



# TOSHIBA

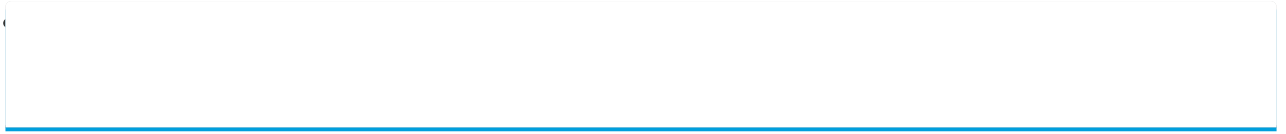
## Toshiba CV-10HB Instruction Manual

High-voltage vacuum contactors 12 13.8 kv-400a-5ka



1
Table Of Contents
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

18  
19  
20  
21



•

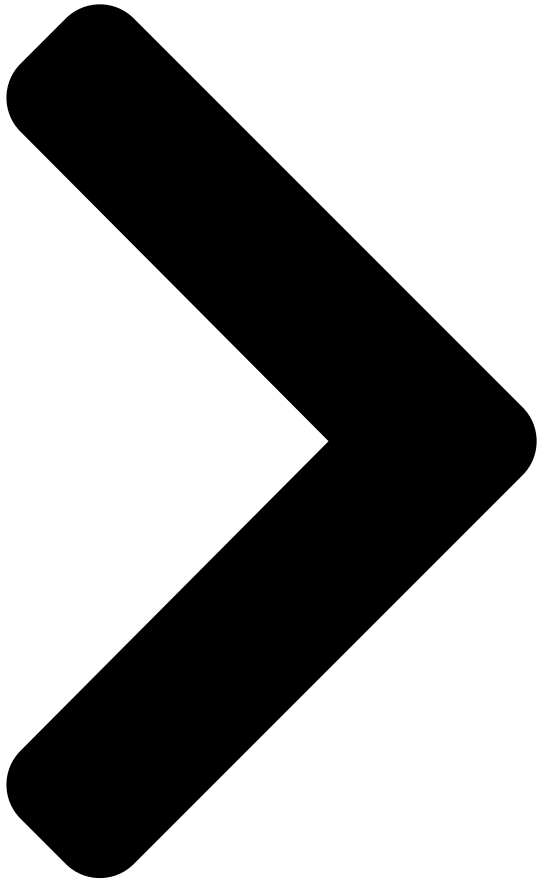
[Table of Contents](#)

•

## Bookmarks

[Download this manual](#)

## Quick Links





TYPE:CV-10HB

TYPE:CV-10HBL 12□13.8□kV□400A□5kA

Buy: [www.ValinOnline.com](http://www.ValinOnline.com) | Phone 844-385-3099 | Email: [CustomerService@valin.com](mailto:CustomerService@valin.com)

INSTRUCTION MANUAL

HIGH□VOLTAGE

VACUUM CONTACTORS

---

CAPACITOR APPLICATION

12□13.8□kV□400A□5kA

---

TOSHIBA CORPORATION

---



[Table of Contents](#)

[Next Page](#)

1  
2  
3  
4  
5

## Related Manuals for Toshiba CV-10HB

### [Industrial Equipment Toshiba CV-10HB Instruction Manual](#)

High-voltage vacuum contactors (21 pages)

### [Industrial Equipment Toshiba TOSNUC 92 Connection Manual](#)

(141 pages)

### [Industrial Equipment Toshiba GRB200 Instruction Manual](#)

Replica setting procedure for centralized busbar protection ied (70 pages)

### [Industrial Equipment Toshiba JK Series Instruction Manual](#)

Medium voltage controllers, oem power cells - fixed and withdrawable types, 360a, 7.2kv maximum (32 pages)

### [Industrial Equipment Toshiba VN-M1500HE Installation Manual](#)

Air to air heat exchanger (28 pages)

### [Industrial Equipment Toshiba GSC1000-C Operation Manual](#)

Substation automation system (402 pages)

