



Toshiba EQP Global IEC Series Installation Instructions And Maintenance Manual

Low voltage motors

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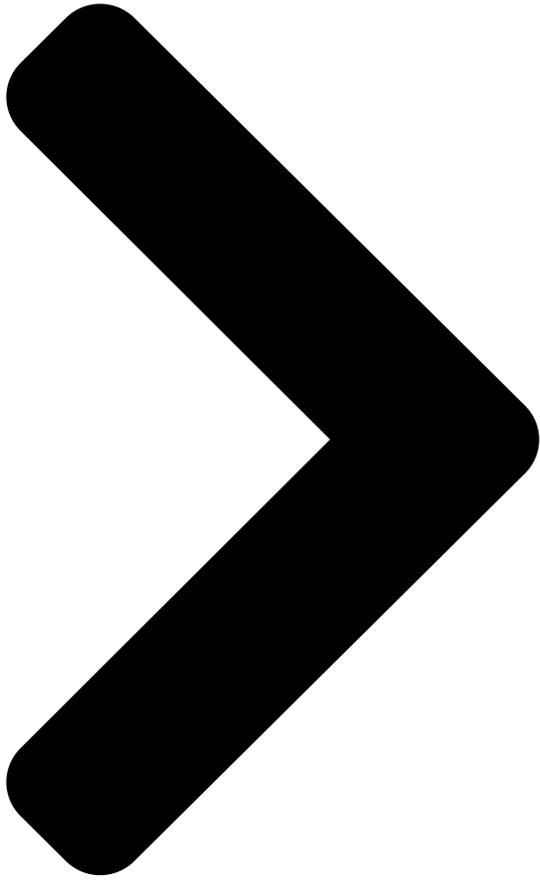
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LOW VOLTAGE MOTORS

TOSHIBA

TOSHIBA INTERNATIONAL CORPORATION

EQP Global® IEC Series

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Toshiba low voltage motors product brochure (2 pages)

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Pwm type single channel h-bridge dc brushed motor driver for automotive use (49 pages)

Summary of Contents for Toshiba EQP Global IEC Series

[Page 1](#) LOW VOLTAGE MOTORS...

[Page 3](#) EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Installation & Maintenance Manual DN: 98170-000 April, 2021...

[Page 5](#) Introduction Thank you for choosing Toshiba and congratulations on the purchase of the EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor! The squirrel cage induction motor was designed for an extended service life under very demanding conditions. However, should the motor require service, this manual includes a section that assists the repair technician with maintenance, disassembly/assembly, part replacement, testing, troubleshooting, and warranty information.

[Page 6](#) This manual was written by the Toshiba International Corporation Technical Communications Group. This group is tasked with providing technical documentation for the EQP Global IEC Series Low- Voltage 50/60 Hz Metric Motor. Every effort has been made to

provide accurate and concise information to you, our customer.

[Page 7](#) TIC Customer Support Center Toshiba International Corporation's Customer Support Center can be contacted to obtain help in resolving any motor system problem that you may experience or to provide application information. The Support Center is open from 8 a.m. to 5 p.m. (CST), Monday through Friday. The toll free number to the center is US (800) 231-1412/Fax (713) 466-8773.

[Page 8](#) The sales contract contains the entire obligation of Toshiba International Corporation. The warranty contained in the contract between the parties is the sole warranty of Toshiba International Corporation and any statements contained herein do not create new warranties or modify the existing warranty.

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Table of Contents EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor General Safety Information1 Safety Alert Symbol1 Signal Words1 Special Symbols1 Equipment Warning Labels 1 Qualified Personnel2 Receiving and Storage 3 Receiving

[Page 10](#) Table of Contents EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor <https://www.toshiba.com/tic/...>

[Page 11: General Safety Information](#)

Safety Information EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor General Safety Information CAUTION The word CAUTION without DO NOT attempt to install, operate, maintain, the safety alert or dispose of the motor until you have read and symbol indicates a potentially hazardous...

[Page 12: Qualified Personnel](#)

Safety Information EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Qualified Personnel Otherwise, when opened, moisture will condense on the cold parts. This may reduce the electrical resistance of the insulation or Installation, operation, and maintenance shall be performed by Qualified Personnel ONLY. A cause rust or corrosion of metallic parts.

[Page 13: Receiving And Storage](#)

Safety Information EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Receiving and Storage or other fittings into the eye; they must fit freely. Do not shock load the eye bolts. Receiving When lifting the motor, align the eye bolts to...

[Page 14](#) Safety Information EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor be stored in an area that is exposed to vibration must have the shaft locked to prevent any movement. If the motor is stored in a temperature less than - 15°...

