

CT Current Transformer

The Magnelab Current Transformer (CT) provides an accurate, nondestructive (noncontact), measurement of single or repetitive unipolar or bipolar pulses, or continuous waves.

The product range offers the measurement of currents from micro-amps to 20K amps, at frequencies ranging from 0.5 Hz to 500 MHz. The output signal of the transformer is an accurate voltage waveform representation of the measured current, which can be analyzed on an oscilloscope, RF power meter, spectrum analyzer or custom interface circuitry.

Offering superior performance and quality, the transformers are available in 5 case sizes, can be terminated with BNC or SMA connectors and offer a sensitivity range providing environmental application flexibility.

All transformers can be shipped with a certificate of calibration and factory test data, ensuring optimum levels of performance.



The Magnelab Current Transformers offer key advantages over competing products

- Higher frequency cutoff, assuring faithful rendering of fast transients
- Up to 5 times more sensitivity for low intensity signal measurement
- Operating temperature -20°C to +120°C
- Higher nominal accuracy $\pm 0.5\%$ over a wider bandwidth

Application sectors and industrial sectors include:

- Laser and plasma research
- EMC and EMI research
- Semiconductor gate switching
- Power system harmonics and transients
- Lightning research and simulation testing
- Capacitor and electrostatic discharges
- Corona wire discharge
- Partial Discharge measurement
- Critical monitoring of current fluctuations



*Higher Frequency
Higher Sensitivity
Higher Temperature
More Accuracy*

Magnelab welcomes the opportunity to discuss your application requirements, offer advice and propose solutions. Should your needs fall outside our standard product specifications, we would be pleased to discuss the possibility of custom solutions.

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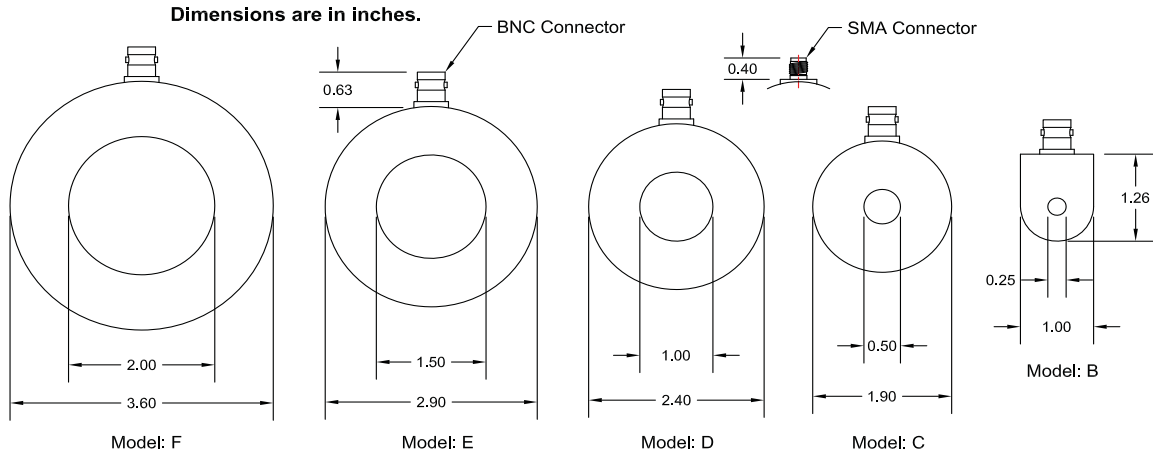
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V2.0

Note: Customer is responsible for isolating CT from bare conductors carrying high voltage. Magnelab High Frequency CT's are not intended to be used as isolation devices. They do not come with an associated voltage safety rating. The paint layer should be considered cosmetic and only offers a small level of electrical isolation. Please take necessary precautions when installing these CT's to insure adequate electrical isolation from high voltages.



