



# Instrument Current Transformers

600 volt - 15Kv

## Reliability and Quick Results

**Reliability and quick response are the reasons you should select a Piedmont Current Transformer or have us build a custom unit for you!**

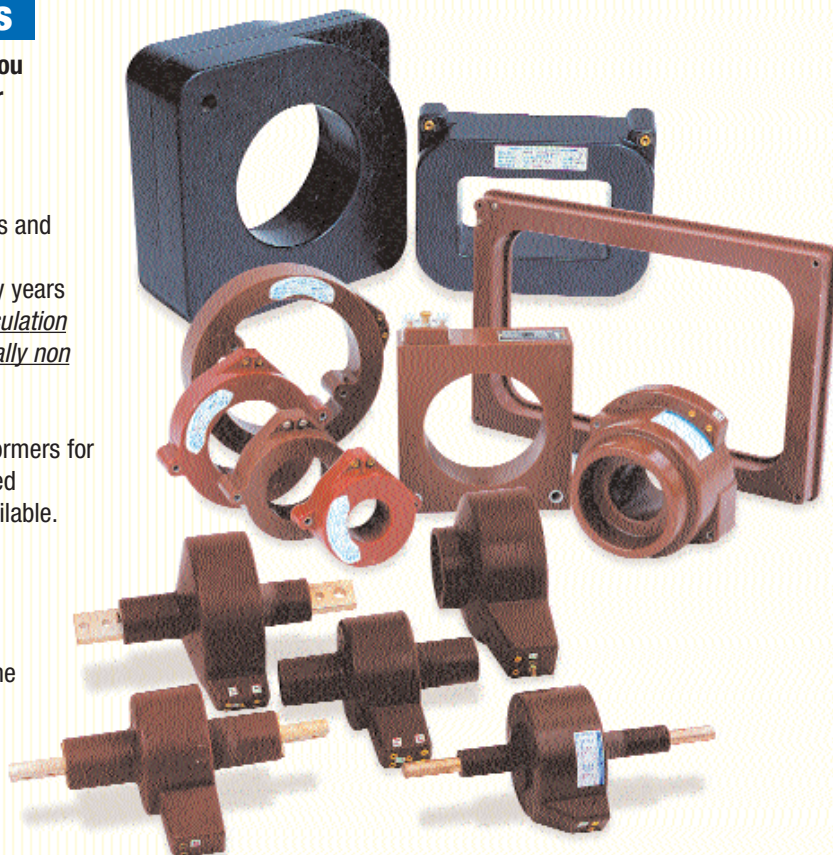
Piedmont Bushings & Insulators is an integrated manufacturer of toroidal wound current transformers and sensors. Not only have we been making current transformers for better than 40 years we have many years experience in the design of electrical insulation. *Insulation failures of our transformers over the years are virtually non existent.*

We have many hundreds of standard current transformers for you to choose from, and by using in-house developed computer programs new designs can be readily available.

Using high grades of silicone steels we wind and anneal our own cores, apply the winding, package this "basic" CT by either taping it, capturing it in an injection molded case, or encapsulating it in urethane or epoxy. Every transformer is tested to the applicable ANSI or IEC Standard, and a permanent record kept of its serial number and performance. Certified test reports are available when called for.

Current transformers are classified by their current and voltage rating, accuracy class, physical configuration, and application. . Those differentiated by their application may be either **relaying type** or **metering type**. The relaying type have greater output and are generally larger and more expensive. Those differentiated by their configuration may be either **window type** or **bar type**. Piedmont makes many general purpose, **600 volt** window type transformers for both metering and relaying applications. When used with our high voltage bushings the assembly has the rating of the bushing. We also make a substantial line of **5Kv, 15Kv and 25Kv** bar type transformers for both metering and relaying applications.

Please select from this brochure the current transformers that meets your needs. Or, if you need help call, fax, or e-mail your requirements and we will respond promptly.