[Page 15: Frame Size, Standards, & Installation](#)

Motor Size, Compliance, & Installation EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Frame Size, Standards, & which an ASD, soft starter, or electronic control Installation is being used, the installer/system integrator or commissioning party will be required to verify...

[Page 16: Motor Installation And Coupling](#)

Motor Size, Compliance, & Installation EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Motor Installation and All dimensions are in millimeters (inches). Coupling Divide the millimeter value by 25.4 to convert to inches. Motor Installation Any motor operated using an Adjustable...

[Page 17](#) Motor Size, Compliance, & Installation EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Foundation Figure 2. Mounting Foundation. A rigid foundation is necessary for smooth, stable, and reliable operation. Foundation A satisfactory bond between the foundation and the Bedplate grouting is required.

[Page 18: Motor Coupling](#)

Motor Size, Compliance, & Installation EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor 5. Measure the alignment and, using shims, con- 5. Pack the grout to a height of 12.7 mm (½")

above time to adjust as required. the underside of the bedplate.

[Page 19](#) Motor Size, Compliance, & Installation EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor readings must be made with the dial button located Non-parallel faces will be indicated by a variation in at the chalk mark. At least six readings are to be separation of the coupling halves as they are performed.

[Page 20](#) Motor Size, Compliance, & Installation EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Direct coupling via a flexible means does not • Worn bearings on the motor and/or the driven machine. require a check for minimum sprocket diameter. • A resonant mounting condition — the effect is...

[Page 21: Power Supply & Connections](#)

Power Supply and Connections EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Power Supply & Connections connections are also shown in the conduit box of the motor and in Figure 6. CAUTION EQP Global IEC Series Metric motors 160 frame...

[Page 22](#) Power Supply and Connections EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor WARNING Before starting the motor, remove all unused shaft keys and loose rotating parts to prevent them from becoming projectiles during operation. CAUTION Check the direction of motor rotation before coupling the motor to a load.

[Page 23: Motor Operation](#)

Operation and Testing EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Motor Operation DANGER Motor Start-Up Precheck Ensure that all personnel are Perform the following checks before the initial start clear of the motor and the • Inspect the motor for foreign materials and driven equipment during the general cleanliness.

[Page 24: Maintenance](#)

Maintenance EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Maintenance solvent/cleaner. A brush should be used for surfaces difficult to reach by hand. Use a spray gun to clean inaccessible slots and passages. After Inspect the motor at regular intervals. Keep the using the solvent, be sure to dry the windings with motor clean and the vent openings unobstructed.

[Page 25: Lubrication](#)

Maintenance EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Figure 7. Insulation Resistance vs. Drying Time. Frames 200 – 225 are manufactured with double shielded open ball bearings. Depending on the kW size and/or the operating speed, it may be...

[Page 26: Disposal](#)

Maintenance EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Recommended Greases for Special Applications The following greases are recommended for special applications only and should be used only for motors specifically built for such conditions. Minimum Ambient Temp. -60° C (-76° F) Beacon Exxon Mobil Corp.

[Page 27](#) Maintenance EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Table 1. Ball Bearing Relubrication Frequency. Lubrication Intervals in Duty Hours Frame 3000 1500 1000 900 – 500 Grease Amount Size r/min. r/min. r/min. r/min. (Oz./Grams) 112, 132 0.53/15 4800...

[Page 28: Ordering Information, Spare Parts, And Service Guide](#)

Ordering, Spare Parts, & Service EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Ordering Information, Spare Spare Parts Listing Parts, and Service Guide Use only genuine Toshiba parts. Ordering Information When ordering, specify complete motor information. model number and serial number are a minimum requirement.

[Page 29](#) Ordering, Spare Parts, & Service EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Figure 8. EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Components. Item Description Item Description C/B Cover Screw Frame/Stator Assembly C/B Case N. D. E. Bracket...

[Page 30: Service Guide](#)

Ordering, Spare Parts, & Service EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Service Guide The following table lists operational symptoms that may occur, probable causes, and the suggested course of action. This table is intended as both a diagnostic aid and a quick reference tool.

[Page 31](#) Ordering, Spare Parts, & Service EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Troubleshooting Assistance Symptom Probable Cause Remedy Abnormal noise or Foreign matter between fan and • Check fan path for obstruction. abnormal vibration another object. • Remove foreign object — Keep surroundings free of foreign objects.

[Page 32](#) EQP Global IEC Series Low-Voltage 50/60 Hz Metric Motor Index , 17 Relubrication Frequency Rigid Coupling , 10 Belt Installation , 20 Service Guide , 14 , 13 Cleanliness Start-Up Precheck Coupling , 13 Testing , 20 Direct-Coupled Motors Troubleshooting Assistance...

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