



LG

SV - iH

30 ~ 220kW(40 ~ 300HP)

LG



“ ”

“ ” “ ” 가



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가



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가



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■ 가

가

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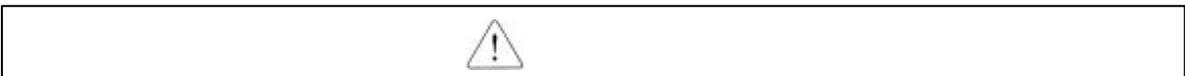
10

(DC 30V)

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■ 가 가

가 가 가

■

2 가

■ P1(P2), N P1, P2

■

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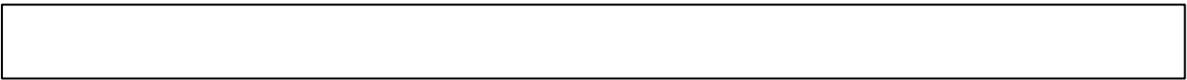
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가 가



(1)

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3

P C B

(2)

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(U, V, W)

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(3)

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(4)

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■ 400V

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(5)

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가

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가

가

가

(6)

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가

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4

(7)

■

(8)



가

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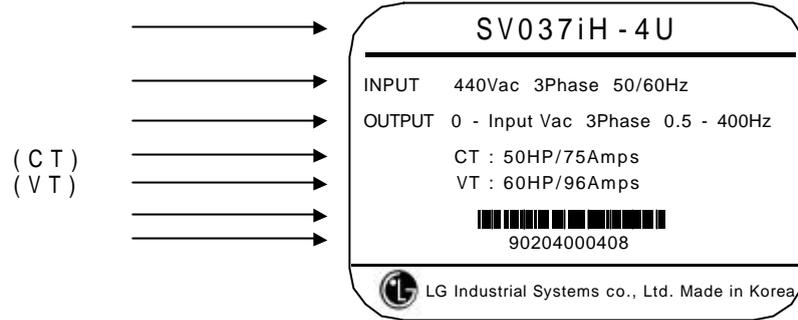
SV - iH Series

-
- V/F
- DC
-
-
-
- IGBT Arm
- DSP 가 IGBT
- PI (, , , ,)

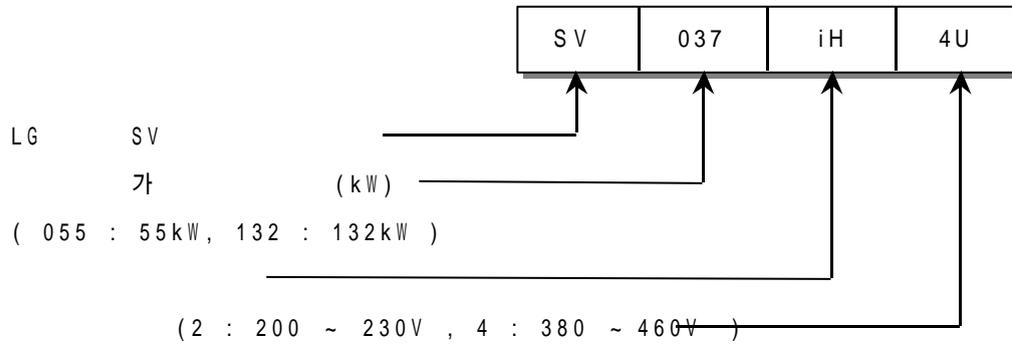
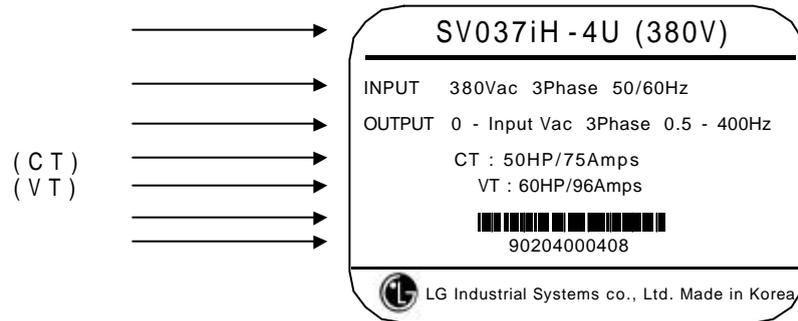
가

가

■ 440V ~ 460V



■ 380V ~ 400V





「 」

가

STARTVERT-iH

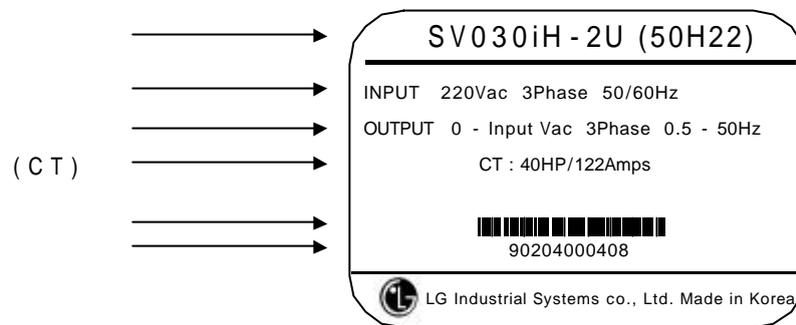
8 가

「 」

■ 220V

「 」

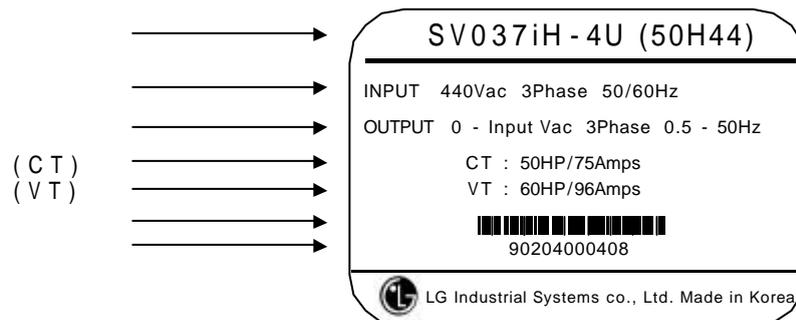
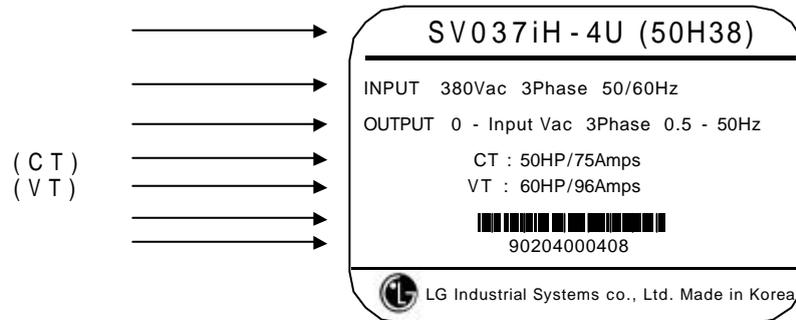
: SV030iH-2U, SV037iH-2U, SV045iH-2U, SV055iH-2U



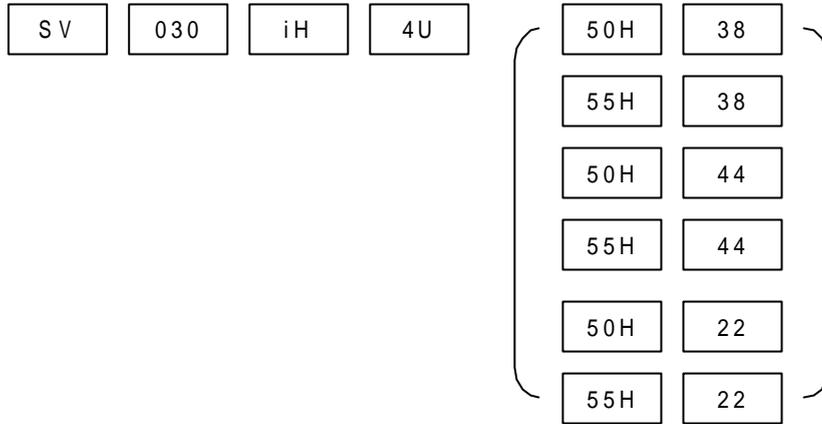
■ 380V / 440V

「 」

: SV030iH-4U, SV037iH-4U, SV045iH-4U, SV055iH-4U



「 」



SV : LG STARVERT
 030 : 가 (kW) (: 030 : 30kW, 055 : 55kW)
 iH :
 4U : (2U : 220V , 4U : 380 / 440V)
 50H : 가 (: 50H : 50Hz, 55H : 55Hz) - 「 」
 44 : (44 : 440V , 38 : 380 , 22 : 220V) - 「 」

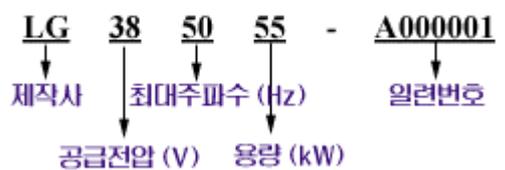
■

가

고효율 Hi-inverter 인버터

인정기관 : 한국전력공사
 최대주파수 : 50Hz
 승인번호 : LG385055
 일련번호 : A00001
 시험기관 : O O O 연구소

0 승인번호의 의미



200 - 230V / 220V 3 200 ~ 230Vac / 220Vac
 380 - 400V / 380V 3 380 ~ 400Vac / 380Vac
 440 - 460V / 440V 3 440 ~ 460Vac / 440Vac
 ±10%
 50 ~ 60Hz (±5%)

200 - 230V -10 ~ 40 (14 ~ 104)
 380 - 460V (CE) 5 ~ 40 (41 ~ 104)
 () -20 ~ 65 (-4 ~ 149)
 90% (Non-condensing)
 (CE) 5 ~ 85% (Non-condensing)
 1,000m (3,300ft)
 5.9m/s² (0.6g)
 86 ~ 106kPa
 IP00 ()

가 ,

UL * UL 508C
 CE Emissions EN 50081-1 ClassB (380 - 460V)
 EN 50081-2 ClassA (200 -230V)
 Immunity EN 50082-2 ClassA
 ESD (EN 61000-4-2)
 Radiated immunity (EN 50140)
 EFT (EN 61000-4-4)
 Conducted immunity (EN 61000-4-6)
 M (EN 61000-4-8)
 Safety EN 50178 : 1997
 「 」 LG385030 (30 ~55kW : 220V/380V/440V - 50/55Hz)

Note : UL 380 - 460V



V / F
 0.01Hz
 : 0.01%
 : 0.1%
 V / F , 2 , User V / F, Auto
 CT^{*1} : 150% 1 , 200% 0.5
 VT^{*2} : 110% 1 , 150% 0.5
 : 0 ~ 20% 가



/ / 가
 : 0 ~ 10V
 : 4 ~ 20mA
 가 : 10k , 1/2W
 (key pad)
 가 0.1 ~ 6,000
 8 가 ()
 가 / S / U 가



/
 /
 /
 / Fuse Open
 IGBT Arm *3
 가 , , 가
 /
 15msec :
 15msec : 가

* Note : 1. CT - Constant Torque Load, 2. VT - Variable Torque Load, 3. 220kW .



