

Bushing Current Transformers

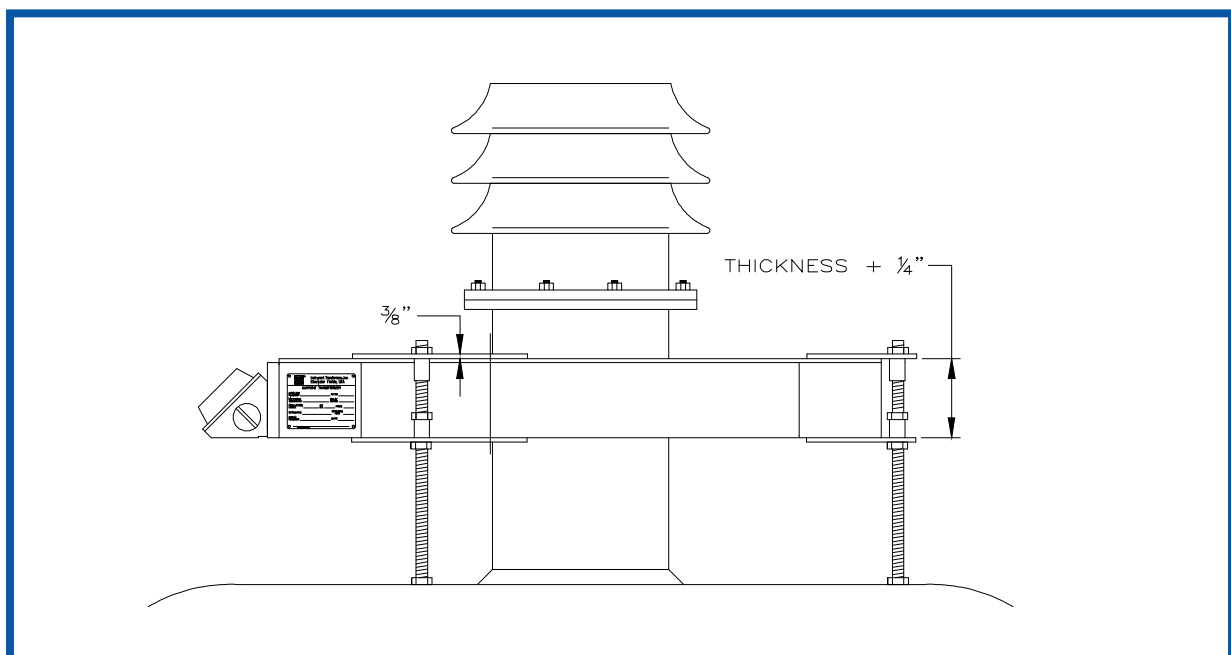
600V Class



Bushing-Type Current Transformers (BCT)

