MITSUBISHI ELECTRIC

700 series

INVERTER

Plug-in option

FR-A7AY

INSTRUCTION MANUAL

Analog output function

Digital output function

Thank you for choosing this Mitsubishi Inverter plug-in option.
This instruction manual gives handling information and precautions for use of this equipment. Incorrect handling might cause an unexpected fault. Before using the equipment, please read this manual carefully to use the equipment to its optimum.
Please forward this manual to the end user.

This section is specifically about safety matters

Do not attempt to install, operate, maintain or inspect this product until you have read through this instruction manual and appended documents carefully and can use the equipment correctly. Do not use this product until you have a full knowledge of the equipment, safety information and instructions.
In this instruction manual, the safety instruction levels are classified into "WARNING" and "CAUTION".

⚠ WARNING Assumes that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

⚠ CAUTION Assumes that incorrect handling may cause hazardous conditions, resulting in medium or slight injury, or may cause physical damage only.

Note that even the **⚠ CAUTION** level may lead to a serious consequence according to conditions. Please follow the instructions of both levels because they are important to personnel safety.

SAFETY INSTRUCTIONS

1. Electric Shock Prevention

⚠ WARNING

- While power is on or when the inverter is running, do not open the front cover. You may get an electric shock.
- Do not run the inverter with the front cover or wiring cover removed. Otherwise, you may access the exposed high-voltage terminals and charging part and get an electric shock.
- If power is off, do not remove the front cover except for wiring or periodic inspection. You may access the charged inverter circuits and get an electric shock.
- Before starting wiring or inspection, check to make sure that the inverter power indicator lamp is off, wait for at least 10 minutes after the power supply has been switched off, and check that there are no residual voltage using a tester or the like. The capacitor is charged with high voltage for some time after power off and it is dangerous.
- Any person who is involved in the wiring or inspection of this equipment should be fully competent to do the work.
- Always install the plug-in option before wiring. Otherwise, you may get an electric shock or be injured.
- Do not touch the plug-in option with wet hands. Otherwise you may get an electric shock.
- Do not subject the cables to scratches, excessive stress, heavy loads or pinching. Otherwise you may get an electric shock.

2. Injury Prevention

⚠ CAUTION

- Apply only the voltage specified in the instruction manual to each terminal. Otherwise, burst, damage, etc. may occur.
- Ensure that the cables are connected to the correct terminals. Otherwise, burst, damage, etc. may occur.
- Always make sure that polarity is correct to prevent damage, etc. Otherwise, burst, damage may occur.
- While power is on or for some time after power-off, do not touch the inverter as it is hot and you may get burnt.

3. Additional Instructions

Also note the following points to prevent an accidental failure, injury, electric shock, etc.

1) Transportation and mounting

⚠ CAUTION

- Do not install or operate the plug-in option if it is damaged or has parts missing.
- Do not stand or rest heavy objects on the product.
- Check that the mounting orientation is correct.
- Prevent other conductive bodies such as screws and metal fragments or other flammable substance such as oil from entering the inverter.

2) Trial run

⚠ CAUTION

- Before starting operation, confirm and adjust the parameters. A failure to do so may cause some machines to make unexpected motions.

3) Usage

⚠ WARNING

- Do not modify the equipment.
- Do not perform parts removal which is not instructed in this manual. Doing so may lead to fault or damage of the inverter.

⚠ CAUTION

- When parameter clear or all parameter clear is performed, reset the required parameters before starting operations. Each parameter returns to the initial value.
- For prevention of damage due to static electricity, touch nearby metal before touching this product to eliminate static electricity from your body.

4) Maintenance, inspection and parts replacement

⚠ CAUTION

- Do not test the equipment with a megger (measure insulation resistance).

5) Disposal

⚠ CAUTION

- Treat as industrial waste.

6) General instruction

All illustrations given in this manual may have been drawn with covers or safety guards removed to provide in-depth description. Before starting operation of the product, always return the covers and guards into original positions as specified and operate the equipment in accordance with the manual.