### [Industrial Equipment Toshiba E3327 Manual](#)

Industrial magnetron (16 pages)

### [Industrial Equipment Toshiba TH650A Maintenance Manual](#)

Industrial robot (112 pages)

### [Industrial Equipment Toshiba TOSVERT VF-AS3 Instruction Manual](#)

Pid control instruction manual (62 pages)

### [Industrial Equipment Toshiba Q9 Plus Bypass ASD Installation & Operation Manual](#)

(434 pages)

### [Industrial Equipment Toshiba WX9 ASD Installation & Operation Manual](#)

(226 pages)

### [Industrial Equipment Toshiba TH180 Maintenance Manual](#)

Industrial robot (69 pages)

### [Industrial Equipment Toshiba TOSVERT VF-AS Instruction Manual](#)

Optional rom for hoist & crane (54 pages)

## Summary of Contents for Toshiba CV-10HB

[Page 1](#) 6F9G0154 INSTRUCTION MANUAL HIGH VOLTAGE VACUUM CONTACTORS CAPACITOR APPLICATION TYPE:CV-10HB 12/13.8kV/400A/5kA TYPE:CV-10HBL 12/13.8kV/400A/5kA TOSHIBA CORPORATION © TOSHIBA Corporation 2001-2009 All Rights Reserved. Buy: www.ValinOnline.com | Phone 844-385-3099 | Email: CustomerService@valin.com...

### [Page 2: Table Of Contents](#)

6F9G0154 高电压真空接触器电容器应用说明书  
应用类型:CV-10HB 12/13.8kV/400A/5kA 型号:CV-10HBL 12/13.8kV/400A/5kA  
TOSHIBA CORPORATION © TOSHIBA Corporation 2001-2009 All Rights Reserved. Buy:  
www.ValinOnline.com | Phone 844-385-3099 | Email: CustomerService@valin.com...

**Page 3** 6F9G0154 Read this manual carefully to fully understand the operation. And keep for maintenance. WARNING : Never remodel or disassemble the equipment nor mount nonstandard components. This equipment shall only be used inside a metal enclosure (grounded) in other establishments than domestic , or those that are connected to the public power source system.

**Page 4** 6F9G0154 2. PRECAUTIONS IN SPECIAL APPLICATION (outdoor cubicle etc.) In application, check the follow items, please carry out the maintenance frequently. or perform the countermeasure. (Visual inspection: once a month, regular inspection: once a year) Table 2 Precaution in special application Special condition Instance Caution items...

**Page 5:** □□□□□□□□□□ □□□ □□□□□□□□

6F9G0154 3. RECEIVING AND UNPACKING WARNING : If any parts are damaged or missing. Do not install that has been damaged. Make the following checks after unpacking : (1) Check if there is any damage , foreign matter trapped , or water seepage into the contactor.

**Page 6:** □□□□□□□□□□□□□□

6F9G0154 5□INSTALLATION When installing , protect from dust. Particularly when the contactor is installed while the building is under construction , shield it from cement dust and other foreign matter. The following precautions should be taken. (1) The mounting surface must be horizontal (level : less than ±1mm). When the mounting surface is not horizontal , adjust with spacers.

**Page 7:** □□□□□□□□

6F9G0154 □□RATING DANGER : Do not exceed the ratings specified on the contactor. Table 3 Ratings Type□ form CV□10HB CV□10HBL Operating mechanism Non-latched Latched 12 □13.8□\* Rated operation voltage (kV) Rated insulation level (kV) AC.28 , Imp.75 Rated operational current Thermal current Rated frequency (Hz)

**Page 8:** □□□□□□□□□ □□□□□□□□

6F9G0154 □□OUTLINE DRAWING □ - Buy: www.ValinOnline.com | Phone 844-385-3099 | Email: CustomerService@valin.com...

