



Schneider Electric HDP6000 METSEHDP150A30H Split Core Current Transformer Installation Guide

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Power Logic™ HDP6000 Series Current Transducer Models Installation Guide

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HDP6000 METSEHDP150A30H Split Core Current Transformer



The Power Logic™ HDP6000 series low-voltage current transducers (LVCT) provide secondary AC voltage proportional to the primary (sensed) alternating current. For use with the HDP6000 platform only, these current transducers provide a means to transform electrical service amperages to a voltage compatible with monitoring equipment.



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HDP6000 Series Current Transducer Models

Refer to the following installation guides (part number):

HDPM6000B (Z208131), HDPM6000 Head Unit (Z208128), HDPM6000 I/O Module (Z208142), HDPM6000R (Z208129), HDPM6000S24 (Z208449) and HDPM6000S (Z208130).

Safety Information

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material. A qualified person is one who has skills and knowledge related to the construction, installation and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Safety Precautions

Installation, wiring, testing and service must be performed in accordance with all local and national electrical codes.



DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E in the USA or applicable local standards.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying equipment before working on or inside the equipment.
- Product may use multiple voltage/power sources. Disconnect all sources of power before servicing.
- Always use a properly rated voltage sensing device to confirm power is off.
- Do not depend on this product for voltage indication.
- Products rated for basic insulation must be installed on insulated conductors.
- Replace all doors, covers and protective devices before powering the equipment.
- Install device in an appropriate electrical and fire enclosure per local regulations
- This product is not intended for life or safety applications.

Failure to follow these instructions will result in death or serious injury.

⚠ WARNING

RISK OF INJURY OR EQUIPMENT DAMAGE

Do not apply current transducer to circuits having a phase-to-phase voltage greater than their voltage rating unless adequate additional insulation is applied between the primary conductor and the current transducers.

Failure to follow these instructions can result in injury, fire or equipment damage.

Schneider Electric assumes no responsibility for damage of equipment or personal injury caused by products operated on circuits above their published ratings.

Ordering Information

CTs Compatible With HDPM6000 Head Unit, HDPM6000R Retrofit Module and I/O Module						
Commercial Reference / Model	Lead Length	Weight	Form Factor	Accuracy	Description	Type of CT
METSEHDPM20A12H	12 ft (3.6 m)	1.088 lb (0.494 kg)	SUN2	0.2%	20 A CT	Split-Core
METSEHDPM20A30H	30 ft (9.14 m)	1.946 lb (0.883 kg)				
METSEHDPM75A12	12 ft (3.6 m)	0.350 lb (0.159 kg)	CTMF	1.0%	75 A CT	
METSEHDPM75A12H	12 ft (3.6 m)	1.137 lb (0.516 kg)	SUN3	0.2%		
METSEHDPM75A30	30 ft (9.14 m)	0.710 lb (0.322 kg)	CTMF	1.0%		
METSEHDPM75A30H	30 ft (9.14 m)	1.996 lb (0.905 kg)	SUN3	0.2%		
METSEHDPM75A60	60 ft (18.29 m)	2.305 lb (1.046 kg)	CTMF	1.0%		
METSEHDPM125A12	12 ft (3.6 m)	0.350 lb (0.159 kg)	CTTG	0.1%	125 A CT	Solid-Core
METSEHDPM125A30	30 ft (9.14 m)	0.710 lb (0.322 kg)				
METSEHDP150A12H	12 ft (3.6 m)	1.187 lb (0.538 kg)	SUN3	0.2%	150 A CT	
METSEHDP150A30H	30 ft (9.14 m)	2.046 lb (0.928 kg)				
METSEHDPM150A12	12 ft (3.6 m)	1.137 lb (0.516 kg)	SUS4	0.5%		
METSEHDPM150A30	30 ft (9.14 m)	1.996 lb (0.905 kg)				
METSEHDPM150A60	60 ft (18.29 m)	2.595 lb (1.177 kg)				

