THREE-PHASE INDUCTION VOLTAGE REGULATORS AND ROTARY FREQUENCY CONVERTERS

THREE-PHASE INDUCTION VOLTAGE REGULATORS

When voltage must be adjusted in a.c. circuits, transformers or autotransformers with variable taps or induction voltage regulators are used. The three-phase induction regulator consists of a stator with a three-phase winding that represents the secondary. While the rotor is the primary and bears the excitation winding, normally it has a star connection (for construction reasons) and is installed in series to the secondary winding. The rotor of this machine is held by a group of worm gears and can be moved as required along the overall length by a polar step of the stator by making a specific adjustment. The main features include high efficiency values, complete absence of deformations on the regulated voltage waveform plus silent and maintenance-free operation. Cooling is generated by an axial electric fan and three-phase motor with its own power supply. These machines were designed with the B3 construction form and are provided with support and attachment feet.

For adjustment ranges that differ from those indicated in this catalogue, consult our technical office.

ROTARY FREQUENCY CONVERTERS

These machines are used where frequencies must be varied to obtain a value that is different from what is available from the distribution network. They are used in various sectors and applications, including testing rooms to perform inspections and to vary frequencies based on a sinusoidal waveform, wood and glass working machines, etc..
The three-phase asynchronous frequency converter consists basically of an alternator mechanically coupled to a three-phase asynchronous motor. The unit is rotated by the motor (with a high number of poles) that entrains the alternator rotor in the opposite direction of the main field, so that the required frequencies are available at the terminals of the alternator collector.

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