier to use high voltage bushings for the measurement. The winding configuration for the 7223CT-2S-HV model allows for 2000:1 ratio with up to 2000 A on the primary side of the CT.

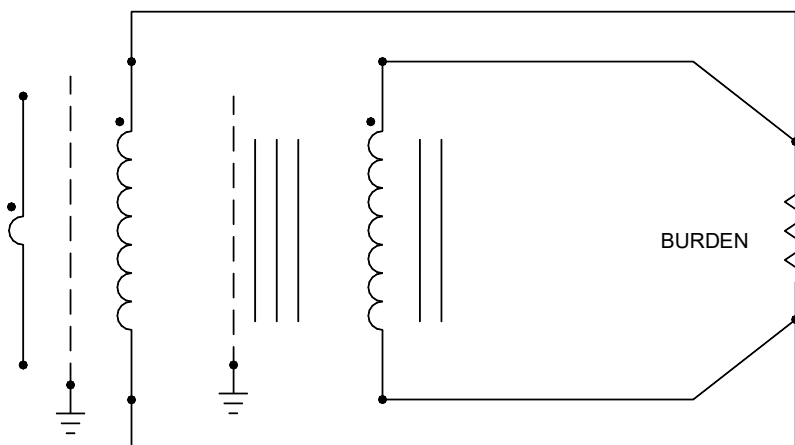
### THEORY OF OPERATION

The 7223CT-2S AC Current Transformer produces an output current that varies directly with the input current with a ratio of 1000:1. By the connection of a reference shunt burden on the output terminals the primary current can also be calculated from the measured voltage on the reference shunt with consideration of the 1000:1 ratio. The 7223CT-2S is also suitable for extending the current range of power meters and analyzers.

No adjustments of the 7223CT-2S AC Current Transformer are required for proper operation.



**HV Model**



**Typical Transformer Connections**

## 7223CT-2S Precision AC Current Transformer Series

| <b>7223CT-2S AC Current Transformer Specifications (3 Year)</b> |   |           |
|---|---|-----------|
| Uncertainty / Accuracy 50/60 Hz<br>(Burden 0.5 Ω)               | In-phase                                  | < ± 5 ppm |
|   | Quadrature                                | < ± 5 ppm |
| Linearity   | < ± 1 ppm full scale                      |           |
| Temperature Coefficient   | ± 0.01 ppm/°C                             |           |
| Test Current Range  | 7223CT-2S                                 | ± 2000 A  |
|   | 7223CT-2S-HV                              | ± 2000 A  |
| Test Volt Range   | Up to 100,000 Vac with Insulating Bushing |           |
| Transformation Ratio  | 7223CT-2S                                 | 1000 : 1  |
|   | 7223CT-2S-HV                              | 2000 : 1  |
| Secondary and Compensation<br>Winding Breakdown Voltage         | 300 VAC                                   |           |

| <b>GENERAL SPECIFICATIONS</b>     |                    |                      |                 |
|-----------------------------------|--------------------|----------------------|-----------------|
| Temperature                       | Operating          | 15 °C to 30 °C       | 59 °F to 86 °F  |
|                                   | Storage            | -20 °C to 60 °C      | -4 °F to 140 °F |
| Humidity                          | Operating          | 20 % to 70 % RH      |                 |
|                                   | Storage            | 15 % to 80 % RH      |                 |
| Weight                            | 30 kg              | 66 lbs               |                 |
| Dimensions (H x D x W)            | 350 x 107 x 315 mm | 13.8 x 4.2 x 12.4 in |                 |
| Weight – HV Model                 | 136 kg             | 300 lbs              |                 |
| Dimensions – HV Model (H x D x W) | 592 x 180 x 559 mm | 23.3 x 7.1 x 22.0 in |                 |

| <b>ORDERING INFORMATION</b> |   |
|-----------------------------|---|
| 7223CT-2S                   | 2000 Ampere AC Current Transformer (1000:1) |
| 7223CT-<br>2S-HV            | 2000 Ampere AC Current Transformer (2000:1) |
| /CC                         | Certificate of Conformance (Included)       |
| /OM                         | Operators Manual (Included)                 |

GUILDLINE IS DISTRIBUTED BY:



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