VOLTAGE TRANSFORMER GROUPS

GROUP 1. Transformers for application with 100% of rated primary voltage connected to the primary terminals either line–to–line or line–to–ground. These transformers are capable of operating at 125% of rated volts in emergency conditions, but cannot exceed 65% of their thermal burden rating, with a limit of 75°C. temperature rise. This will result in a reduced life expectancy. Consult the factory for details. Continuous operation at 110% of rated voltage is permissible, provided that the thermal burden rating is not exceeded.

PRIMARY VOLTAGE RATING	TURNS RATIO	B.I.L. (kV PEAK)
120 for 208Y	1:1	10
240 for 416Y	2:1	10
300 for 520Y	2.5:1	10

GROUP 2. Transformers are for line–to–line connection, but may be connected line–to–neutral at a voltage of the rated line volts divided by the square root of 3.
Continuous operation at 110% of rated voltage is permissible, provided that the thermal burden rated volt–amperes is not exceeded.

PRIMARY VOLTAGE RATING	TURNS RATIO	B.I.L. (kV PEAK)
120 for 120Y	1:1	10
240 for 240Y	2:1	10
300 for 300Y	2.5:1	10
480 for 480Y	4:1	10
600 for 600Y	5:1	10

VOLTAGE TRANSFORMER FUSES

This Voltage Transformer section contains some models that can be fitted with primary fuses. The fuse style is the CC class having a rejection feature. These fuses are rated as current limiting with a 200,000 ampere (RMS symmetrical) interrupting rating, for BRANCH circuits of 600 volts or less. The fuses are contained in a fuseblock that will accept only class CC, UL approved fuses. This prevents other fuse types of the same size being fitted that would have a lower interrupting capacity and/or a non–current limiting capability. It is possible to fit the fuse carrier and fuseblock to our models 450, 456 and 475 after manufacture so that a field retro–fit can be made.

The National Electric Code requires that all voltage transformers installed indoors or in an enclosure shall be fused in the primary circuit with devices rated 15 amperes or less. This arrangement will protect the supply from faults internally in the transformer, but faults in the secondary circuit may not rupture the primary fuse. It is suggested that the user fit secondary circuit fuses to protect the transformer from such faults. The recommended fuse rating is 125% of rated full load amperes, with a maximum of 167%, again referring to the National Electric Code.

When fusing either the primary or the secondary circuits of voltage transformers that are connected line–to–ground, only one fuse should be fitted line side so that the transformer cannot remain energized from a line connection while the grounded neutral fuse is ruptured. The selection of fuses as listed with each model that can accept fuses, is based upon magnetizing inrush considerations and not necessarily upon the VA rating of the transformer. In cases where the user wishes to select and mount fuses elsewhere in equipment, we recommend that the ratings given be adhered to. If no fuses are listed, consult the factory engineers for a recommendation.

VOLTAGE TRANSFORMER BURDEN DATA

BURDEN	VOLT AMPERES	POWER FACTOR	P.F. ANGLE
W	12.5	0.10	84.3°
X	25	0.70	45.6°
M	35	0.20	78.5°
Y	75	0.85	31.8°
Z	200	0.85	31.8°
ZZ	400	0.85	31.8°