METSEHD150A12	12 ft (3.6 6 m)	1.167 lb (0. 529 kg)	SUSF (Sm all)	1.0%	150 A CT, 1 in x 1 in (2.54 cm x 2.54 cm)	Split-C ore
METSEHD150A30	30 ft (9.1 4 m)	2.026 lb (0. 919 kg)				
METSEHD150A60	60 ft (18. 29 m)	2.625 lb (1. 190 kg)				
METSEHDP300A12H	12 ft (3.6 6 m)	1.287 lb (0. 584 kg)	SUN4	0.2%	300 A CT	
METSEHDPM300A12	12 ft (3.6 6 m)	1.187 lb (0. 538 kg)	SUS4	0.5%		
METSEHDPM300A30	30 ft (9.1 4 m)	2.046 lb (0. 928 kg)				
METSEHDPM300A30 H	30 ft (9.1 4 m)	2.146 lb (0. 973 kg)	SUN4	0.2%		
METSEHDPM300A60	60 ft (18. 29 m)	2.645 lb (1. 200 kg)	SUS4	0.5%		
METSEHD300A30	30 ft (9.1 4 m)	2.096 lb (0. 951 kg)	SUSF (Sm all)	1.0%	300 A CT, 1 in x 1 in (2.54 cm x 2.54 cm)	
METSEHD300A60	60 ft (18. 29 m)	1.646 lb (0. 747 kg)			300 A CT, 2 in x 2 in (5.08 cm x 5.08 cm)	
METSEHD300A12	12 ft (3.6 6 m)	1.237 lb (0. 561 kg)				
METSEHD300A12L	12 ft (3.6 6 m)	1.646 lb (0. 747 kg)				
METSEHD300A30L	30 ft (9.1 4 m)	2.505 lb (1. 136 kg)				
METSEHD300A60L	60 ft (18. 29 m)	3.104 lb (1. 408 kg)				
METSEHDP300A08H	8 ft (2.44 m)	1.996 lb (0. 905 kg)	CTTB	0.2%	300 A CT	Solid-C ore
METSEHDPM400A12	12 ft (3.6 6 m)	1.287 lb (0. 584 kg)	SUS4	0.5%	400 A CT	
METSEHDPM400A12 H	12 ft (3.6 6 m)	1.387 lb (0. 629 kg)	SUN4	0.2%		
METSEHDPM400A30	30 ft (9.1 4 m)	2.146 lb (0. 973 kg)	SUS4	0.5%		
METSEHDPM400A30 H	30 ft (9.1 4 m)	2.245 lb (1. 018 kg)	SUN4	0.2%		
METSEHDPM400A60	60 ft (18. 29 m)	2.744 lb (1. 245 kg)	SUS4	0.5%		
METSEHD400A12	12 ft (3.6 6 m)	1.297 lb (0. 588 kg)				