— CONTENTS —

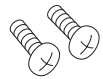
1 PRE-OPERATION INSTRUCTIONS

1.1 Unpacking and Product Confirmation

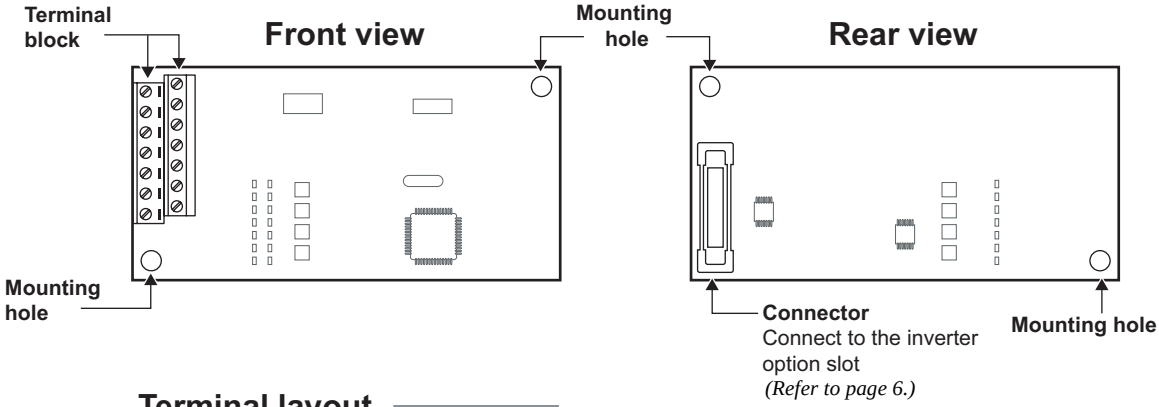
Take the plug-in option out of the package, check the unit name, and confirm that the product is as you ordered and intact.
This product is a plug-in option dedicated for the FR-F700 series.

1.1.1 Packing confirmation

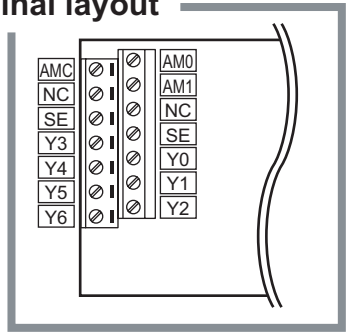
Check the enclosed items.

Plug-in option ..... 1 	Mounting screw (M3 × 6mm) ..... 2 *(Refer to page 6.)* 	Hex-head screw for option mounting (5.5mm) ..... 1 *(Refer to page 6.)* 

1.1.2 Parts



Terminal layout



1.1.3 Specifications

(1) Output signals
Voltage output (across terminals AM0-AMC) 0 to 10VMAXDC
Current output (across terminals AM1-AMC) 0 to 20mADC

(2) Output resolution
Voltage output 3mV
Current output 10μA

(3) Output accuracy (reference value)
±10% of the full-scale output value
Depends on the output signal type.

(4) Meters used
- Voltmeter
  DC voltmeter Full-scale 10V (internal impedance 10kΩ or more)
- Ammeter
  DC ammeter Full-scale 20mA (internal impedance 300Ω or less)
- Wiring length
  Maximum 10m

MEMO

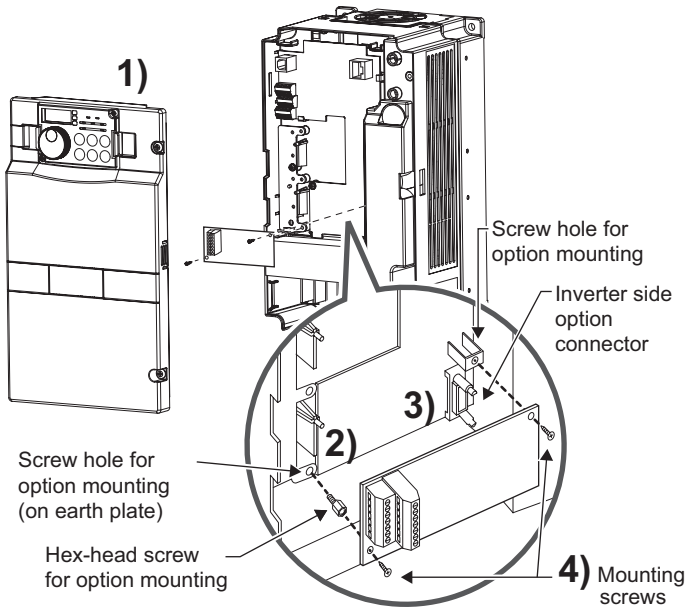
2 INSTALLATION AND WIRING

2.1 Pre-Installation Instructions

Make sure that the input power of the inverter is off.

⚠ CAUTION
⚠ **With input power on, do not install or remove the plug-in option. Otherwise, the inverter and plug-in option may be damaged.**

2.2 Installation Procedure



1) Remove the inverter front cover.
2) Mount the hex-head screw for option mounting into the inverter screw hole (on earth plate). (size 5.5mm, tightening torque 0.56N·m to 0.75N·m)
3) Securely fit the connector of the plug-in option to the inverter connector along the guides.
4) Securely fix the both right and left sides of the plug-in option to the inverter with the accessory mounting screws. If the screw holes do not line-up, the connector may not have been plugged snugly. Check for loose plugging.

