

PowerLogic™ Low Voltage Current Transducers (LVCTs)

Installation Guide

1 VAC and 0.333 VAC LVCTs
Z205398-0D
06/2018

Split-Core Models



Solid-Core Models



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 an 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.

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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.
- Current transformer secondaries must be shorted or connected to a burden at all times.
- 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 transducers 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 may 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.

Introduction

Schneider Electric low voltage current transducers (LVCTs) provide secondary voltage AC proportional to the primary (sensed) current. For use with power meters, data loggers, chart recorders, and other instruments, LVCTs provide a cost-effective means to transform electrical service amperages to a voltage compatible with monitoring equipment.

LVCTs are available in split-core and solid-core models. Split-core models are available with 0.333 VAC and 1 VAC output versions. Solid-core models are available with only 0.333 VAC output.

Part Number Information

Split-Core

Part Number	Max. Rated Current	CT Output Range
LVCT00050	50 A	0 to 0.333 V
LVCT00101	100 A	0 to 0.333 V
LVCT00201	200 A	0 to 0.333 V
LVCT00102	100 A	0 to 0.333 V
LVCT00202	200 A	0 to 0.333 V
LVCT00302	300 A	0 to 0.333 V
LVCT00403	400 A	0 to 0.333 V
LVCT00603	600 A	0 to 0.333 V
LVCT00803	800 A	0 to 0.333 V
LVCT00804	800 A	0 to 0.333 V
LVCT01004	1000 A	0 to 0.333 V
LVCT01204	1200 A	0 to 0.333 V
LVCT01604	1600 A	0 to 0.333 V
LVCT02004	2000 A	0 to 0.333 V
LVCT02404	2400 A	0 to 0.333 V
LVCT10102	100 A	0 to 1 V
LVCT10202	200 A	0 to 1 V
LVCT10302	300 A	0 to 1 V
LVCT10403	400 A	0 to 1 V
LVCT10603	600 A	0 to 1 V
LVCT10803	800 A	0 to 1 V
LVCT10804	800 A	0 to 1 V
LVCT11004	1000 A	0 to 1 V
LVCT11204	1200 A	0 to 1 V
LVCT11604	1600 A	0 to 1 V
LVCT12004	2000 A	0 to 1 V
LVCT12404	2400 A	0 to 1 V

Solid-Core

Part Number	Max. Rated Current	CT Output Range
LVCT20050	50 A	0 to 0.333 V
LVCT20100	100 A	0 to 0.333 V
LVCT20202	200 A	0 to 0.333 V
LVCT20403	400 A	0 to 0.333 V

Specifications

Split-Core

Type	Description
Output at Rated Current	0.333 VAC or 1 VAC outputs available (see Part Number Information for specifics)
Accuracy	1% from 10% to 100% of rated current (specified with the conductor(s) centered through the CT window)
Frequency Range	50/60 Hz
Leads	LVCT00050, LVCT00101, LVCT00201: 22 AWG, 6 ft. (1.8 m) standard length All other split-core models: 18AWG, 6 ft. (1.8 m) standard length
Operating Temperature Range	LVCT00050, LVCT00101, LVCT00201: 0° to 70°C (32° to 158°F) All other split-core models: -15° to 60°C (5° to 140°F)
Storage Temperature Range	LVCT00050, LVCT00101, LVCT00201: -40° to 105°C (-40° to 221°F) All other split-core models: -40° to 70°C (-40° to 158°F)
Humidity Range	0-95% noncondensing
Max. Voltage L-N Sensed Conductor*	LVCT00050: 300 VAC (basic insulation rating), 150 VAC (reinforced insulation rating) All other split-core models: 600 VAC (basic insulation rating), 300 VAC (reinforced insulation rating)
Altitude of Operation	3 km max.
Approvals	EN61010-1; UL61010-1
Installation Category	Cat. III, pollution degree 2

Solid-Core

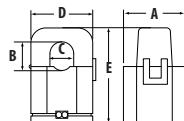
Type	Description
Output at Rated Current	0.333 VAC
Accuracy	±0.5% from 5%-120% of rated current (specified with the conductor(s) centered through the CT window)
Frequency Range	50/60 Hz
Leads	22 AWG, 6 ft. (1.8 m) standard length
Operating Temperature Range	-40° to 85°C (-40° to 185°F)
Storage Temperature Range	-50° to 105°C (-58° to 221°F)
Humidity Range	0-95% noncondensing
Max. Voltage L-N Sensed Conductor*	600 VAC (basic insulation rating), 300 VAC (reinforced insulation rating)
Altitude of Operation	3 km max.
Approvals	EN61010-1; UL61010-1
Installation Category	Cat III, pollution degree 2

Dimensions

Split-Core

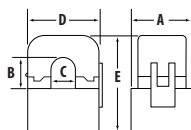
LVCT00050S Only

A = 1.0" (26 mm)
B = 0.5" (11 mm)
C = 0.4" (10 mm)
D = 0.9" (23 mm)
E = 1.6" (40 mm)



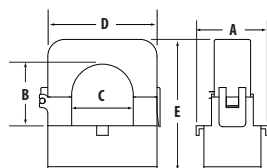
LVCT00101S Only

A = 1.2" (29.5 mm)
B = 0.8" (20 mm)
C = 0.7" (16 mm)
D = 1.6" (40 mm)
E = 2.1" (53 mm)



