



CT-100
CT-150

Current or
Voltage
Output



CT-100 / CT-150

- Closed-loop current transformer technology allows accurate monitoring of DC and AC bipolar currents up to $\pm 100A$ (CT-100) or up to $\pm 150A$ (CT-150).
- 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)
- Test & Measurement Setups

The 0-FLUCS (0-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/CT-150 transducers are rated at a maximum bipolar primary current of 100A/150A with a transformation ratio of 1:1000/1:1500.

Galvanic isolation between the primary and the secondary circuits allows to measure currents at a different potential and simplifies interfacing when using the 0-FLUCS as the feedback element of current regulated power supplies.

Output from the 0-FLUCS 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 0-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/CT-150 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 Us

CAEN ELS is a leading company in the design of power supplies and state-of-the-art complete electronic systems for the Physics research world, having its main focus on dedicated solutions for the particle accelerator community and high-end industrial applications.

-  Power Supply Systems
-  Precision Current Measurements
-  Beamline Electronic Instrumentation
-  FMC & MTCA.4 – MicroTCA for Physics

CAEN ELS s.r.l.

SS14 km 163.5
In Area Science Park
34149 – Basovizza, Trieste
Italy

Registered office:
via Vetraia 11 – 55049 – Viareggio (LU) - Italy

info@caenels.com
www.caenels.com

 www.caenels.com



0-FLUCS Closed-Loop Technology

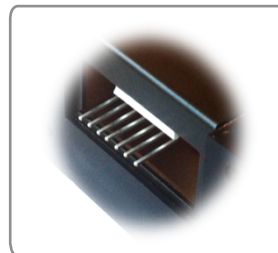
The CT-100 and CT-150 current transducer series is based on the CAEN ELS 0-FLUCS Closed-Loop Technology.

Due to the excellent characteristics, the 0-FLUCS 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/CT-150 current sensors are DB-9 connector “C” and 7-pin strip type “P” with their respective voltage-output versions “V”.

Technical Specifications	CT-100	CT-150
Current Transform Ratio – N	1:1000	1:1500
Maximum DC Primary Current - $I_{P(DC)}$	±100 A	±150 A
Maximum RMS Primary Current - $I_{P(RMS)}$	71 A	106 A
Current Polarity	Bipolar	
Maximum DC Secondary Current - $I_{S(DC)}$	±100 mA	
Maximum RMS Secondary Current - $I_{S(RMS)}$	71 mA	
Small Signal Bandwidth (±3 dB) - BW	> 500 kHz > 200 kHz (“V”-version)	
Noise (RMS) – typ.	< 0.5 ppm (@200 Hz) < 5 ppm (@50 kHz)	< 1.5 ppm (@200 Hz) < 8 ppm (@50 kHz)
External Shunt Resistance (current output only) - R_S	0 Ω – 40 Ω	
Output Voltage (“V”-version) - V_{OUT}	±10 V	
Output Voltage Ratio (“V” version) – $V_{OUT}/I_{P(DC)}$	0.1 V/A	(1/15) V/A
Maximum Output Current – “V”-version	±15 mA	
Temperature Coefficient – TC (typ.)	< 0.5 ppm/K < 2 ppm/K (“V”-version)	
Linearity	< 3 ppm < 15 ppm (“V”-version)	
Induction into Primary (typ.)	35 μV (RMS)	
Protection Signal	Yes - Primary Over-Current	
Supply Voltage (± 6%)	±15 V	
Connections	DB-9 Connector (“C”) or 7-pin type (“P”)	
Mechanical (Outer) Dimensions	45 × 57 × 75 mm	
Primary Conductor Hole Diameter – \varnothing	16 mm	
Operating Temperature Range	0...+50 °C	
Maximum Weight	250 g	

PS1215I – PS1215V
Low-Noise Power Supplies
for current transducers




CT-100/CT-150
7-pin strip connector for PCB



Ordering Options

WCT100CXAAA	CT-100-C	100 A Primary Current 0-FLUCS , DB-9 connector
WCT100PXAAA	CT-100-P	100 A Primary Current 0-FLUCS , 7-pin type connections
WCT100VCXAAA	CT-100V-C	100 A Primary Current 0-FLUCS , DB-9 connector, Voltage-Output
WCT100VPXAAA	CT-100V-P	100 A Primary Current 0-FLUCS , 7-pin type connections, Voltage-Output
WCT150CXAAA	CT-150-C	150 A Primary Current 0-FLUCS , DB-9 connector
WCT150PXAAA	CT-150-P	150 A Primary Current 0-FLUCS , 7-pin type connections
WCT150VCXAAA	CT-150V-C	150 A Primary Current 0-FLUCS , DB-9 connector, Voltage-Output
WCT150VPXAAA	CT-150V-P	150 A Primary Current 0-FLUCS , 7-pin type connections, Voltage-Output