REMARKS

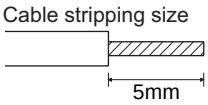
After removing two screws on the right and left places, remove the plug-in option.
(The plug-in option is easily removed if the control circuit terminal block is removed before.)

CAUTION

1. **When the inverter can not recognize that the option unit is mounted due to improper installation, etc., "E. 1 " (option alarm) is displayed.**
2. **Note that a hex-head screw for option mounting or mounting screw may drop during mounting and removal.**

2.3 Wiring

(1) Strip off the sheath of the cable to wire.
Strip off the sheath about the size below. If the length of the sheath pealed is too long, a short circuit may occur among neighboring wires. If the length is too short, wires might come off.



Wire the stripped cable after twisting it to prevent it from becoming loose.
In addition, do not solder it.
Use a bar type terminal as required.

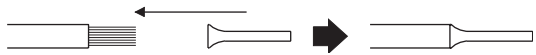
REMARKS

Information on bar terminals
Introduced products (as of October, 2003): Phoenix Contact Co.,Ltd.

Terminal Screw Size	Bar Terminal Model (with insulation sleeve)	Bar Terminal Model (without insulation sleeve)	Wire Size (mm^2)
M2	AI 0.5-6WH	A 0.5-6	0.3 to 0.5

· Bar terminal crimping tool: CRIMPFOX ZA3 (Phoenix Contact Co., Ltd.)

When using the bar terminal (without insulation sleeve), use care so that the twisted wires do not come out.



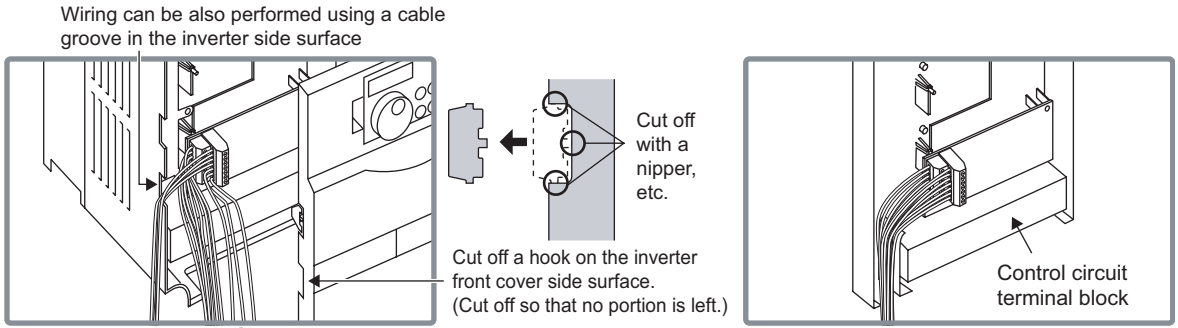
(2) Loosen the terminal screw and insert the cable into the terminal.

Screw Size	Tightening Torque	Cable Size	Screwdriver
M2	0.22N·m to 0.25N·m	$0.3mm^2$ to $0.75mm^2$	Small ⊖ flat-blade screwdriver (Tip thickness: 0.4mm/tip width: 2.5mm)

CAUTION

Undertightening can cause cable disconnection or malfunction. Overtightening can cause a short circuit or malfunction due to damage to the screw or unit.

(3) For wiring of the **30K(00620 (EC Version)) or less**, route wires between the control circuit terminal block and front cover. If cables can not be routed between the control circuit terminal block and front cover due to the increased number of cables, remove a hook of the front cover and use a space become available. For wiring of the **37K(00770 (EC Version)) or more**, use the space on the left side of the control circuit terminal block.



REMARKS

When wires can not be connected to the terminal block due to parallel connection or will not fit in the wiring space due to large gauge or the increased number of cables, perform wiring by using a junction terminal block, etc.

⚠ CAUTION

⚠ **Do not use empty terminals as junction terminals because they are used in the option unit. If they are used as the junction terminals, the option unit may be damaged.**

⚠ **When installing the inverter front cover, the cables to the inverter's control circuit terminals and option unit terminals should be routed properly in the wiring space to prevent them from being caught between the inverter and its cover.**

⚠ **After wiring, wire offcuts must not be left in the inverter. They may cause a fault, failure or malfunction.**

3 PARAMETER LIST

When the FR-A7AY is mounted on the inverter, the following parameters are extended.