Unit height: 0.67" for models C, D, E & F and 0.60" for model B

| Model | Output (V/A) | | Max rms (A AC) | Max Peak (A DC) | Droop (%/us) | Rise (ns) | Max I.t.* (As) in 50Ω | -3db low (Hz) | -3db high (MHz) |
|------------|---|--------|-------------------|--------------------|-----------------|--------------|--------------------------|------------------|--------------------|
| | in 1MΩ | in 50Ω | | | | | | | |
| CT-B5.0 | 5.0 | 2.5 | 2 | 200 | 3 | 0.875 | 0.0001 | 4800 | 400 |
| CT-B2.5 | 2.5 | 1.25 | 5 | 400 | 0.75 | 0.7 | 0.0004 | 1200 | 500 |
| CT-B1.0 | 1.0 | 0.5 | 8 | 1000 | 0.13 | 0.7 | 0.0025 | 200 | 500 |
| CT-B0.5 | 0.5 | 0.25 | 11 | 2000 | 0.03 | 1.75 | 0.01 | 48 | 200 |
| CT-B0.25 | 0.25 | 0.125 | 16 | 4000 | 0.015 | 3.5 | 0.013 | 24 | 100 |
| CT-B0.1 | 0.1 | 0.05 | 25 | 10000 | 0.006 | 7 | 0.013 | 10 | 50 |
| CT-B0.05 | 0.05 | 0.025 | 35 | 20000 | 0.003 | 17.5 | 0.053 | 5 | 20 |
| CT-C5.0 | 5.0 | 2.5 | 2 | 200 | 3 | 0.875 | 0.0002 | 4800 | 400 |
| CT-C2.5 | 2.5 | 1.25 | 5 | 400 | 0.75 | 0.7 | 0.0008 | 1200 | 500 |
| CT-C1.0 | 1.0 | 0.5 | 11 | 1000 | 0.13 | 0.7 | 0.005 | 200 | 500 |
| CT-C0.5 | 0.5 | 0.25 | 16 | 2000 | 0.03 | 1.75 | 0.02 | 48 | 200 |
| CT-C0.25 | 0.25 | 0.125 | 22 | 4000 | 0.01 | 3.5 | 0.08 | 12 | 100 |
| CT-C0.1 | 0.1 | 0.05 | 35 | 10000 | 0.004 | 7 | 0.167 | 6 | 50 |
| CT-C0.05 | 0.05 | 0.025 | 50 | 20000 | 0.002 | 17.5 | 0.283 | 3 | 20 |
| CT-D5.0 | 5.0 | 2.5 | 2 | 200 | 3 | 0.875 | 0.0002 | 4800 | 400 |
| CT-D2.5 | 2.5 | 1.25 | 5 | 400 | 0.75 | 0.7 | 0.0008 | 1200 | 500 |
| CT-D1.0 | 1.0 | 0.5 | 11 | 1000 | 0.13 | 0.7 | 0.005 | 200 | 500 |
| CT-D0.5 | 0.5 | 0.25 | 16 | 2000 | 0.03 | 1.75 | 0.02 | 48 | 200 |
| CT-D0.25 | 0.25 | 0.125 | 22 | 4000 | 0.01 | 3.5 | 0.08 | 12 | 100 |
| CT-D0.1 | 0.1 | 0.05 | 35 | 10000 | 0.002 | 7 | 0.5 | 2 | 50 |
| CT-D0.05 | 0.05 | 0.025 | 50 | 20000 | 0.001 | 17.5 | 0.756 | 1 | 20 |
| CT-E5.0 | 5.0 | 2.5 | 2 | 200 | 3 | 0.875 | 0.0002 | 4800 | 400 |
| CT-E2.5 | 2.5 | 1.25 | 5 | 400 | 0.75 | 0.7 | 0.0008 | 1200 | 500 |
| CT-E1.0 | 1.0 | 0.5 | 11 | 1000 | 0.13 | 0.7 | 0.005 | 200 | 500 |
| CT-E0.5 | 0.5 | 0.25 | 22 | 2000 | 0.03 | 1.75 | 0.02 | 48 | 200 |
| CT-E0.25 | 0.25 | 0.125 | 32 | 4000 | 0.01 | 3.5 | 0.08 | 12 | 100 |
| CT-E0.1 | 0.1 | 0.05 | 50 | 10000 | 0.002 | 7 | 0.5 | 2 | 50 |
| CT-E0.05 | 0.05 | 0.025 | 71 | 20000 | 0.001 | 17.5 | 0.756 | 1 | 20 |
| CT-F5.0 | 5.0 | 2.5 | 2 | 200 | 3 | 0.875 | 0.0002 | 4800 | 400 |
| CT-F2.5 | 2.5 | 1.25 | 5 | 400 | 0.75 | 0.7 | 0.0008 | 1200 | 500 |
| CT-F1.0 | 1.0 | 0.5 | 11 | 1000 | 0.13 | 0.7 | 0.005 | 200 | 500 |
| CT-F0.5 | 0.5 | 0.25 | 22 | 2000 | 0.03 | 1.75 | 0.02 | 48 | 200 |
| CT-F0.25 | 0.25 | 0.125 | 32 | 4000 | 0.01 | 3.5 | 0.08 | 12 | 100 |
| CT-F0.1 | 0.1 | 0.05 | 50 | 10000 | 0.002 | 7 | 0.5 | 2 | 50 |
| CT-F0.05 | 0.05 | 0.025 | 71 | 20000 | 0.001 | 17.5 | 0.756 | 1 | 20 |
| CT-CALCERT | Certificate of Calibration with traceability information available as an option | | | | | | | | |

The characteristics listed above are only guaranteed when CT is terminated in 50 Ohms.

All specs listed above are valid for DC pulses only unless otherwise specified.

* When unipolar pulses are measured, CT output winding may require a few milliamps of DC-current biasing for maximum I.t product.

Connector Selection

For termination connector append the model with "SMA" or "BNC", e.g. CT-C1.0-SMA.