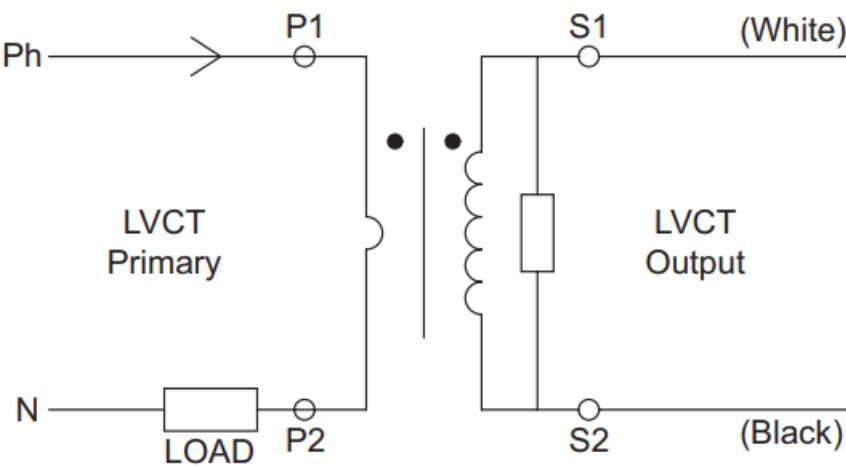
METSEHD400A30	30 ft (9.1 4 m)	2.156 lb (0. 978 kg)	SUSF (Sm all)	1.0%	400 A CT, 1.25 in x 1.25 in (3.17 cm x 3.17 cm)	Split-C ore	
METSEHD400A60	60 ft (18. 29 m)	2.754 lb (1. 249 kg)			400 A CT, 2.5 in x 2.5 in (6. 35 cm x 6.35 cm)		
METSEHD400A12L	12 ft (3.6 6 m)	1.856 lb (0. 842 kg)					
METSEHD400A30L	30 ft (9.1 4 m)	2.714 lb (1. 231 kg)					
METSEHD400A60L	60 ft (18. 29 m)	3.313 lb (1. 503 kg)					
METSEHDPM600A12	12 ft (3.6 6 m)	1.387 lb (0. 629 kg)	SUS4	0.5%	600 A CT		
METSEHDPM600A30	30 ft (9.1 4 m)	2.305 lb (1. 046 kg)					
METSEHDPM600A60	60 ft (18. 29 m)	2.305 lb (1. 046 kg)					
METSEHD600A30	30 ft (9.1 4 m)	2.535 lb (1. 150 kg)	SUSF (Sm all)	1.0%	600 A CT, 3 in x 3 in (7.62 cm x 7.62 cm)		
METSEHD600A60	60 ft (18. 29 m)	3.133 lb (1. 421 kg)					
METSEHD600A12	12 ft (3.6 6 m)	1.676 lb (0. 760 kg)					
METSEHD800A30	30 ft (9.1 4 m)	2.934 lb (1. 331 kg)			800 A CT, 4 in x 4 in (10.16 cm x 10.16 cm)		
METSEHD800A60	60 ft (18. 29 m)	3.533 lb (1. 603 kg)					
METSEHD800A12	12 ft (3.6 6 m)	2.075 lb (0. 941 kg)					
METSEHD1000A30	30 ft (9.1 4 m)	2.934 lb (1. 330 kg)			1000 A CT, 4 in x 4 in (10.1 6 cm x 10.16 cm)		
METSEHD1200A30	30 ft (9.1 4 m)	3.054 lb (1. 385 kg)					1200 A CT, 4 in x 6 in (10.1 6 cm x 15.24 cm)
METSEHD1600A30	30 ft (9.1 4 m)	3.173 lb (1. 439 kg)	SUSF (Me dium)	1.0%	1600 A CT, 4 in x 6 in (10.1 6 cm x 15.24 cm)		
METSEHD1600A30L	30 ft (9.1 4 m)	3.173 lb (1. 439 kg)					1600 A CT, 4.5 in x 4.5 in (11.43 cm x 11.43 cm)
METSEHD2000A30	30 ft (9.1 4 m)	4.650 lb (2. 109 kg)	SUSF (Me dium)	1.0%	2000 A CT, 4 in x 6 in (10.1 6 cm x 15.24 cm)		
METSEHD2000A30L	30 ft (9.1 4 m)	4.480 lb (2. 032 kg)					2000 A CT, 6 in x 3 in (15.2 4 cm x 7.62 cm)
METSEHD3000A30	30 ft (9.1 4 m)	4.271 lb (1. 937 kg)			3000 A CT, 4 in x 4 in (10.1 6 cm x 10.16 cm)		

METSEHD3000A30L	30 ft (9.1 4 m)	4.430 lb (2. 009 kg)	SUSF (Large)	1.0%	3000 A CT, 4 in x 6 in (10.1 6 cm x 15.24 cm)
METSEHD3000A30XL	30 ft (9.1 4 m)	5.289 lb (2. 399 kg)			3000 A CT, 5 in x 12 in (12. 7 cm x 30.48 cm)
METSEHD4000A30	30 ft (9.1 4 m)	5.289 lb (2. 399 kg)			4000 A CT, 5 in x 12 in (12. 7 cm x 30.48 cm)

CTs Compatible With HDPM6000S and HDPM6000S24 Strip Modules						
Commercial Reference / Model	Lead Length	Weight	Form Factor	Accuracy	Description	Type of CT
METSEHDPM50 A12P	12 in (30.4 8 cm)	0.101 lb (0.0 46 kg)	CTTA	0.2%	50 A CT, with connector, for use with 24 circuit strip module only	Solid-Core
METSEHDPM50 A18P	18 in (45.7 2 cm)	0.104 lb (0.0 47 kg)				
METSEHDPM75 A4	4 in (10.16 cm)	0.629 lb (0.2 85 kg)	CTMF	1.0%	75 A CT, for use with 21 circuit with connector, strip module only	Split-Core
METSEHDPM125 A10	10 in (25.4 cm)	0.130 lb (0.0 59 kg)	CTTG	0.1%	125 A CT, with connector, for use with 21 circuit strip module only	Solid-Core
METSEHDPM125 A4	4 in (10.16 cm)	0.130 lb (0.0 59 kg)				
METSEHDPM150 A5	5 in (12.7 cm)	0.918 lb (0.4 16 kg)	SUS4	0.5%	150 A CT, for use with 21 circuit with connector, strip module only	Split-Core
METSEHDPM250 AT12	12 ft (3.66 m)	0.500 lb (0.2 27 kg)	SUST	0.5%	250 A CT, without connector	Solid-Core
METSEHDPM300 A5	5 in (12.7 cm)	0.968 lb (0.4 39 kg)	SUS4	0.5%	300 A CT, with connector, for use with 21 circuit strip module only	Split-Core
METSEHDPM400 A5	5 in (12.7 cm)	1.068 lb (0.4 84 kg)			400 A CT, with connector, for use with 21 circuit strip module only	
METSEHDPM500 AT12	12 ft (3.66 m)	0.500 lb (0.2 27 kg)	SUST	0.5%	500 A CT, without connector	Solid-Core
METSEHDP600A 5	5 in (12.7 cm)	1.167 lb (0.5 29 kg)	SUS4	0.5%	600 A CT, for use with 21 circuit with connector, strip module only	Split-Core