	Parameter Number	Name	Setting Range	Minimum Increments	Initial Value	Refer to Page
EXTENSION ANALOG OUTPUT	306	Analog output signal selection	1 to 3, 5, 6, 8,(9), 10 to14,17, 21, 24, 50, 52, 53	1	2	11 and later
	307	Setting for zero analog output	0 to100%	0.1	0%	
	308	Setting for maximum analog output	0 to100%	0.1	100%	
	309	Analog output signal voltage/current switchover	0, 1, 10, 11	1	0	
	310	Analog meter voltage output selection	1 to 3, 5, 6, 8, (9), 10 to14, 17, 21, 24, 50, 52, 53	1	2	
	311	Setting for zero analog meter voltage output	0 to100%	0.1	0%	
	312	Setting for maximum analog meter voltage output	0 to100%	0.1	100%	
	323	AM0 0V adjustment	900 to1100%	1	1000%	
	324	AM1 0mA adjustment	900 to 1100%	1	1000%	
	C0(900)	FM(CA) terminal calibration	—	—	—	
	C1(901)	AM terminal calibration	—	—	—	

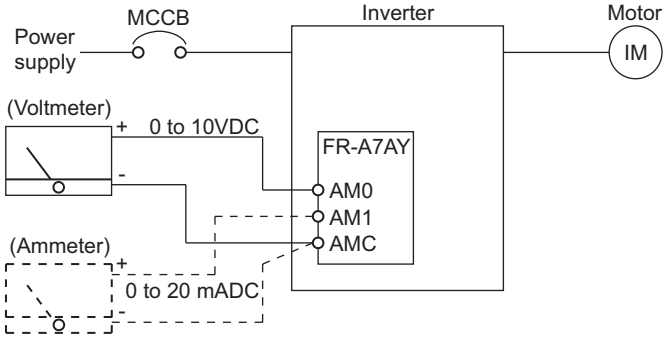
	Parameter Number	Name	Setting Range	Minimum Increments	Initial Value	Refer to Page
DIGITAL OUTPUT	313	DO0 output selection	0 to 5, (7), 8, 10 to 19, 25, 26, 45 to 47, 64, 70, (71 to 78), 86 to 96, 98, 99, 100 to 105, (107), 108, 110 to 116, 125, 126, 145 to 147, 164, 170, 186 to 196, 198, 199, 9999	1	9999	21 and later
	314	DO1 output selection				
	315	DO2 output selection				
	316	DO3 output selection				
	317	DO4 output selection				
	318	DO5 output selection				
	319	DO6 output selection				

4 EXTENSION ANALOG OUTPUT

4.1 Wiring Example

By setting the *Pr. 306* to *Pr. 312* values, analog signals such as the output frequency and output current can be output from the voltage output terminal *(AM0)* and current output terminal *(AM1)*.

Connect the voltmeter or ammeter as shown below:

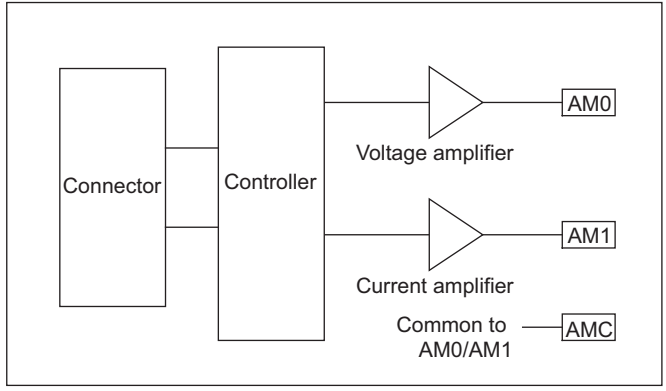


CAUTION

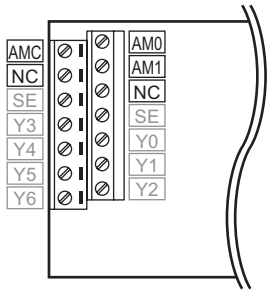
The wiring length between the FR-A7AY and the voltmeter/ammeter should be 10m maximum.

4.2 Internal Block Diagram

The following is the internal block diagram about the FR-A7AY analog output function.



4.3 Terminals



Terminal Symbol	Terminal Name	Description
AM0	Voltage output terminal	Connect a DC voltmeter (10VDC).
AM1	Current output terminal	Connect a DC ammeter (20mADC).
AMC	Common terminal	Common to AM0 and AM1
Y0 to Y6	Used for analog output function. *(Refer to page 21)*	
SE		
NC (empty)	Do not use.	