## Piedmont Bushings & Insulators, LLC

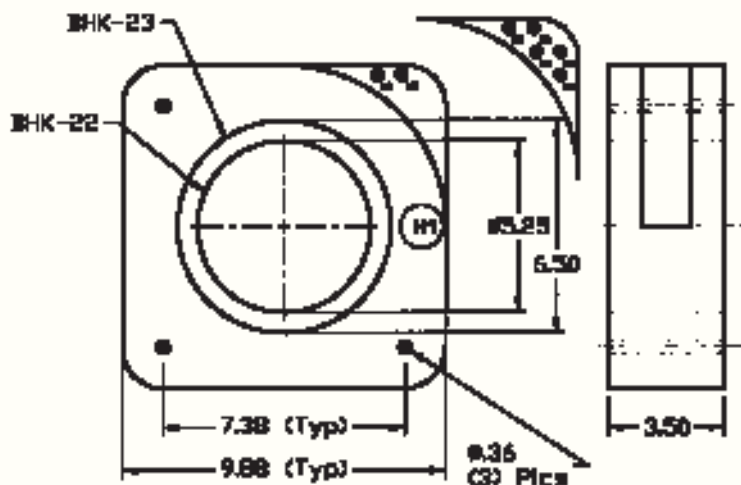
251 Harris Bridge Road  
Post Office Box 849  
Woodruff, South Carolina 29388

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The 600 volt BHK and BG range of current transformers are suitable for relaying and metering applications, and are specifically designed for 15Kv and 26Kv metal clad switchgear. The 9.88" square design complements the 10 inch pole spacing of that equipment. One or two of the transformers can be slipped over the primary disconnect bushings. The BHK comes in two window sizes, 5.25" and 6.5" diameter. The BG is available in the larger size only. Both the BHK and the BG are made in ratios from 50:5 to 5000: 5 amperes, both single and multi ratio.

The BHK-22 single and multi ratio transformers are available in Noryl plastic cases up to 2000 amperes. Above that, to meet the continuous current rating factor of 1.33 or better, they are encapsulated in polyurethane which more efficiently conducts the heat away from the core and coil. The BHK-22S single and multi ratio transformers are also encapsulated, as are all the BHK-23. At the present time all the BG current transformers are encapsulated.

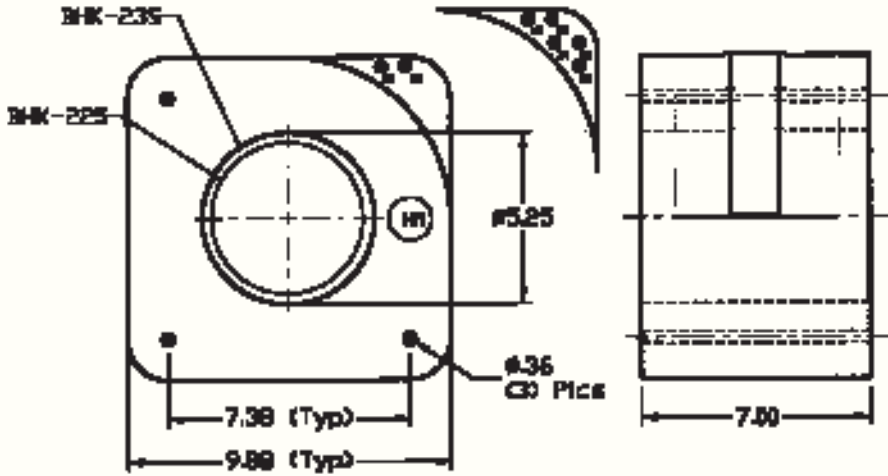
The secondary terminals consist of a 10-32 insert in the molding. A 10-32 x 3/8" binding head screw is recommended.



