
TOSHIBA
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TMS7

Toshiba ME00070B Manual

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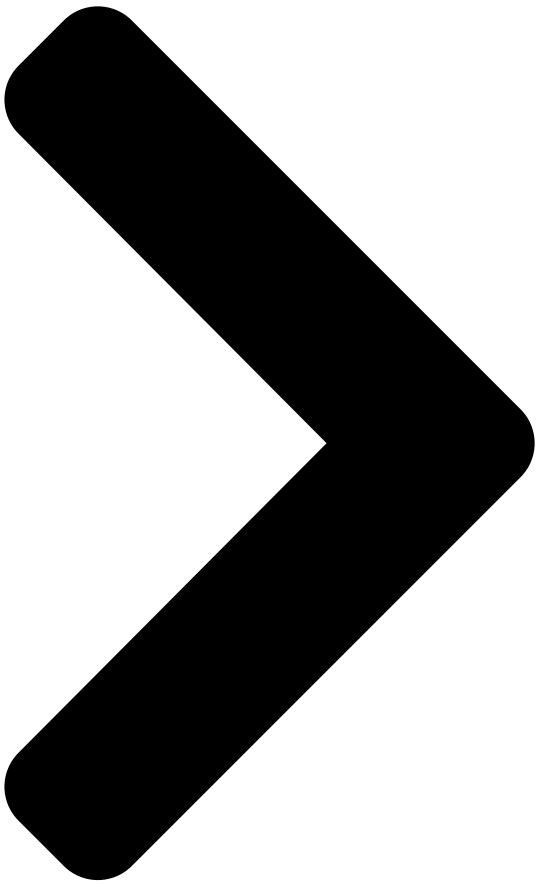

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Summary of Contents for Toshiba ME00070B

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Page 2: Quick Start

Select Function 1. Motor Full Load Current by holding down the <FUNCTION> key and then press the <UP> key until the display shows "1". Release the <FUNCTION> key to display the currently stored value of Function 1. Motor Full Load Current. ME00070B TMS7 SERIES...

Page 3: Caution Statements

Users are cautioned that the information contained in this manual is subject to change at any time and without prior notice. In no event will responsibility or liability be accepted for direct or indirect or consequential damages resulting from the use or application of this equipment. TMS7 SERIES ME00070B...

Page 4: General Description

IP42 (<253 Amps) IP00 (>302 Amps) Current read-out Motor temperature read-out Fault History (eight position). Multiple function sets. Restart Delay. Low current alarm. High current alarm. Motor overtemperature alarm. Auto-reset. Function lock/Password protection. Load defaults function settings. ME00070B TMS7 SERIES...

Page 5: Specifications

TMS7-4315 TMS7-4315 TMS7-4400 TMS7-4400 1163 1065 TMS7-4500 TMS7-4500 1346 1247 1059 TMS7-4600 1134 TMS7-4600 1701 1484 1308 1139 TMS7-4700 1385 1210 1066 TMS7-4700 2078 1815 1599 1382 TMS7-4800 1563 1366 1202 1030 TMS7-4800 2345 2049 1803 1545 TMS7 SERIES ME00070B...

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1163 1163 1009 TMS7-4500 TMS7-4500 1346 1346 1197 TMS7-4600 1153 1153 1006 TMS7-4600 1730 1730 1509 1276 TMS7-4700 1403 1403 1275 1060 TMS7-4700 2105 2105 1912 1591 TMS7-4800 1574 1574 1474 1207 TMS7-4800 2361 2361 2212 1811 ME00070B TMS7 SERIES...

Page 7: Dimensions & Weights

TMS7-4400 170M6021 170M6020 170M6017 170M6017 2,532,000 TMS7-4500 170M6021 170M6020 170M6151 170M6151 4,500,000 TMS7-4600 170M6021 170M6020 170M6151 170M6151 4,500,000 TMS7-4700 170M6021 170M6021 *170M5018 *170M5018 6,480,000 TMS7-4800 170M6021 170M6021 *170M5018 *170M5018 12,500,000 *Two parallel connected fuses required per phase TMS7 SERIES ME00070B...

