
Basic Data

Facts that you have to know before using.

- **Product verification**

After bring out the product from the packing box, check the rating inscription tablet on back side of the product and make sure that it is identified with you order and there is no damage during transport.

SV	008	ix	-	Ext-IO	
	Applied motor capacity	Category name		Option type	

- **Accessories**

If you have any doubts and there is damage of the product, contact to us.

(Refer to cover page of the manual)

- **This product only can be used for SV-IS7 Series.**

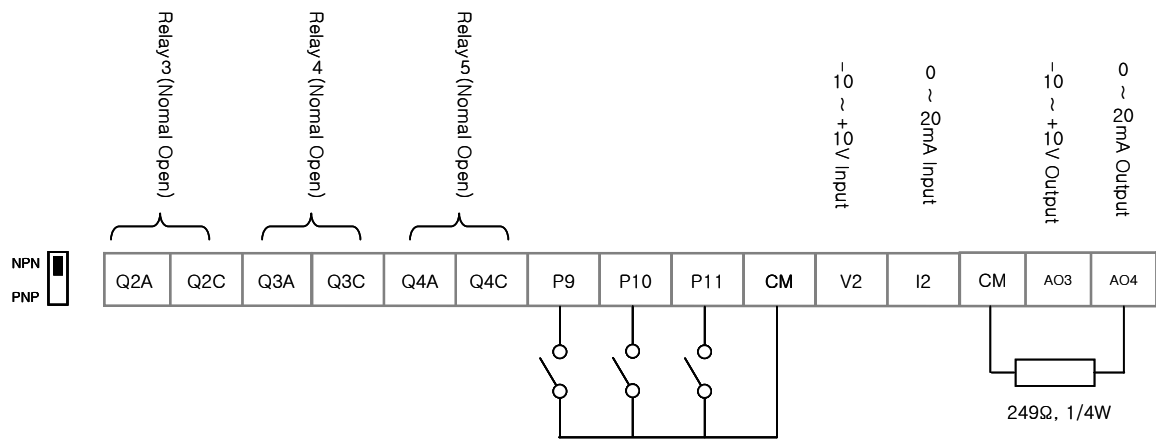
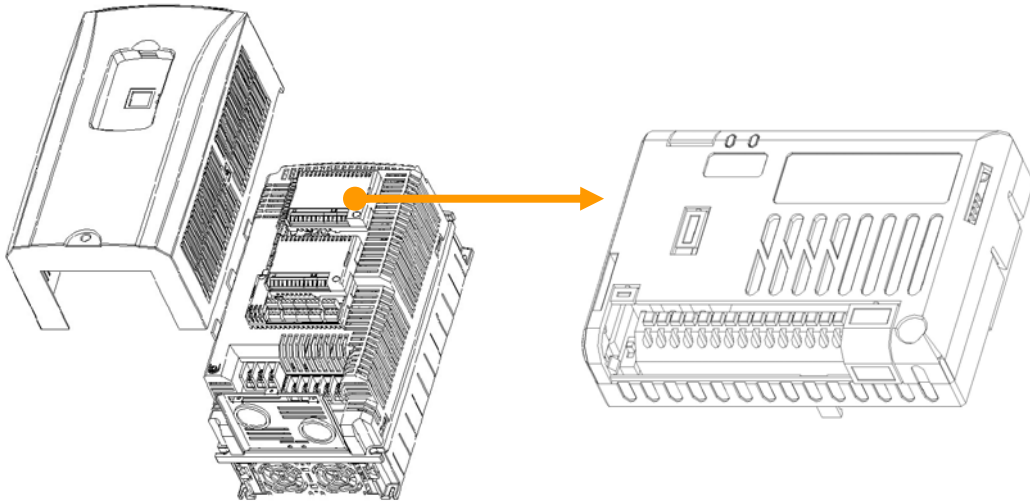
Specifications