TYPE BHK-22				TYPE BHK-23		
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy
SINGLE RATIO						
50:5	401803-K21	-	C10			
75:5	401803-K22	-	C10			
100:5	401803-K23	-	C20			
150:5	401803-K24	-	C20			
200:5	401803-K25	B0.2	C50			
300:5	401803-K26	B0.2	C50			
400:5	401803-K27	B0.9	C100			
500:5	401803-K28	B0.9	C100			
500:5	401803-K44	B0.9	C100			
600:5	401803-K29	B0.9	C100	401805-K07	B1.8	C200
600:5	401803-K41	B0.9	C100			
800:5	401803-K30	B0.9	C100			
1000:5	401803-K31	B1.8	C100			
1200:5	401803-K32	B1.8	C200	401805-K10	B1.8	C200
1200:5	401803-K43	B1.8	C200			
1500:5	401803-K33	B1.8	C200	401805-K21*	B1.8	C200
2000:5	401803-K19*	B1.8	C400	401805-K22*	B1.8	C200
2000:5	401803-K34*	B1.8	C200			
2400:5	401803-K42*	B1.8	C200			
2500:5	401803-K35*	B1.8	C400	401805-K23*	B1.8	C200
2500:5	401803-K45*	B1.8	C200			
3000:5	401803-K51*	B1.8	C200	401805-K24*	B1.8	C200
3000:5	401803-K16*	B1.8	C400			
3500:5	401803-K20*	B1.8	C400			
4000:5	401803-K17*	B1.8	C400	401805-K25*	B1.8	C200
5000:5	401803-K18*	B1.8	C400	401805-K26*	B1.8	C400
MULTI RATIO						
TYPE BHK-22M				TYPE BHK-23M		
600:5	401810-K21	B1.8	C100			
1200:5	401810-K22	B1.8	C200			
2000:5	401810-K23	B1.8	C200	401820-K01	B1.8	C200
3000:5	401810-K4	B1.8	C400	401820-K02	B1.8	C200
3000:5				401820-K05	B0.9	C200
4000:5	401810-K5	B1.8	C400	401820-K03	B1.8	C200
5000:5	401810-K6	B1.8	C400	401820-K04	B1.8	C200

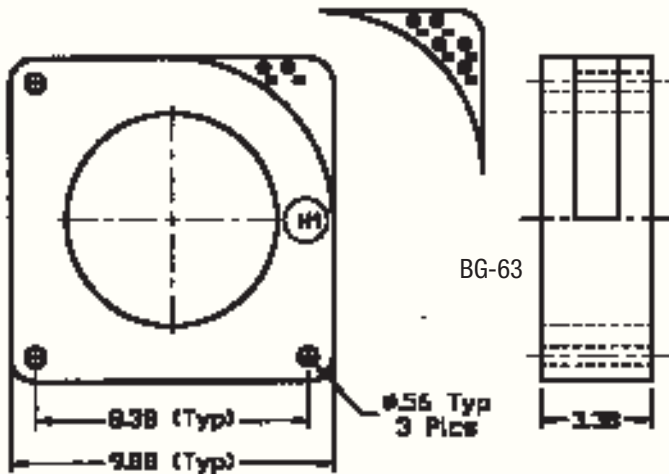
Approximate Weight: 38 lbs

\*Encapsulated



TYPE BHK-225				TYPE BHK-235		
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy
SINGLE RATIO						
50:5	401812-K1	-	C20	-	-	-
75:5	401812-K2	-	C20	-	-	-
100:5	401812-K3	-	C50	-	-	-
150:5	401812-K4	-	C50	-	-	-
200:5	401812-K5	B0.2	C100	-	-	-
300:5	401812-K6	B0.2	C100	-	-	-
400:5	401812-K7	B0.9	C200	-	-	-
500:5	401812-K8	B0.9	C200	-	-	-
600:5	401812-K9	B0.9	C200	-	-	-
800:5	401812-K10	B0.9	C200	-	-	-
1000:5	401812-K11	B1.8	C200	-	-	-
1200:5	401812-K12	B1.8	C400	-	-	-
1500:5	401812-K13	B1.8	C400	401818-K1	B1.8	C400
2000:5	-	-	-	401818-K2	B1.8	C400
2500:5	401812-K15	B1.8	C800	401818-K3	B1.8	C400
3000:5	401812-K16	B1.8	C800	401818-K4	B1.8	C400
4000:5	401812-K17	B1.8	C800	401818-K5	B1.8	C400
5000:5	401812-K18	B1.8	C800	401818-K6	B1.8	C400
TYPE BHK-22MS			MULTI RATIO			
2000:5	401822-K3	B1.8	C800	401825-K1	B1.8	C400
3000:5	401822-K4	B1.8	C800	401825-K2	B1.8	C400
4000:5	401822-K5	B1.8	C800	401825-K3	B1.8	C400
5000:5	401822-K6	B1.8	C800	401825-K4	B1.8	C400

