

Current Transformer (CT) Selection Guide

Solar Analytics hardware currently supports 4 different CTs off the shelf and 1 custom build Rogowski coil option. These are listed in the table below. If you require custom CT sizing please contact Solar Analytics directly.

To make your CT selection, please have the following information handy, the maximum current flowing through the cable you want to measure and the diameter of the cable, including the insulation. For additional technical information, please see Appendix attached.

CT Type	Max Rated Current	Max Internal Diameter
	60 A	10 mm
	120 A	16 mm
	400 A	25 mm
	600 A	35 mm
	3000A	110 mm

60A Current Transformer

Electrical Specifications	
Rated Primary Current(Amp.) 50/60Hz	60nom(1~75A max)
Turn Ratio	Np:Ns=1:750
Current Ratio	60A/80mA
Accuracy @RL≤1Ω	1%
Phase error at rated current range	≤2°
Operating Temperature Range	-40~65°C
Storage Temperature Range	-45~85°C
Dielectric Withstanding Voltage(Hi-pot)	2.5KV/1mA/1min
Insulation Resistance	DC500V/100MΩ min

Mechanical Specifications	
CUP	PBT
Opening Dimensions	>10mm
Output Type	UL2464 24AWG white jacket PVC wire
Approx. Weight	60g

120A Current Transformer

Electrical Specifications	
Rated Primary Current(Amp.) 50/60Hz	120A
Turn Ratio	Np:Ns=1:1200
Current Ratio	120A/100mA
Accuracy @RL≤1Ω	0.5%
Phase error at rated current range	≤1°
Protection Level	6.8V (peak)
Operating Temperature Range	-40~70°C
Storage Temperature Range	-45~85°C
Dielectric Withstanding Voltage(Hi-pot)	2.5KV/1mA/1min 5kVp
Insulation Resistance	DC500V/100MΩ min

Mechanical Specifications	
CUP	PA66 (UL94-V0)
Opening Dimensions	>16mm
Output Type	UL2464 24AWG white jacket PVC wire
Approx. Weight	100g

400A Current Transformer

Electrical Specifications	
Rated Primary Current(Amp.) 50/60Hz	400A (1-480A)
Turn Ratio	Np:Ns=1:4000
Current Ratio	400A/100mA
Accuracy @RL≤1Ω	0.5%
Phase error at rated current range	≤1°
Protection Level	6.8V (peak)
Operating Temperature Range	-40~70°C
Storage Temperature Range	-45~85°C
Dielectric Withstanding Voltage(Hi-pot)	4KV/1mA/1min, 5kVp
Insulation Resistance	DC500V/100MΩ min

Mechanical Specifications	
CUP	PC/ABS (UL94-V0)
Opening Dimensions	>25mm
Output Type	UL2464 24AWG white jacket PVC wire
Approx. Weight	185g

600A Current Transformer

Electrical Specifications	
Rated Primary Current(Amp.) 50/60Hz	600A (1-720A)
Turn Ratio	Np:Ns=1:6000
Current Ratio	600A/100mA
Accuracy @RL≤1Ω	0.5%
Phase error at rated current range	≤1°
Operating Temperature Range	-40~70°C
Storage Temperature Range	-45~85°C
Dielectric Withstanding Voltage(Hi-pot)	2.5KV/1mA/1min, 5kVp
Insulation Resistance	DC500V/100MΩ min

Mechanical Specifications	
CUP	PA66
Opening Dimensions	>36mm
Output Type	UL2464 24AWG white jacket PVC wire
Approx. Weight	300g

3000A Rogowski Coil

Electrical Specifications	
Rated Primary Current(Amp.) 50/60Hz	3000A (1-3000A)
Output Level	100mV/1kA @50Hz
Accuracy @$RL \leq 1\Omega$	0.5%
Coil resistance	From 70 to 900 Ω
Operating Temperature Range	-30~80°C
Storage Temperature Range	-40~80°C
Dielectric Withstanding Voltage(Hi-pot)	2.5KV/1mA/1min, 5kVp
Insulation Resistance	DC500V/100M Ω min

Mechanical Specifications	
Coil diameter	8.3mm +/-0.2mm
Output cable length	300mm
Approx. Weight	500g