

7.2 Applied operations by an I/O signal (operation from the terminal block)

Input terminal sink and source logic are set by using slide switch SW1.

7.2.1 Input terminal function (sink logic)

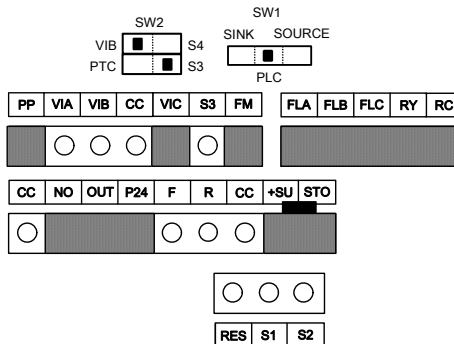
This function is used to send a signal to the input terminal from an external programmable controller to operate or configure the inverter. The ability to select from a variety of functions allows for flexible system design.

Default settings of slide switch SW1 and SW2 are as follows;

SW1: PLC side, SW2: VIB side and S3 side.

Refer to page B-11 to 13 for details.

[Control terminal block]



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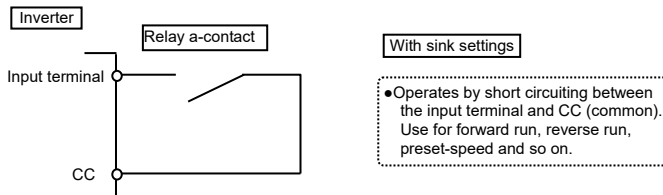
■ Settings for the logic input terminal function

Terminal symbol	Title	Function	Adjustment range	Default setting
F	F 1 1 1	Input terminal selection 1A (F)	0-203 Note 1)	2 (F)
	F 1 5 1	Input terminal selection 1B (F)		0 (No function)
	F 1 5 5	Input terminal selection 1C (F)		0 (No function)
R	F 1 1 2	Input terminal selection 2A (R)	0-203 Note 1)	4 (R)
	F 1 5 2	Input terminal selection 2B (R)		0 (No function)
	F 1 5 6	Input terminal selection 2C (R)		0 (No function)
RES	F 1 1 3	Input terminal selection 3A (RES)	0-203 Note 1)	8 (RES)
	F 1 5 3	Input terminal selection 3B (RES)		0 (No function)
S1	F 1 1 4	Input terminal selection 4A (S1)	0-203 Note 1)	10 (SS1)
	F 1 5 4	Input terminal selection 4B (S1)		0 (No function)
S2	F 1 1 5	Input terminal selection 5 (S2)	0-203 Note 3)	12 (SS2)
	F 1 4 6	Logic input / pulse train input selection (S2)	0: Logic input 1: Pulse train input	0
S3	F 1 1 6	Input terminal selection 6 (S3)	0-203 Note 4)	14 (SS3)
	F 1 4 7	Logic input / PTC input selection (S3)	0: Logic input 1: PTC input	0
VIB	F 1 1 7	Input terminal selection 7 (VIB)	0-203 Note 5)	16 (SS4)
VIA	F 1 1 8	Input terminal selection 8 (VIA)	8-55 Note 6)	24 (AD2)
VIA VIB	F 1 0 9	Analog/logic input selection (VIA/VIB)	0-4	0
F to VIB	F 1 4 4	Input terminal response time	1-1000 (ms) Note 7)	1

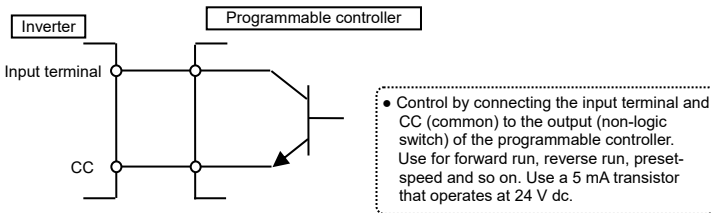
- Note 1) Multiple functions assigned to a single terminal operate simultaneously.
- Note 2) In case of setting always active function, assign the menu number to *F 104*, *F 108* and *F 110* (always active function selection).
- Note 3) In case of using terminal S2 as a logic input, set the parameter *F 146*=0 (logic input).
- Note 4) In case of using terminal S3 as a logic input, set the slide switch SW2 (lower) to S3 side and the parameter *F 147*=0 (logic input).
- Note 5) In case of using terminal VIB as a logic input, set the side switch SW2 (upper) to S4 side and set the parameter *F 109*=1, 3, or 4 (logic input). Since/ source logic depends on the slide switch SW1. Input terminal selection 7 (VIB) of the logic input terminal function is enabled only by an even number setting (Positive logic). An odd number setting (Negative logic) is disabled.
- Note 6) In case of using terminal VIA as a logic input, set the parameter *F 109*=3 or 4 (logic input).
- Note 7) When stable operation cannot be attained because of frequency setting circuit noise, increase the value of *F 144*.

■ Connecting

- 1) For logic input

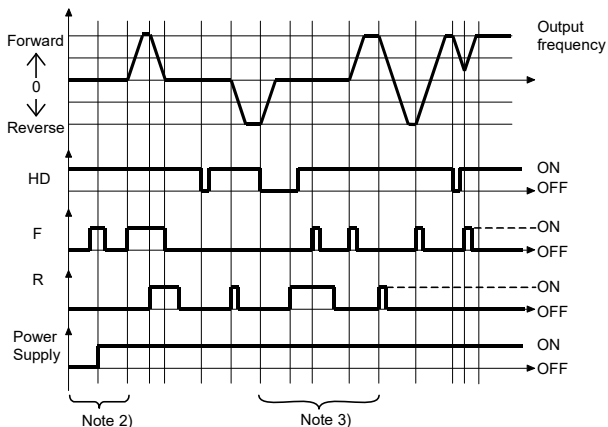
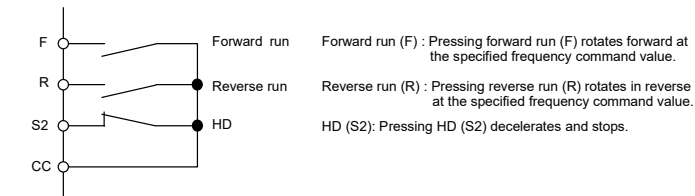


- 2) For connection (sink logic) via transistor output



■ Usage example ... 3-wire operation (one-push operation)

Use the 3-wire operation function to operate the inverter, maintaining operation without using the sequence circuit by inputting an external signal (reset logic signal).



Note 1) Set $F110 = 5$ (ST: standby) and $C110d = 0$ (terminal block) for 3 wire operation. Assign HD (operation hold) to any input terminal at input terminal selection. When assigning the S2 terminal as shown above, set $F115 = 50$ (HD: Operation hold).

Note 2) If the terminals are ON before turning on the power, terminal input is ignored when the power is turned ON. (Prevents sudden movements.) After turning the power ON, turn terminal input ON again.

Note 3) When HD is OFF, F and R are ignored even when ON. R does not operate even if it's ON when HD is ON. Likewise in this state, F does not operate even if it's ON. Turn F and R OFF and then turn them ON.

Note 4) During 3 wire operation, sending the jog run mode command stops operation.

Note 5) Be aware that DC braking continues even if a startup signal is input during DC braking.

Note 6) Only F and R maintain HD (operation hold). When using F or R in combination with other functions, be aware that the other functions do not hold. For example, when F and SS1 are assigned, F holds, but SS1 does not.

[Parameter settings]

Terminal symbol	Title	Function	Adjustment range	Setting example
S2	F115	Input terminal selection 5 (S2)	0-203	50: HD (Operation hold)