Approximate Weight: 38 lbs

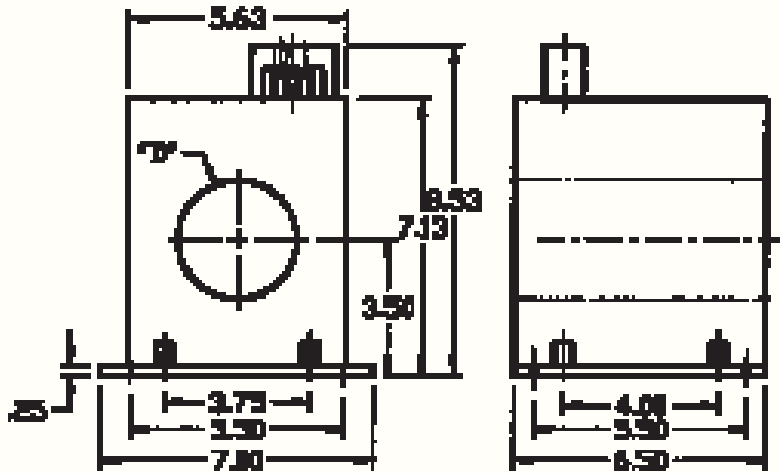


TYPE BG-63				TYPE BG-66S		
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy
100:5	402042-K01	-	C10	402038-K01	-	C20
150:5	402042-K02	-	C20	402038-K02	-	C50
200:5	402042-K03	-	C20	402038-K03	B0.2	C50
250:5	402042-K04	-	C20	402038-K04	B0.2	C50
300:5	402042-K05	B0.1	C20	402038-K05	B0.5	C100
400:5	402042-K06	B0.2	C50	402038-K06	B0.5	C100
500:5	402042-K07	B0.2	C50	402038-K07	B0.5	C100
600:5	402042-K08	B0.5	C100	402038-K08	B0.9	C200
800:5	402042-K09	B1.8	C100	402038-K09	B1.8	C200
1000:5	402042-K10	B1.8	C100	402038-K10	B1.8	C200
1200:5	402042-K11	B1.8	C200	402038-K11	B1.8	C400
1500:5	402042-K12	B1.8	C200	402038-K12	B1.8	C400
2000:5	402042-K13	B1.8	C200	402038-K13	B1.8	C400
2500:5	402042-K14	B1.8	C200	402038-K14	B1.8	C400
3000:5	402042-K15	B1.8	C200	402038-K15	B1.8	C800
4000:5	402042-K16	B1.8	C200	402038-K16	B1.8	C800
5000:5	402042-K17	B1.8	C200	402038-K17	B1.8	C800

Approximate Weight: 38 lbs  
Multi-ratio available upon request.