4.4 Extension Analog Output Function Parameter List

Parameter Number	Name	Setting Range	Minimum Increments	Initial Value
306	Analog output signal selection	1 to 3, 5, 6, 8, (9), 10 to 14, 17, 21, 24, 50, 52, 53	1	2
307	Setting for zero analog output	0 to 100%	0.1	0%
308	Setting for maximum analog output	0 to 100%	0.1	100%
309	Analog output signal voltage/current switchover	0, 1, 10, 11	1	0
310	Analog meter voltage output	1 to 3 , 5, 6, 8, (9), 10 to 14, 17, 21, 24, 50, 52, 53	1	2
311	Setting for zero analog meter voltage output	0 to 100%	0.1	0%
312	Setting for maximum analog meter voltage output	0 to 100%	0.1	100%
323	AM0 0V adjustment	900 to 1100%	1	1000%
324	AM1 0mA adjustment	900 to 1100%	1	1000%
C0(900)	FM terminal calibration	—	—	—
C1(901)	AM terminal calibration	—	—	—

REMARKS

For *Pr. 306* and *Pr. 310*, write is enabled even when "0" is set in *Pr. 77*.

4.5 Adjustment Procedure

4.5.1 Setting of analog output signal voltage/current switchover (Pr. 309)

Use *Pr. 309 Analog output signal voltage/current switchover* to select whether to output the same signal or different signals from terminal AM0 (voltage output) and terminal AM1(current output).

Pr. 309 Setting	Description	Terminal	Parameters for Setting	Parameters for Adjustment
0 (initial value)	Same select signals are output from the voltage output terminal *(AM0)* and current output terminal *(AM1)*. The signal set in *Pr. 306 Analog output signal selection* is made valid. (The setting of *Pr. 310* is made invalid.)	*AM0*	*Pr. 306* : Select the output signal. *Pr. 307* : Output signal value for zero analog output *Pr. 308* : Output signal value for maximum analog output	*Pr. 323* *Pr. 324* *C1 (Pr. 901)*
		AM1		
10		*AM0*	*Pr. 306* : Select the output signal. *Pr. 307* : Analog output value for zero output signal *Pr. 308* : Analog output value for maximum output signal	
		AM1		
1	Different select signals are output from voltage output terminal *(AM0)* and current output terminal *(AM1)*.	*AM0*	*Pr. 310* : Select the output signal. *Pr. 311* : Output signal value for zero analog output *Pr. 312* : Output signal value for maximum analog output	*Pr. 323* *C0 (Pr. 900)*
		AM1	*Pr. 306* : Select the output signal. *Pr. 307* : Output signal value for zero analog output *Pr. 308* : Output signal value for maximum analog output	*Pr. 324* *C1 (Pr. 901)*
11		*AM0*	*Pr. 310* : Select the output signal. *Pr. 311* : Analog output value for zero output signal *Pr. 312* : Analog output value for maximum output signal	*Pr. 323* *C0 (Pr. 900)*
		AM1	*Pr. 306* : Select the output signal. *Pr. 307* : Analog output value for zero output signal *Pr. 308* : Analog output value for maximum output signal	*Pr. 324* *C1 (Pr. 901)*

REMARKS

Analog output means voltage (0 to 10 V) and current (0 to 20mA) output from terminal *AM0* and *AM1*, and output signal means the monitor signal (*refer to page 18*) set in *Pr. 306* and *Pr. 310*.

4.5.2 Calibration of meter

(1) Outputting the same select signals from *terminals AM0* and *AM1* (*Pr. 309* = 0 or 10)

START

Connect a DC voltmeter (or DC ammeter) across terminals AM0 (or terminal AM1) and AMC.
→ At this time, check that the polarity is correct

Use *Pr. 323* (*Pr. 324*) to calibrate the meter when the voltage (current) input is 0.
→ If the meter needle does not point to 0 when voltage or current input is 0, use *Pr. 323* AM0 0V adjustment or *Pr. 324* AM1 0mA adjustment to calibrate the meter

Set "21" (reference voltage output) in *Pr. 306*.
→ At this time, the following analog signal is actually output and deflects the meter.
- <across terminals AM0-AMC>
  Maximum output voltage set previously (factory setting: 10VDC)
- <across terminals AM1-AMC>
  Maximum output current set previously (factory setting: 20mADC)

Run the inverter

Use *Pr. 901* to perform adjustment, then set.
→ After making adjustment with  to deflect the meter to full-scale, press SET to set.