200 - 230V

: 3 200V, 220V, 230V

	Constant Torque Load					
			[Arms]	[kVA]		
	kW	HP			kg	lb
SV030iH-2U	30	40	122	46	42	93
SV037iH-2U	37	50	146	55	42	93
SV045iH-2U	45	60	180	68	56	123
SV055iH-2U	55	75	220	83	56	123

380 - 400V

: 3 380V, 400V

	Constant Torque Load				Variable Torque Load					
			[Arms]	[kVA]			[Arms]	[kVA]		
	kW	HP			kW	HP			kg	lb
SV030iH-4U	30	40	61	40	37	50	80	52	45	99
SV037iH-4U	37	50	75	50	45	60	96	62	45	99
SV045iH-4U	45	60	91	60	55	75	115	74	63	139
SV055iH-4U	55	75	110	70	75	100	125	80	63	139
SV075iH-4U	75	100	152	100	90	125	160	103	68	150
SV090iH-4U	90	125	183	120	110	150	228	147	98	216
SV110iH-4U	110	150	223	145	132	175	264	170	98	216
SV132iH-4U	132	175	264	170	160	215	330	213	122	269
SV160iH-4U	160	215	325	200	185	250	361	233	122	269
SV220iH-4U	220	300	432	280	280	350	477	307	175	386

440 - 460V

: 3 440V, 460V

	Constant Torque Load				Variable Torque Load					
			[Arms]	[kVA]			[Arms]	[kVA]		
	kW	HP			kW	HP			kg	lb
SV030iH-4U	30	40	61	45	37	50	80	60	45	99
SV037iH-4U	37	50	75	56	45	60	96	70	45	99
SV045iH-4U	45	60	91	68	55	75	115	86	63	139
SV055iH-4U	55	75	110	82	75	100	125	93	63	139
SV075iH-4U	75	100	152	113	90	125	160	120	68	150
SV090iH-4U	90	125	183	136	110	150	228	170	98	216
SV110iH-4U	110	150	223	166	132	200	264	200	98	216
SV132iH-4U	132	200	264	197	185	250	330	246	122	269
SV160iH-4U	160	250	325	242	220	300	361	270	122	269
SV220iH-4U	220	300	432	322	280	350	477	356	175	386

* Note : [kVA] 200 - 230V 220V, 380 - 400V 380V, 440 - 460V 440V

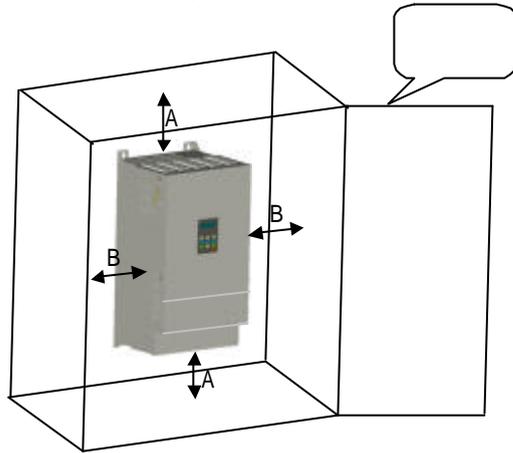


1. 가 (10)

2. (90%) (-10 ~ 40) , 40

3. 20cm, 50cm

A : 50cm
B : 20cm



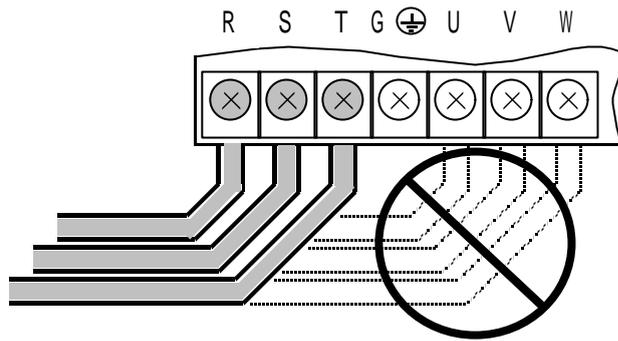
4. 가 , 가

5. 가 가 가

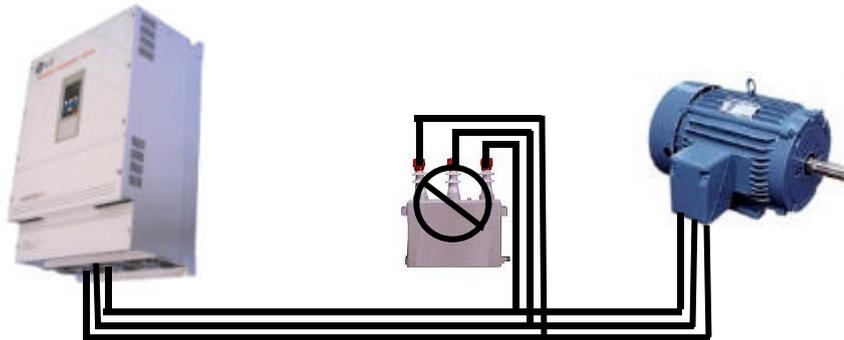
6. SV-iH



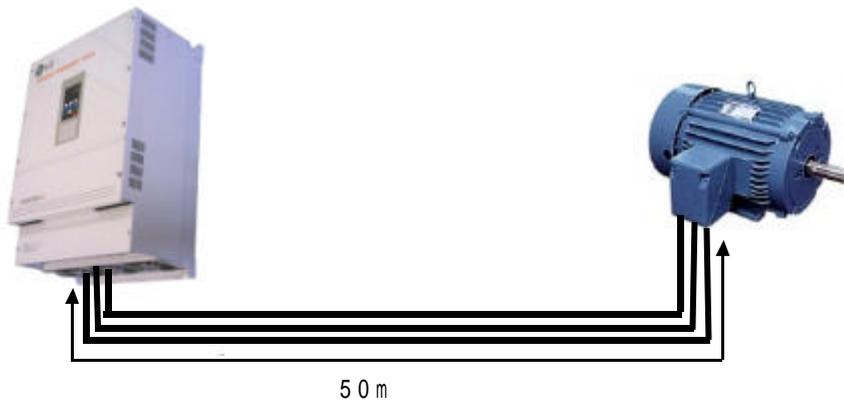
1. 3 R, S, T
 (R, S, T) U, V, W 가



2.



3. 50m 가



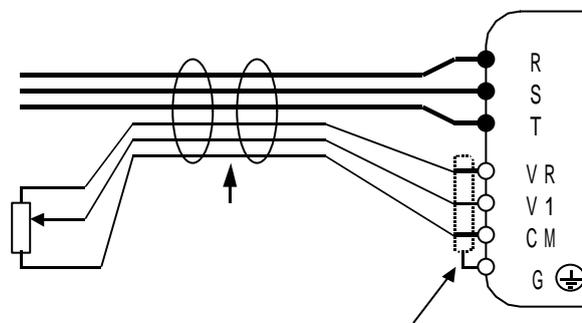
4. 가 50m

가

5.

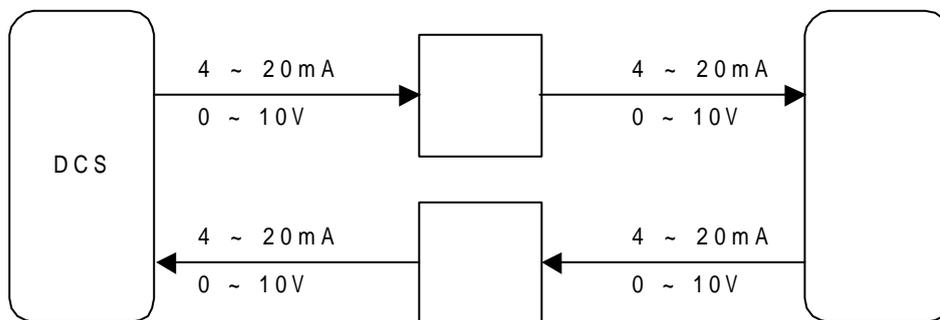
6. 가

7.



8.

(V1, V2, I, Io) Noise



1. ()

가 가

	Size			Size	
	mm ²	AWG		mm ²	AWG
SV030iH-2U	60	1/0	SV055iH-4U	38	2
SV037iH-2U	60	1/0	SV075iH-4U	60	1/0
SV045iH-2U	100	4/0	SV090iH-4U	60	1/0
SV055iH-2U	100	4/0	SV110iH-4U	80	3/0
SV030iH-4U	22	4	SV132iH-4U	100	4/0
SV037iH-4U	22	4	SV160iH-4U	100	4/0
SV045iH-4U	38	2	SV220iH-4U	2×100	2×4/0

2.

