

VARISPEED-616G5 OPTION CARD
2C-RELAY OUTPUT CARD DO-02C
INSTRUCTIONS

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.



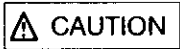
NOTES FOR SAFE OPERATION

Read this instruction manual thoroughly before installation, operation, maintenance or inspection. In this manual, the NOTES FOR SAFE OPERATION is classified as “CAUTION”.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to personnel and damage to equipment.

It may also be used to alert against unsafe practices.

Even items described in  may result in a vital accident in some situations. In either case, follow these important items.



: These are steps to be taken to insure proper operation and to avoid malfunctions, etc.

CAUTION

- The option card uses C MOS IC chips. It may break if touched by bare fingers because of static electricity. Be careful when handling.
- When removing the option card from the inverter for transportation or storage, put the card into the anti-static package it was in when delivered.
- Never change wiring or connect or disconnect connectors while the power is ON.

Failure to observe this caution may injure you.

The 2C-relay output card, DO-02C is mounted on the control board of the inverter to output two 1C dry contacts.

This option card is applicable to the following inverter series:
 VS-616G5: Entire series

Name	Code No.	Functions
2C-relay output card DO-02C	73600-A007X	C (1A-1B) dry contact output × 2 circuits Contact open/close capability: 250VAC 1A or lower 30VDC 1A or lower

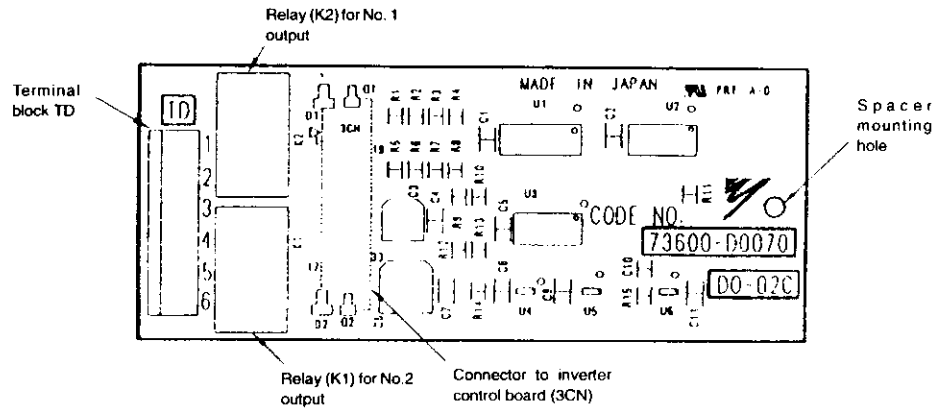


Fig. 1 2C-relay output card DO-02C



Before use,

- (1) Before using DO-02C, read this manual and the manual for the installation of the inverter.
- (2) Before connecting DO-02C or external terminals, turn OFF main power of the inverter and verify the CHARGE indicator lamp of the inverter is OFF.
- (3) When ordering DO-02C, specify the name and code number.

1 Inspection after Delivery

 CAUTION
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|--|
| <ul style="list-style-type: none">• Verify that ordered products have been delivered.
Installation of a wrong device may lead to injury or damage. |
|--|

Though the products have undergone rigorous inspection before shipping, check the following for safety.

- Check the name written on the product to verify that ordered products have been delivered.
- Check for damage caused during transportation.

If there is anything uncertain on the structure, contact your YASKAWA representative.

2 Installing to Inverter (See Fig. 2)

2.1 Installation Procedure

- ① Turn OFF the main power and wait for the time specified on the cover of the inverter. Remove the cover and verify that the CHARGE indicator lamp is OFF.
- ② Plug the 3CN connector of 2C-relay output card DO-02C into the 3CN connector (34 pins) on the control board of the inverter. Gently push DO-02C until the spacer engages the spacer hole of the option card on the control board. Fix DO-02C tightly. (See part A of the side view.)
- ③ After installing DO-02C, connect the inverter with peripheral devices and replace the cover of the inverter.