CTs Compatible With HDPM6000B Busway Module						
Commercial Reference / Model	Lead Length	Weight	Form Factor	Accuracy	Description	Type of CT
METSEHDPM75 A16	16 in (40.64 cm)	0.639 lb (0.290 kg)	CTMF	1.0%	75 A CT	Split-Core
METSEHDPM125 A16	16 in (40.64 cm)	0.140 lb (0.064 kg)	CTTG	0.1%	125ACT	Solid-Core
METSEHDPM150 A16	16 in (40.64 cm)	0.928 lb (0.421 kg)	SUS4	0.5%	150 ACT	Split-Core
METSEHDPM300 A16	16 in (40.64 cm)	0.978 lb (0.444 kg)			300 A CT	
METSEHDPM400 A16	16 in (40.64 cm)	1.078 lb (0.489 kg)			Split-Core 400 A CT	
METSEHDP600A16	16 in (40.64 cm)	1.177 lb (0.534 kg)			600 A CT	

Application Diagram



Specifications

Form Factor	Accuracy	Operating Temperature Range	Storage Temperature Range	Leads	Altitude of Operation	Installation Category	Agency Approvals
SUN 2	0.2%	-40 °F to 131 °F (-40 °C to 55 °C)	-58 °F to 158 °F (-50 °C to 70 °C)	Black and white twisted pair 18 AWG, AWM, UL1015, 600 V, 221 °F (105 °C)	6561.68 ft (2000 m) max	Cat III, Pollution Degree 2	UL2808, CE
SUN 3						Cat III, Pollution Degree 3	
SUN 4						Cat IV, Pollution Degree 3	
SUS4	0.5%						
SUS F	1%	-40 °F to 158 °F (-40 °C to 70 °C)	-58 °F to 21 °F (-50 °C to 105 °C)				
CTM F	1%	-40 °F to 131 °F (-40 °C to 55 °C)	-58 °F to 140 °F (-50 °C to 60 °C)				IEEE C57.13, CAN / CSA-C61869-1:14, CAN / CSA-C61869-2:14, CE
CTTG	0.1%	-40 °F to 185 °F (-40 °C to 85 °C)	-58 °F to 21 °F (-50 °C to 105 °C)		3280.84 ft (1000 m) max		UL2808 (Lead Length 4.92 ft (1.5 m)) or UL Recognized (Lead Length < 4.92 ft (1.5 m)), CE
SUS T	0.5%	-40 °F to 131 °F (-40 °C to 55 °C)	-58 °F to 158 °F (-50 °C to 70 °C)				
CTTA	0.2%	-40 °F to 185 °F (-40 °C to 85 °C)	-40 °F to 185 °F (-40 °C to 85 °C)	Black and white twisted pair 24 AWG, AWM1901, 600 V, 392 °F (200 °C)	6561.68 ft (2000 m) max	Cat III, Pollution Degree 2	UL Recognized, CE
CTTB	0.2%			Black and white twisted pair 18 AWG, AWM1015, 600 V, 221 °F (105 °C)			

Following specifications are common for all form factors:

Output at Rated Current: 0.25 VAC

Frequency Range: 50/60 Hz

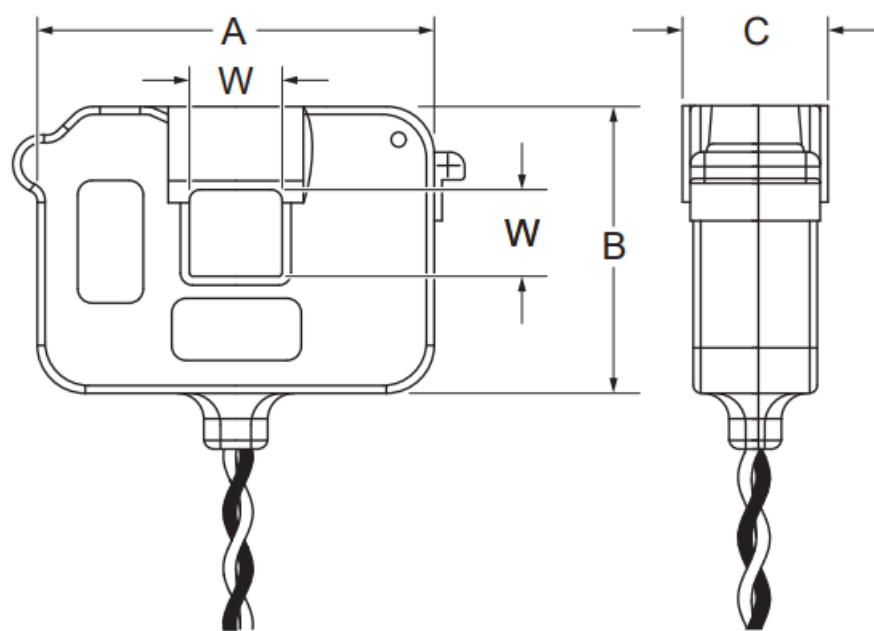
Humidity Range: 0 to 95% noncondensing

Continuous Current Rating Factor: 1

Max. Voltage L-N Sensed Conductor: 600 VAC

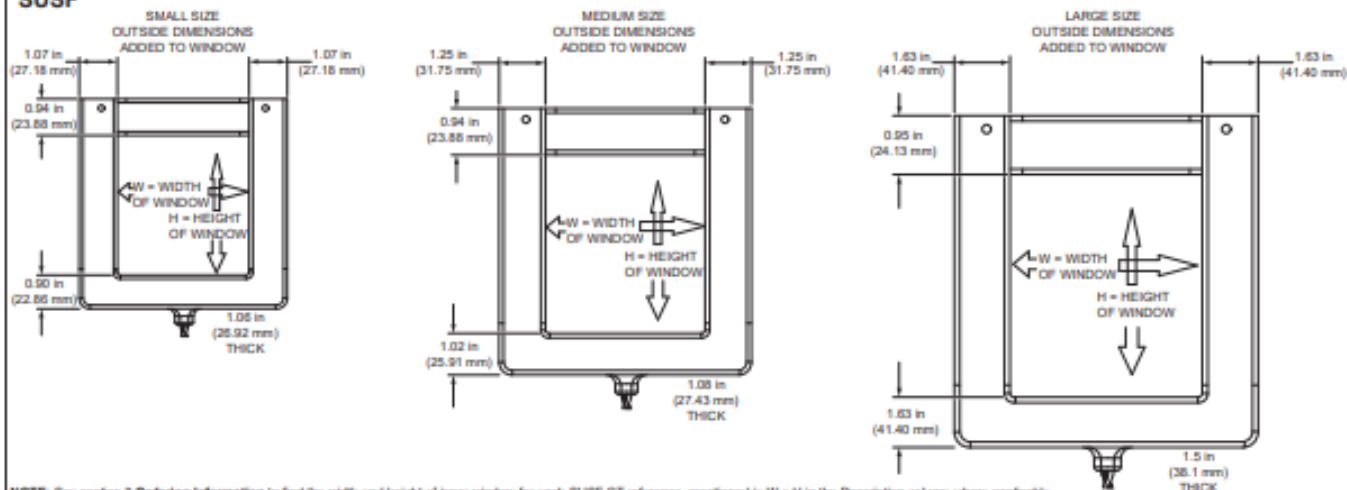
Dimensions

SUN2, SUN3, SUN4 and SUS4



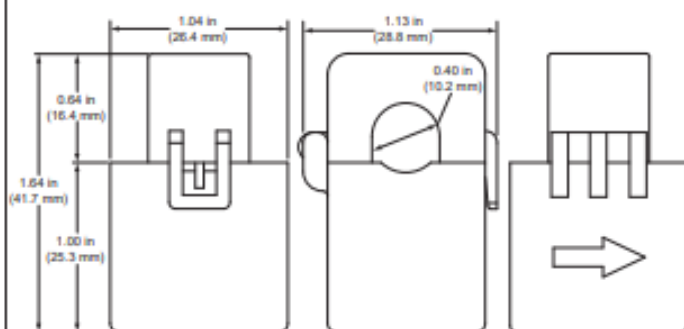
Model	W Window	A Dimension	B Dimension	C Dimension
SUN2	0.4 in (10.17 mm)	2.4 in (60.69 mm)	1.65 in (41.91 mm)	1.15 in (29.21 mm)
SUN3	0.7 in (17.80 mm)	3.0 in (76.19 mm)	2.4 in (60.96 mm)	1.17 in (29.72 mm)
SUN4	1.25 in (31.75 mm)	3.3 in (83.81 mm)	3.1 in (78.74 mm)	1.3 in (31.04 mm)