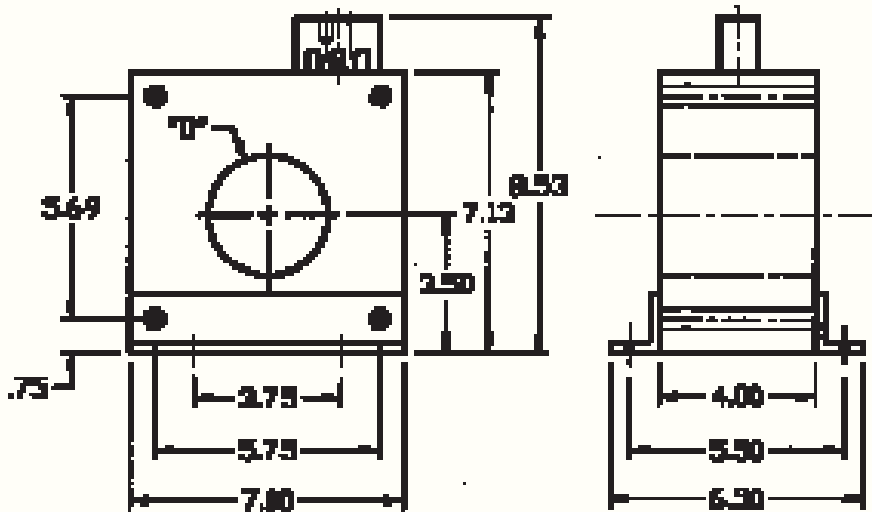
The UM series of current transformers are window type designed primarily for indoor or outdoor metering applications. While they have some relaying capability, it is small, particularly in low ratios. They are encapsulated in polyurethane. The secondary terminals are compression lug type suitable to receive wire sizes between #14-#8 AWG. A clear plastic terminal cover with sealing wire and short circuiting link provision is included. A mounting kit option is available.

A variety of window sizes are available from 3" to 8".



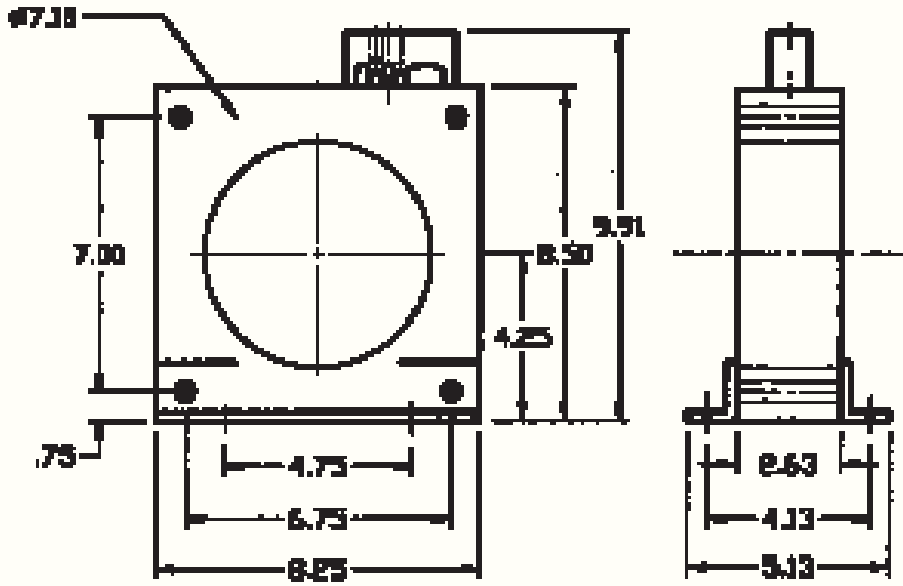
TYPE UM-3				
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Window Diameter "D"
50	402546-K01	-	-	3.06
100	402546-K02	B0.1	C20	2.5
200	402546-K03	B0.5	C30	2.5
400	402546-K04	B0.5	C30	3.06
500	402546-K05	B0.5	C30	3.06
600	402546-K06	B0.5	C30	3.06
800	402546-K07	B0.5	C30	3.06
1000	402546-K08	B0.5	C30	3.06
1200	402546-K09	B0.5	C30	3.06
200/400	402546-K10	B0.5	C30/C50	2.5
300/600	402546-K11	B0.5	C20/C30	3.06
400/800	402546-K12	B0.5	C20/C50	3.06
150	402546-K13	B0.5	C20	2.5
50/100	402546-K14	B0.5	C20	2.5
100/200	402546-K15	B0.5	C30/C50	2.5