LVCT00201S Only

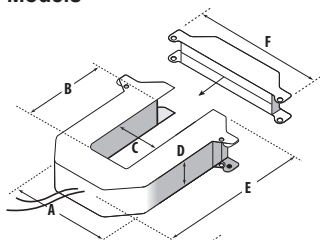
A = 1.5" (39 mm)
B = 1.25" (32 mm)
C = 1.25" (32 mm)
D = 2.5" (64 mm)
E = 2.8" (71 mm)



All Other Split-Core Models

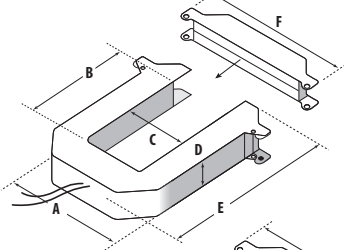
100 - 300 Amp

A = 3.8" (95 mm)
B = 1.5" (38 mm)
C = 1.3" (32 mm)
D = 1.1" (29 mm)
E = 3.9" (107 mm)
F = 4.8" (121 mm)



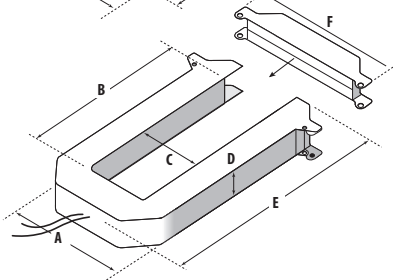
400 - 800 Amp

A = 4.9" (124 mm)
B = 2.9" (73 mm)
C = 2.5" (62 mm)
D = 1.1" (29 mm)
E = 5.3" (141 mm)
F = 5.9" (150 mm)

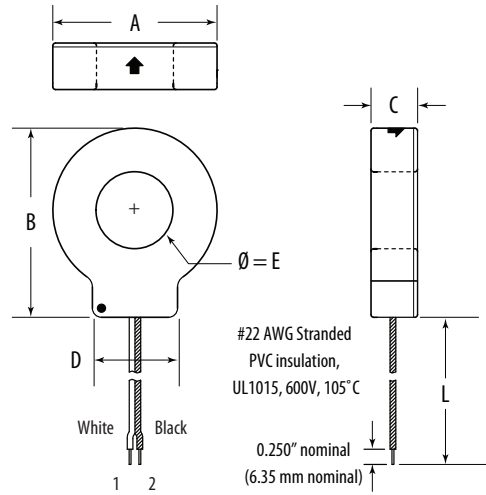


800 - 2400 Amp

A = 4.9" (124 mm)
B = 5.5" (140 mm)
C = 2.5" (62 mm)
D = 1.1" (29 mm)
E = 8.1" (207 mm)
F = 5.9" (150 mm)



Solid-Core

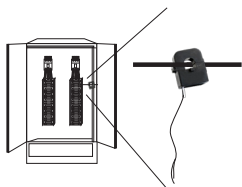


Model	L	A	B	C	D	E
LVCT20050	6"	1.3"	1.5"	0.7"	0.8"	0.4"
LVCT20100	(1.8 m)	(33 mm)	(38 mm)	(18 mm)	(21 mm)	(10 mm)
LVCT20202	6"	2.3"	2.6"	0.7"	1.2"	1.0"
	(1.8 m)	(59 mm)	(66 mm)	(18 mm)	(31 mm)	(25 mm)
LVCT20403	6"	2.8"	3.2"	1.0"	1.4"	1.25"
	(1.8 m)	(70 mm)	(82 mm)	(25 mm)	(36 mm)	(31 mm)

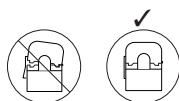
Installation

Split-Core

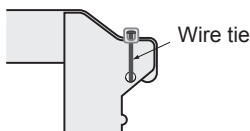
1. Turn off and lock out power to the primary circuit before installing these current transducers.
2. Use a properly rated voltage sensing device to confirm that power is off.
3. Connect the transducer output leads to the meter inputs. The white wire is the X1 lead.
4. Release the clasp on one side of the CT and open it on the hinge. Check the core ends on both sections of the CT to ensure there is no rust or debris in the closure areas.
5. Wrap the CT around the primary lead. A label on the product indicates the source side.



6. Close the CT until the clasp clicks into place to ensure that the contact surfaces are firmly seated.



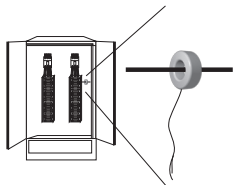
NOTE: With the exceptions of the LVCT00050, LVCT00101, and LVCT00201 models, the split-core devices have a detachable I-bar. If the I-bar is removed, re-orient it according to the markings on the core surface, then re-attach it. In any application where fault currents can exceed 20 times the rated current of the CT, use wire ties or similar fasteners to secure both sides of the I-bar to the CT housing.



7. Reconnect power to the panel.

Solid-Core

1. Turn off and lock out power to the primary circuit before installing these current transducers.
2. Use a properly rated voltage sensing device to confirm that power is off.
3. Connect the transducer output leads to the meter inputs. The white wire is the X1 lead.
4. Route the primary conductor through the center of the CT and complete the conductor connections. A label on the product indicates the source side.



5. Reconnect power to the panel.

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As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this publication.

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