YASKAWA

VARISPEED-616PC5/P5 OPTION CARD
RS-232C/485 INTERFACE CARD SI-K2/P
INSTRUCTIONS

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

YASKAWA

MANUAL NO. TOE-C736-40.15

1 Inspection after Delivery

⚠ CAUTION
· 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 Position RS-232C/485 interface card SI-K2/P on the control board of the inverter. Gently push SI-K2/P until the spacer engages the four spacer holes of the option card on the control board. Fix SI-K2 tightly. (See part A of the side view.)

③ Plug the connector 2CN of SI-K2/P into 2CN of the control board of the inverter.

④ After installing SI-K2/P, connect the inverter with peripheral devices and replace the cover of the inverter.

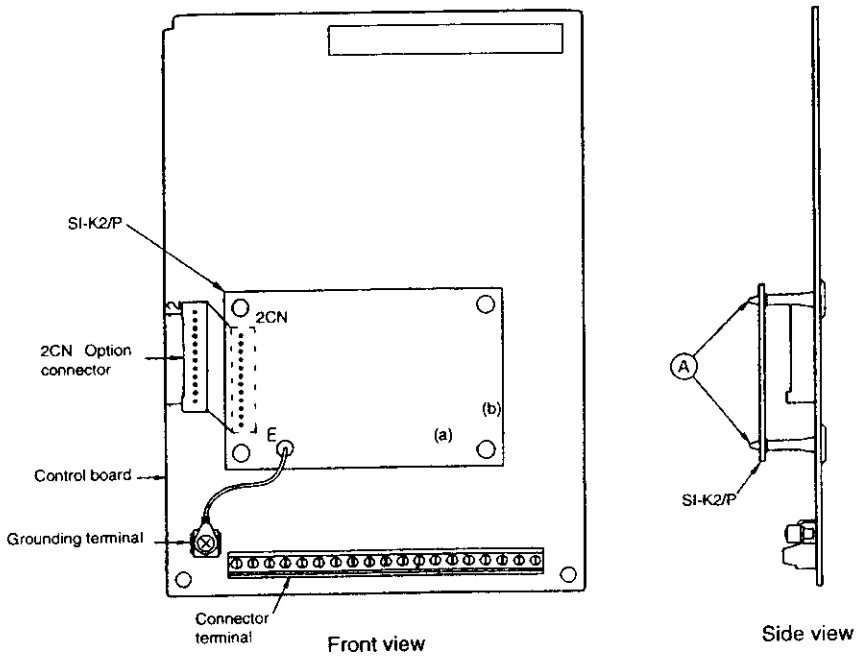


Fig. 2 Installation of RS-232C/485 interface card SI-K2/P

3 Interconnection

Fig. 3 shows interconnection between the inverter, SI-K2/P, and peripheral equipment.