■

가

. 200V

3

100

. 400V

3

10

■

(

2

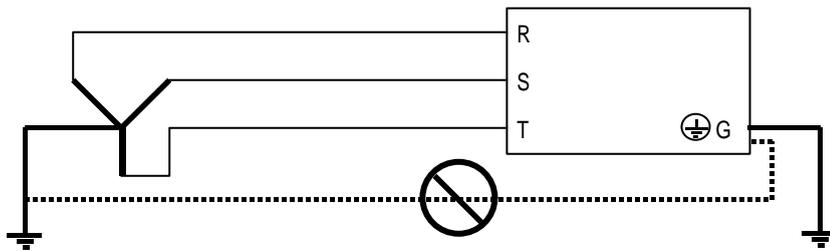
)

3

4

(Y

)



■

가

■

가

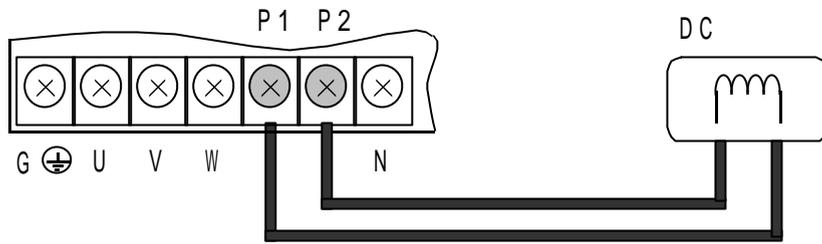
가

가

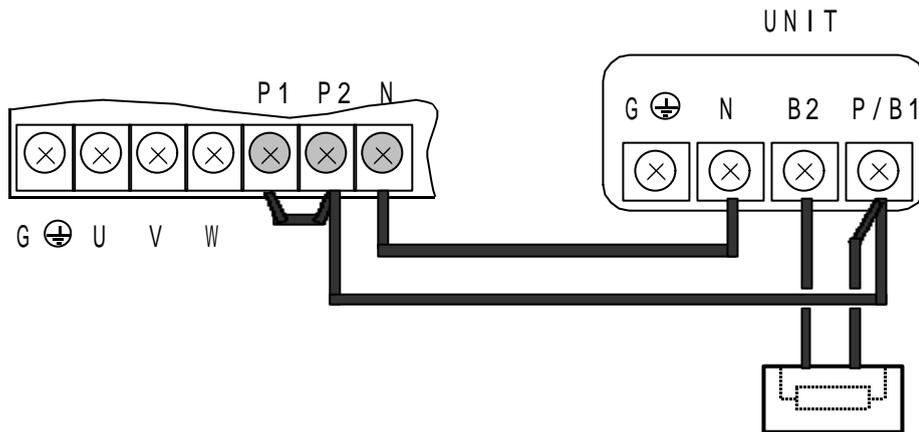
가

	[mm ²]	
	200V	400V
30 ~ 37kW	22	14
45 ~ 75kW	38	22
90 ~ 132kW	-	38
160 ~ 280kW	-	60

DC ()

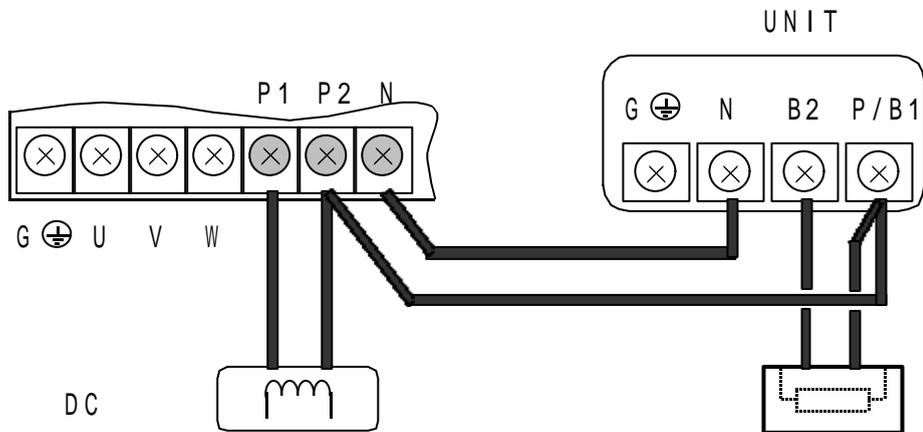


()



: Unit 가 .

DC () ()



RS485

1.

	RS485 (RS232-485)
	Bus , Multidrop Link System
	SV-iH Series
	RS232 가
	31
	1,200m (700m)

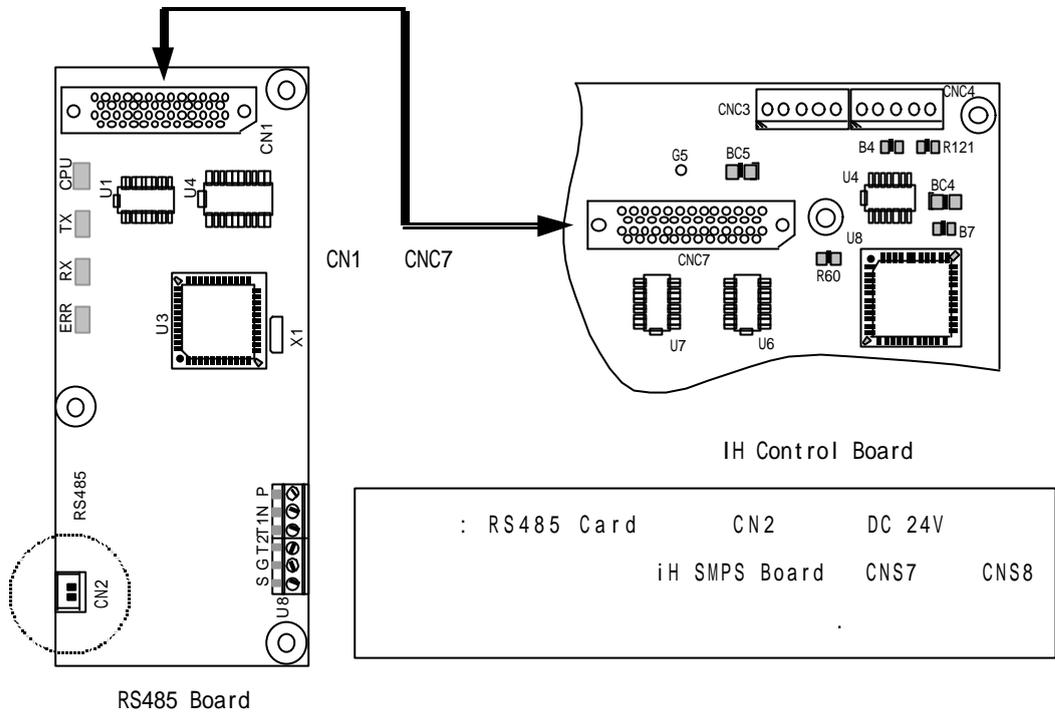
2.

3.

	19200/9600/4800/2400/1200 bps 가
	Half duplex system
	ASCII (8bit)
Stop bit	1bit
Error check(CRC16)	2byte
Parity check	None

4.

	CN1	(iH Control Board CNC7)
	CN2	(DC24V) (iH SMPS Board CNS7 CNS8)
	P	485 - High
	N	485 - Low
	G	485 Groud
	S	Shield
	T1	(T1 T2)
	T2	



5. LED

CPU LED	CPU	가	
RXD LED	RX	485	
TXD LED	TX	485	
ERR LED	ERR		Data ()
		CPU	DPRAM
		CPU	Network Connection Time out

6.

6.1 RS485

6.1.1 (CNC7) RS485 (CN1)
가

6.1.2 가

6.1.3 LED 가 “CPU LED”가 1

6.1.4 “CPU LED”가 “CPU LED”가

가

(: “CPU LED”가 가

가 .)

6.1.5 “I/O 48 Option1” “RS485”

6.1.6 6.1.5

<FUN 01>	Freq. set	“Remote”
<FUN 02>	Run/stop set	“Remote”
<I/O 50>	Inv. number	“1~31” (가)
<I/O 51>	Baud-rate	“9600 BPS” ()
<I/O 52>	Comm. timeout(1)	“10.0sec”

1)

가 Remote

. Comm. Timeout 0.0sec

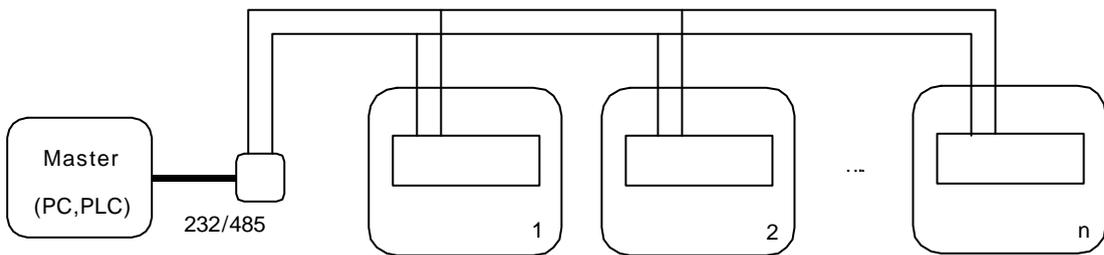
6.1.7

6.1.8

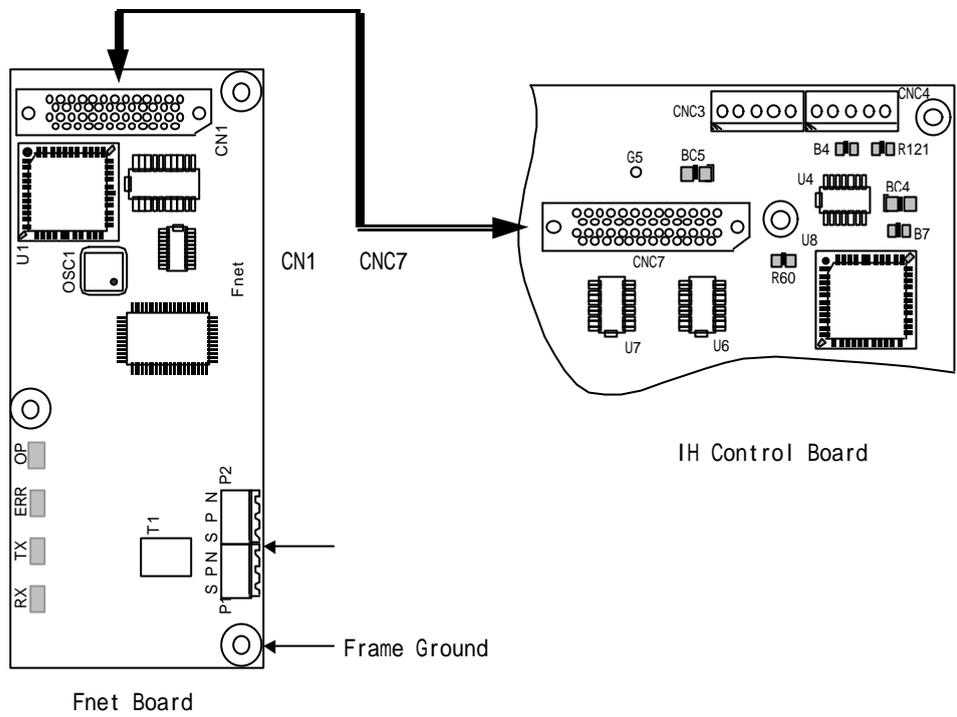
(U8) T1 T2

6.2 RS232 - 485

6.3



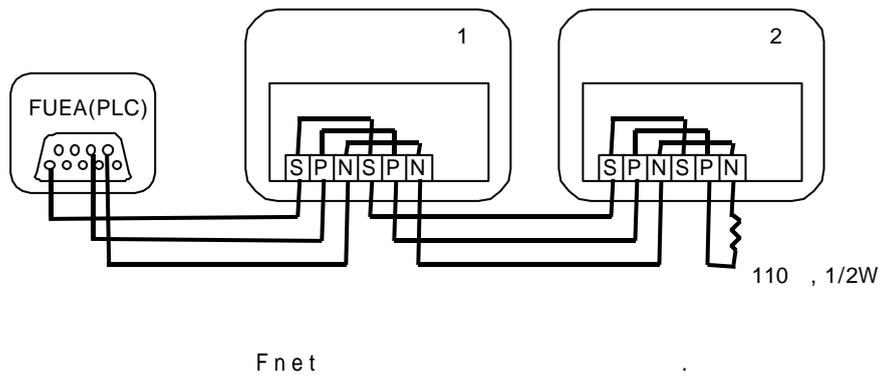
RS485



4. LED

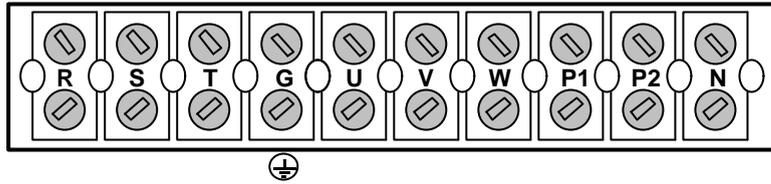
LED	LED	
RXD	RX	
TXD	TX	
ERR	ERR	
OP	OP	1
		Fnet 500 ms
		DPRAM 2

5.