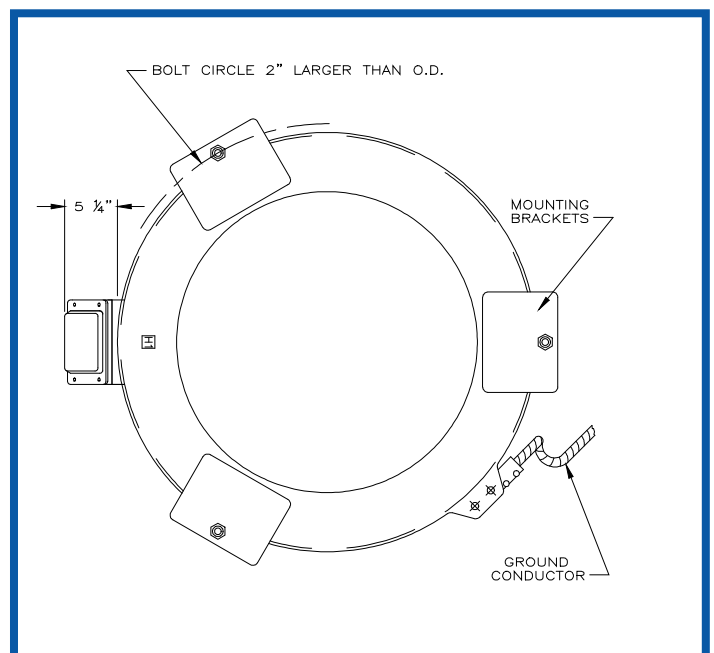
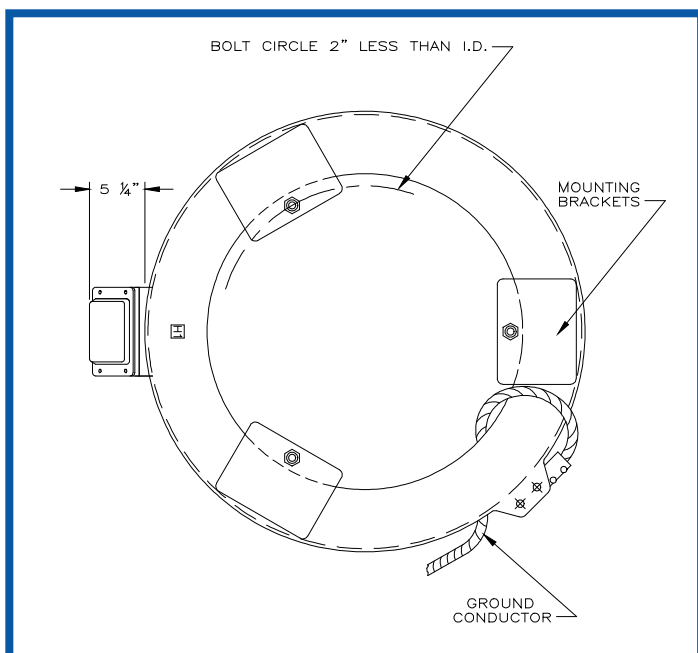
Type B07- Current Transformers are for use over outdoor bushings of Power Transformers, Bulk Oil Circuit Breakers and other Dead -Tank Circuit Breakers.

The B07 bushing type mounts externally over the apparatus bushing on the cover of the apparatus. These transformers are used primarily for relaying but may also be used for metering where rating allows.



Features

- Conforms to IEEE Std., C57.13 or IEC, 60044-1. Consult factory for other standards
- Weather proof outdoor terminal box of heavy, molded, weatherproof, polyester resin, glass-reinforced
- Conduit connections - Two 1" threaded hubs for horizontal take-off and a 1" IPS knockout in the bottom
- Stainless steel or aluminum, nameplate
- Broad range of sizes and ratios
- Weather resistant
- High mechanical impact and dielectric strength
- Completely encapsulated in polyurethane
- Easy installed
- Clearly identified secondary terminals
- Mounting feet can be located anywhere around the inner or outer periphery



Construction

The toroidal cores are made of cold-rolled, high-permeability, grain-oriented, silicon steel, annealed after forming under precisely controlled conditions. The grain of the core steel is oriented in the direction of the magnetic flux, thus minimizing the core losses and maximizing the accuracy..

Windings

The winding are wound over the insulated core on large toroidal winding machines. They are fully distributed around the core on all taps so that the leakage reactance is low on each tap.

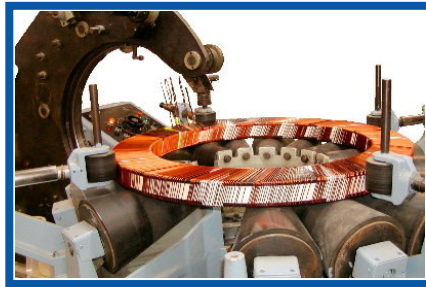
Encapsulation

The core and coils are encapsulated in polyurethane. The system used is a proprietary formulation. It was developed specifically to meet the rigorous electrical, physical and chemical requirements of outdoor, electrical insulation. This encapsulation system demonstrates excellent weather resistance. The U.V.-stabilized insulation has adequate elasticity to compensate for dimensional changes of the core, caused by temperature variations, without cracking or crazing.

Secondary Terminals and Conduit Box

The secondary terminals are #10-32 screws in tapped bosses. The terminals are housed in a polyester terminal box of sturdy construction with a neoprene gasket and polyester cover.

The box is fitted with two 1" IPS threaded openings for horizontal conduit takeoff and and one knockout in the bottom for 1" IPS conduit, the flange for the cover is at 45 degree angle which gives maximum accessibility for wiring and connecting.