Page 8: Power Terminations

Control Inputs Start (I34,I33) ....Normally Open, Active 24VDC, 8mA approx. Stop (I22,I21) ..... Normally Closed, Active 24VDC, 8mA approx. Reset (I12,I11) .... Normally Closed, Active 24VDC, 8mA approx. FLC Select (I44,I43) ..Normally Open, Active 24VDC, 8mA approx. ME00070B TMS7 SERIES...

Page 9: Installation

200mm Minimum Clearance 200mm Minimum Clearance 4.2 Power Termination Configuration The bus bars on models TMS7-4150 ~ TMS7-4800 can be adjusted to provide four different input/output power terminal configurations. 200mm Minimum Clearance 200mm Minimum Clearance TMS7 SERIES ME00070B...

Page 10: Ventilation

(watts) /min /hour Rise Rise Rise Rise 1125 11.3 1350 13.5 1575 15.8 1800 18.0 1080 540 2025 20.3 10.1 1218 609 2250 22.5 11.3 1350 675 2475 24.8 12.4 1488 744 2700 27.0 13.5 1620 810 ME00070B TMS7 SERIES...

Page 11: Power Circuits

Connecting power CAUTION L1 B factor correction capacitors to the output of the 3 PHASE soft starter will result in damage to the soft SUPPLY starter. Lege nd K1 Line Conta ctor F1 Se micon ducto r Fuses TMS7 SERIES ME00070B...

Page 12: Line Contactors

TMS7 can avoid this. Line contactors must be selected such that their AC3 rating is equal to or greater than the full load current rating of the connected motor. ME00070B TMS7 SERIES...

Page 13: Control Circuits

- High current alarm TMS7-4007~ TMS7-4030~ TMS7-4132~ - Motor overload alarm (C24 Programmable - St art/Run TMS7-40047 TMS7-4110 TMS7-4800 Output C - Main Contactor Models) (*Tripped) 110/460 995-00821- 995-00823- 995-00824- * = default functionality

110/575 995-00825- 995-00827- 995-00828- TMS7 SERIES ME00070B...

Page 14: Rs485 Serial Communication

[LRC1]h [LRC2]h setting Function 60. RS485 Timeout. The starter address is assigned using Function 62. RS485 Satellite Address. Slave response. The flow charts below show typical form of communication ASCII ACK between an TMS7 and host controller. ME00070B TMS7 SERIES...

Page 15 RS485 protocol version number. Add the binary LRC. Trip Code 255 = No trip The least significant byte should be zero. Shorted SCR Reserved For example: Motor Thermal model trip ASCII Motor thermistor Current imbalance trip Supply frequency trip TMS7 SERIES ME00070B...

Page 16 Status.1 Unallocated Status.0 Unallocated Status_1 bits (negative logic 0 = true) Status Bit Function Comment Status_1.7 Status_1.6 Status_1.5 Restart Status_1.4 Delay Overload Motor is operating in an overload Status_1.3 condition. Status_1.2 Output On Status_1.1 Power On Status_1.0 ME00070B TMS7 SERIES...

Page 17: Programming Procedure

<FUNCTION> and <STORE> keys. Step 3. Alter the function set point. Review the current function set point and, if necessary, use the <UP> or <DOWN> keys to adjust the setting. (Pressing the <FUNCTION> key will restore the original setting). TMS7 SERIES ME00070B...

Page 18: Function List

Current imbalance trip delay Read Only Data 100 Model Number 500% 101 Fault History Restricted Functions 110 Access code 300% 111 Update access code 112 Function lock 113 Restore function settings 100% 100% ROTOR SPEED (% Full Speed) ME00070B TMS7 SERIES...

Page 19 MTC = 5 Sec A motor's thermal capacity is expressed as the maximum time (seconds) a motor can maintain locked rotor current conditions I (% FLC) from cold, and is often referred to as Maximum Locked Rotor TMS7 SERIES ME00070B...