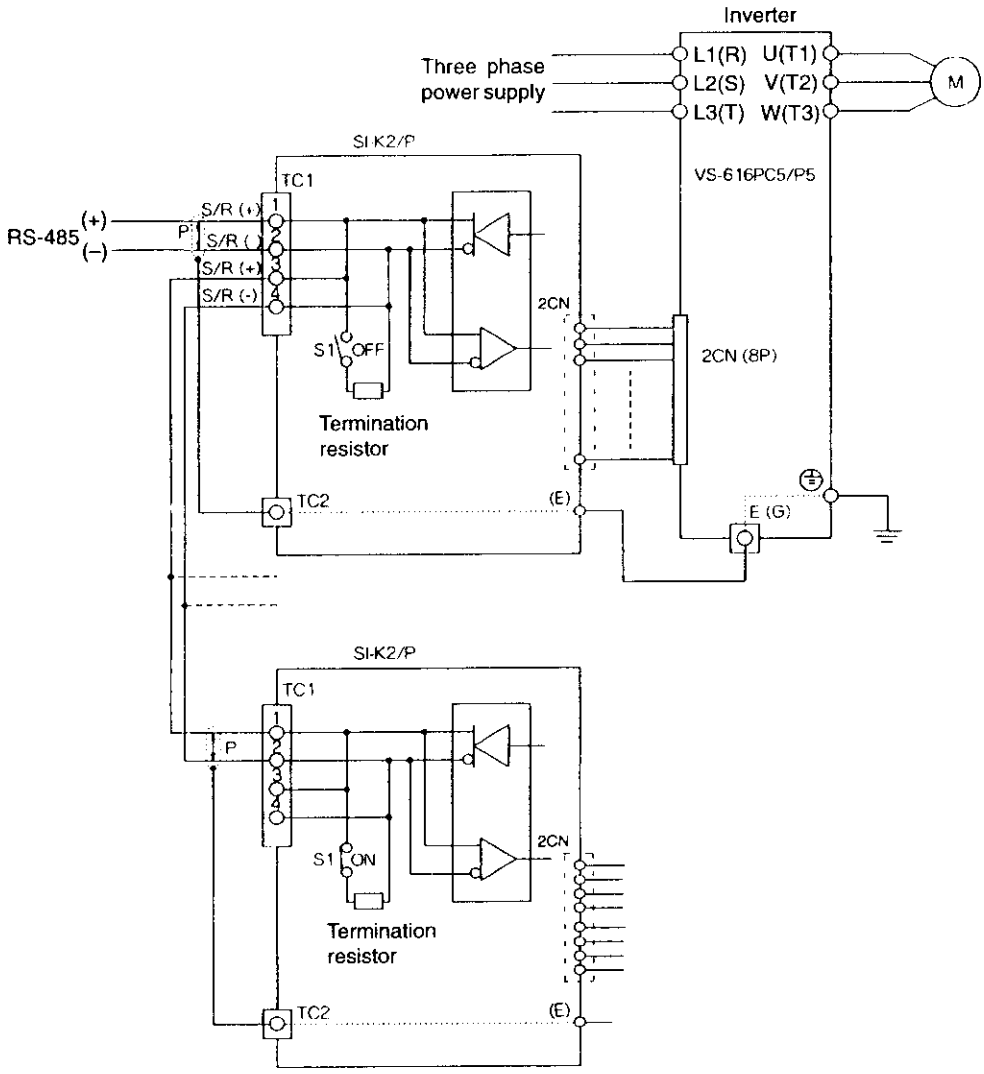


Fig. 3 Interconnection diagram

NOTE

Notes on wiring

· Separate the wires for transmission (from terminal TC1) of the SI-K2/P from the main circuit wires and other power cables.

· Use a shielded wire to connect for transmission. Connect the wire as shown in Fig. 4 to prevent interference by noise.

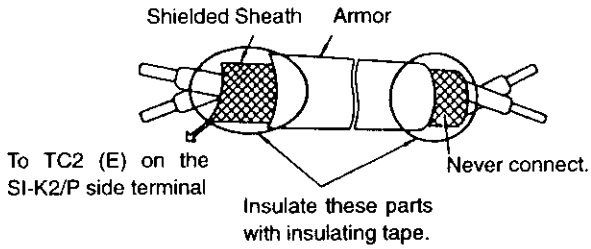


Fig. 4 Shielded wire termination

4 Wiring

See Table 1 for the functions of the external terminals.

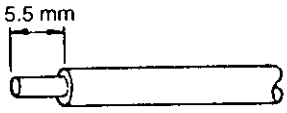
Table 1 External terminals

Terminal block symbol	Pin No.	Functions		Remarks
TC1	1	S/R (+)	RS-485 input/output (+)	Use as input at parallel connection
	2	S/R (–)	RS-485 input/output (–)	
	3	S/R (+)	RS-485 input/output (+)	Use as output at parallel connection
	4	S/R (–)	RS-485 input/output (–)	
TC2	Shielded sheath connection terminal			–

Make sure the followings when wiring.

- To prevent noise, use shielded wire in the specified area in Fig.3 and separate from heavy current circuits (200VAC or greater) or relay drive circuits.
- Connect the grounding lead wire (E) to pin ⑫ of the control board of the inverter.
- Applicable wire sizes for terminal block TC1 is shown below.
  [Terminal: MKDS1 series manufactured by Phoenix Contact GmbH & Co.]

	[mm^2]	AWG	I [A]	VAC [V]
Thin twisted wire	1	16	12	125
Solid wire	1.5	16	12	125
UL	—	22–16	10	300
CSA	—	28–16	10	300
CSA	—	28–16	10	150



Terminal block TC1 side
Connecting wire end

NOTE

Notes on selecting cables

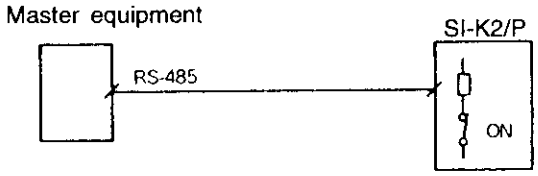
Too thick a cable applies pressure to the option card and may lead to failure.

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

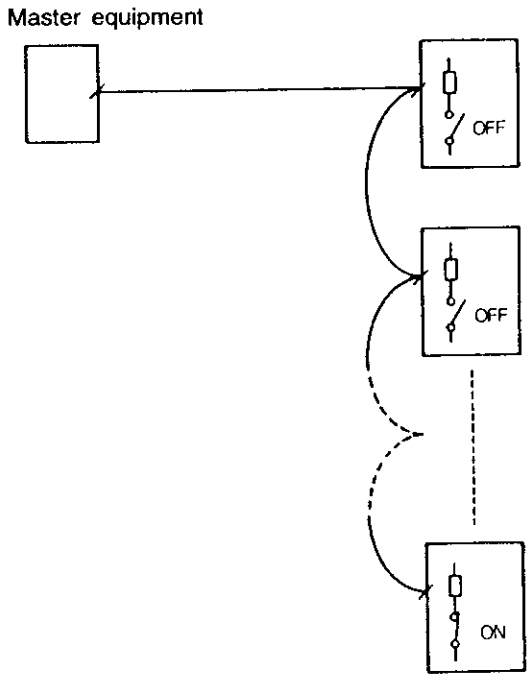
5 SW1 ON–OFF

When SW1 is ON, the termination resistor (100 Ω) in the SI-K2/P is connected between S/R(+) and S/R(–).

(1) For one-to-one connection of the RS-232C/485 interface card SI-K2/P and the instruction master equipment, set SW1 of the SI-K2/P to ON.



(2) If more than one SI-K2/P is connected to the instruction master equipment, set SW1 of only the last SI-K2/P to ON.



If all the SI-K2/Ps have their SW1s ON, drive capacity of RS-485 may become insufficient to maintain proper communication.

NOTE

RS-232C/485 INTERFACE CARD SI-K2/P
INSTRUCTIONS

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