

Clamp Type AC Current Sensors

For energy management systems CCT series

Expansion of the line-up. There is a movement to introduce BEMS, FEMS and CEMS by consideration of the global environment and the point of view of energy conservation-oriented. Its new product 600A model, the optimization of the shape using a high-performance ferrite core of the new development has been carried out. As a result it is possible to correspond to the new demand. By the Nominal Current Transformation Ratio of the series unification, the further standardization of circuit parts is enabled.



Photo : Type -00

- 56(L)x67(W)x96mm(H) Small size package
- Internal clamp diameter of $\Phi 36\text{mm}$ (Nom)
- Nominal current transformation ratio of 3000:1 *
- Clamp type for easy installation on existing power equipment.
- Accommodates automatic processes from wire wrapping and winding to soldering, ensuring high-quality and stable supply.
- Equipped with a built-in open-circuit protective device.
- Product compatible with RoHS directive.
- Compatible with lead-free solders.

■ APPLICATION

For energy management systems such as BEMS/FEMS/CEMS

■ Electrical Characteristics

| Part No. | CCT406393-600-36-00 | CCT406393-600-36-02 | |
|---|--|-----------------------------|----------------------|
| Applied current (50/60Hz) / Arms | 1.0 to 600 | | |
| Maximum allowed current / Arms continuous | 700 | | |
| Internal clamp section diameter. (Nom) | 36mm | | |
| Nominal current transformation ratio | 3000 : 1 | | |
| Output current accuracy | 200.0mA \pm 1% (600A, 50/60Hz) | | |
| Phase difference | 0.35 \pm 0.2 $^\circ$ (10 Ω ,600A, 50/60Hz) | | |
| Secondary winding resistance | 64 Ω | | |
| Open-circuit protection | 7.5V Clamp element | | |
| Output connector | Pin contact | SYM-001T-P0.6 (JST) | SPAL-001T-P0.5 (JST) |
| | Receptacle housing | SMR-02V-B (JST) | PALR-02VF (JST) |
| Adaptation connector | Socket contact | SHF-001T-0.8BS (JST) | SPHD-001T-P0.5 (JST) |
| | Plug housing | SMP-02V (JST) | PAP-02V-S (JST) |
| Output lead wire | AWG22 155mm | | |
| Allowable desorption number of times | About 100 times | | |
| Withstanding Voltage | AC2200V, 1min. (Between outer case and output) | | |
| Insulation Resistance | 100M Ω Over (DC500V) | | |
| Flame retardant grade | UL 94 V-0 | | |
| Temperature range | Operating temp.** | -20 to +60 $^\circ\text{C}$ | |
| | Storage temp.*** | -30 to +60 $^\circ\text{C}$ | |
| External L x W x H (Max.) / mm | 56 x 67 x 96 | | |
| Individual weight | 535 g | | |
| Packaging quantity (pieces/box) | 8 | | |

* 9000:1 is general for nominal current transformation ratio of the said class product. When a product of 3000:1 is used for this, it's possible to set load resistance (RL) to only one.

Operating temperature range includes self-temperature rise. *The Storage temperature range is for after the assembly.

"CCT272440-80-10" type

Added 80A type "CCT272440-80-10"(Internal clamp section diameter of 10mm) to the line-up.
It's produced by the same magnetic material like 30A type and 100A type.



Photo : Type -00

Photo : Type -02

- 30.5(L)x27.5(W)x41.5mm(H) Small size package
- Internal clamp diameter of $\Phi 10\text{mm}$ (Nom)
- Nominal current transformation ratio of 3000:1 *
- Clamp type for easy installation on existing power equipment.
- Accommodates automatic processes from wire wrapping and winding to soldering , ensuring high-quality and stable supply.
- Equipped with a built-in open-circuit protective device.
- Product compatible with RoHS directive.
- Compatible with lead-free solders.

