

Clamp-on type
AC Current Sensors

C-CT series



To construct new energy management system
and contribute to the promotion of energy conservation.

A *Nidec* Group Company

COPAL ELECTRONICS

—All for dreams

Clamp-on type

RoHS
Compliant

AC Current Sensors **C-CT series**



Features

- Clamp-on type (split core design).
Easy installation to distribution panels.
- Compact size and wide measuring range.
- Outstanding output linearity at all current ranges.
- Direct interface.
- Overvoltage protection (zener diode).
- RoHS compliant.
- UL-94V-0 flame rating.

Applications

- To measure or monitor current or power consumption in smart energy systems such as:
 - HEMS (Home Energy Management System)
 - BEMS (Building Energy Management System)
 - Various power monitoring systems.

Part Number Designation

C - CT - 6

Series Name

Hole Diameter

6: φ 6mm 10: φ10mm
16: φ16mm 24: φ24mm

List of Part Numbers

| Part Number | Rated Primary Current | Max. Input Current | Output characteristic Example | Size and Weight |
|----------------|----------------------------|-----------------------|--|------------------------------------|
| C-CT-6 | AC 0.1 ~ 30A (50/60Hz) | AC 50Arms continuous | AC 100mV±1% (AC30A RL=10Ω 50/60Hz) | 19.3×26.4×31mm, Approx. 20gs |
| C-CT-10 | AC 0.1 ~ 60A (50/60Hz) | AC 100Arms continuous | AC 200mV±1% (AC60A RL=10Ω 50/60Hz) | 26.4×25.5×43.3mm, Approx. 40gs |
| C-CT-16 | AC 0.1 ~ 100A (50/60Hz) | AC 200Arms continuous | AC 333mV±1% (AC100A RL=10Ω 50/60Hz) | 32.5×30.5×46.2mm, Approx. 75gs |
| C-CT-24 | AC 0.1 ~ 200A (50/60Hz) | AC 300Arms continuous | AC 666mV±1% (AC200A RL=10Ω 50/60Hz) | 48.4×35.5×69.6mm, Approx. 170gs |

Specifications

| Part Number | C-CT-6 | C-CT-10 | C-CT-16 | C-CT-24 |
|-------------------------------|---|--|--|--|
| Rated Primary Current | AC 0.1 ~ 30A (50/60Hz) | AC 0.1 ~ 60A (50/60Hz) | AC 0.1 ~ 100A (50/60Hz) | AC 0.1 ~ 200A (50/60Hz) |
| Max. Input Current | AC 50Arms continuous | AC 100Arms continuous | AC 200Arms continuous | AC 300Arms continuous |
| Output characteristic Example | AC 100mV±1% (AC30A RL=10Ω 50/60Hz) | AC 200mV±1% (AC60A RL=10Ω 50/60Hz) | AC 333.3mV±1% (AC100A RL=10Ω 50/60Hz) | AC 666.6mV±1% (AC200A RL=10Ω 50/60Hz) |
| Phase Accuracy | +2.5°±0.5° (AC30A RL=10Ω 50Hz) +2.1°±0.5° (AC30A RL=10Ω 60Hz) | +1.6°±0.5° (AC60A RL=10Ω 50Hz) +1.3°±0.5° (AC60A RL=10Ω 60Hz) | +0.9°±0.5° (AC100A RL=10Ω 50/60Hz) | +0.3°±0.5° (AC200A RL=10Ω 50/60Hz) |
| Hole Diameter | φ6mm | φ10mm | φ16mm | φ24mm |
| Nominal Current Ratio | 3000 : 1 | | | |
| Applicable Frequency | 10Hz ~ 5kHz | | | |
| Max. Circuit Voltage | Less than AC600V (for insulated cable) | | | |
| Withstanding Voltage | AC 2200V/1 minute (between output terminal and outer case) | | | |
| Insulation Resistance | More than 50MΩ by 500V insulation tester (between output terminal and outer case) | | | |
| Open Circuit Protection | 7.5V (Zener diode) | | | |
| Operational Temperature | -20 ~ 60°C, less than 80%RH Without condensation | | | |
| Storage Temperature | -30 ~ 60°C, less than 80%RH Without condensation | | | |
| Flame Rating | UL-94V-0 | | | |
| Output Cable lead | AWG24 Approx. L=200mm | AWG22 Approx. L=150mm | | |
| Size and Weight | 19.3×26.4×31mm Approx. 20gs | 26.4×25.5×43.3mm Approx. 40gs | 32.5×30.5×46.2mm Approx. 75gs | 48.4×35.5×69.6mm Approx. 170gs |

Packing Specifications

- Bulk Packing specifications
Individually packaged in a plastic bag (1pc per bag).

Handling Notes

- Do not disassemble or modify the product.
- To ensure proper operation, do not apply shock to the product and keep the sensing part free from contamination.

NIDEC COPAL ELECTRONICS CORP.

7-5-25 Nishi-Shinjuku, Shinjuku-ku,
Tokyo 160-0023 JAPAN Phone:+81-3-3364-7055 Fax:+81-3-3364-7098

NIDEC COPAL ELECTRONICS, INC.

367 Van Ness Way, Suite 601
Torrance, CA 90501 U.S.A
Phone:+1-310-618-0225 Fax:+1-310-618-9984

NIDEC COPAL ELECTRONICS SHANGHAI CO.,LTD.

Unit A, 4/F, No.4 Bldg., No.253, Ai Du Rd., Wai Gao Qiao
Free Trade Zone, Shanghai, CHINA P.C.200131
Phone:+86-21-5046-3009 Fax:+86-21-5046-3115

NIDEC COPAL ELECTRONICS (TAIWAN) CO., LTD.

18F-1, No.57, Sec.2, Tun Hwa S.Rd., Taipei, TAIWAN
Phone +886-2-27030577 Fax:+886-2-27010577

■ Specifications are subject to change without notice.

A *Nidec* Group Company

COPAL ELECTRONICS —All for dreams
www.nidec-copal-electronics.com

NIDEC COPAL ELECTRONICS GMBH

Mergenthalerallee 79-81
65760 Eschborn GERMANY
Phone:+49-6196-92775-0 Fax:+49-6196-92775-75

NIDEC COPAL ELECTRONICS KOREA CORP.

2F Jin-il Bldg., 52-7 Banpo-Dong, Seocho-Gu,
Seoul 137-040 KOREA
Phone:+82-2-3482-5861 Fax:+82-2-3482-5860

NIDEC COPAL ELECTRONICS SINGAPORE PTE. LTD.

180B Bencoolen Street #07-05 The Bencoolen Singapore 189648
Phone +65-6535-0056 Fax:+65-6535-0087