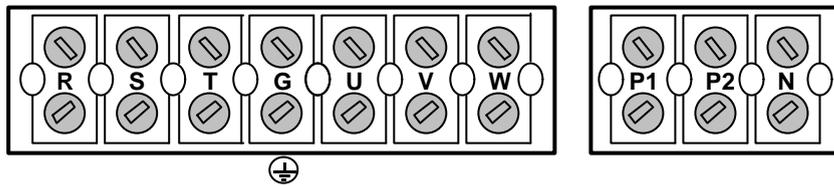


Fnet

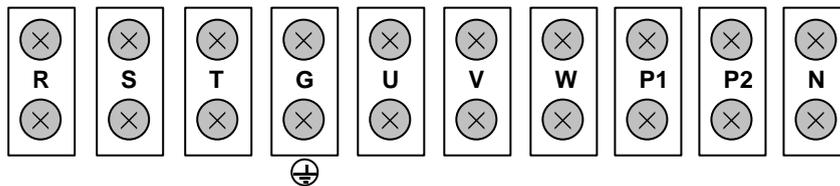
- SV045, 055iH-2U



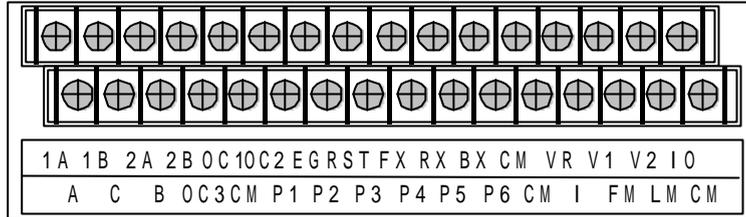
- SV030, 037iH-2U, SV030, 037, 045, 055, 075iH-4U



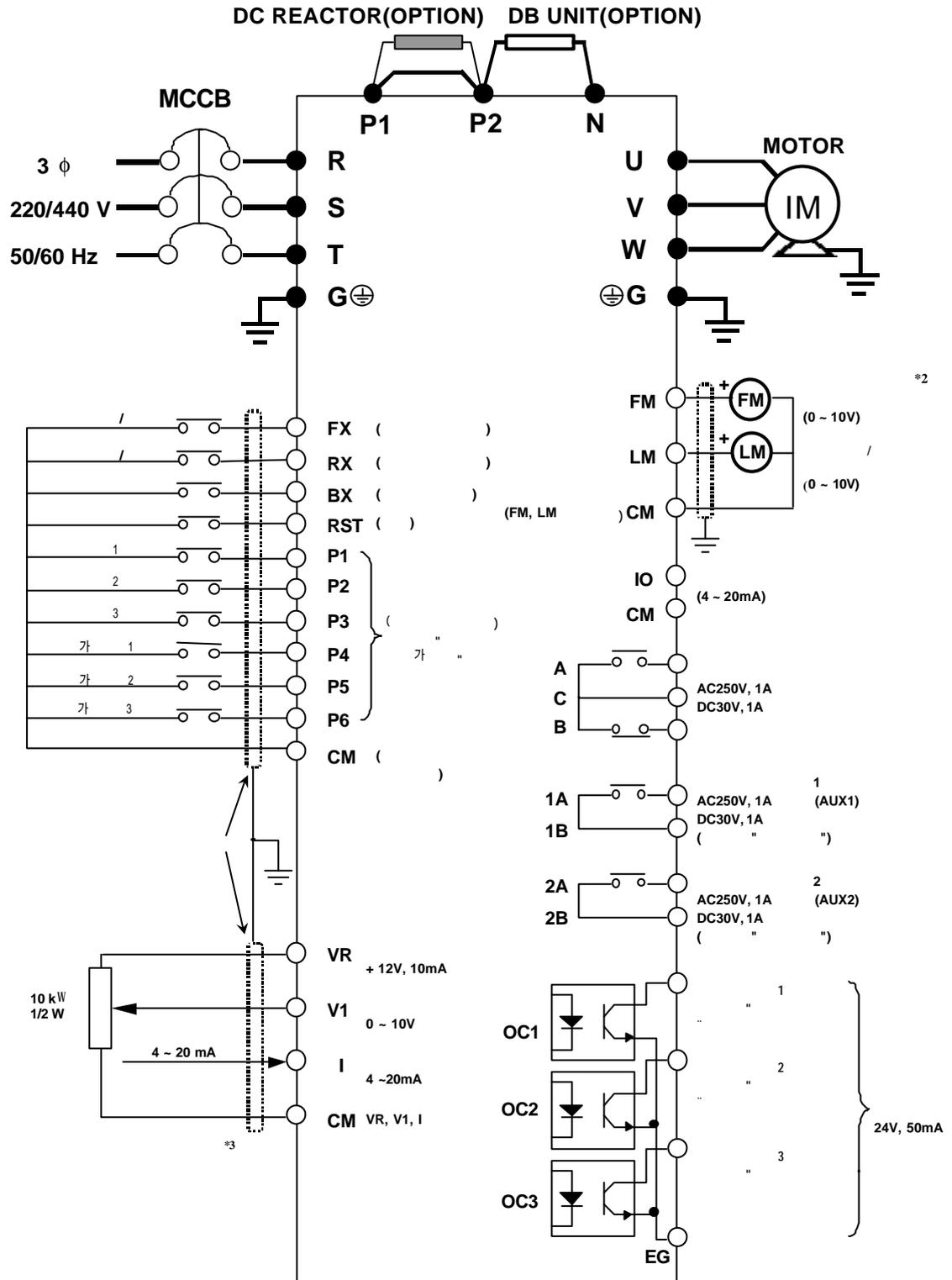
- SV090, 110, 132, 160, 220iH-4U



R, S, T		3
U, V, W		3
P1, P2	DC	DC
N		
⊕ (G)		



V1, V2		DC 0 ~ 10V , 10V
VR		DC+12V, 10 mA
I		DC 4 ~ 20mA , 20mA
FM	()	0 ~ 10V, 1mA (RPM 가)
LM	/	0 ~ 10V, 1mA
IO	()	4 ~ 20mA (RPM (가)
FX		FX -CM ON , OFF
RX		RX -CM ON , OFF
BX	()	BX -CM ON
RST		RST -CM ON 가 OFF ()
P1, P2, P3, P4, P5, P6		P1~P3 : , P4~P6 : 가
CM	Common	V1, V2, I, FM, LM, IO, FX, RX, BX, P1 ~ P6, RST Common
OC1, OC2, OC3		DC24V, 50mA, OC1 : , OC2 : , OC3 :
EG	Common	(OC1, OC2, OC3) Common
1A, 1B		(AUX1)
2A, 2B		(AUX2)
A, B, C		: AC250V, DC30V, 1A 가



Note) 1. ● :
 2. ○ :
 3. 12V 가
 가 . ()

(MCCB, ELB, Magnetic Contactor)

	[kW]		(LG)	(LG)
200V	30	SV030iH-2U	ABS203a/200A EBS203a/200A	GMC-150
	37	SV037iH-2U	ABS203a/225A EBS203a/225A	GMC-180
	45	SV045iH-2U	ABS403a/300A EBS403a/300A	GMC-220
	55	SV055H-2U	ABS403a/400A EBS403a/400A	GMC-300
400V	30	SV030iH-4U	ABS103a/100A EBS103a/100A	GMC-85
	37	SV037iH-4U	ABS203a/125A EBS203a/125A	GMC-100
	45	SV045iH-4U	ABS203a/150A EBS203a/150A	GMC-125
	55	SV055iH-4U	ABS203a/175A EBS203a/175A	GMC-150
	75	SV075iH-4U	ABS203a/225A EBS203a/225A	GMC-180
	90	SV090iH-4U	ABS403a/300A EBS403a/300A	GMC-220
	110	SV110iH-4U	ABS403a/350A EBS403a/350A	GMC-300
	132	SV132iH-4U	ABS403a/400A EBS403a/400A	GMC-400
	160	SV160iH-4U	ABS403a/400A EBS403a/400A	GMC-400
	220	SV220iH-4U	ABS603a/600A EBS603a/600A	GMC-600

1.