Approximate Weight: 17 lbs



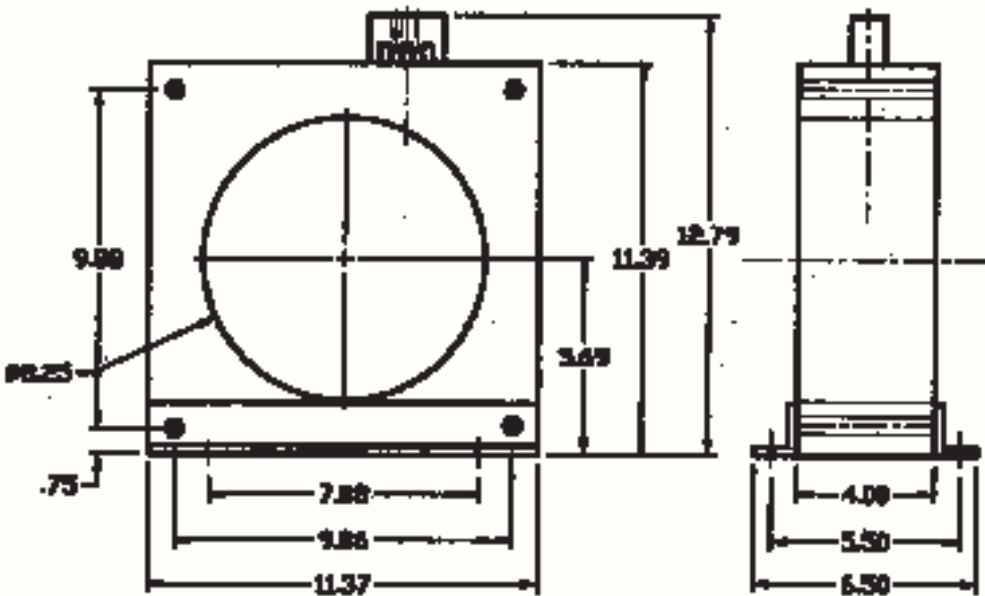
TYPE UM-4				
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Window Diameter "D"
50:5	402647-K01	-	C10	3.5
75:5	402647-K02	-	C10	3.5
100:5	402647-K03	-	C20	3.5
150:5	402647-K04	-	C20	3.5
200:5	402647-K05	B0.1	C50	3.5
250:5	402647-K06	B0.2	C50	3.5
300:5	402647-K07	B0.2	C50	3.5
400:5	402647-K08	B0.5	C100	4.0
500:5	402647-K09	B1.8	C100	4.0
600:5	402647-K10	B1.8	C100	4.0
800:5	402647-K11	B1.8	C200	4.0
1000:5	402647-K12	B1.8	C200	4.0
1200:5	402647-K13	B1.8	C200	4.0
1500:5	402647-K14	B1.8	C200	4.0
2000:5	402647-K15	B1.8	C200	4.0
2500:5	402647-K16	B1.8	C200	4.0
3000:5	402647-K17	B1.8	C200	4.0
4000:5	402647-K18	-	C200	4.0

Approximate Weight: 35 lbs



TYPE UM-5				
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Window Diameter "D"
600	402548-K01	-	C30	4.75
800	402548-K02	-	C30	4.75
1000	402548-K03	-	C50	4.75
1200	402548-K04	-	C30	4.75
1500	402548-K05	-	C30	4.75
2000	402548-K06	B0.9	C50	4.75
3000	402548-K07	B0.9	C10	4.75
4000	402548-K08	B0.9	-	4.75
600	402548-K09	-	C10	4.75
2000	402548-K09	B0.9	C30	4.75
800	402548-K10	-	C20	4.75
1600	402548-K10	B0.9	C30	4.75
1000	402548-K11	-	C30	4.75
2000	402548-K11	B0.9	C50	4.75
1500	402548-K12	-	-	4.75
3000	402548-K12	B0.9	C10	4.75
2000	402548-K13	B0.9	-	4.75
4000	402548-K13	B0.9	-	4.75

