

TOSVERT VF-S9

Functional manual of 3-wire operation

~ In order to hold operation signals ~

Toshiba Schneider Inverter Corporation

This manual is intended only to describe the typical operation and application of the product. The technical information contained in this manual does not guarantee the intellectual proprietary rights or other rights of, or grant a license to, the Toshiba Schneider Inverter Corporation or third parties, for the use of the technical information or of the product.

© Toshiba Schneider Inverter Corporation 2003

All rights reserved

Contents

1. When this function can be used	2
1.1. Automatic setting of parameters with <i>RU4</i> (automatic function setting)	2
1.2. Manual setting of 3-wire operation	2
1.3. Holding operation using the input terminal F (START) and S3 (HD)	2
1.4. How to set parameters in case of forward and reverse operation using the input terminal F (forward), R (reverse) and S3 (HD)	3

1. When this function can be used

3-wire operation allows you to operate the inverter by automatically holding the operation without any sequence circuit according to input the external signal (reset contact signal).

1.1. Automatic setting of parameters with *AU4* (automatic function setting)

When this setting is executed, 3-wire operation will be set:
Set "2" in *AU4* (automatic function setting).

Setting value of *AU4*

Setting value of <i>AU4</i>	Function	Remarks
0	Disabled	Default setting
1	Coast stop	
2	3-wire operation	
3	External input up/down setting	
4	4-20 mA current input operation	

When *AU4* is performed, *CNOd* = "0" and *F116* = "49" will be set.

1.2. Manual setting of 3-wire operation

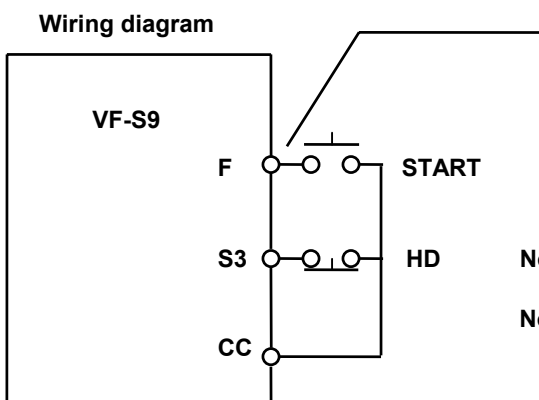
Set the following parameters:

Title	Function	Setting value	Default setting
<i>CNOd</i>	Command mode selection	0	1
<i>F116</i>	Input terminal selection 6 (S3)	49	8

* Setting "49" of operation-holding function (HD) is available for all input terminals (*F111*~*F116*).
The set input terminal will have the operation-holding function (in the above example, the operation-holding function (HD) is set to S3 terminal).

1.3. Holding operation using the input terminal F (START) and S3 (HD)

- (1) Set parameters with *AU4* or manually.
- (2) Connect START (F: a contact) with HD (S3: b contact).



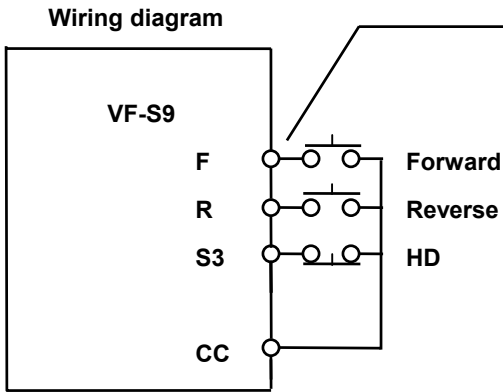
Method of operation
Press START (F) to operate in forward with the designated frequency value. Note 1)
Press HD (S3) to make a decelerating stop. Note 2)

Note 1) In case of reverse operation, connect "START" with terminal signal "R".

Note 2) For CPU version V. 110 or later, changing *F103* to "2" allows coast stop.

1.4. How to set parameters in case of forward and reverse operation using the input terminal F (forward), R (reverse) and S3 (HD)

- (1) Set parameters with *AU4* or manually.
- (2) Connect forward (F: a contact) and reverse (R: a contact) with HD (S3: b contact).