SV-iH

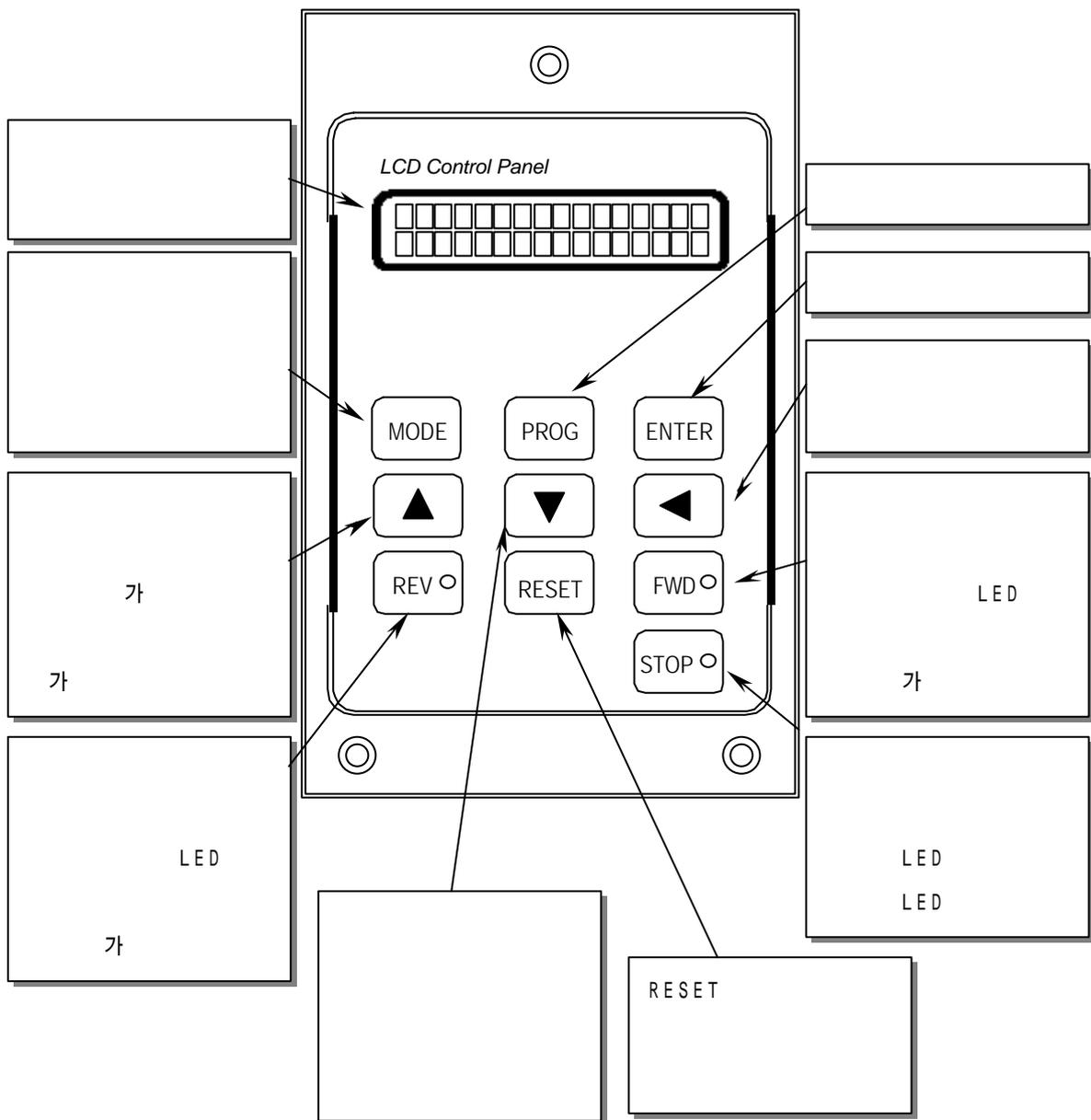
LCD ()

3

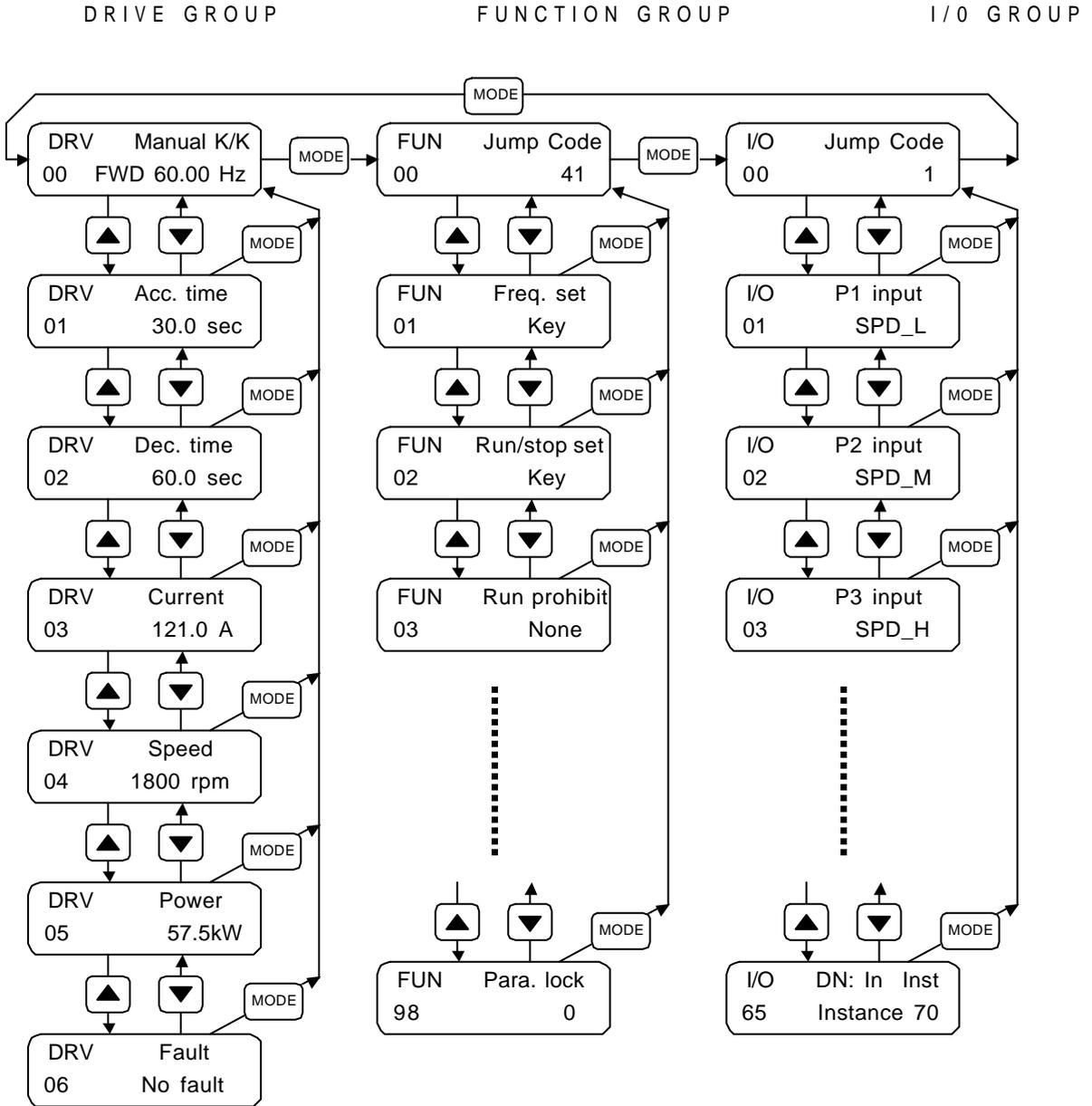
	(LCD)	
	DRV	, 가
	FUN	,
	I/O	,

2.

가 32



3.



1 : [MODE], [], [] Key .

2 : FUN, I/O Jump Code (00) 가

가 , 00 [PROG] Key [], []Key 가

[ENTER] Key . [] Key

4.

[PROG] Key ()가 [], [] Key
[ENTER] Key

) 가

a. 가 ()

b. 가()

1) 가 10 15

DRV	Manual K/K
00	FWD 60.00 Hz

▲	DRV	Acc. time
	01	10.0 sec

PROG	DRV	Acc. time
	01	10.0 sec

: 가 .()

◀	DRV	Acc. time
	01	10.0 sec

▲	DRV	Acc. time
	01	11.0 sec

가 .

⋮

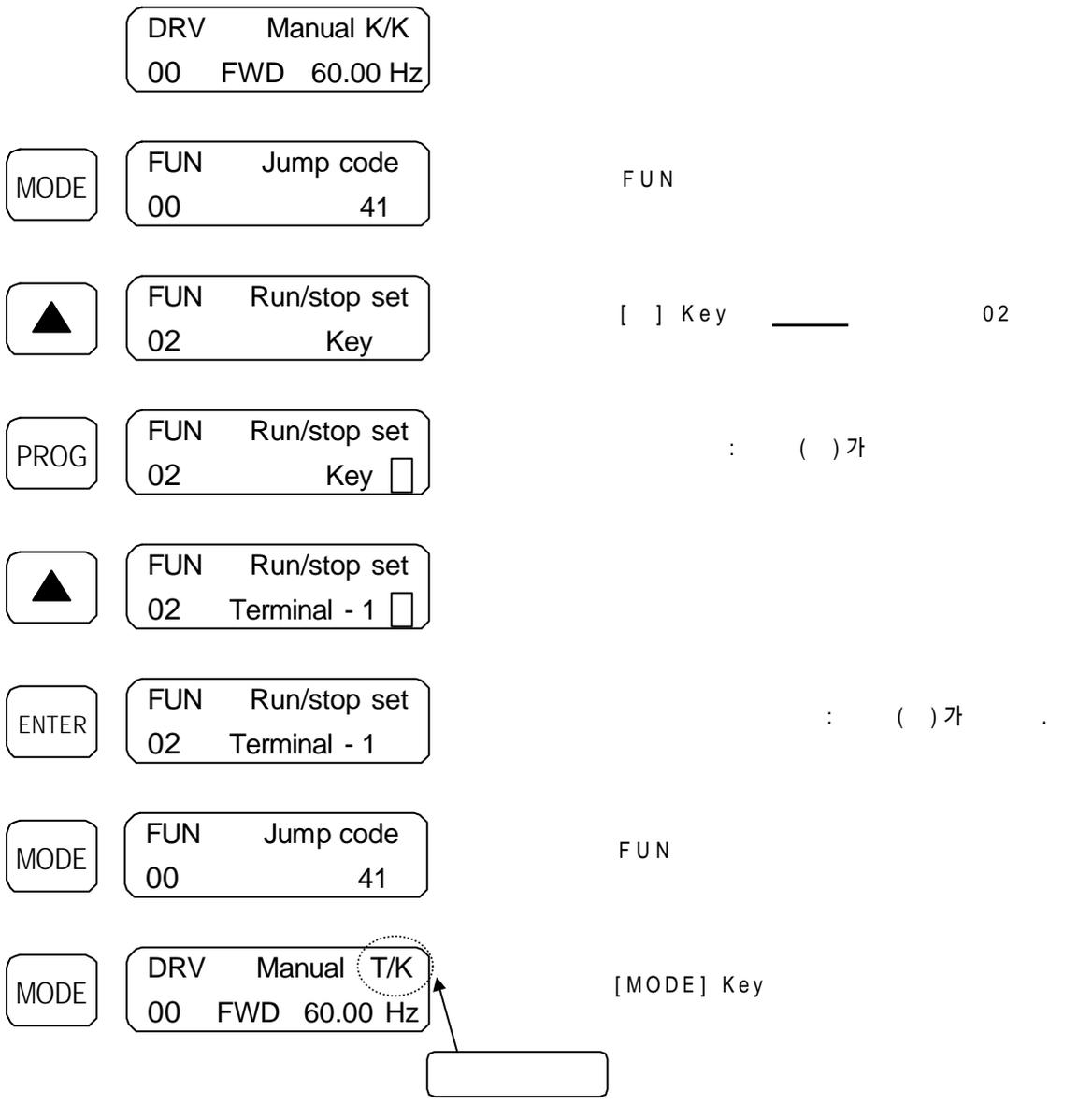
▲	DRV	Acc. time
	01	15.0 sec

ENTER	DRV	Acc. time
	01	15.0 sec

: 가 .