Ground Shield

Ground shields are available. The installation of the current transformer reduces the line-to-ground strike distance of the apparatus on which it is mounted, a ground shield should be used. The ground shields are



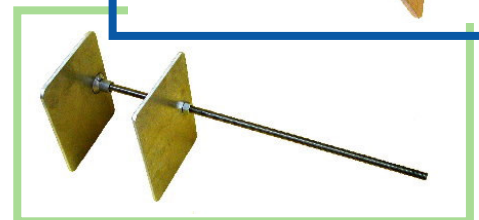
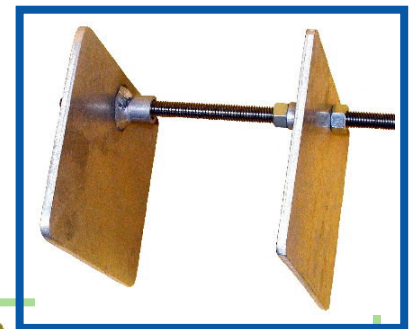
fabricated of aluminum and fit closely over the top of the current transformer. The shield purpose is to prevent a bushing flash-over from penetrating the insulation and impressing a high voltage upon the secondary winding, interconnecting cables, and relays.

In an installation where it is not desirable for the relay to "see" a bushing flash-over, the mounting clamps should be placed around the outer periphery of the transformer. The ground conductor should not pass through the window.

In an installation where it is desirable for the relay to "see" the bushing flash-over current, the mounting clamps should be positioned around the inner periphery and the ground conductors should pass through the window. The inside diameter of the current transformer should be increased by 4" to accommodate this arrangement.

Mounting Clamps

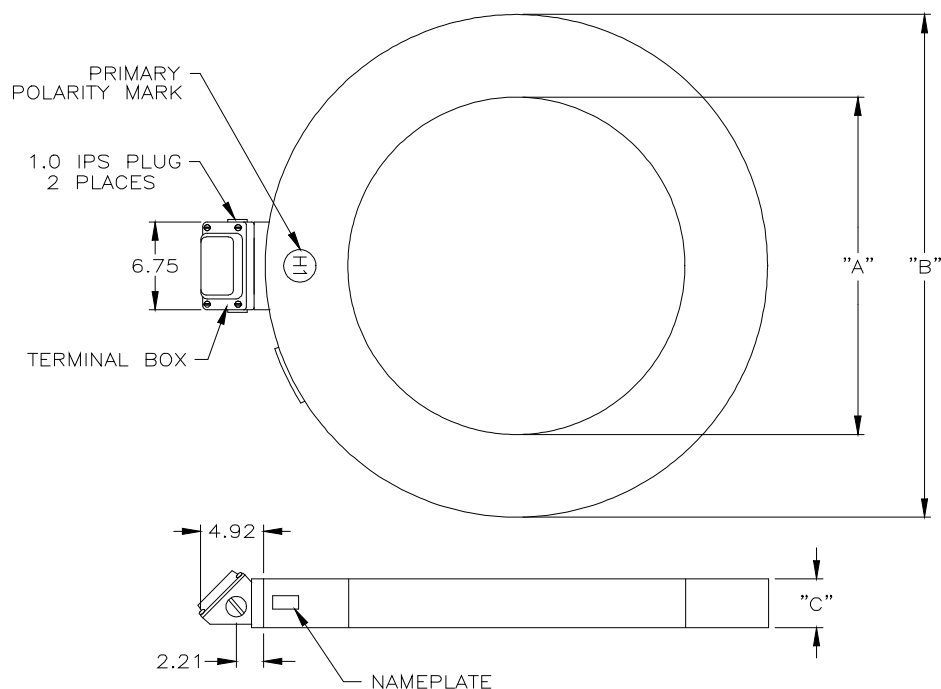
The mounting clamps are of aluminum and held together with the 1/2" stainless steel studs (continuously threaded) and the stainless steel nuts, that make it very easy to install. Mounting clamps also support optional ground shield. Clamps can be placed at any convenient location around the inner or outer periphery of the transformer. Three complete sets are included with each transformer.



