

CURRENT TRANSFORMERS

Technical Information

SPLIT-CORE CTs



DENT Split-Core CTs offer the greatest utility at the lowest cost. These internally shunted CTs are intrinsically safe and can be used on “live” conductors without turning the load off.

Split-Core Series CTs are available in several window sizes and for loads from <5A to 1200A loads.

Standard Features Include:

- Nominal Rating ranges from 50 to 1000A
- Accuracy $\pm 1\%$ from 10% to 130% of rated current
- Frequency Range of 50 Hz to 400 Hz
- Shrouded core blades for protection during installation
- Snap closing/opening feature
- Meet CE and ETL C57.13

High Accuracy 5A CT Features:

- Nominal Rating is 5A
- Accuracy $\pm 1\%$ for 0.05 to 7A
- Frequency Range of 10Hz to 10KHz
- Excellent low current sensitivity
- Spring loaded core
- ETL recognized per UL506

CLAMP-ON CTs



DENT Clamp-On Style CTs are specifically designed to offer broad utility in a compact shape. The spring-loaded handles make frequent installation and removal a “snap!”

These CTs deliver high accuracy, high sensitivity, versatility and low phase shift making these probes an excellent choice for use in a wide range of current and power measurement applications.

Clamp-on CTs are ideally suited for short-term metering applications where their ease of use and one-handed operation greatly reduce workload.

Standard Features Include:

- Nominal Rating of 150, 500 or 1000A
- Accuracy for each:
 - $\pm 1-1.5\%$ for CON-0150
 - $\pm 2.5-3.5\%$ for CON-0500
 - $\leq 0.5-3\%$ for CON-1000
- Frequency Range for each:
 - 40 Hz to 10 kHz for CON-0150
 - 48 Hz to 1000 Hz for CON-0500
 - 30 Hz to 5 kHz for CON-1000
- CE Mark, Conforms to IEC 1010-2-032

ROGOWSKI (FLEX) CTs



DENT's Rogowski Coil Current Transformers have no metal cores which make them extremely flexible and light weight. Because they lack a metal core, Rogowski coils have very low phase shift error, can be used on very high currents, and are suitable for highly distorted AC waveforms.

These “rope” style CTs are designed to take measurements where standard current sensors cannot. Large buss bars, cable bundles, and irregular shaped conductors will no longer be a challenge when using this flexible CT.

Standard Features Include:

- Nominal Rating of 300/3000A
- Accuracy $\pm 1-4\%$, depending on CT orientation
- Frequency Range of 40 Hz to 5 kHz
- Remembers shape, allowing for pre-forming before use and simplifying installations in difficult to reach situations
- 90 cm (36”) long, window size of 29 cm (11.5”)
- Very low phase shift error
- CE Mark, Conforms to IEC 1010-2-032

CURRENT TRANSFORMER SPECIFICATIONS

High Accuracy
SHS-0005



Small Split Core
SCS-0050, 0100



Med. Split Core
SCM-0100, 0200, 0400, 0600



Large Split Core
SCL-0600, 1000



150A Clamp-On
CON-0150



500A Clamp-On
CON-0500



1000A Clamp-On
CON-1000



Rogowski Coil
FLN-3000



ELECTRICAL

Nominal Rating	5 Amps	100, 200, 400, 600 Amps	600, 1000 Amps	150 Amps	500 Amps	1000 Amps	Dual Range 300/3000 Amps
Accuracy	±1% for 0.05 to 7A	±1% for 10% to 130% of Rated Current	±1% for 10% to 130% of Rated Current	±1% for 2 to 80A ±1.5% for 80 to 150A	±2.5% for 10 to 600A 48-440 Hz ±3.5% for 10 to 600A 440-1000Hz	≤ 3° @ 10A ≤ 1.5° @ 50A ≤ 0.75° @ 200A ≤ 0.5° @ 1200A	±1% repeatability ±1-4% accuracy depending on CT orientation
Phase Shift	< 1° @ 5A 50/60 Hz	< 2° @ Rated Current 50/60 Hz	< 2° @ Rated Current 50/60 Hz	≤ 3° for 2 to 20A ≤ 2° for 20 to 80A ≤ 2.5° for 80 to 150A 50/60 Hz	< 3° for 10 to 600A 50/60 Hz	≤ 3° @ 10A ≤ 1.5° @ 50A ≤ 0.75° @ 200A ≤ 0.5° @ 1000A ≤ 0.5° @ 1200A	< 1° 50/60 Hz
Frequency Range	10 Hz to 10 KHz	50 Hz to 400 Hz	50 Hz to 400 Hz	40 Hz to 10 KHz	48 Hz to 1000 Hz	30 Hz to 5 KHz	40 Hz to 5 KHz
Useful Current Range	0.025 to 7A AC	10% to 130% of Rated Current	10% to 130% of Rated Current	2 to 150A AC	10 to 600A AC	10 to 1200A AC	10 to 4000A AC
Working Voltage	Maximum 600 Vrms	Maximum 600 Vrms	Maximum 600 Vrms	Maximum 600 Vrms	Maximum 600 Vrms	Maximum 600 Vrms	Maximum 600 Vrms
Output Signal	333mV @ 5A	333mV @ Rated Current	333mV @ Rated Current	333mV @ Rated Current	333mV @ 500A AC	333mV/A @ 1000A AC	333mV @ 300A or 3000A (1.11 mV/A or .111 mV/A)