2)

= FUN
= 02
= Key → Terminal-1



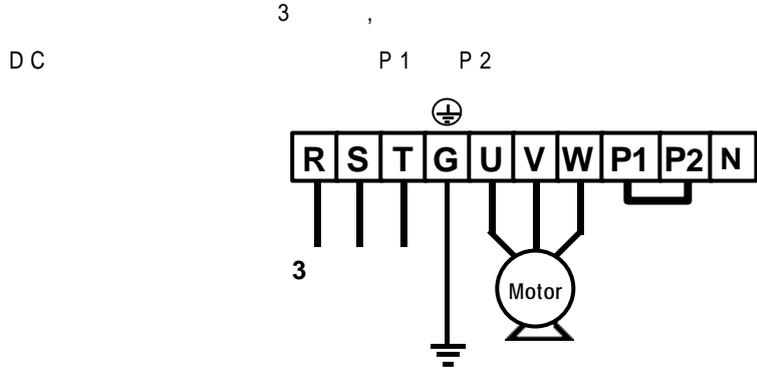
Key [] Key . [] Key , []

SV -iH

가

	/	FUN 01 : Key FUN 02 : Key
	/	FUN 01 : Terminal FUN 02 : Terminal-1
	/ ,	FUN 01 : Terminal FUN 02 : Key
	/ ,	FUN 01 : Key FUN 02 : Terminal-1
	/	FUN 01 : Remote FUN 02 : Remote

1.



Key (FUN 01 02 가 Key

DRV Manual K/K
00 FWD 60.00 Hz

5Hz [ENTER] Key [PROG] Key Up, Down Key 5.00Hz

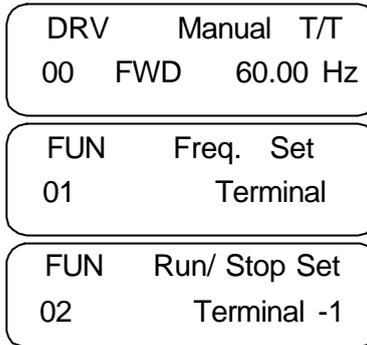
DRV Manual K/K
00 FWD 5.00 Hz

[FWD] Key
[STOP] Key

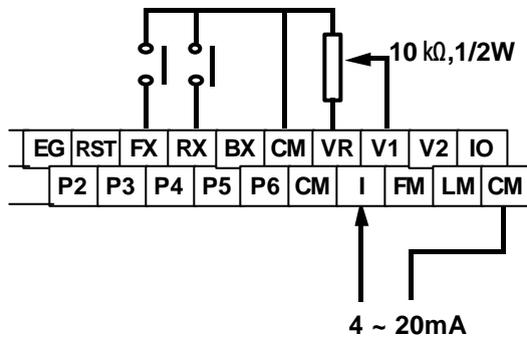
U, V

3.

“Manual T/T” 가 FUN
 01 “Terminal”, FUN 02 “Terminal-1”



V1, VR, CM 가 가
 V1, CM 가 I, CM
 FX RX CM
 , FX RX CM



4.

4.1

‘Manual K/T’

가

FUN 01 ‘Terminal’ , FUN 02 ‘Key’

DRV	Manual K/T
00	FWD 60.00 Hz

FUN	Freq. Set
01	Terminal

FUN	Run/ Stop Set
02	Key

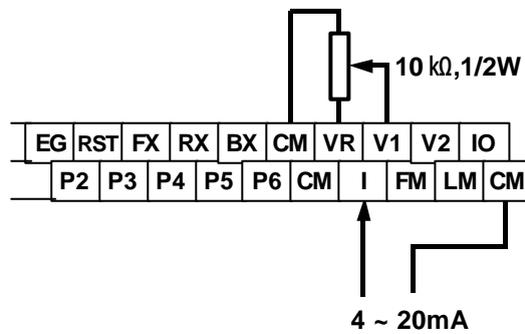
V1, VR, CM 가

가

V1, CM 가

I, CM

FWD, REV, STOP Key



4.2

‘Manual T/K’

가

FUN 01 ‘Key’ , FUN 02 ‘Terminal-1’

DRV	Manual T/K
00	FWD 60.00 Hz

FUN	Freq. Set
01	Key

FUN	Run/ Stop Set
02	Terminal -1

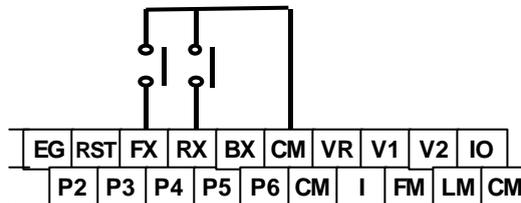
DRV

FX RX CM

, FX

RX CM

가



5.

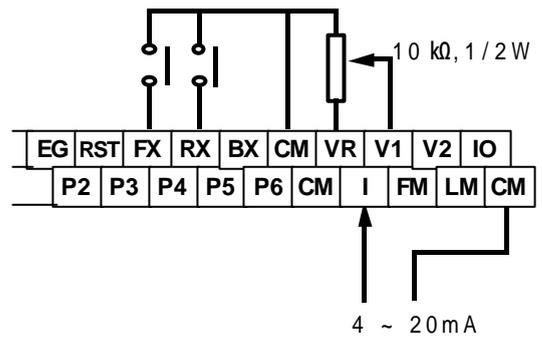
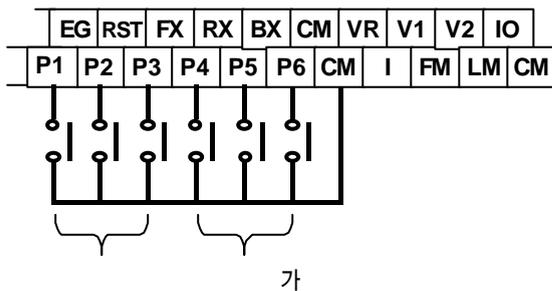
I/O P1 P6 가
 . P1 P3 , P4 P6 가
 CM 가 (I/O 01~06).
 FUN 01 Key Terminal

DRV Manual T/T
 00 FWD 60.00 Hz

FUN Freq. Set
 01 Terminal

FUN Run/ Stop Set
 01 Terminal -1

FUN 02 Key Terminal . Key
 , Terminal FX RX CM
 , FX RX CM 가 .



1. Drive

Code	(LCD)	LCD			
00	() ()	0.0 ~ Freq.max Hz *	0.01	0.00Hz	O
01	가 (Acc. time)	0.0 ~ 6000.0 sec	0.1	30.0 sec	O
02	(Dec. time)	0.0 ~ 6000.0 sec	0.1	60.0 sec	O
03	(Current)	-	-	-	X
04	(Speed)	-	-	-	X
05	(Power)	-	-	-	X
06	(Fault)	-	-	-	X

* : 「 」 (Freq.max)
 50Hz : Freq.max : 50Hz,
 55Hz : Freq.max : 55Hz .

2. Function

Code	(LCD)	LCD		
00	(Jump Code)	1 ~ 98	41	O
01	(Freq. set)	Key / Terminal / Remote	Key	X
02	(Run / Stop set)	Key / Terminal-1/ Terminal-2 / Remote	Key	X
03	(Run prohibit)	None / FWD disable / REV disable	None	X
	「 」	REV disable (가)	REV disable	X
04	(Freq. max)	40.00 ~ 400.00 Hz	60.00 Hz	X
	「 」 50Hz	40.00 ~ 50.00 Hz	50.00 Hz	X
	「 」 55Hz	40.00 ~ 55.00 Hz	55.00 Hz	
05	(Freq. base)	40.00 ~ Freq. max	60.00 Hz	X
	「 」	40.00 ~ 60.00 Hz	60.00 Hz	X
06	(Freq. start)	0.50 ~ 5.00 Hz	0.50 Hz	X
07	(Hold time)	0.0 ~ 10.0 sec	0.0 sec	O
08	/ (V/F pattern)	Linear / 2.0 / User / Auto	Linear	X
	「 」	Linear / 2.0 / User / Auto	2.0	X
09	(Fwd boost)	0 ~ 20%	2 %	X
10	(Rev boost)	0 ~ 20%	2 %	X
11	가 (Acc. pattern)	Linear / S-Curve / U-Curve	Linear	X
12	(Dec. pattern)	Linear / S-Curve / U-Curve	Linear	X
13	(Volt control)	40 ~ 110 %	100 %	X
14	(Energy save)	70 ~ 100 %	100 %	O
15	(Stop mode)	Decel / DCBR / Free Run	Decel	X
16	V/F 1 (User - 1f)	0.00 ~ 30.00Hz	10.00 Hz	X
17	V/F 1 (User - 1v)	0 ~ 50 %	15 %	X
18	V/F 2 (User - 2f)	User 1f ~ Freq.max	30.00 Hz	X
19	V/F 2 (User - 2v)	User 1v ~ 100 %	50 %	X
20	(V - I mode)	V1 / I / V1+I / V2	V1	X
21	(Filter gain)	1 ~ 100 %	25 %	O
22	(Analog gain)	50.0 ~ 250.0 %	100.0 %	O
23	(Analog bias)	0.0 ~ 200.0 %	100.0 %	O
24	(Analog dir)	Direct / Invert	Direct	O

