



**DC Current Transformer Series**



**CT-100**

**Current or Voltage Output**

Closed-loop current transformer technology allows accurate monitoring of DC and AC bipolar currents up to  $\pm 100A$ .

Galvanic isolation between primary and secondary conductor for simple current sensing at different potential.

Standard current output and voltage output ("V"-version) available.

**Features**

- Monitoring of DC and AC currents
- Excellent Linearity
- Closed-loop detection
- Galvanically isolated from primary
- Low Temperature Drift
- Current-output or Voltage-output versions
- Wide Bandwidth
- High Accuracy
- UL 94 V-0 flammability grade
- LED indicates correct operation
- DB-9 Connector or PCB-mount versions

**Applications**

- Power Supplies
- Sensing Element in Calibration Systems
- Biomedical Devices
- Nuclear Magnetic Resonance (NMR)

The O-FLUCS (O-FLUX Current Sensor) family is based on a closed loop technology that allows accurate and precise monitoring of DC and AC currents with high bandwidth.

The CT-100 transducers are rated at a maximum bipolar primary current of 100A with a transformation ratio of 1:1000.

Galvanic isolation between the primary and the secondary circuits allows to measure currents at a different potential and simplifies interfacing when using the O-FLUCS as the feedback element of current regulated power supplies.

Output from the CT-100 transducers can be chosen between two different versions: secondary current output or buffered voltage output (low temperature coefficient shunt resistor and low-noise amplifier are embedded in the device).

Also connection type can be chosen

between the "C" option – a male DB-9 Connector – and the "P" option – 7-pin through-hole for PCB mounting.

Main characteristics of the O-FLUCS current transformers are negligible temperature coefficient on the secondary output current, excellent linearity and extremely low noise.

DC current transformers represents the ideal replacement for systems where Hall-effect sensors are used as current sensing elements and better performances are needed.

All CT-100 devices also have different mounting holes in order to be easily installed in different configurations. Both self-threading screws and normal ones can be used.

Main application fields for these current transducers are precise and extremely stable regulated power supplies and power inverters.

#### About CAENels

CAENels is a dynamic company that provides power supplies and state-of-the-art dedicated electronic systems to the particle accelerator community – e.g. synchrotron light sources and Free Electron Laser (FEL) facilities.

- Magnet Power Supply Systems
- Beamline Electronic Instrumentation
- Precision Current Transducers
- High-Voltage Dedicated Systems

#### CAEN els d.o.o.

Kraška ulica, 2  
6210 – Sežana  
Slovenija

Phone +386 (0)5 7313 585  
Fax +386 (0)5 7313 587

info@caenels.com



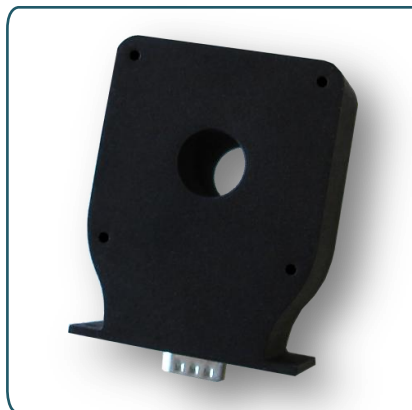
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Due to the excellent characteristics, the CT-100 transducers can be used in a variety of calibration, acceptance testing and quality control applications in industrial, power generation and automotive fields.

Commercially available versions of The CT-100 current transformers are the current-output CT-100-C and CT-100-P with their respective voltage-output versions CT-100V-C and CT-100V-P.

#### Technical Specifications

	<b>CT-100</b>
<b>Current Transform Ratio - N</b>	<b>1:1000</b>
<b>Maximum DC Primary Current - <math>I_{P(DC)}</math></b>	<b>±100 A</b>
<b>Maximum RMS Primary Current - <math>I_{P(RMS)}</math></b>	<b>71 A</b>
<b>Current Polarity</b>	<b>Bipolar</b>
<b>Maximum DC Secondary Current - <math>I_{S(DC)}</math></b>	<b>±100 mA</b>
<b>Maximum RMS Secondary Current - <math>I_{S(RMS)}</math></b>	<b>71 mA</b>
<b>Small Signal Bandwidth ( ±1 dB ) - BW</b>	<b>&gt; 100 kHz</b>
<b>Noise (DC-50 kHz) – typ.</b>	<b>&lt; 10 ppm (RMS)</b>
<b>Output Voltage ("V"-version) - <math>V_{OUT}</math></b>	<b>±10 V</b>
<b>Output Voltage Ratio ("V" version) - <math>V_{OUT}/I_{P(DC)}</math></b>	<b>0.1 V/A</b>
<b>Maximum Output Current – "V"-version</b>	<b>±15 mA</b>
<b>Temperature Coefficient – TC (typ.)</b>	<b>&lt; 0.5 ppm/K &lt; 2 ppm/K ("V"-version)</b>
<b>Linearity</b>	<b>&lt; 5 ppm &lt; 15 ppm ("V"-version)</b>
<b>Induction into Primary (typ.)</b>	<b>35 μV (RMS)</b>
<b>Protection Signal</b>	<b>Yes - Primary Over-Current</b>
<b>Supply Voltage ( ± 6% )</b>	<b>±15 V</b>
<b>Connections</b>	<b>DB-9 Connector ("C") or 7-pin type ("P")</b>
<b>Mechanical (Outer) Dimensions</b>	<b>45 × 57 × 75 mm</b>
<b>Primary Conductor Hole Diameter – <math>\emptyset</math></b>	<b>16 mm</b>
<b>Maximum Weight</b>	<b>250 g</b>



*O-FLUCS – CT-100 Rear View*

#### Ordering Options

WCT100CXAAAA	<b>CT-100-C</b>	100 A Primary Current O-FLUCS , DB-9 connector
WCT100PXAAAA	<b>CT-100-P</b>	100 A Primary Current O-FLUCS , 7-pin type connections
WCT100VCXAAA	<b>CT-100V-C</b>	100 A Primary Current O-FLUCS , DB-9 connector, Voltage-Output
WCT100VPXAAA	<b>CT-100V-P</b>	100 A Primary Current O-FLUCS , 7-pin type connections, Voltage-Output