

## **INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR SINGLE-PHASE ASYNCHRONOUS SQUIRREL CAGE INDUCTION MOTORS**

### **Definition:**

The motor you have purchased will supply driving power to various machines, and industrial equipment. It is manufactured according to Turkish Standards TS 4239 and EN 60034.

### **Safety:**

TEE single phase general purpose motors comply with the recent valid technical standards.

All repair and servicing operations on motors must be carried out when the equipment is electrically isolated and the motor and driven machine are at standstill.

The motors should only be transported, installed, connected, commissioned, maintained, and operated by skilled persons familiar with all relevant safety standards and mounting specifications.

### **Assembly and Operation:**

Please consider the following points for assembly and operation of the motor:

- Do not neglect to check the motors for any transport damage prior to installation.
- Ensure motors are adequately protected during transportation and storage. If stored for a long time, the motors must be protected against dust, moisture and other harmful factors.

Please follow the procedure below if the motor has been out of use for a long time.

-Examine the bearings and replace them if necessary.

-Check the insulation resistance. If the insulation resistance measured at 25°C and 500V is below 2 Mohm, the motor must be dried at 80°C.

### **Assembly to Driven Machine:**

The rotors are dynamically balanced with half key. So that, the coupling elements also have to be dynamically balanced with half key. To fit a half coupling on the motor shaft easily, please ensure the shaft end is clean. It is advised to heat coupling elements up to 60-80°C before securing them on to the shaft.

**Caution:** The use of a hammer is not permitted for fitting the couplings to the shaft.

Please ensure right pulley diameter and appropriate belt tension.

One of the major factors extending the life time of motors is the alignment of the motor shafts and the driven machine. Please note that even a minor misalignment may soon damage the bearings.

While operating the motor and the driven elements such as couplings or pulleys, check radial/ axial forces to protect the bearings against damage.

During assembly, the space below the feet of the motor must be filled with steel shims if necessary. Please ensure the motor is centered accurately, and the bolts are fastened properly. Motors have been delivered fitted with greased bearings and ready to operate. The bearings have to be changed in case of abnormal noise and heating.

### **Grounding**

According to VDE 0530, all motors must be grounded from the terminal marked "ground" in the terminal box.

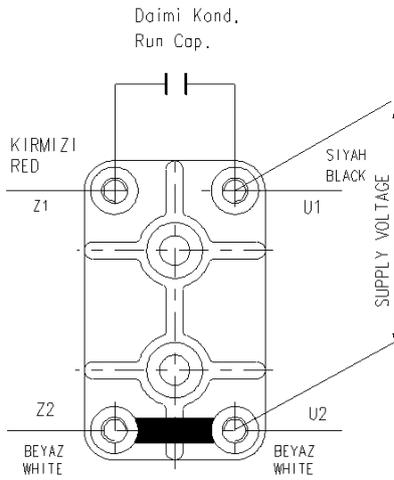
**Protection:**

The motors must be protected against short circuit, and overloads by proper fuses, thermal-magnetic switches or electronic protection circuits. The nameplate values are valid where the ambient temperature does not exceed 40°C and altitude is less than 1000 m. The permissible voltage variation according to VDE 0530 is  $\pm 10\%$  at the rated output and rated frequency.

**Power Connection:**

The rating plate values of the motor must to be examined carefully and supply voltage should be either the same with the rating plate value.

The standard terminal box has 4 connection leads. Short circuit links should be connected as follows:

**With Run Capacitor****Handling of Discarded Motor**

The discarded motor at the end of its useful life must be recycled in accordance with the national law. The all materials (steel, cast iron, copper, aluminum, plastics used in insulation materials) used for manufacturing of the motors subject to material recycling after the all parts are separated. All oil and grease should be disposed or incinerated according to the ordinance of waste oils. Electronic components of the motor must be recycled separately from other parts.

**Important Notes:**

Standard Single-phase motors should not be run on NoLoad. These motors should be operated Full load or close to Full Load.

The motors should be handled by qualified persons.

Please ensure that shaft, and the electrical terminals are connected properly.

The normal rotation of the motor is anti-clockwise facing the drive end. But if connected incorrectly, it may reverse causing a hazard to machinery and personnel. Therefore, please check the rotation of motor before connecting it to driven unit.

TEE guarantees that its motors comply with this instruction manual. The removal of parts or dismantling of the motor will automatically void this warranty.

The above instructions are valid for the motor you have purchased. TEE reserves the right to alter these instructions.

Please contact your dealer for items not covered in this leaflet.

The motors which has a starting current level of bigger than 26A in single phase type , necessary precaution has to be taken according to the limits of EN 61000-3-3 and EN 61000-3-11, or the motors must be connected to a network