Output-	
Contact point	Relay output 3 points (N.O.), AC250V/DC30V-5A
Analog	Voltage : -10 ~ +10V, 10mA, 11bit resolution Current : 0~20mA, 12 bit resolution
Input-	
Contact point	3 points (NPN/PNP select), 0~25V In case of PNP operation, use 24V power of inverter standard I/O terminal or extra power supply is needed from outside.
Analog	Voltage : -10 ~ +10V Current : 0 ~ 20mA
Scan time	Contact point : Minimum 1.5 msec Analog: Minimum 3msec
Enclosures	IP20
Cooling method	Cooling by itself

Installation

- Block the power which is fed to inverter.
- Separate the cover of the body as the picture.
- Wait until the power turns off at charged lamp of the body.
- Install at 1 or 2 of the option slot.
- Wire to terminal that you want to use.
- After feeding power to inverter, make sure if the power is ON at the power lamp of the
- Installed extended I/O card
- If there is no error at power lamp, be OFF the power and cover the body after the charged lamp turns off.
- Feed power to inverter.

• Terminal wiring



Terminal wiring specifications

Terminal		Wire thickness		Electric Specification
Type	Name	mm ²	AWG	
P9~P1 1	Multi-function input terminal	0.33 ~ 1.25	16 ~ 22	-
CM	Common terminal			Common earth for multi function input terminal
V2	Multi-function analog voltage input terminal			Input voltage: -12~12V
I1	Multi-function analog current input terminal			0~20mA input Interior impedance : 249Ω
AO3	Multi-function analog voltage output terminal	0.33 ~ 2.0	14 ~ 22	Max. output voltage: +/-10V Max. output current : 10mA
AO4	Multi-function analog current output terminal			Max. output current : 20mA
CM	Common terminal	0.33 ~ 1.25	16 ~ 22	-
Q2A	Multi-function Relay A contact	0.33 ~ 2.0	14 ~ 22	Under AC250V, 5A Under DC30V, 5A
Q2C	Multi-function Relay C contact			
Q3A	Multi-function Relay A contact			
Q3C	Multi-function Relay C contact			
Q4A	Multi-function Relay A contact			
Q4C	Multi-function Relay C contact			

Function table

Parameter mode– input terminal function group (PAR→IN)

You can input the frequency command by using -10~+10V (V2 terminal) and 0~20mA(I2terminal) if you mount an extended I/O card on the inverter option slot.

-10~+10V Input

Group	Code No.	Function Display	Setting Displayed		Setting Range	Unit
DRV	07	Freq Ref Src	4	V2	-	-
IN	35	V2 Monitor	-	0.00	0~20	mA
IN	37	V2 Filter	-	10	0~10000	msec
IN	38	V2 Volt x1	-	0.00	0~10V	V
IN	39	V2 Perc y1	-	0.00	0~100	%
IN	40	V2 Volt x2	-	10.00	0~10	V
IN	41	V2 Perc y2	-	100.00	0~100	%
IN	42	V2 -Volt x1'	-	0.00	0~10	V
IN	43	V2 -Perc y1'	-	0.00	0~100	%
IN	44	V2 -Volt x2'	-	-10.00	0~10	V
IN	45	V2 -Perc y2'	-	-100.00	-100~0	%
IN	46	V2 Inverting	0	No	No/Yes	-
IN	47	V2 Quantizing	-	0.04	0.04~10	%

The voltage input of the extended I/O inputs two-way voltage at -10V ~ +10V. Its operating method is the same as the two-way input of the V1 terminal, which was described on Page 7-2.