25	(Freq. limit)	No / Yes	No	X
26	(F - limit high)	0.00 ~ Freq. max	60.00 Hz	X
	「 」 50Hz 「 」 55Hz	0.00 ~ Freq.max 0.00 ~ Freq.max	50.00 Hz 55.00 Hz	X
27	(F - limit low)	0.00 ~ F-limit high	0.00 Hz	X
28	(Freq. Jump)	No / Yes	No	X
29	1 (Freq-jump 1f)	0.00 ~ Freq. max	10.00 Hz	X
30	2 (Freq-jump 2f)	0.00 ~ Freq. max	20.00 Hz	X
31	3 (Freq-jump 3f)	0.00 ~ Freq. max	30.00 Hz	X
32	(Freq. band)	0.00 ~ 30.00 Hz	5.00 Hz	X
33	(DC-br freq.)	0.00 ~ 60.00 Hz	0.50 Hz	X
34	(DC-br block)	0.5 ~ 5.0 sec	2.0 sec	X
35	(DC-br time)	0.1 ~ 25.0 sec	0.5 sec	X
36	(DC-br value)	1 ~ 20 %	1 %	X
37	(Slip compen.)	No / Yes	No	X
38	(Rated slip)	0.00 ~ 5.00 Hz	0.00 Hz	X
39	(M-rated cur.)	0.1 ~ 999.0 A	103.0 A	X
40	(No-load cur.)	0.1 ~ 300.0 A	0.1 A	X
41	(Inv capacity)	SV030iH-2U ~ SV375iH-4U	SV030iH-2U	X
42	(Retry number)	0 ~ 10	0	O
43	(Retry time)	0.0 ~ 10.0 sec	1.0 sec	O
44	(Relay mode)	Retry 0 / All Trips / LV+Retry 0 / LV+All Trips	Retry 0	O
45	(Stall mode)	None / Acc / Steady / Acc+Steady / Dec / Acc+Dec / Dec+Steady / Acc+Dec+Std	None	X
46	(Stall level)	CT : 30 ~ 150 %	150 %	X
		VT : 30 ~ 110 %	110 %	X
47	(OL level)	CT : 30 ~ 150 %	150 %	O
		VT : 30 ~ 110 %	110 %	O
48	(OL time)	1.0 ~ 30.0 sec	10.0 sec	O
49	(OC lim. level)	CT : 30 ~ 200 %	160 %	O
		VT : 30 ~ 150 %	110%	O
50	(OC lim. time)	0.0 ~ 60.0 sec	60.0 sec	O
51	(ETH select)	No / Yes	No	O

52	(ETH level)	110 ~ 150 %	150 %	O
53	(Motor type)	General / Special	General	O
54	(Pole number)	2 ~ 12	4	O
55	(IPF select)	No / Yes	No	O
56	가 (SS acc. time)	0.1 ~ 600.0 sec	5.0 sec	O
57	(SS dec. time)	0.1 ~ 600.0 sec	10.0 sec	O
58	(SS gain)	0 ~ 200 %	100 %	O
59	RST - restart)	No / Yes	No	O
60	(Power on st)	No / Yes	No	O
61	(Carrier freq)	* 3)		X
62	PI (PI-control)	No / Yes	No	X
63	PI (P gain)	0 ~ 30000	10	O
64	PI (I gain)	0 ~ 30000	50	O
65	PI (PI-fb select)	I / V1 / V2	I	X
66	PI (PI-fb flt. G)	1 ~ 100 %	25 %	O
67	PI (PI-fb gain)	50.0 ~ 250.0 %	100.0 %	O
68	PI (PI-fb bias)	0.0 ~ 200.0 %	100.0 %	O
69	PI (PI-fb dir)	Direct / Invert	Direct	X
70	PI (I_term scale)	1 ~ 100 %	100 %	O
71	PI (PI error dir)	Direct / Invert	Direct	X
72	PI (Regul bypass)	No / Yes	No	X
73 ~ 93 : * 1)				
94	CT / VT (CT / VT)* 2)	Constant Trq / Variable Trq	Constant Trq	X
95	(Para. read)	No / Yes	No	X
96	(Para. write)	No / Yes	No	X
97	(Para. init.)	No / Yes	No	X
98	(Para. lock)	0 ~ 255	0	O

1) FUN(73) ~ FUN(93)

2) VT 400V

3)

TYPE		C T		V T	
200V	SV030iH-2U	2 ~ 10 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV037iH-2U	2 ~ 10 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV045iH-2U	2 ~ 8 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV055iH-2U	2 ~ 8 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
400V	SV030iH-4U	2 ~ 10 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV037iH-4U	2 ~ 10 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV045iH-4U	2 ~ 8 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV055iH-4U	2 ~ 8 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV075iH-4U	2 ~ 7 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV090iH-4U	2 ~ 6 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV110iH-4U	2 ~ 6 [kHz]	6 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV132iH-4U	2 ~ 5 [kHz]	5 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV160iH-4U	2 ~ 4 [kHz]	4 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV220iH-4U	2 ~ 4 [kHz]	4 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV315iH-4U	2 ~ 4 [kHz]	4 [kHz]	2 ~ 3 [kHz]	3 [kHz]
	SV375iH-4U	2 ~ 4 [kHz]	4 [kHz]	2 ~ 3 [kHz]	3 [kHz]

3. I/O

Code	(LCD)	LCD		
00	(Jump Code)	1 ~ 65	1	O
01	1 (P1 input)	SPD_L, SPD_M, SPD_H, JOG, ACCT_L, ACCT_M ACCT_H, UP, DOWN, HOLD, DIS_OPT, COMM_CONN, EXT_DCBR, EXT_TRIP, INTERLOCKS	SPD_L	X
02	2 (P2 input)		SPD_M	X
03	3 (P3 input)		SPD_H	X
04	4 (P4 input)		ACCT_L	X
05	5 (P5 input)		ACCT_M	X
06	6 (P6 input)		ACCT_H	X
07	1 (OC1 output)	FST_LO, FST_HI, FDT_HI, FDT_PULSE, FDT_BAND, OL, STALL, LV, RUN, COMM, STEP_L, STEP_M, STEP_H	STEP_L	X
08	2 (OC2 output)		STEP_M	X
09	3 (OC3 output)		STEP_H	X
10	4 (AUX1 output)		COMM	X
11	5 (AUX2 output)		COMM	X
12	(Jog freq.)	0.00 ~ Freq. max	30.00 Hz	O
13	1 (Step freq-1)	0.00 ~ Freq. max	10.00 Hz	O
14	2 (Step freq-2)	0.00 ~ Freq. max	20.00 Hz	O
15	3 (Step freq-3)	0.00 ~ Freq. max	30.00 Hz	O
16	4 (Step freq-4)	0.00 ~ Freq. max	40.00 Hz	O
17	5 (Step freq-5)	0.00 ~ Freq. max	50.00 Hz	O
18	6 (Step freq-6)	0.00 ~ Freq. max	46.00 Hz	O
19	7 (Step freq-7)	0.00 ~ Freq. max	37.00 Hz	O
20	가 1 (Acc time-1)	0.0 ~ 6000.0 sec	1.0 sec	O
21	1 (Dec time-1)	0.0 ~ 6000.0 sec	1.0 sec	O
22	가 2 (Acc time-2)	0.0 ~ 6000.0 sec	2.0 sec	O
23	2 (Dec time-2)	0.0 ~ 6000.0 sec	2.0 sec	O
24	가 3 (Acc time-3)	0.0 ~ 6000.0 sec	3.0 sec	O
25	3 (Dec time-3)	0.0 ~ 6000.0 sec	3.0 sec	O
26	가 4 (Acc time-4)	0.0 ~ 6000.0 sec	4.0 sec	O
27	4 (Dec time-4)	0.0 ~ 6000.0 sec	4.0 sec	O
28	가 5 (Acc time-5)	0.0 ~ 6000.0 sec	5.0 sec	O
29	5 (Dec time-5)	0.0 ~ 6000.0 sec	5.0 sec	O
30	가 6 (Acc time-6)	0.0 ~ 6000.0 sec	6.0 sec	O
31	6 (Dec time-6)	0.0 ~ 6000.0 sec	6.0 sec	O
32	가 7 (Acc time-7)	0.0 ~ 6000.0 sec	7.0 sec	O

33	7 (Dec time-7)	0.0 ~ 6000.0 sec	7.0 sec	O
34	(LM meter)	Voltage / Current	Voltage	O
35	(LM adj.)	0 ~ 120 %	100 %	O
36	(FM adj)	0 ~ 120 %	100 %	O
37	(lo adj)	0 ~ 120 %	100 %	O
38	(FST -freq.)	0.50 ~ Freq.max Hz	0.50 Hz	X
39	(FDT - freq.)	0.50 ~ Freq.max Hz	60.00 Hz	X
	「 」 50Hz 「 」 55Hz	0.50 ~ Freq.max Hz 0.50 ~ Freq.max Hz	50.00 Hz 55.00 Hz	X
40	(FDT -band)	0.00 ~ 30.00 Hz	1.00 Hz	X
41	(Mul. factor)	0 ~ 999	100	O
42	(Div. factor)	1 ~ 999	100	O
43	(Ter. input)	P6 P5 P4 P3 P2 P1 BX RX FX	0000000000	X
44	(Ter. output)	AUX2 AUX1 OC3 OC2 OC1	00000	X
45	(S/W version)	2.04	2.04	X
46	1 (Last fault 1)	Fault Status/ /	No fault	O
47	2 (Last fault 2)	Fault Status/ /	No fault	O
48	(Option 1)	None / RS485 / ModBus RTU / Fnet / Device Net	None	X
49	(Option 2)	None / MMC	None	X
50	(Inv.number)	1 - 31	1	O
51	(Baud-rate)	1200/2400/4800/ 9600/19200 BPS	9600 BPS	O
52	(Comm.timeout)	0.0 ~ 60.0 sec	10.0 sec	O
53	PG (PG slip freq)	0.00 - 10.00 Hz	5.00 Hz	X
54	PG (PG. P-gain)	0 - 225	1	O
55	PG (PG. I-gain)	0 - 225	1	O
56	PG (PG. F-gain)	0 - 225	100	O
57	(Enc. pulse)	100/500/512/1000/ 1024/2000/2048/4000	512 pulse	O
58	(DI mode)	None/Freq.1/Freq.2	Freq.1	O
59	(DA mode)	Freq./Voltage/Current	Freq.	O

60	(DA adj.)	80 - 120%	100%	O
61	Fnet (FN: St. ID)	1 ~ 63	1	X
62	ID (DN: MAC ID)	0 ~ 63	0	O
63	(DN: Baud Rate)	125 / 250 / 500	125 kBPS	O
64	(DN: Out Inst)	20 / 21 / 100 / 101	20	X
65	(DN: In Inst)	70 / 71 / 110 / 111	70	X

1. Drive

DRV 00 :

DRV Manual K/K
00 FWD 60.00 Hz

- : 0 [Hz]
- : ,
- Key
(: 0 ~10V, : 4 ~ 20mA)

「 」

DRV Manual K/K
00 FWD 55.00 Hz

- :
50 Hz : 0 50.00 [Hz]
55 Hz : 0 55.00 [Hz]