Page 20 Relay Output C Functionality benefit in some pumping applications. Range: 0 - 11 Default Setting: 0 (Tripped) Local/Remote Operation Description: Assigns the functionality of programmable relay Range: 0 – 3 output C. 0 = TMS7 Local/Remote push button always enabled. ME00070B TMS7 SERIES...

Page 21: Restart Delay

Range: 0 – 105% Motor Temperature Timeout Protection and enables the TMS7 to continuing operating even if the RS485 link Default Setting: 80% CAUTION becomes inactive. Description: Sets the temperature (%) at which the motor overtemperature alarm operates. TMS7 SERIES ME00070B...

Page 22 Range: 100 – 550 % FLC function. Default Setting: 350% FLC Auto-Reset – Number Of Resets Description: Sets the minimum current level for the Ramp Start mode. Range: 1 - 5 Adjustment: Refer to Function 3 for further detail. Default Setting: 1 ME00070B TMS7 SERIES...

Page 23 Adjustment: Set as required. Adjustment: Refer to Function 9 for further detail. 113. Restore Function Settings Current Imbalance Trip Delay Range: 0, 50 Range: 3 – 254 Seconds TMS7 SERIES ME00070B...

Page 24: Operation

When control power is applied to the TMS7 it may be in either local or remote control mode according to the mode it was in when control power was removed. The factory default is local control. CAUTION ME00070B TMS7 SERIES...

Page 25 The primary motor parameters are set using functions 1~9. The secondary motor parameters are set using functions 80~88. When commanded to start the TMS7 checks the state of the FLC Select input (Terminals I43 & I44). In the event of an open TMS7 SERIES ME00070B...

Page 26: Application Examples

TMS7 RUN OUTPUT (terminals R34, R33). Function Settings: Function 21. Relay Output A Functionality = 11 Function Settings: (Assigns the Main Contactor function to Relay Output A) - no special settings required. ME00070B TMS7 SERIES...

Page 27: Soft Braking

When motor speed approaches zero the shaft rotation sensor (A2) stops the soft starter and opens the braking contactor (K2M). Function Settings: Function 23. Relay Output C Functionality = 0 (Assigns the Trip function to Relay Output C) Functions 1~9 (Sets starting performance characteristics) Functions 80~88 (Sets braking performance characteristics) TMS7 SERIES ME00070B...

Page 28: Two Speed Motor

On receipt of a Low Speed start signal the Low Speed contactor (K2M) is closed. The relay contact across Input A is also closed causing the TMS7 to control the motor according to the Secondary Parameter set (Function Numbers 80~88). Function Settings: Function 23. Relay Output C Functionality = 0 (Assigns the Trip function to Relay Output C) ME00070B TMS7 SERIES...

Page 29: Trouble Shooting

2. Alternatively, remove control voltage from the terminals T1, T2, T3 means there is no supply TMS7 and reconnect the motor in 6 Wire. connected to the TMS7 input. This will be seen as TMS7 SERIES ME00070B...

Page 30: Trip Log

Function settings must be stored using the are not recorded. <STORE> button. Refer to section 7.1 Programming Procedure for further detail. Function settings are locked. Ensure that Function 112. Function Lock is set for Read/Write. ME00070B TMS7 SERIES...

Page 31: Tests And Measurements

TMS7 is performing correctly. Power circuit test. This test verifies the TMS7 power circuit including the SCR, firing loom and control module. Remove the incoming supply from the TMS7 (L1, L2, L3 and control supply). TMS7 SERIES ME00070B...

Page 32: Contents 10.3 Ac53B Utilisation Codes

Pump - Slurry in the remaining sections of the utilisation code. — Re-pulper — Rotary Table — Sander — Saw - Bandsaw — Saw - Circular — Separator — Shredder — Slicer — Tumbler ME00070B TMS7 SERIES...

This manual is also suitable for:

Tms7-4007Tms7-4015Tms7-4018Tms7-4022Tms7-4030Tms7-4037 ... Show all