SUS4	1.25 in (31.75 mm)	3.3 in (83.81 mm)	3.1 in (78.74 mm)	1.3 in (31.04 mm)

SUSF

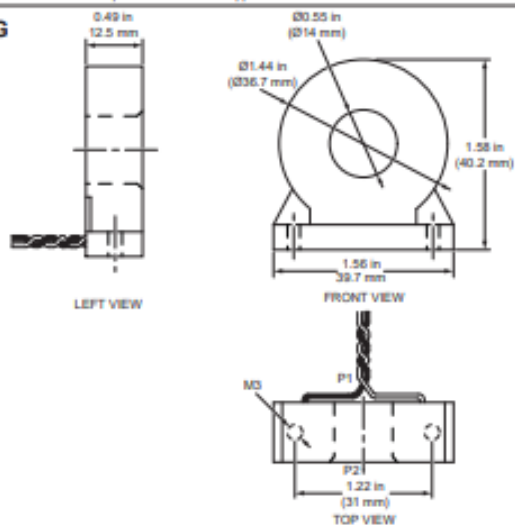


NOTE: See section 3 Ordering Information to find the width and height of inner window for each SUSF CT reference, mentioned in W x H in the Description column where applicable.

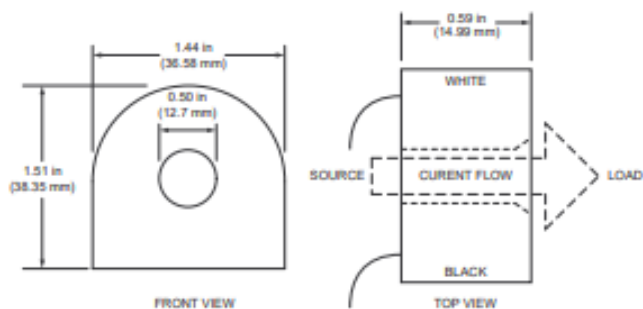
CTMF



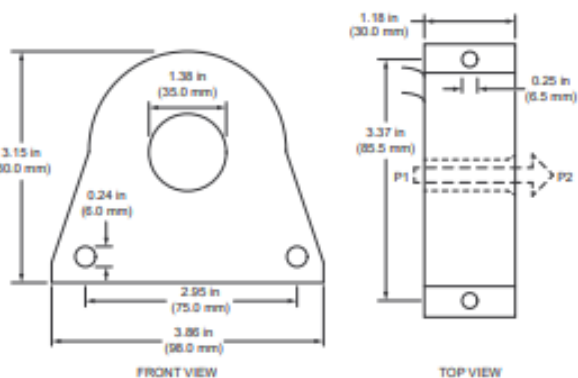
CTTG



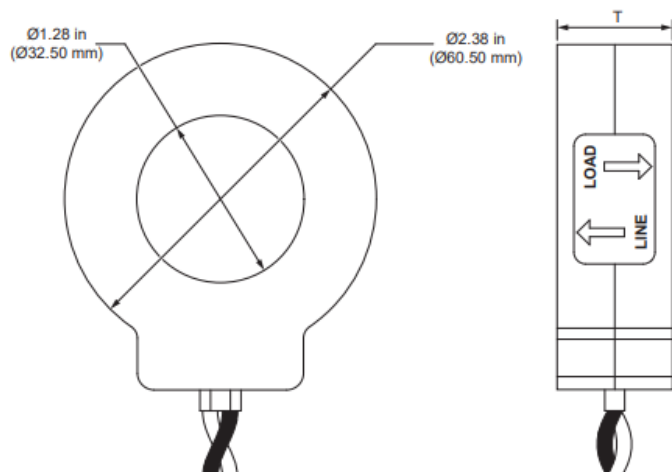
CTTA



CTTB



SUST



Amperage	T
250 A	0.69 in (17.50 mm)
500 A	0.88 in (22.50 mm)

Installation

Turn off and lock out power to the primary circuit before installing these CTs. Use a properly rated voltage sensing device to confirm that power is off.