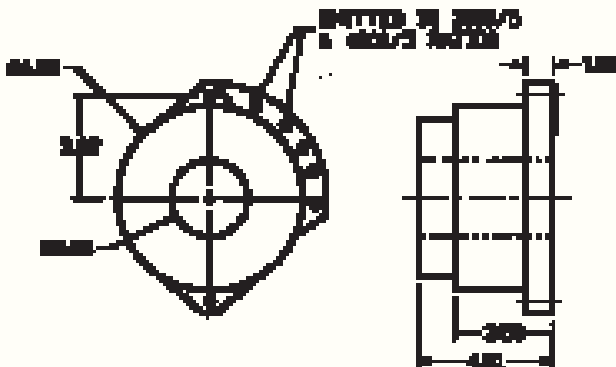
Approximate Weight: 65 lbs



TYPE UM-8				
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Window Diameter "D"
2000	402550-K01	B0.9	C50	8.25
3000	402550-K02	B1.8	C100	8.25
4000	402550-K03	B1.8	C100	8.25
5000	402550-K04	B1.8	C100	8.25
6000	402550-K05	B1.8	-	8.25
8000	402550-K05	B1.8	-	8.25
1000	402550-K06	B0.5	C30	8.25
2000	-	B0.9	C50	8.25
1500	402550-K07	B0.5	C50	8.25
3000	-	B1.8	C100	8.25
2000	402550-K08	B0.9	C50	8.25
4000	-	B1.8	C100	8.25
2500	402550-K09	B1.8	C100	8.25
5000	-	B1.8	C200	8.25
3000	402550-K10	B1.8	-	8.25
6000	-	B1.8	-	8.25
4000	402550-K12	B1.8	-	8.25
5000	-	B1.8	-	8.25

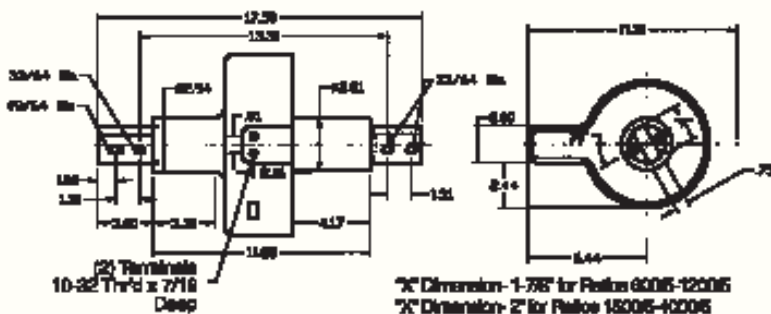
Approximate Weight: 65 lbs

The 5Kv and 15Kv MC series of current transformers are bar type designed to be bus mounted and are suitable for relaying and metering applications. Most are available as either single or multi ratio type. They can be supplied with silver plated aluminum bars as standard or copper when requested. The core and coils are potted in an epoxy case with polyurethane. The secondary terminals consist of a 10-32 insert in the molding. A 10-32 x 3/8 binding head screw is recommended.



5Kv			
TYPE MC-5 & MC-5M			
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy
SINGLE RATIO			
75:5	401437-K1	-	C10
100:5	401437-K2	-	C10
150:5	401437-K3	B0.1	C20
200:5	401437-K4	B0.1	C20
250:5	401437-K15	B0.2	C20
300:5	401437-K05	B0.5	C50
400:5	401437-K06	B0.5	C50
500:5	401437-K16	B0.9	C50
600:5	401437-K07	B0.9	C100
800:5	401437-K08	B1.8	C100
1000:5	401437-K17	B1.8	C100
1200:5	401437-K18	B1.8	C200
1500:5	401437-K10	B1.8	C200
2000:5	401437-K11	B1.8	C200
2500:5	401437-K12	B1.8	C200
3000:5	401437-K13	B1.8	C200
4000:5	401437-K14	B1.8	C200
MULTI RATIO			
600:5	401434-K1	B1.8	C400
1200:5	401434-K2	B1.8	C100
2000:5	401434-K3	B1.8	C200
3000:5	401434-K4	B1.8	C200
4000:5	401434-K5	B1.8	C200

