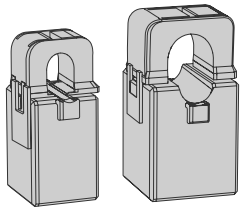
Split Core Current Transformer

Current Transformer Features

Split-core current transformers are used to monitor AC current for various devices. The current transformer input takes a high-voltage current input and produces a proportional low-voltage, low-current signal for measuring and monitoring. Split-core current transformers are ideal for installing onto existing electrical wiring because they can snap around the individual conductors without disconnecting any cables.



These split-core current transformers are compatible with Banner's Condition Monitoring devices (CM1L or Q45CT Nodes, and the S15C-CT-MQ Converters).

Current Transformer Models

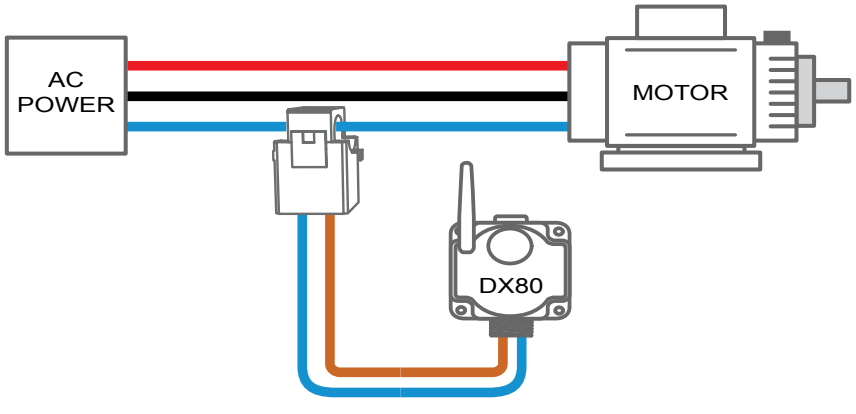
Model Kits	Description	Connection
BWA-CURRENT-TRANSFORMER-20A	Includes CT20A; 20 A Input; 0.333 V Output	1-meter two-wire twisted pair cable
BWA-CURRENT-TRANSFORMER-150A	Includes CT150A; 150 A Input; 0.333 V Output	
BWA-CURRENT-TRANSFORMER-600A	Includes CT600A; 600 A Input; 0.333 V Output	

Installing the Current Transformers

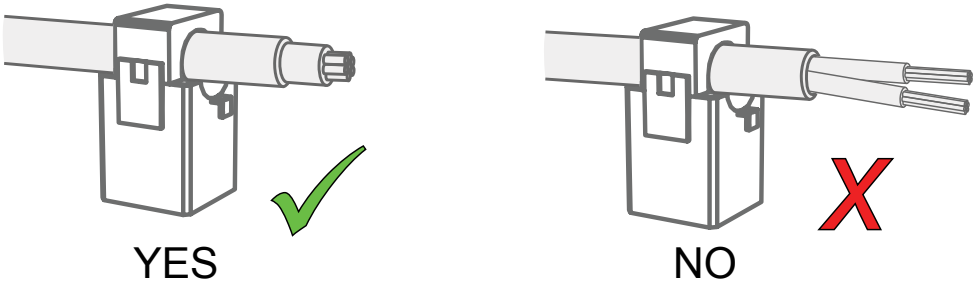
Observe the polarity when installing current transformers. Banner's current transformers indicate **k (S1)** as the source side and **l (S2)** as the load side, where source refers to the incoming power feed side to the device and the load side is the device side.

Banner's CTs have an etched arrow to indicate the directionality for installation (k (S1) -> l (S2)). As shown in "Figure: Installing a current transformer relative to the power supply/motor" on page 1, the source is the AC power supply and the load is the Motor. The CT direction arrow must point toward the load. Banner's current transformers can be installed on any conductor in a 2- or 3-phase AC line. Current transformers should only be installed on a single conductor. For the correct installation, see "Figure: Installing a single conductor on the current transformer" on page 1.

Installing a current transformer relative to the power supply/motor



Installing a single conductor on the current transformer



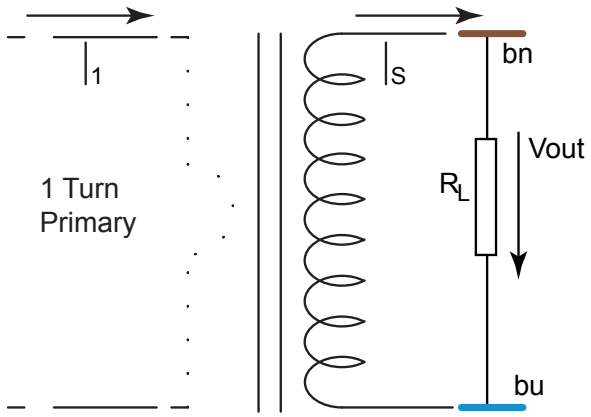
Wire the Current Transformer

For more information on wiring and installing the current transformer, refer to the Split Core Current Transformer datasheet (p/n 212463).

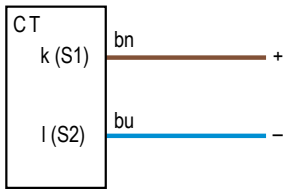
© Banner Engineering Corp.

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Current transformer wiring



Current transformer wiring to Node



brown: input from CT (k (S1))

blue: CT ground (l (S2))

Current Transformer Specifications

Frequency
50 to 2000 Hz

Rating Input
CT20A: 0–20A
CT150A: 0–150A
CT600A: 0- 600A

Rated Output
0.333 V AC

Measuring Range
10% to 130% In

Ratio
≤ ±1%

Inrush Current
8x rated input for ≤ 0.1 s

Phase Angle
≤ ±60 min

Dielectric Strength
2.5 kV / 1 mA / 1 min

Insulation Resistance
DC5000 V / 1000 MOhm min

Construction
PA /UL94-VO case; PBT bobbin; silicon steel core; epoxy internal structure; tie construction

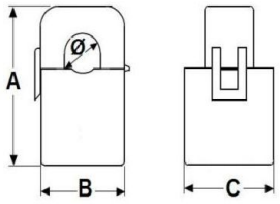
Operating Conditions
–25 °C to +75 °C (–13 °F to +167 °F)
85% relative humidity

Accuracy Class
0.5

Certifications

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

Turck Banner LTD Blenheim House
Blenheim Court
Wickford, Essex SS11 8YT
GREAT BRITAIN



Model	Diameter	A	B	C
CT20A	10 mm (0.39 in)	41 mm (1.61 in)	24 mm (0.94 in)	26.5 mm (1.04 in)
CT150A	16 mm (0.63 in)	65.3 mm (2.57 in)	37.3 mm (1.47 in)	40.3 mm (1.59 in)
CT600A	35 mm (1.38 in)	99 mm (3.9 in)	69.8 mm (2.75 in)	52 mm (2.05 in)

Banner Engineering Corp Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

© Banner Engineering Corp. All rights reserved.

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: www.bannerengineering.com.

For patent information, see www.bannerengineering.com/patents.

Document title: Split Core Current Transformer
Part number: 212463
Revision: E
Original Instructions
© Banner Engineering Corp. All rights reserved.

212463

© Banner Engineering Corp. All rights reserved.