



Department of consumer and corporate affairs / Ministère de la consommation et des corporations



STANDARDS BRANCH - DIRECTION DES NORMES

**NOTICE OF APPROVAL
AVIS D'APPROBATION**

T-103

OTTAWA March 8, 1976

ELECTROMAGNETIC INDUSTRIES TYPES CO1----, CO2-----, BC01----
AND BC02-----, CURRENT TRANSFORMERS - OUTDOOR, WINDOW AND BAR
TYPE-5.0, 8.7 AND 15Kv CLASSES

Apparatus

Primary Current

Single Ratio

Types CO1----, BC01----

800, 1200, 1500, 2000, 3000, 4000

Types CO2-----, BC02-----

800, 1200, 1500, 2000, 3000

Dual Ratio

Types BC01---

600/1200, 1000/2000, 1500/3000
and 2000/4000 amperes

Types BC02---

600/1200, 1000/2000 and 1500/3000
amperes

Secondary Current

5 amperes

Accuracy Rating

Types CO1, CO2, BC01 and BC02 (Single Ratio)

800 amperes

0.3B0.5; 0.6B2.0

Types CO1, CO2, BC01 and BC02 (Single Ratio)

1000, 1200, 1500, 2000
and 3000 amperes

0.3B2.0

Types CO1 and BC01

(Single Ratio)

4000 amperes

0.3B2.0

Dual Ratio

Types BC01 and BC02

600/1200 and 1000/2000
amperes

0.3B0.5/0.3B0.5; 0.6B2.0/0.3B2.0

1500/3000 amperes

0.3B2.0/0.3B2.0

Type BC01

2000/4000 amperes

0.3B2.0/0.3B2.0

R.F. (rating factor)

Type CO1	
800 amperes	2.0
1200, 1500 and 2000 amperes	1.5
3000 amperes	1.33
4000 amperes	1.0

Type CO2	
800 amperes	2.0
1000 and 2000 amperes	1.5
1500 and 3000 amperes	1.0

Type BCO1	
800, 1200, 1500 and 2000 amperes	1.5
3000 amperes	1.33
4000 amperes	1.0

Type BCO2	
800, 1200, 1500 and 2000 amperes	1.5
3000 amperes	1.0

Type BCO1 (dual rating)	
600/1200 and 1000/2000 amperes	1.5
1500/3000 and 2000/4000 amperes	1.0

Type BCO2 (dual rating)	
600/1200 amperes	1.33
1000/2000 amperes	1.5

Nominal Voltage Class	BIL is incorporated into the type designation
Frequency	60Hz
Style	Outdoor, Window and Bar Type

Description

These transformers are window and bar types with a single secondary winding wound on a torroidal core of grain-oriented silicon steel.

The core and secondary winding is assembled into a case that is compression molded of fibreglass reinforced polyester. Then the entire case is filled with epoxy to complete the encapsulation.

The main insulation is a porcelain tube with the outer periphery of the porcelain on both ends grooved to increase the leakage distance to ground. On the center section of the outer periphery is a ground shield to control the voltage stresses and prevent partial discharges.

The insulator is fixed inside the molding, which encapsulates the core and secondary, by a silicone elastomer. This elastomer has high adhesion and is of adequate thickness to serve as a cushion between the porcelain and resin molding to prevent excessive mechanical stresses from temperature changes caused by the differences in the thermal coefficients of expansion of dissimilar materials. It also seals out moisture.

Primary windings are included in the types CO2 and BC02. The primary consists of a hollow copper tube passing straight through the porcelain tube. Flat terminal pads are brazed to each end of the tube and they are tinned. The copper tube is fixed inside the porcelain tube by means of a silicone elastomer in the same manner as the porcelain tube is held inside the core and secondary.

Both the main body and the cover are compression moldings of polyester fiberglass. The cover flange is at a 45 degree angle. A neoprene gasket provides the seal between box and cover. The thumb screws in the cover are drilled to accommodate a seal wire.

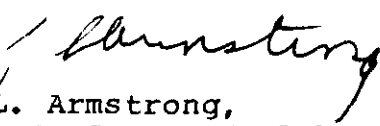
All terminals are identified by permanently molded letters and white polarity marks.

Types CO1 and BC01 are window types, and CO2 and BC02 are bar types.

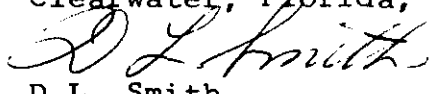
Dual ratios are available only in types BC01 and BC02.

All types are equipped with manually-operated short-circuiting devices and a solderless ground terminal within the secondary conduit box.