Approximate Weight: 16 lbs



5Kv				15Kv		
TYPE MC-25A				TYPE MC-15A		
Primary Current Rating	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy	Ordering Number	Highest Burden For 0.3 Acc	Relaying Accuracy
SINGLE RATIO						
75:5	401574-K1	-	C10	401160-T1	-	C10
100:5	401574-K2	-	C10	401160-T2	-	C10
150:5	401574-K3	B0.1	C20	401160-T3	B0.1	C20
200:5	401574-K4	B0.1	C20	401160-T4	B0.1	C20
250:5	401574-K5	B0.5	C20	401160-T5	B0.5	C20
300:5	401574-K6	B0.5	C50	401160-T6	B0.5	C50
400:5	401574-K7	B0.5	C50	401160-T7	B0.5	C50
500:5	401574-K8	B0.9	C50	401160-T8	B0.9	C50
600:5	401574-K9	B1.8	C100	401160-T9	B1.8	C50
800:5	401574-K10	B1.8	C100	401160-T10	B1.8	C100
1000:5	401574-K11	B1.8	C100	401160-T11	B1.8	C100
1200:5	401574-K18	B1.8	C200	401160-T18	B1.8	C100
1500:5	401574-K13	B1.8	C200	401160-T13	B1.8	C200
2000:5	401574-K14	B1.8	C200	401160-T14	B1.8	C200
2500:5	401574-K15	B1.8	C200	401160-T15	B1.8	C200
3000:5	401574-K16	B1.8	C200	401160-T16	B1.8	C200
4000:5	401574-K17	B1.8	C200	401160-T17	B1.8	C200
TYPE MC-25M1		MULTI RATIO		TYPE MC-15M1		
600:5	401577-K1	B0.9	C400	401161-T1	B0.9	C100
1200:5	401577-K2	B1.8	C100	401161-T2	B1.8	C100
2000:5	401577-K3	B1.8	C200	401161-T3	B1.8	C200
3000:5	401577-K4	B1.8	C200	401161-T4	B1.8	C200
4000:5	401577-K5	B1.8	C200	401161-T5	B1.8	C200

Approximate Weight: 16 lbs







## Additional Products

In addition to conventional current transformers Piedmont make zero sequence current transformers, sensors used with static relays, and linear couplers.

Zero sequence transformers are a standard transformer with a very large magnetic core and a low ratio such as 50:5 amperes. When all three phases are pulled through the transformer window and the current in each phase is equal the magnetic fields cancel and there is no output. Under ground fault conditions the currents are unbalanced and an output exists that can operate a relay.

Current sensors are constructed like a current transformer but have much smaller magnetic circuits and produce a voltage output that can operate low burden static relays. There are no industry standards of output so they are designed to complement specific relay characteristics. For distribution circuits up to 69Kv Piedmont offers current and voltage sensors in the form of an outdoor post insulator. Ask for Catalog 3B.

Linear couplers are constructed like a current transformer, but with a non-magnetic core so they do not saturate. They have a significant number of turns that produce a standardized output of 5 volts per 1000 amperes. Since they do not have the power capability of a current transformer they are very sensitive and great care must be used in their construction and calibration.

We can help you with applications of any these devices. Please call, fax, or e-mail your requirements and we will respond promptly.

For over forty years, PDC has been manufacturing high quality, very reliable dielectric products in the Factory located in Woodruff, South Carolina, having affiliations with ITE and ABB. Besides CRC bushings, other dielectric products include:

- Polykeram insulators
- Line sensors
- Instrument transformers

For more details and technical assistance on these dielectric products, contact the Factory.

## PBI Commitment

PBI is committed to becoming a dominant supplier of capacitance-graded bushings to transformer manufacturers for new equipment and to end-users for replacement requirements. For more details and technical assistance on CRC bushings, contact the **Factory**, or **first**, visit us on-line at **pb-i.com** at any time of the day to obtain:

- an indepth presentation
- catalog and prints as well as, to order CRC bushings from our on-line catalog using our **secure** shopping cart ordering system.



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