**Page 9:** □□□□□□□□□□

6F9G0154 8□STRUCTURE □ - Buy: www.ValinOnline.com | Phone 844-385-3099 | Email: CustomerService@valin.com...

**Page 10:** □□□□□□□□□□

6F9G0154 □□ OPERATION The drive unit for the electromagnet is installed in the bottom frame. Molded and wired on the printed circuit. The closing circuit can be operated using either in AC or DC by the drive unit. The optional latch trip circuit uses DC as standard. When a latched contactor is operated using AC power, it is recommended that a Capacitor trip device be used.

**Page 11** 6F9G0154 (1) CONNECTION OF CONTROL POWER SUPPLY Fig.4 and Fig.5 show the internal connections of the normally energized type latched type respectively. According to there figures, connection should be made of the control power supply and open / close command contact (power relay contact). □□...

**Page 12** 6F9G0154 (2) STANDARD OPERATION CIRCUIT Shown below are the vacuum contactor and its auxiliary circuits (control and monitoring). Fig.6 represents the standard operation circuit of the normally energized type and Fig.7 the latched type. Wiring should be done according to these circuit diagrams. □□□...

**Page 13** 6F9G0154 □□□□□□□□□□□□ □ □ □ □ □□□□ □□ □□□ □ □□ □□ □□ □□ □□ □□ □□□□ □□□ □□□□□□□□ □ □ □ □ □□ □□ □ □ □□ □ □ □ □ □□ □ □ □ □ □□...

**Page 14** 6F9G0154 10□Trial operation Warning : Make sure main power is OFF. After mounting and wiring of the vacuum contactor, make the following inspections. 1) Check for any loose connections. 2) Check for any wiring errors. Perform this test with only the control circuit energized. confirm that the operation is correct.

[Page 15](#) 6F9G0154 11 INSPECTION AND MAINTENANCE To maintain the function and performance of the vacuum contactor for a long period of time, the following inspections and maintenance procedures are recommended. The intervals between inspections may vary depending on the conditions of use and the environment under which the contactor is used.

[Page 16](#) 6F9G0154 (2) Periodical Inspection/Detailed Inspection(every 1~2 years or every 20,000 operations) The facility should be removed out of service and perform inspection According to the instruction given in Table 6. WARNING : Contact with energized components can cause severe injury or death.

[Page 17](#) 6F9G0154 Table 6 Periodical inspection and detailed inspection Location What to inspect Decision criteria What to do Contactor as Appearance Abnormal appearance Check by sight. Replace broken a whole damage Parts. Insulating Check if moisture or Material dust adheres to the insulator.

[Page 18](#) 6F9G0154 Location What to inspect Decision criteria What to do Control wiring Check for discoloration Retighten. equipment and tightness. Auxiliary switch Amount of dust attached. Check by sight. Replace if damage is excessive. Drive unit Overheat, discoloration. Check by sight. Replace if abnormal More than 50MΩ...

[Page 19](#) 6F9G0154 Table 7 Gap/wipe standard value (mm) Parts name Wipe Allowable wear Normally Vacuum energized 7.0~7.5 More than 3.0 interrupter type 7.0~7.5 Latch type More than 2.8 12 CRITERIA FOR DURABILITY (1) Electrical service life The electrical service life of the vacuum interrupter is defined by the electrode wear the number of open/close operations (mechanical life).

[Page 20](#) 6F9G0154 (2) Mechanical service life The normally energized type has the mechanical service life of 0.25 million operations , and the latch type 0.25 million operations. (The mechanical service life of the vacuum interrupter is 100,000 operations.) For the components listed below , replacement or detailed inspection and cleaning are recommended after the indicated number of operations.

[Page 21](#) 6F9G0154 (3) Service life of capacitor Opening and closing of the capacitor produces sever conditions for contactors, such as high frequency inrush current and interpole recovery voltage more than twice the normal voltage. The criteria of the maximum number of the capacitor current switching operations is shown in the graph below.

This manual is also suitable for:

Cv-10hbl