MECHANICAL

Window Size	1.0 cm (0.4")	1.9 cm (.75")	3.2 cm (1.25")	5.1 cm (2.0")	2.0 cm (0.8")	3.3 cm (1.2")	5.2 cm (2.0")	29 cm (11.5")
Dimensions	6.4 x 5.1 x 2.5 cm (2.5 x 2.0 x 1.0")	5.1 x 5.3 x 1.6 cm (2.0 x 2.1 x 0.6")	8.3 x 8.6 x 2.5 cm (3.3 x 3.4 x 1.0")	12.1 x 12.7 x 3.0 cm (4.8 x 5.0 x 1.2")	14 x 5 x 3 cm (5.5 x 2.0 x 1.2")	19.5 x 6.6 x 3.4 cm (7.7 x 2.6 x 1.3")	21.6 x 11.1 x 4.5 cm (8.5 x 4.4 x 1.8")	Sensor: 90 cm (36") long Case: 4.1 x 6.4 x 11.4 cm (1.6 x 2.5 x 4.5")
Polarity	White lead is positive	White lead is positive	White lead is positive	White lead is positive	White lead is positive	Red lead is positive	Red lead is positive	Lead marked "1" is positive
Output Lead	2.7 m (8 ft) twisted pair	2.7 m (8 ft) twisted pair	2.7 m (8 ft) twisted pair	2.7 m (8 ft) twisted pair	3 m (10 ft) Double insulated	3 m (10 ft) Double insulated	3 m (10 ft) Double insulated	3 m (10 ft) shielded cable
Operating Temp	-20 to 50 °C (-4 to 122 °F)	-10 to 50 °C (14 to 120 °F)	-10 to 50 °C (14 to 120 °F)	-10 to 50 °C (14 to 120 °F)	-10 to 55 °C (14 to 130 °F)	-10 to 50 °C (14 to 120 °F)	-10 to 50 °C (14 to 120 °F)	-10 to +55 °C (14 to 131 °F)
Weight	136 g (4.8 oz)	136 g (4.8 oz)	340 g (12 oz)	748 g (26 oz)	180 g (6.5 oz)	350 g (12 oz)	500 g (19 oz)	370 g (14 oz)

SAFETY

Use	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor	Indoor/Outdoor
Storage Temp	-20 to +80°C (-4 to +175 °F)	-20 to +80°C (-4 to +175 °F)	-20 to +80°C (-4 to +175 °F)	-20 to +80°C (-4 to +175 °F)	-40 to 70 °C (-40 to 160 °F)	-40 to 80 °C (40 to 175 °F)	-40 to 70 °C (-40 to 160 °F)	-20 to +70 °C (-4 to 160 °F)
Case Protection	ABS and PVC UL94-V0	ABS UL94-V0	ABS UL94-V0	ABS UL94-V0	ABS UL94-V0	IP 40 (IEC 529)	IP 40 (IEC 529)	Case IP 65 (NEMA 4)
Safety Certification	ETL, Compliant with UL 506	ETL, CE, Compliant with IEEE C57.13-1993	ETL, CE, Compliant with IEEE C57.13-1993	ETL, CE, Compliant with IEEE C57.13-1993	ETL, CE, Compliant with IEEE C57.13-1993	CE Mark, Compliant with IEC 1010-2-032	CE Mark, Compliant with IEC 1010-2-032	CE Mark, Compliant with IEC 1010-2-032