Type B07

Current Transformer

Standard Selection



STANDARD CURRENT TRANSFORMERS SELECTION GUIDE*

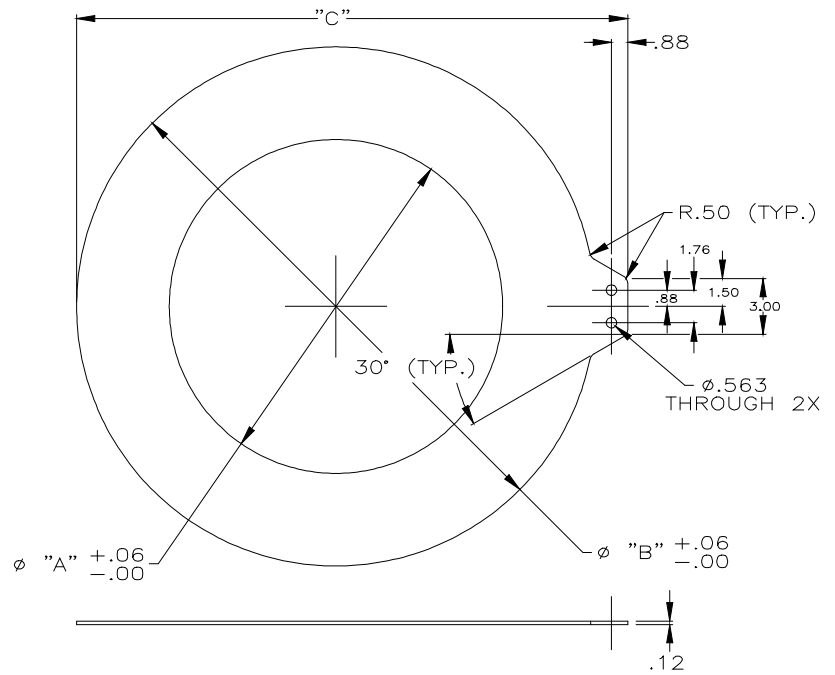
Catalog Number	Ratio	Relaying Accuracy	DIM "A"***	DIM "B"***	DIM "C"*** MAX.	Approx. Weight
B07-601-12	600:5MR	C400	12.00	24.75	4.50	245 lbs.
B07-601-18	600:5MR	C400	18.00	31.00	4.50	340 lbs.
B07-601-20	600:5MR	C400	20.00	33.00	4.25	355 lbs.
B07-601-22	600:5MR	C400	22.00	35.00	4.25	385 lbs.
B07-601-26	600:5MR	C400	26.00	39.00	4.25	425 lbs.
B07-601-28	600:5MR	C400	28.00	40.75	4.25	450 lbs.
B07-601-32	600:5MR	C400	32.00	43.50	5.00	475 lbs.
B07-122-12	1200:5MR	C800	12.00	24.75	4.50	233 lbs.
B07-122-18	1200:5MR	C800	18.00	30.75	4.50	307 lbs.
B07-122-20	1200:5MR	C800	20.00	32.75	4.50	331 lbs.
B07-122-22	1200:5MR	C800	22.00	34.75	4.50	356 lbs.
B07-122-26	1200:5MR	C800	26.00	38.75	4.50	406 lbs.
B07-122-28	1200:5MR	C800	28.00	40.75	4.50	429 lbs.
B07-122-32	1200:5MR	C800	32.00	43.50	4.75	460 lbs.
B07-202-12	2000:5MR	C800	12.00	24.75	3.75	200 lbs.
B07-202-18	2000:5MR	C800	18.00	30.75	3.75	240 lbs.
B07-202-20	2000:5MR	C800	20.00	32.75	3.75	255 lbs.
B07-202-22	2000:5MR	C800	22.00	31.00	3.75	275 lbs.
B07-202-26	2000:5MR	C800	26.00	38.75	3.75	315 lbs.
B07-202-28	2000:5MR	C800	28.00	40.75	3.75	325 lbs.
B07-202-32	2000:5MR	C800	32.00	43.50	3.75	355 lbs.
B07-302-12	3000:5MR	C800	12.00	24.75	3.75	144 lbs.
B07-302-18	3000:5MR	C800	18.00	30.75	3.75	189 lbs.
B07-302-20	3000:5MR	C800	20.00	32.75	3.75	202 lbs.
B07-302-22	3000:5MR	C800	22.00	34.75	3.75	215 lbs.
B07-302-26	3000:5MR	C800	26.00	38.75	3.75	243 lbs.
B07-302-28	3000:5MR	C800	28.00	40.75	3.75	257 lbs.
B07-302-32	3000:5MR	C800	32.00	43.50	3.75	268 lbs.