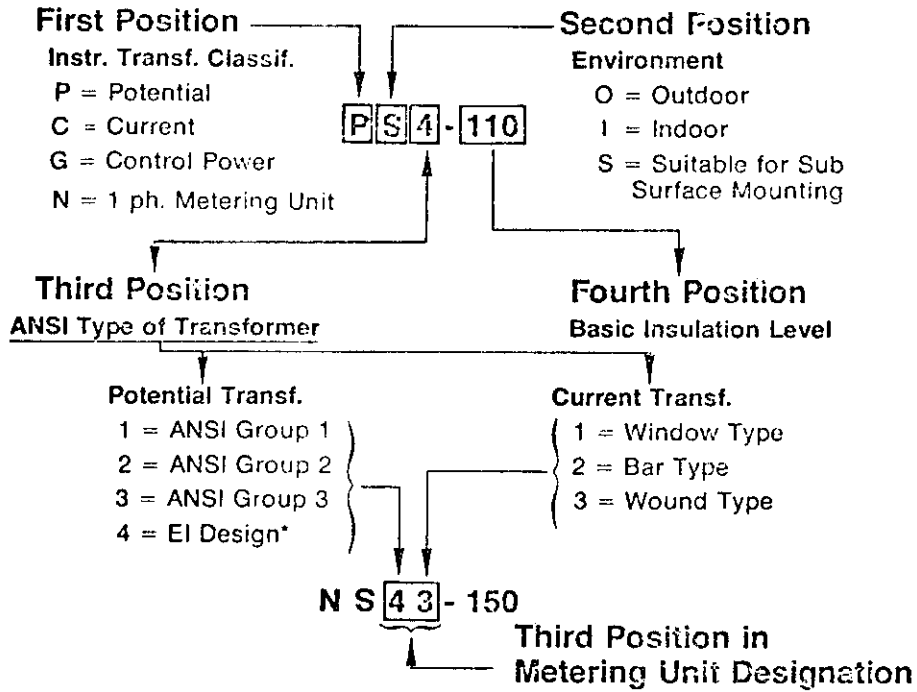
Approval granted to:


J.L. Armstrong,
Chief, Standards Laboratory,
Metrology and Laboratory Services.

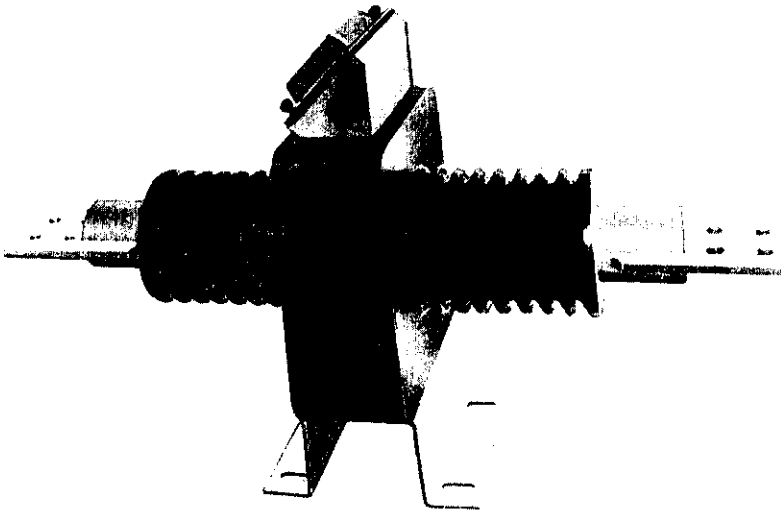
Electromagnetic Industries Inc.,
Clearwater, Florida, U.S.A.


D.L. Smith,
Chief, Electricity and Gas Division,

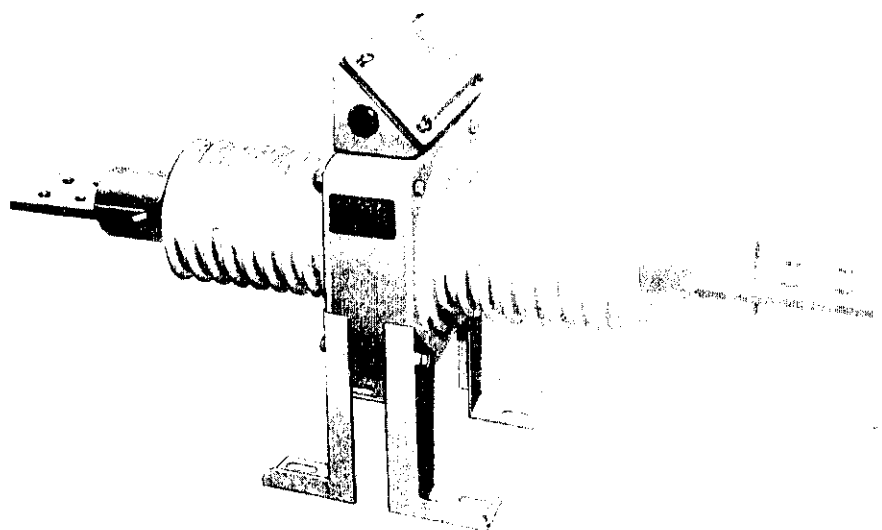
EXPLANATION OF THE TYPE DESIGNATIONS



Prefix - A letter appearing before the above type designations identifies another "family" of similar products: e.g. BCO1-110 is similar to the series CO1-110.



BCO1, BCo2
Current Transformers
Window & Bar Type



CO1-110 C.T.