

Overview

The CT Series Low Alternating Current Sensors can be used to detect very low current levels and for overcurrent protection in electronic appliances.

Applications

Typical applications include overcurrent detection in microcontroller-based equipment, refrigerators, air conditioners, inductive heating, servo motors, inverters, UPSs and SMPS.

Benefits

- High sensitivity
- High performance
- Compact and lightweight
- Mountable on printed circuit boards

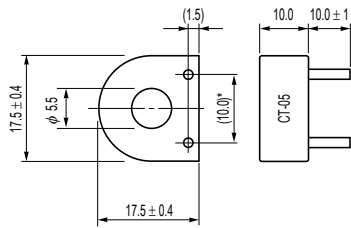


Ordering Information

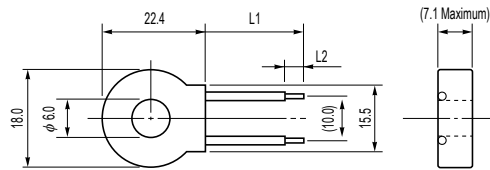
| CT- | 06- | 50 |
|--------|----------------------|---|
| Series | Shape Classification | Number of Turns |
| CT | 05 06 07 | Blank (CT-05 only) = 500 turns 50 = 500 turns 100 = 1,000 turns |

Dimensions in mm

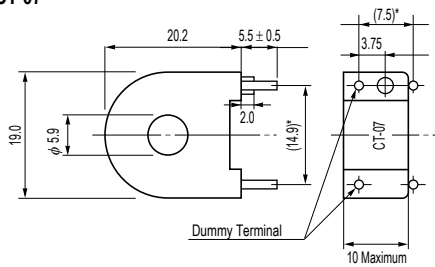
CT-05



CT-06



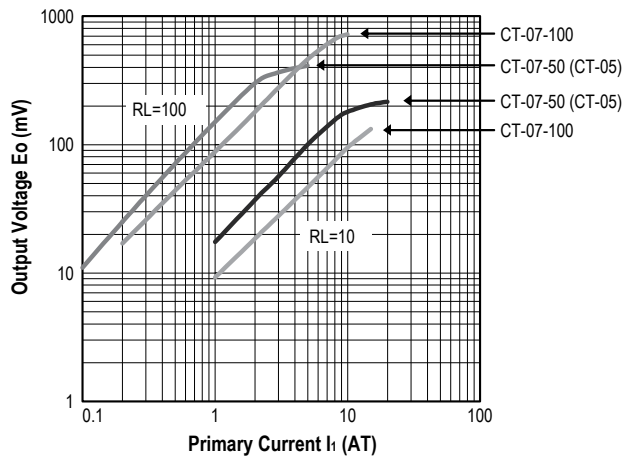
CT-07



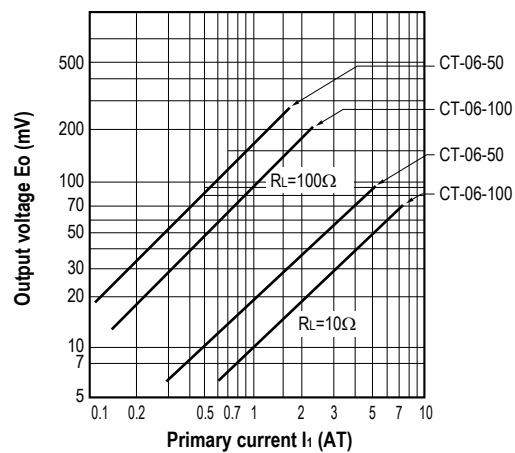
| Product Name | L1 (±5) | L2 (±2) |
|--------------|---------|---------|
| CT-06-50 | 56.0 | 4.0 |
| CT-06-100 | 85.0 | 5.0 |

Output Characteristics

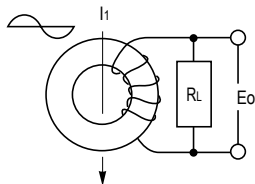
CT-05, CT-07 AC output characteristics (example)



CT-06 AC output characteristics (example)



Measuring Circuit



I_1 : Primary current (AT)
 R_L : Load resistance (Ω)
 E_o : Output voltage (mV_{rms})

Environmental Compliance

All CT sensors are RoHS compliant.

Table 1 – Ratings & Part Number Reference

| Part Number | Turns | Core | Lead Wires | Material |
|-------------|-------|-----------|--|-------------------------------------|
| CT-05 | 500 | Permalloy | ϕ 0.6 mm pin connectors | Phenolic resin case, epoxy-filled |
| CT-06-50 | 500 | Permalloy | Polyethylene sheath ϕ 0.5 mm single wire | Phenolic resin case, silicon-filled |
| CT-06-100 | 1,000 | Permalloy | Polyethylene sheath ϕ 0.5 mm single wire | Phenolic resin case, silicon-filled |
| CT-07-50 | 500 | Permalloy | ϕ 0.8 mm pin connectors | Phenolic resin case, epoxy-filled |
| CT-07-100 | 1,000 | Permalloy | ϕ 0.8 mm pin connectors | Phenolic resin case, epoxy-filled |

Precautions

Before Using Low Alternating Current Sensors

- Do NOT drop or apply any other mechanical stress.
- Preliminary study is required when heating by current conduction.
- Do NOT use the Low Alternating Current Sensors opened between secondary output terminals. Heat build-up in the magnetic core may occur, resulting in damages to the parts by melting of the coil.

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