NOTICE

INCORRECT POLARITY OR CT WIRE MISCONNECTION

- Align CT arrow to point in the direction of the power flow.
- Paired lead wires must be kept together.
- Do not install CTs in a panel where they exceed 75% of the wiring space of any cross-sectional area within the panel.
- Do not install CTs in areas of breaker arc venting.
- Do not install CTs using Class 2 wiring methods or connect to Class 2 equipment (NFPA 70)
- Secure CTs and route conductors so that they do not contact live terminals or bus.

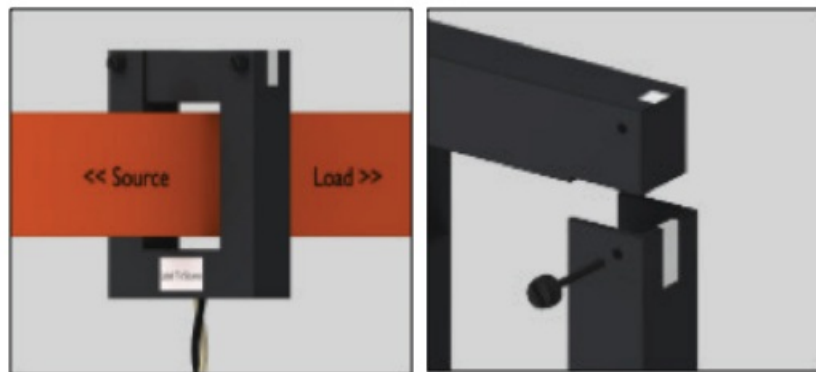
Failure to follow this instruction can result in incorrect readings or loss of data or damage to equipment.

Connect the transducer output leads to the meter inputs. Refer the wiring diagram in the installation guide for the appropriate module for details.

SUN2, SUN3, SUN4, SUS4, and SUSF Installation

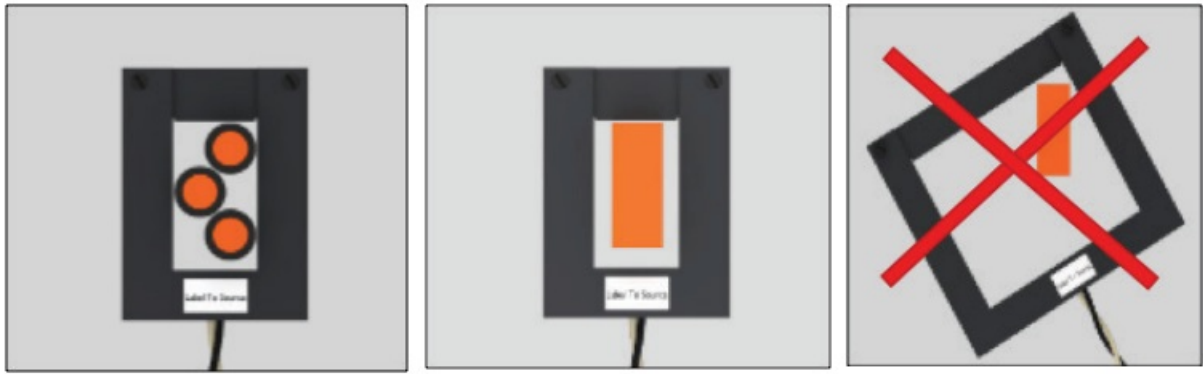
Busbar and Phase Orientation

- The white mark ensures orientation every time the top is attached.
- The white mark is on the top right side when looking at the product label.
- Refer to label for correct CT orientation.



Proper Size and Fitting

- The window of the CT should be big enough to fit the busbar without excess space.
- A split-core CT should not be oversized around the bus/conductor, resulting in an inaccurate/bad reading.
- The busbar should also be in the center of the CT window to allow the coils to energize evenly.

