INSTALLATION & OPERATING

INSTRUCTIONS FOR

DRY TYPE CONTROL TRANSFORMERS

RECEIVING – Upon receipt of shipment examine the package for damage that may have been sustained in transit. If the shipping container must be opened outdoors, take proper precautions to prevent the entrance of moisture. While unpackaging, examine the product for broken or loose parts or other damage. If injury from outside sources is evident, file on damage claim with the transportation company and notify the nearest sales office. Tighten any parts which may have become loose during shipment.

HANDLING – In general, units having a net weight in excess of 50 lbs. will have provision for lifting. Damage to the finish and parts may be avoided by using a spreader on lifting chains. Very large units, in addition to lifting holes or lugs, may have provision for rolling, skidding or jacking.

STORAGE – The storage room should be clean and dry and, when possible without extreme temperature variations. Before placing a dry-type transformer in service after a period of storage, be sure that it is clean and dry by observing the instructions under "Installation".

INSTALLATION – The only foundation necessary is a flat surface strong enough to support the weight of the unit. Regardless of the type of mounting surface, permanent and effective grounding of the metal case is recommended as a safety precaution for personnel. The metal encased transformers are suitable for outdoor use, when mounted in an upright position. The open frame (core and coil) transformer are for indoor use and should be placed in locations not subject to exposure to high humidity. Because free circulation of air is essential for the proper operation of all dry-type transformers, they should not be located in areas where heavy dust or corrosive fumes are present.

Any accumulations of dirt or dust may be removed by brushing or by blowing dry air on the unit. If moisture is evident by the appearance of rust or mildew, the unit should be dried out by placing it in an oven or by blowing heated air over it. In either case the temperature should not exceed 110° C.

Make only those connections authorized by the nameplate or connection diagram, and do not change connections while the unit is energized.

MAINTENANCE – In general, dry-type transformer products have no moving parts. The only maintenance required is periodic inspection of connections and removal of accumulated dust, dirt and lint.

NOTE
This transformer is constructed with substances which are potentially harmful for the environment. Shall not be disposed as normal waste. Please consult your local regulations for disposal requirements.

RENEWAL PARTS – Because of the unit structure of small transformers, field repairs are usually uneconomical and no spare and renewal parts are recommended. On large and more complicated equipments where component replacement may be desirable, contact the nearest sales office for information.

CONTROL TRANSFORMERS – Control transformers are encapsulated construction and whether of the open frame type for panel mounting, or encased for general use, the exterior surface transfers the heat generated within the unit. They will perform satisfactorily when the surrounding air temperature does not exceed 40° Centigrade (104° Fahrenheit) and free air circulation is provided by maintaining at least one inch spacing on all sides except the mounting surface. They are designed to reach rated temperature operating continuously at rated voltage, frequency and load. Serious overheating may result if operated for sustained periods at over-voltage, above rated current (rated current equals rated volt-amperes divided by rated voltage), or less than rated frequency. Generally, within the power frequency range of 25 to 100 cycles per second, a control transformer may be operated safely at a frequency higher than rated frequency. Transformers rated 50/60 cycles can be used at 400 cycles if proper allowance is made for increased regulation caused by the larger reactance voltage drop.

Standard control transformers are designed for step-down service. The secondary or low voltage is over wound to compensate for resistance drop in order to provide rated output voltage at rated load. If they are reversed for step-up service, the voltage ratio will be incorrect and the output voltage will be low. This is particularly significant in rating of less than 75 volt ampers. Because of the added turns on the secondary coil care should be used in applying small transformers when the load is less than rated load, to make sure that the resultant voltage is not excessive for the desired loading.

When a control transformer is operating, the temperature of the outside surfaces is generally higher than can be handled comfortably. This should be no cause for concern since these transformers are designed to operate at high temperatures to provide the benefits of small size and light weight. Surface temperatures generally meet the requirements established by Underwriters´ Laboratories, Inc. to assure safe operations.

Standard control transformers of identical model numbers may be connected in parallel, or they may be used in three phase banks. They may also be connected as autotransformers for boosting or bucking voltage. However the use of autotransformers is subject to precautions and in some areas local codes prohibit their use. Be sure to check local codes before using autotransformers.

NOTE – These instructions do not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met in connection with installation, operation and maintenance. Should further information be desired or should problems arise which are not covered sufficiently for the purchaser´s purpose, the matter should be referred to the manufacturer.