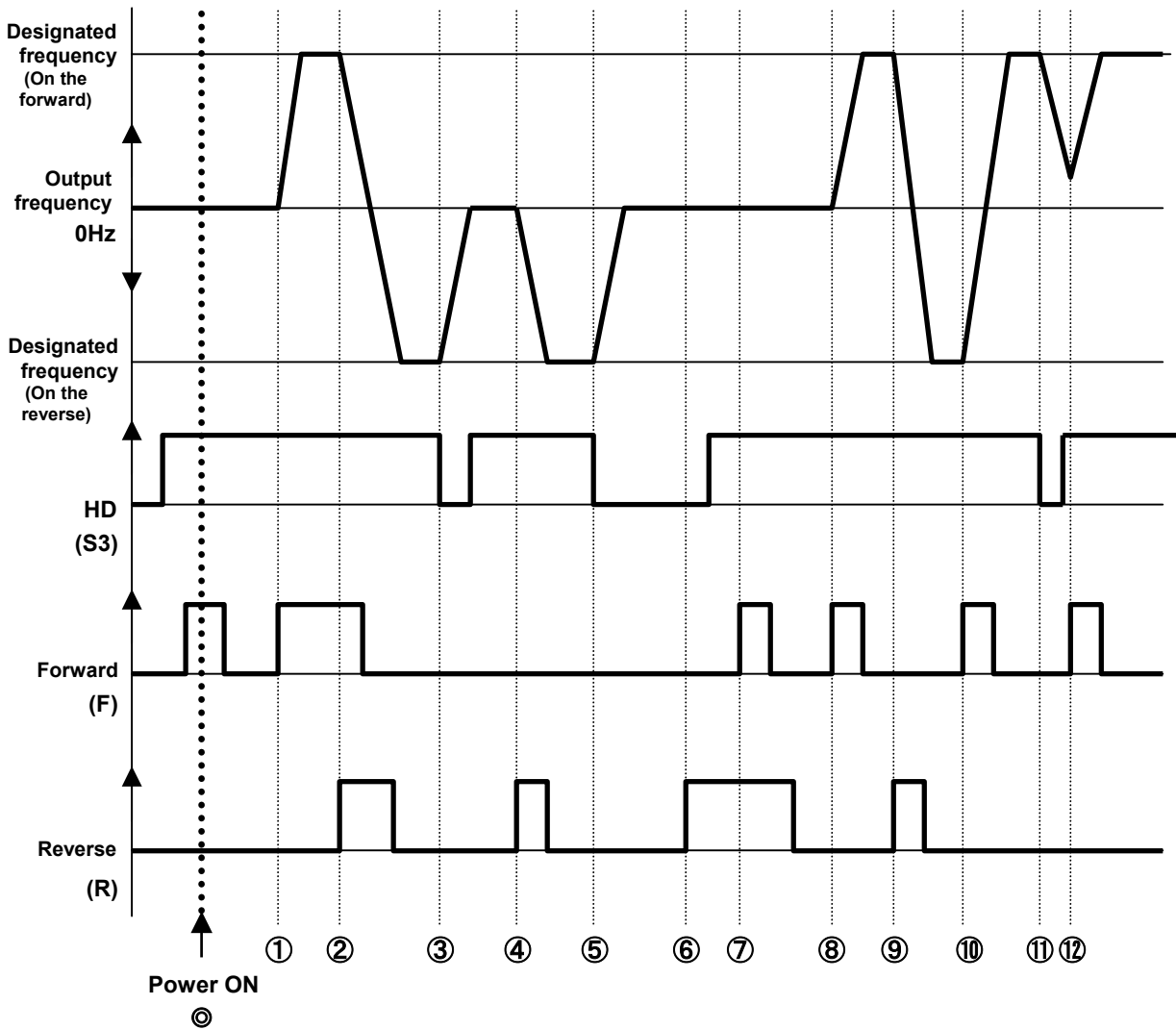


Method of operation

In case of forward operation
 Press forward (F) to operate in forward with the designated frequency value.
 Press HD (S3) to make a decelerating stop. Note)

In case of reverse operation
 Press reverse (R) to operate in reverse with the designated frequency value.
 Press HD (S3) to make a decelerating stop. Note)

Note) For CPU version V. 110 or later, changing *F 103* to "2" allows coast stop.



- Ⓒ If each operation signal is turned "ON" prior to power ON, no terminal input will be enabled (due to dangerous sudden revolution of motor).
After power ON, turn "ON" the operation signal again.
- ① With HD signal (S3) "closed" and forward signal (F) "ON", the operating frequency will be raised up to the designated frequency in the forward operation.
- ② If the reverse signal (R) is turned ON during forward operation, the operating frequency will be raised up to the designated frequency in the reverse operation after a decelerating stop.
- ③ With HD signal (S3) "opened", a decelerating stop will be made.
- ④ With HD signal (S3) "closed" and reverse signal (R) "ON", the operating frequency will be raised up to the designated frequency in the reverse operation.
- ⑤ With HD signal (S3) "opened", a decelerating stop will be made.
- ⑥ When HD signal (S3) is set to "opened", no operation will be caused even with the input of operation command (forward or reverse).
During the operation command "ON", no operation will occur even if HD signal is set to "closed".
- ⑦ With reverse signal (R) "ON", no operation will occur even with the input of forward signal (F).
Turn OFF the forward (F) and reverse (R) inputs, then input the forward (F) or reverse (R) again.
- ⑧ With HD signal (S3) "closed" and forward signal (F) "ON", the operating frequency will be raised up to the designated frequency in the forward operation.
- ⑨ If the reverse signal (R) is turned ON during forward operation, the operating frequency will be raised up to the designated frequency in the reverse operation after a decelerating stop.
- ⑩ If the forward signal (F) is turned ON during reverse operation, the operating frequency will be raised up to the designated frequency in the forward operation after a decelerating stop.
- ⑪ With HD signal (S3) "opened", a decelerating stop will be made.
- ⑫ Whenever the forward signal is input during decelerating stop, the operating frequency will be raised up to the designated frequency (the operation will be continued until HD signal is "opened").