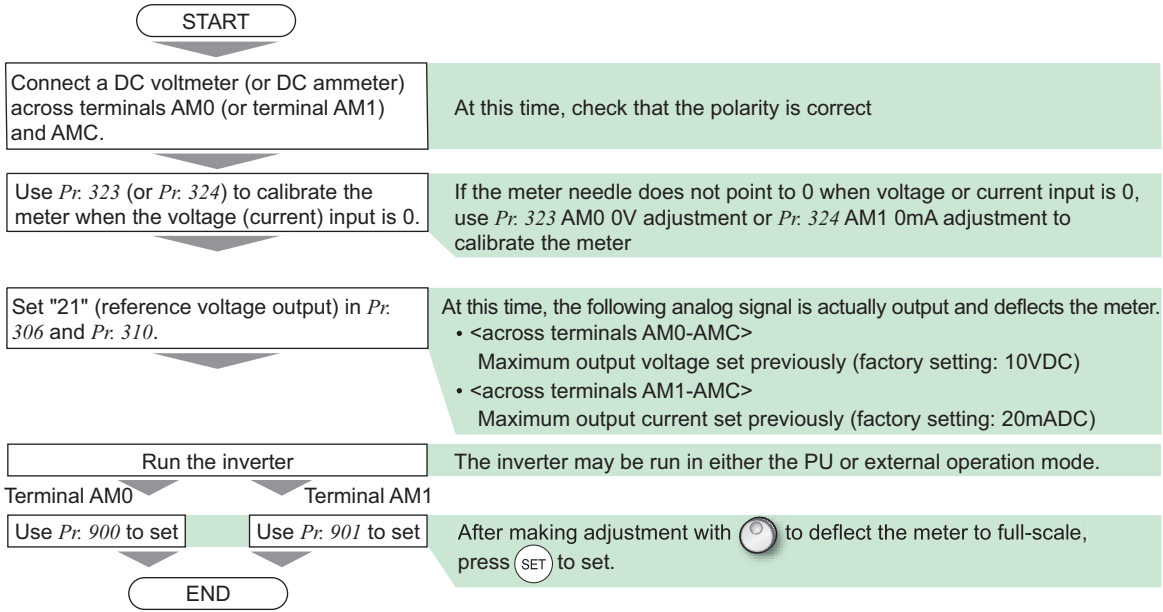
END

In *Pr. 306*, set the types of the signals to be output.
(Refer to page 18.)

CAUTION

1. **If calibration is made without "21" (reference voltage output) set in *Pr. 306*, *Terminals FM/AM* of the inverter is calibrated. To calibrate the extension analog output,** always set "21" **in *Pr. 306*.**
2. **When the plug-in option used was remounted on other inverter, use *Pr. 323* and *Pr. 324* to calibrate again.**

(2) Outputting different select signals from terminals *AM0* and *AM1* (*Pr. 309* = 1 or 11)



In *Pr. 306* and *Pr. 310*, set the types of the signals to be output.
(Refer to page 18.)

CAUTION

1. **If calibration is made without "21" (reference voltage output) set in *Pr. 306* or *Pr. 310*, *terminals FM/AM* of the inverter is calibrated. To calibrate the extension analog output,** always set "21" **in *Pr. 306*.**
2. **When the plug-in option used was remounted on other inverter, use *Pr. 323* and *Pr. 324* to calibrate again.**

4.5.3 Output signal setting

Set the output signals to be monitored. Set *Pr. 306* to output the same signal from *terminals AM0* and *AM1* and *Pr. 306* and *Pr. 310* to output different signals. For details of signal definitions, refer to *Pr. 54 and Pr. 158* of *the inverter manual (applied)*.

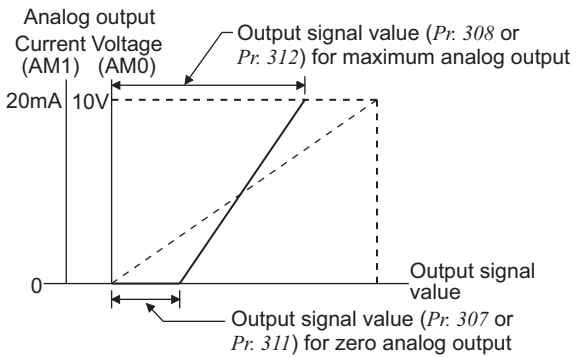
Pr. 306/Pr. 310 Setting	Types of Monitor	Increments	Full-Scale Value
1	Output frequency	0.01Hz	*Pr. 55*
2	Output current	0.01A/0.1A *2	*Pr. 56*
3	Output voltage	0.1V	800V
5	Frequency setting	0.01Hz	*Pr. 55*
6	Running speed	1(r/min)	The value converted with the *Pr. 37* value from *Pr. 55*.
8	Converter output voltage	0.1V	800V
9 *1	Regenerative brake duty	0.1%	*Pr. 70*
10	Electronic thermal relay function load factor	0.1%	Electronic thermal relay function operation level
11	Output current peak value	0.01A/0.1A *2	*Pr. 56*
12	Converter output voltage peak value	0.1V	800V
13	Input power	0.01kW/0.1kW *2	Rated inverter power × 2
14	Output power	0.01kW/0.1kW *2	Rated inverter power × 2
17	Load meter	0.1%	*Pr. 56*
21	Reference voltage output	—	—
24	Motor load factor	0.1%	200%
50	Power saving effect	Variable according to parameters	Inverter capacity
52	PID set point	0.1%	100%
53	PID process value	0.1%	100%

*1 Setting can be made only for the 75K(01800-EC, S75K-CH) or more.
*2 The setting depends on capacities. (55K (01160-EC, 55K-CH) or less/75K (01800-EC, S75K-CH) or more.)