■ APPLICATION

For energy management systems such as HEMS/BEMS/FEMS/CEMS

■ Electrical Characteristics (LINE-UP)

| Part No. | Type -00 | CCT406393-600-36-00 | CCT354571-300-24-00 | CCT323047-100-16-00 | CCT272440-80-10-00 | CCT261631-30-06-00 |
|---|-------------------|---|--|--|---|---|
| | Type -02 | CCT406393-600-36-02 | CCT354571-300-24-02 | CCT323047-100-16-02 | CCT272440-80-10-02 | CCT261631-30-06-02 |
| Applied current (50/60Hz) / Arms | | 1.0 to 600 | 0.1 to 300 | 0.1 to 100 | 0.1 to 80 | 0.1 to 30 |
| Maximum allowed current / Arms continuous | | 700 | 400 | 200 | 120 | 50 |
| Internal clamp section diameter. (Nom) | | 36mm | 24mm | 16mm | 10mm | 6mm |
| Nominal current transformation ratio | | 3000:1 | | | | |
| Output current accuracy | | 200.0mA \pm 1% (600A, 50/60Hz) | 100.0mA \pm 1% (300A, 50/60Hz) | 33.3mA \pm 1% (100A, 50/60Hz) | 26.6mA \pm 1% (80A, 50/60Hz) | 10mA \pm 1% (30A, 50/60Hz) |
| Phase difference | | 0.35 \pm 0.2 $^\circ$ (10 Ω , 600A, 50/60Hz) | 0.7 \pm 0.5 $^\circ$ (10 Ω , 300A, 50/60Hz) | 1.2 \pm 0.8 $^\circ$ (10 Ω , 100A, 50/60Hz) | 1.7 \pm 1.0 $^\circ$ (10 Ω , 80A, 50/60Hz) | 3.0 \pm 1.5 $^\circ$ (10 Ω , 30A, 50/60Hz) |
| Secondary winding resistance | | 64 Ω | 103 Ω | 285 Ω | 352 Ω | 492 Ω |
| Open-circuit protection | | 7.5V Clamp element | | | | |
| Output connector | Type -00 | Pin Contact | SYM-001T-P0.6 (JST) | | | |
| | | Receptacle Housing | SMR-02V-B (JST) | | | |
| | Type -02 | Pin Contact | SPAL-001T-P0.5 (JST) | | | |
| | | Receptacle Housing | PALR-02VF (JST) | | | |
| Adaptation connector | Type -00 | Socket Contact | SHF-001T-0.8BS (JST) | | | |
| | | Plug Housing | SMP-02V (JST) | | | |
| | Type -02 | Socket Contact | SPHD-001T-P0.5 (JST) | | | |
| | | Plug Housing | PAP-02V-S (JST) | | | |
| Output lead wire | | AWG22 155mm | AWG22 140mm | AWG22 150mm | AWG22 155mm | AWG22 160mm |
| Allowable desorption number of times | | About 100 times | | | | |
| Withstanding Voltage | | AC2200V , 1min. (Between outer case and output) | | | | |
| Insulation Resistance | | 100M Ω Over (DC500V) | | | | |
| Flame retardant grade | | UL 94 V-0 | | | | |
| Temperature range | Operating temp.** | -20 to +60 $^\circ\text{C}$ | | | | |
| | Storage temp.*** | -30 to +60 $^\circ\text{C}$ | | | | |
| External L x W x H (Max.) / mm | | 56 x 67 x 96 | 39.5 x 48.5 x 72 | 35 x 32.5 x 47.5 | 30.5 x 27.5 x 41.5 | 28.6 x 18.5 x 32 |
| Individual weight | | 535 g | 221 g | 70 g | 41 g | 24 g |
| Packaging quantity (pieces/box) | | 8 | 24 | 36 | 36 | 60 |

Operating temperature range includes self-temperature rise. *The Storage temperature range is for after the assembly.

RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://product.tdk.com/en/environment/rohs/>

All specifications are subject to change without notice.

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<https://product.tdk.com/info/en/index.html>