

Data Sheet no. 8.78/2

Current Instrument Transformers for Power Measurements

Application

The current instrument transformers are used for the measurement of no-load and load losses of power transformers. Their secondary outputs are connected to a power analyzer. Together with associated voltage instrument transformers the power analyzer enables the evaluation of transformer losses. By using the power analyzer, also other important data related to the waveform of voltage and current can be evaluated.

Design

Depending on the application, types with basic accuracy class (basic type: 0.1...0.2 %) or advanced accuracy class (advanced type: 0.01...0.05 %) are available. All types are maintenance free and designed for indoor installation only. Several primary and secondary windings can be used to select the best adaptation of the test current to the measuring range.

The typical field of application for the basic type is the measurement of no-load losses in on-site transformer test systems. They are designed as cast resin instrument transformers. Bolted connections are provided for the primary side. The secondary terminals are arranged in a waterproof, sealable box.

Types with advanced accuracy class are suitable for no-load and load loss measurements with small power factor. They are designed as oil-immersed standard current instrument transformers. Bolted connections are provided for the primary side. The secondary connections can be accessed by bolted connections or tip jacks.

Technical Data

| | | Basic types | |
|---------------------|-----|-------------|---------------------------------|
| Type | | GSW 30 | GISN36 |
| Application | | mobile | mobile |
| Primary current | A | 10-20-40-80 | 5-10-25-50-100-250- 500-1000 |
| Secondary current | A | 1 | 1 |
| Rated voltage | kV | 36 | 36 |
| Power | VA | 5 | 5 |
| Accuracy class | % | 0.2 | 0.1 |
| Phase displacement | min | ±10 | ±1 |
| Operating frequency | Hz | 45 - 200 | 40 - 200 |
| Measuring frequency | Hz | 50 / 60 | 50 |
| Test voltage (AC) | kV | 70 | 75 |
| Height (approx.) | mm | 410 | 355 |
| Width (approx.) | mm | 400 | 460 |
| Depth (approx.) | mm | 290 | 178 |
| Weight (approx.) | kg | 44 | 41 |

Technical Data

| | | Advanced types | | | |
|---------------------|-----|---------------------------------|---------------------------------|-------------------------------|---|
| Type | | NCO 60mo | NCO 60mo | NCO 60 | NCO 100 |
| Application | | mobile | mobile | stationary | stationary |
| Primary current | A | 5-10-25-50-100-250- 500-1000 | 5-10-25-50-100-250- 500-1000 | 10-25-50-100-250-500- 1000 | 5-10-25-50-100-250- 500-1000-2500-3000 |
| Secondary current | A | 1 | 1 | 5 | 1 |
| Rated voltage | kV | 50 | 50 | 50 | 100 |
| Power | VA | 5 | 5 | 5 | 5 |
| Accuracy class | % | ± 0.05 | ± 0.01 | ± 0.01 | ± 0.01 |
| Phase displacement | min | ±1 | ±1 | ±1 | ±1 |
| Operating frequency | Hz | 40 - 200 | 40 - 200 | 40 - 200 | 40 - 200 |
| Measuring frequency | Hz | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 |
| Test voltage (AC) | kV | 75 / 3 | 75 / 3 | 75 / 3 | 150 / 3 |
| Height (approx.) | mm | 1075 | 1075 | 1075 | 1295 |
| Width (approx.) | mm | 540 | 540 | 540 | 670 |
| Depth (approx.) | mm | 670 | 670 | 540 | 670 |
| Weight (approx.) | kg | 190 | 190 | 190 | 350 |

For further information please contact:

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