* CONSULT FACTORY FOR OTHER SIZES & RATINGS

** ALL DIMENSIONS ARE ± 0.25 TOLERANCE.

Type B07

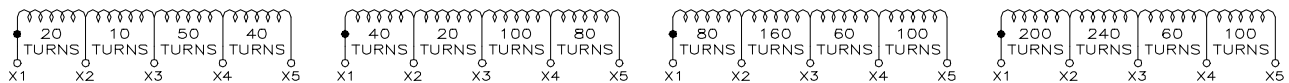
Ground Shield
Standard Selection



MATERIAL: 5052-H32 ALUMINUM PLATE PER ASTM-B209.

Part Number	Model Number	Approx. Weight	DIM "A"	DIM "B"	DIM "C"
1221B27396-10	B07-GS-1225	7.5 lbs.	12.00	25.19	26.94
1221B27396-11	B07-GS-1831	10 lbs.	18.00	31.19	32.94
1221B27396-12	B07-GS-2033	11 lbs.	20.00	33.19	34.94
1221B27396-13	B07-GS-2235	11.5 lbs.	22.00	35.19	36.94
1221B27396-14	B07-GS-2639	13 lbs.	26.00	39.19	40.94
1221B27396-15	B07-GS-2841	14 lbs.	28.00	41.19	42.94
1221B27396-16	B07-GS-3244	14 lbs.	32.00	43.19	45.69

TYPE B07 STANDARD MULTI RATIO TAPS *



Nominal Ratio - 600:5

Nominal Ratio - 1200:5

Nominal Ratio - 2000:5

Nominal Ratio - 3000:5

Available Ratios	Connections	Available Ratios	Connections	Available Ratios	Connections	Available Ratios	Connections
600:5	X1-X5	1200:5	X1-X5			3000:5	X1-X5
500:5	X2-X5	1000:5	X2-X5	2000:5	X1-X5	2500:5	X2-X5
450:5	X3-X5	900:5	X3-X5	1600:5	X2-X5	2200:5	X3-X5
400:5	X1-X4	800:5	X1-X4	1500:5	X1-X4	2000:5	X1-X4
300:5	X2-X4	600:5	X2-X4	1200:5	X1-X3	1500:5	X2-X4
250:5	X3-X4	500:5	X3-X4	1100:5	X2-X4	1200:5	X3-X4
200:5	X4-X5	400:5	X4-X5	800:5	X2-X3	1000:5	X4-X5
150:5	X1-X3	300:5	X1-X3	400:5	X4-X5	800:5	X1-X3
100:5	X1-X2	200:5	X1-X2	500:5	X1-X2	500:5	X1-X2
50:5	X1-X3	100:5	X1-X3	300:5	X3-X4	300:5	X1-X3

* NON-STANDARD ANSI TAPS ARE ALSO AVAILABLE

Other Cast Resin BCTS Outdoor

600 V Class, 10 kV BIL, 60 Hz

Features

- Flexibility of customer specified size and accuracy rating allows for custom-fit with this economical design
- Ratios may be supplied as single-ratios, dual-ratio, or multi-ratios per standard IEEE taps. Non-standard taps also available
- Optional aluminum ground shield design to provide bushing flashover protection
- Permanent stainless steel or aluminum nameplate, with pertinent information, mounted on the transformer
- Conforms to IEEE Standard C57.13
- Typical excitation data available upon request
- Three-point mounting bracket arrangement supplied with every transformer, mounting clamps and stainless steel all-thread studs and hardware provides easy mounting

Application

Externally mounted bushing current transformer for use over apparatus bushing on power transformers and circuit breakers