4.5.4 Analog signal adjustment [Pr. 307, Pr. 308, Pr. 311, Pr. 312]

Use *Pr. 307* or *Pr. 311* to set for zero analog output (meter points 0).
In addition, use *Pr. 308* or *Pr. 312* to set for maximum analog output (full-scale).
Use *Pr. 307* to set the value for zero analog output and *Pr. 308* for maximum analog output when outputting the same signal from terminals *AM0* and *AM1*.
Use *Pr. 307(AM1)* and *Pr. 311(AM0)* to set the value for zero analog output and *Pr. 308(AM1)* and *Pr. 312(AM0)* for maximum analog output when outputting different signals from terminals *AM0* and *AM1*. *(Refer to page 15.)*

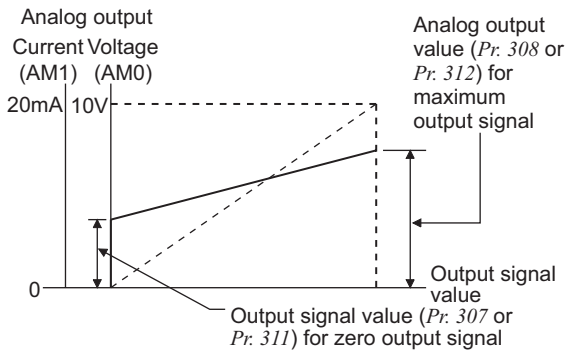
When *Pr. 309* = 0, 1



REMARKS

When *Pr. 307* ≥ *Pr. 308*, *Pr. 311* ≥ *Pr. 312*, the output values at *terminals AM0* and *AM1* are always zero.

When *Pr. 309* = 10, 11



REMARKS

When *Pr. 307* = *Pr. 308*, *Pr. 311* = *Pr. 312*, the output values at *terminals AM0* and *AM1* are values set in parameters always.

4

4.6 Instructions

(1) A voltmeter having smaller internal impedance (or an ammeter having larger internal impedance) than the value indicated in the Specifications may not deflect to full-scale and may not be calibrated.

(2) When calibrating a meter which has a small full-scale value, set the output of *terminal AM0 (or AM1)* to the minimum without the meter connected. Then, connect the meter and make calibration.

⚠ CAUTION

⚠ This option unit is factory-set to provide the full-scale output of 10VDC and 20mADC. Hence, a voltmeter (7VDC or less) or an ammeter (14mADC or less) with a small full-scale value may be damaged accidentally during calibration. This should be fully noted.

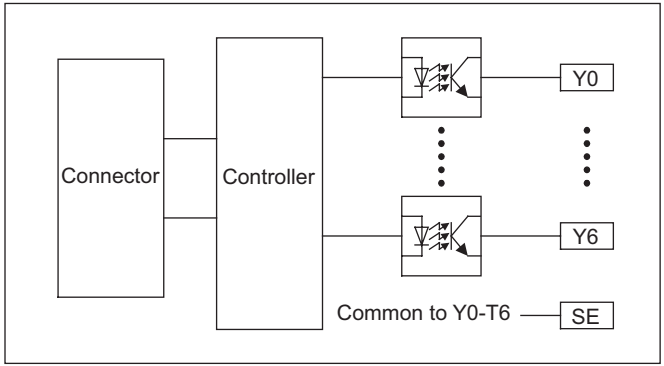
(3) Set "0%" in *Pr. 307 (Pr. 311)* and "100%" in *Pr. 308 (Pr. 312)* when calibrating *Pr. 323*, *Pr. 324*, *C0 (Pr. 900)*, *C1 (Pr. 901)* when *Pr. 309* = "10 or 11 " to prevent calibration value deviation.

(4) When an option error occurs, all outputs are tuned off.

5 DIGITAL OUTPUT

5.1 Internal Block Diagram

The following is the internal block diagram about the FR-A7AY digital output function

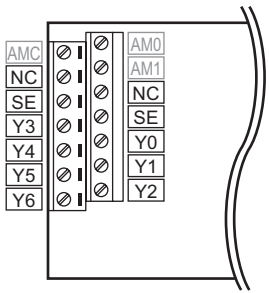


5.2 Terminals

By setting the *Pr. 313* to *Pr. 319* values, output signals available with an inverter as standard can be output from the open collector terminals.