0 ~ 20mA Input

Group	Code No.	Function Display	Setting Displayed		Setting Range	Unit
DRV	07	Freq Ref Src	5	I2	-	-
IN	50	I2 Monitor	-	0.00	0~20	mA
IN	52	I2 Filter	-	10	0~10000	msec
IN	53	I2 Curr x1	-	4.00	0~20	mA
IN	54	I2 Perc y1	-	0.00	0~100	%
IN	55	I2 Curr x2	-	20.00	0~20	mA
IN	56	I2 Perc y2	-	100.00	0~100	%
IN	57	I2 Volt x1'	-	.00	-20~0	mA
IN	58	I2 Perc y1'	-	0.00	-100~0	%
IN	59	I2 Volt x2'	-	-20.00	-20~0	mA
IN	60	I2 Perc y2'	-	-100.00	-100~0	%
IN	61	I2 Inverting	-	No	No/Yes	-
IN	62	I2 Quantizing	-	0.04	0.04~10	%

For its operating method, see the description of the I1 terminal on iS7 User Manual Page 7-6.

-20~20mA Input

Its operating method is the same as the two-way, it also possible to two-way operation by -20~20mA Input

Parameter mode – Output terminal function group (PAR→OUT)

No.	Communication No.	Function Display	Name	Setting Range	Initial Value	Shift in Operation	Page	Control Mode					
								V / F	S L	V C	S L T	V C T	
14 Note25)	0h160E	AO3 Mode	analog output3 item	0	Frequency	0: Frequency	O	9-9	○	○	○	○	○
				1	Current								
				2	Voltage								
				3	DC Link Volt								
				4	Torque								
				5	Watt								
				6	Idss								
				7	Iqss								
				8	Target Freq								
				9	Ramp Freq								
				10	Speed Fbd								
				11	Speed Dev								
				12	PID Ref Value								
				13	PID Fbk Value								
				14	PID Output								
15	Constant												
15	0h160F	AO3 Gain	analog output3 gain	-1000~1000[%]	100.0	O	9-9	○	○	○	○	○	
16	0h1610	AO3 Bias	analogoutput3bias	-100~100[%]	0.0	O	9-9	○	○	○	○	○	
17	0h1611	AO3 Filter	analog output3 filter	0~10000[msec]	5	O	9-9	○	○	○	○	○	
18	-	AO3 Const %	Analog constant output3	0~100[%]	0.0	O	9-9	○	○	○	○	○	
19	0h1613	AO3 Monitor	analogoutput3monitor	-1000~1000[%]	0.0	O	9-9	○	○	○	○	○	
20	0h1614	AO4 Mode	analog output4 item	0	Frequency	0: Frequency		9-9	○	○	○	○	○
				1	Current								
				2	Voltage								
				3	DC Link Volt								
				4	Torque								
				5	Watt								
				6	Idss								

No.	Communication No.	Function Display	Name	Setting Range	Initial Value	Shift in Operation	Page	Control Mode						
								V / F	S L	V C	S L T	V C T		
				7 Iqss										
				8 Target Freq										
				9 Ramp Freq										
				10 Speed Fbd										
				11 Speed Dev										
				12 PID Ref Value										
				13 PID Fbk Value										
				14 PID Output										
				15 Constant										
21	0h1615	AO4 Gain	analog output 2 gain	-1000~1000[%]	100.0	-	9-9	○	○	○	○	○	○	○
22	0h1616	AO4 Bias	Analog output 2 bias	-100~100[%]	0.0	○	9-9	○	○	○	○	○	○	○
23	0h1617	AO4 Filter	analog output2 filter	0~10000[msec]	5	○	9-9	○	○	○	○	○	○	○
24	-	AO4 Const %	Analog constant output4	0~100[%]	0.0	○	9-9	○	○	○	○	○	○	○
25	0h1619	AO4 Monitor	Analog output 2 monitor	0~1000[%]	0.0	○	9-9	○	○	○	○	○	○	○
34 Note26)	0h1622	Q2 Define	multi-function output 2 item	3 FDT-3	0:FDT-2	○	9-10	○	○	○	○	○	○	○
35	0h1623	Q3 Define	multi-function output 3 item	4 FDT-4	0:FDT-3	○	9-10	○	○	○	○	○	○	○
36	0h1624	Q4 Define	multi-function output 4 item	5 Over Load	0:FDT-4	○	9-10	○	○	○	○	○	○	○