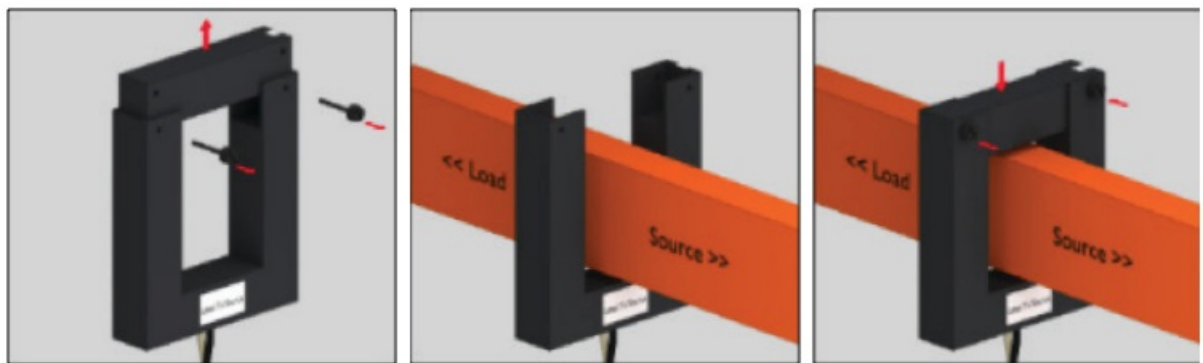


Installation

1. Remove the screws (or push-pins) from the CT and take the top off.
2. Slide the body of the CT over the busbar.

NOTE: Refer to label for correct CT orientation.

3. Re-attach the top to the body of the CT, using the white mark to orient how the top will fit.
4. Place the screws/push-pins back to secure the top to the CT.
5. Terminate the leads to the metering device before turning on the power.



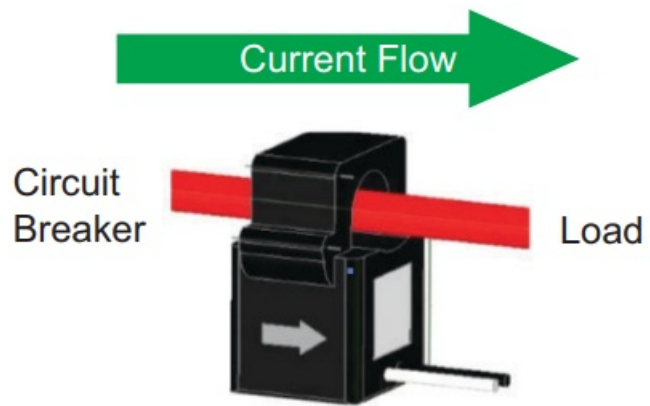
CTMF Installation

1. Release the clasp on one side of the CT and open it on the hinge.

NOTE: Check the core ends on both sections of the CT to ensure there is no rust or debris in the closure areas. A label on the product indicates the source side. In the illustrated diagram, the arrow indicates the current flow (i.e., the label faces away from the circuit breaker).

2. Wrap the CT around the primary lead.
3. Close the CT until the clasp clicks into place to ensure that the contact surfaces are firmly seated.
4. Reconnect power to the panel.

CTs may be simply hung on the wire on which they snap around. An alternative is the use of VELCRO® strips on the bottom or hinged side of the unit, to allow for ease of mounting and removal as necessary. VELCRO is non-conductive.

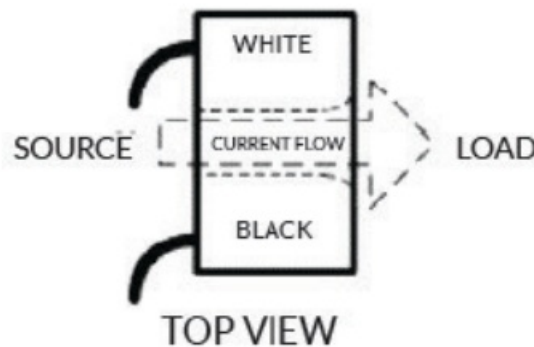


CTTA, CTTB, CTTG, and SUST Installation

1. Route the primary conductor through the center of the CT and complete the conductor connections.

NOTE: A label on the product indicates the source side. All solid-core CT models should be oriented such that the wire leads face the source.

2. Reconnect power to the panel.



Note: Form factor is indicative, it may vary in actual.

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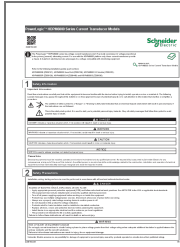
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