(1) Open collector output specifications: Permissible load 24V, 0.1ADC

(2) The circuit logic is the same as that of the inverter.
For details of changing the control logic, refer to *the inverter manual (basic).*



Terminal Symbol	Terminal Name	Description
Y0	Digital output terminals	Use *Pr. 313* to assign functions.
Y1		Use *Pr. 314* to assign functions.
Y2		Use *Pr. 315* to assign functions.
Y3		Use *Pr. 316* to assign functions.
Y4		Use *Pr. 317* to assign functions.
Y5		Use *Pr. 318* to assign functions.
Y6		Use *Pr. 319* to assign functions.
SE	Common terminal	This is a common terminal (for sink and source).
AM0	Used for analog output function. *(Refer to page 11)*	
AM1		
AMC		
NC (empty)	Do not use.	

5.3 Digital Output Function Parameter List

Parameter Number	Name	Initial Value	Setting Range
313	DO0 output selection	9999	0 to 5, (7), 8, 10 to 19, 25, 26, 45 to 47, 64, 70, (71 to 78), 86 to 96, 98, 99, 100 to 105, (107), 108, 110 to 116, 125, 126, 145 to 147, 164, 170, 186 to 196, 198, 199, 9999
314	DO1 output selection	9999	
315	DO2 output selection	9999	
316	DO3 output selection	9999	
317	DO4 output selection	9999	
318	DO5 output selection	9999	
319	DO6 output selection	9999	

REMARKS

- For *Pr. 313* to *Pr. 319*, write is disabled during operation even when "2" is set in *Pr. 77 Parameter write disable selection*. When changing the parameter setting, stop the operation.
- With this function, output signals can be set redundantly.

5.4 Output Signal List

For details of signal definitions, refer to *Pr. 190 to Pr. 196 Output terminal function selection of the inverter manual (applied).*

Setting		Signal Name	Function
Positive Logic	Negative Logic		
0	100	RUN	Inverter running
1	101	SU	Up to frequency
2	102	IPF	Instantaneous power failure/ undervoltage
3	103	OL	Overload alarm
4	104	FU	Output frequency detection
5	105	FU2	Second output frequency detection
7	107	RBP	Regenerative brake prealarm *1
8	108	THP	Electronic thermal relay function prealarm
10	110	PU	PU operation mode
11	111	RY	Inverter operation ready
12	112	Y12	Output current detection
13	113	Y13	Zero current detection
14	114	FDN	PID lower limit

Setting		Signal Name	Function
Positive Logic	Negative Logic		
15	115	FUP	PID upper limit
16	116	RL	PID forward/reverse rotation output
17	—	MC1	Commercial power-supply switchover MC1
18	—	MC2	Commercial power-supply switchover MC2
19	—	MC3	Commercial power-supply switchover MC3
25	125	FAN	Fan fault output
26	126	FIN	Heatsink overheat pre-alarm
45	145	RUN3	During inverter running and start command is on
46	146	Y46	During deceleration due to instantaneous power failure (retained until release)
47	147	PID	During PID control activated
64	164	Y64	During retry
70	170	SLEEP	During PID output suspension
71	—	RO1	Commercial-power supply side motor 1 connection RO1 *2

Setting		Signal Name	Function
Positive Logic	Negative Logic		
72	—	RO2	Commercial-power supply side motor 2 connection RO2 *2
73	—	RO3	Commercial-power supply side motor 3 connection RO3 *2
74	—	RO4	Commercial-power supply side motor 4 connection RO4 *2
75	—	RIO1	Inverter side motor 1 connection RIO1 *2
76	—	RIO2	Inverter side motor 2 connection RIO2 *2
77	—	RIO3	Inverter side motor 3 connection RIO3 *2
78	—	RIO4	Inverter side motor 4 connection RIO4 *2
86	186	Y86	Control circuit capacitor life *3
87	187	Y87	Main circuit capacitor life *3
88	188	Y88	Cooling fan life *3
89	189	Y89	Inrush current limit circuit life *3

Setting		Signal Name	Function
Positive Logic	Negative Logic		
90	190	Y90	Life alarm
91	191	Y91	Input MC shut off signal
92	192	Y92	Energy saving average value updated timing
93	193	Y93	Current average monitor signal
94	194	ALM2	Alarm output 2
95	195	Y95	Maintenance timer signal
96	196	REM	Remote output
98	198	LF	Minor fault output
99	199	ALM	Alarm output
9999		—	No function

*1 Setting can be made only for the 75K (01800-EC, S75K-CH) or more.
*2 Setting can be made only for EC and CH version.
*3 Y86 to Y89 can not be set from the inverter.

REMARKS

When an option error occurs, all outputs are tuned off.

REVISIONS

*The manual number is given on the bottom left of the back cover.

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