This design can be manufactured to customer specified size and electrical rating to use on applications where the standard B07 design is unsuitable. A variety of relay accuracy and metering accuracy ratings can be obtained



Bushing Type CT,
600 V Class,
10kV BIL, 60 Hz



Shown with terminal
cover off

Construction

- Weather proof Polyurethane. This encapsulation system demonstrates excellent weather resistance as described in the proceeding B07 pages
- Toroidal core is made cold-rolled, grain-oriented silicon steel that is annealed after forming to minimize core loss
- Fully distributed, copper secondary winding, on all taps, provides a low leakage reactance on each ratio
- Spacious, fiberglass-reinforced polyester conduit box supplied with two 1" threaded hubs and a 1" I.P.S. knockout in the bottom. Secondary terminals are #10-32 brass screws in tapped inserts

Quoting and ordering information

- 1) Minimum Inside Diameter
- 2) Maximum Outside Diameter
- 3) Maximum Height allowed
- 4) Specify Ratio
(Single, Dual or Multi-ratio)
- 5) Accuracy Requirements
- 6) Burden Requirements
- 7) Rating Factor
- 8) Any other mechanical or environmental limitations

Tape Wrapped BCTS

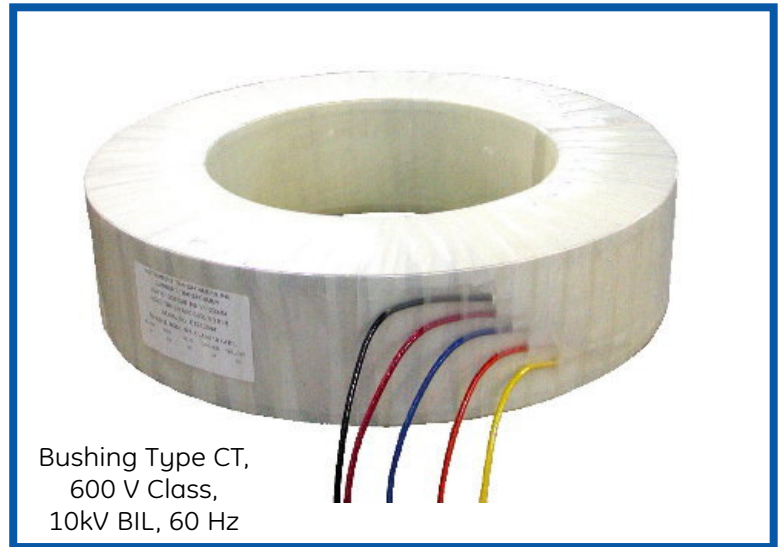
600 V Class, 10 kV BIL, 60 Hz

Features

- Economical design for custom-fit to purchaser's size and electrical rating requirements
- May be used in oil, above oil, under cans, or indoor applications
- Ratios may be supplied as single-ratios, dual-ratio, or multi-ratios per standard IEEE taps. (Non-standard taps also available)
- Pressboard nameplate affixed to unit, with pertinent information and polarity marking
- Conforms to IEEE Standard C57.13
- Typical excitation data available upon request
- Lead wire length sized to purchase's specification

Application

For use around apparatus bushings indoor, or internally mounted applications in transformer oil, or above the oil, inside of circuit breakers or power transformers. Design manufactured for custom-fit applications in current transformer pocket areas inside of electrical equipment.



Construction

- Units can be tapped with cloth or polyester
- Fully impregnated cotton tape wrapped BCTs are fully compatible with hot transformer oil and prevents moisture intrusion into the core and windings. polyester tape over windings also provides additional moisture protection
- Toroidal core is made cold-rolled, grain-oriented silicon steel that is annealed after forming to minimize core loss
- Fully distributed, copper secondary winding, on all taps, provides a low leakage reactance on each ratio
- 600 Volt rated, #10 AWG oil-compatible, wire-marked leads, sized to purchaser specifications

Quoting and ordering information

- 1) Minimum Inside Diameter
- 2) Maximum Outside Diameter
- 3) Maximum Height allowed
- 4) Specify Ratio
(Single, Dual or Multi-ratio)
- 5) Accuracy Requirements
- 6) Burden Information
- 7) Rating Factor
- 8) Any other mechanical or environmental limitations