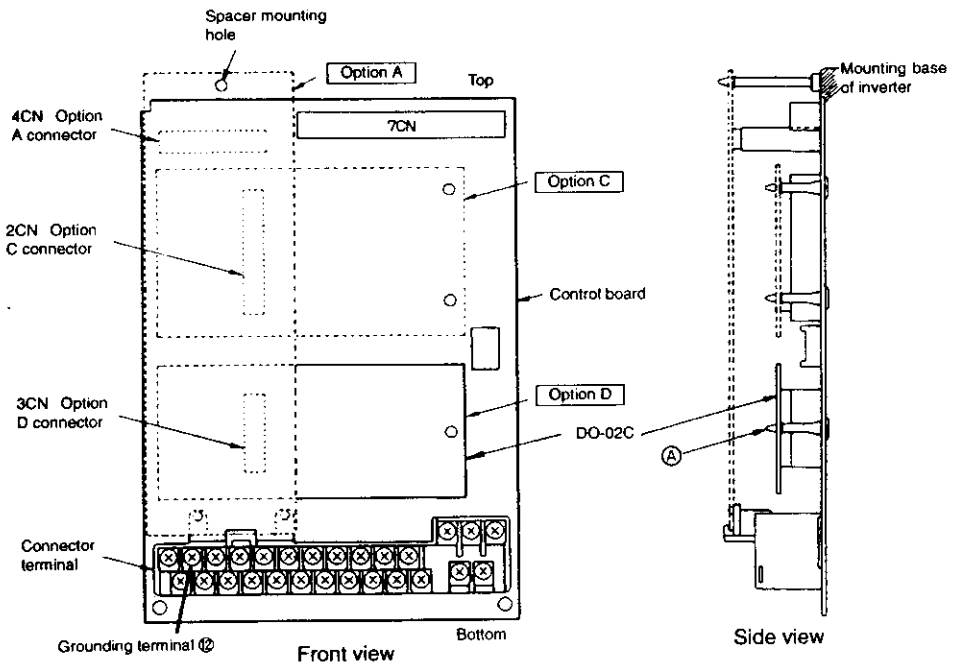


Fig. 2 Installation of 2C-relay output card DO-02C

3 Interconnection

Fig. 3 shows interconnection between the inverter, DO-02C, and peripheral equipment.

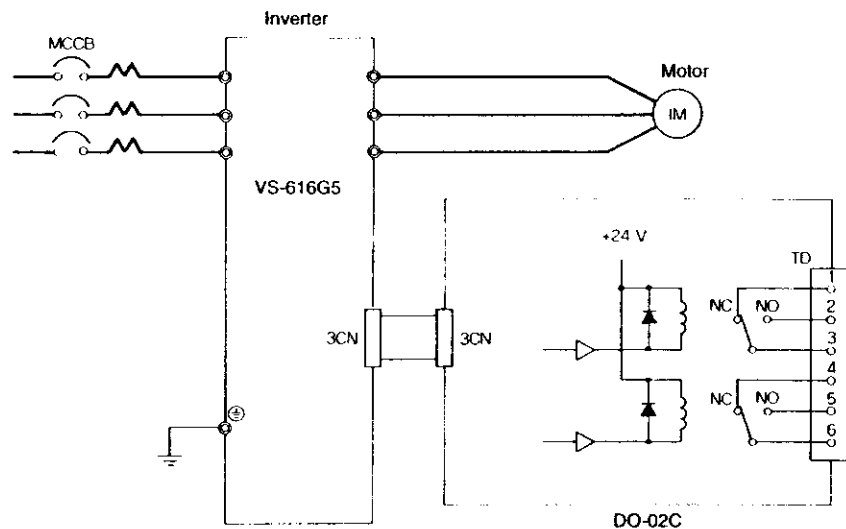


Fig. 3 Interconnection diagram

NOTE

Care must be taken with the cables connected to DO-02C according to the use of the card. Observe the following.

- If the card is to be used as a heavy current circuit (for main circuit wiring, or as any other type of circuit that emits much noise), separate the cables from other signal cables.
- If the card is to be used as a signal circuit, separate the cables from heavy current circuits (main circuit wiring or any other power wiring).

The output relays of DO-02C are not for weak current signals. If used for switching of weak current signals, imperfect contact may occur.

4 Wiring

See Table 1 for the functions of the external terminals.

Table 1 External terminals

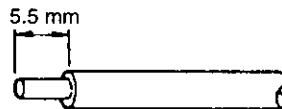
Terminal block symbol	Pin No.	Functions
TD	1	No. 1 output, Normal close (NC) contact
	2	No. 1 output, Normal open (NO) contact
	3	No. 1 output, Common terminal
	4	No. 2 output, Normal close (NC) contact
	5	No. 2 output, Normal open (NO) contact
	6	No. 2 output, Common terminal

Make sure the followings when wiring.

- Applicable wire sizes for terminal block TD are shown below.

[Terminal: MKDS1 series manufactured by Phoenix Contact GmbH & Co.]

	[mm ²]	AWG	I [A]	VAC [V]
Thin twisted wire	1	16	16	250
Solid wire	1.5	14	16	250
UL	—	22-14	10	300
CSA	—	22-14	10	300



Terminal block TD side
Connecting wire end

NOTE

Notes on selecting cables

Too thick a cable applies pressure to the option card and may lead to failure.

Too thin a cable may lead to imperfect contact or a break in the wire.

For setting and selecting constants, refer to the constants list in 'descriptive manual for constants' (Manual No. TOEZ-S616-10.11).

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