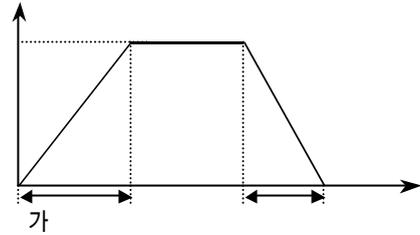
- : 「 」 50 Hz
50.00 Hz, 「 」 55
Hz 55.00 Hz
가

DRV 01,02 : 0 가

DRV Acc. Time
01 30.0 sec

DRV Dec. Time
02 60.0 sec

- : 0 6,000 sec



- : (FUN 04)
가
가
가 가

- 1 ~ 7 가 : 1 7 가
(I/O 01 06) 가
가 가 가 (I/O 20
33)

- : 1 7 가

DRV Mode 가

DRV 03 :

DRV Current
03 125.4 A

- :
(rms)

DRV 04 :

DRV	Speed
04	1800 rpm

- :
.
- [m/min] : (FUN 54),
(I/O 41), (I/O 42)
(m/min)

DRV 05 :

DRV	Power
05	47.8kW

- : Power
[kW]

DRV 06 :

DRV	Fault
06	No Fault

- :

OC Trip	Latch
OV Trip	Latch
EXT Trip	Latch
BX	Unlatch
LV Trip	Unlatch
Fuse Open	Latch
GF Trip	Latch
Over Heat	Latch
ETH	Latch
OC Limit	Latch
M/C Fail	Unlatch
Inv OLT	Latch
SC Trip *)	Latch

: Latch
, Unlatch

*) : SC Trip
(SV220iH-4U)

2. Function

FUN 00 :

FUN	Jump Code
00	41

- : 01 98
 - :
- . PROG
- Key
- ENTER Key
- UP, DOWN Key

FUN 01 :

FUN	Freq. set
01	Key

- : Key, Terminal, Remote
- :

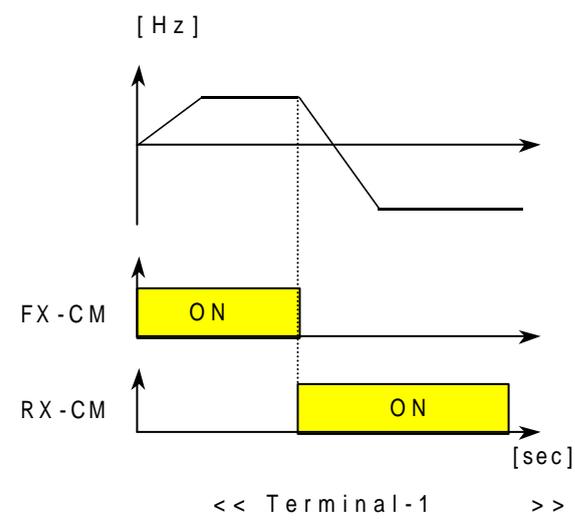
- Key
- Terminal (0 10V, 4 20mA)
- Remote
- : Terminal FUN 20 24

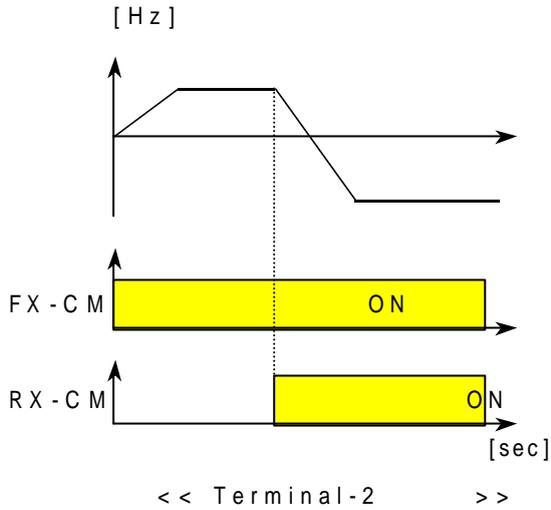
FUN 02 :

FUN	Run/stop set
02	Key

- : Key, Terminal-1
Terminal-2, Remote
- :

- Key
- Terminal-1 (FX,RX)
- FX :
- RX :
- Terminal-2 (FX,RX)
- FX :
- RX :
- Remote





FUN 03 :

FUN	Run Prohibit
03	None

- : None, FWD disable, REV disable
- :
- , Terminal-2

None

FWD disable

REV disable

: 「 」
가

FUN 04,05,06 :

FUN	Freq. max
04	60.00 Hz

- : 40 400 Hz
- :
- 가

- :
- 50 Hz : 40 50.00 [Hz]
- 55 Hz : 40 55.00 [Hz]

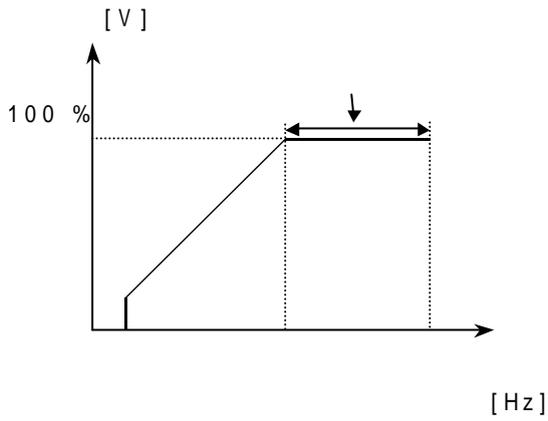
FUN	Freq. base
05	60.00 Hz

- : 40 Freq.max Hz
- :

: 「 」
60 Hz 가 50 Hz
55 Hz 가 60Hz

FUN	Freq. start
06	0.50 Hz

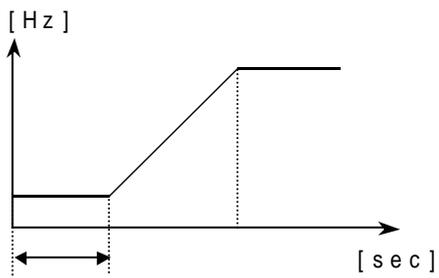
- : 0.50 5.0 Hz
- :



FUN 07 :

FUN	Hold time
07	0.0 sec

- : 0.0 10.0 sec
- : 가



FUN 08 : V/F

FUN	V/F pattern
08	Linear

- : Linear, 2.0, User, Auto

■ : 가

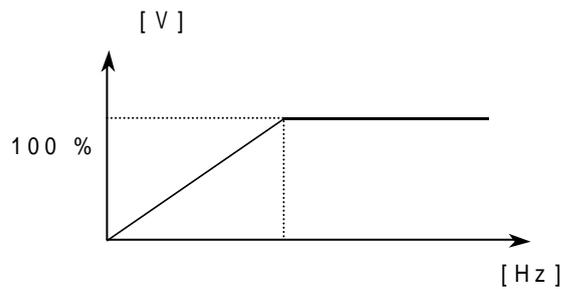
Linear

2.0 가 2.0

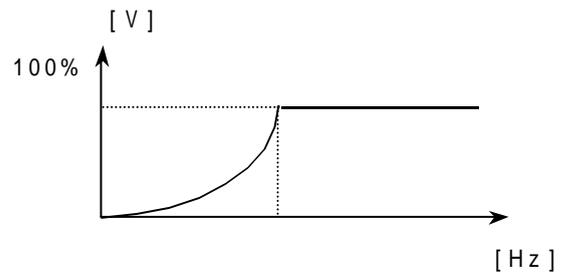
User 가

4 V/F

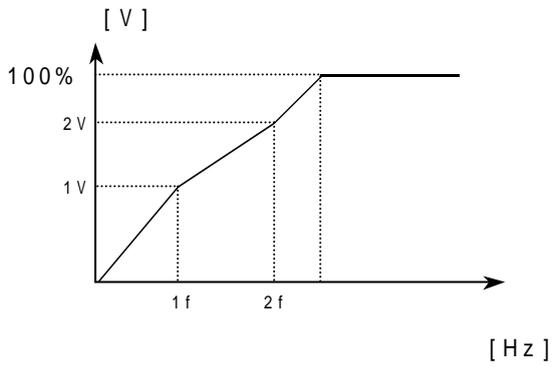
Auto 가



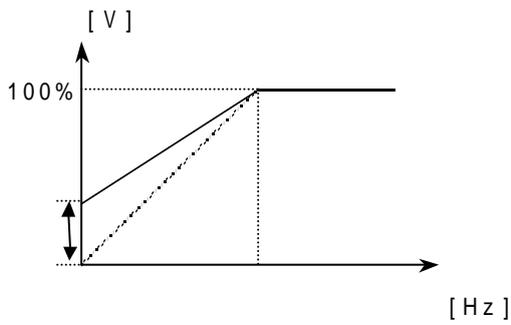
< Linear V/F >



< 2.0 V/F >



< User V/F >



< Auto V/F >

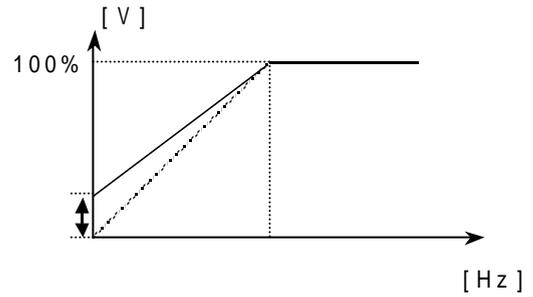
FUN 09,10 :

FUN	FWD boost
09	2 %

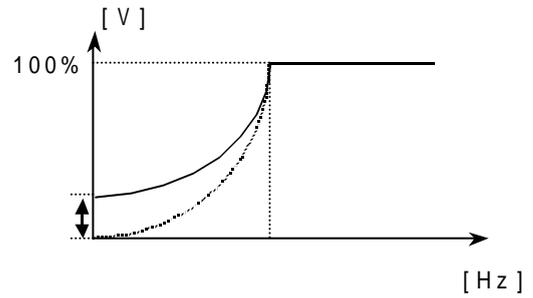
FUN	REV boost
10	2 %

- : 0 20 %
- :

가



< Linear V/F >



< 2.0 V/F >

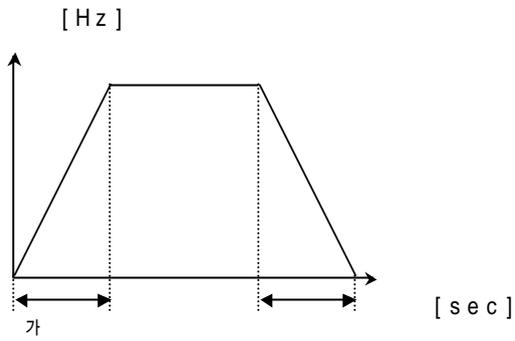
FUN 11,12 : 가

FUN	Acc. pattern
11	Linear

FUN	Dec. pattern
12	Linear

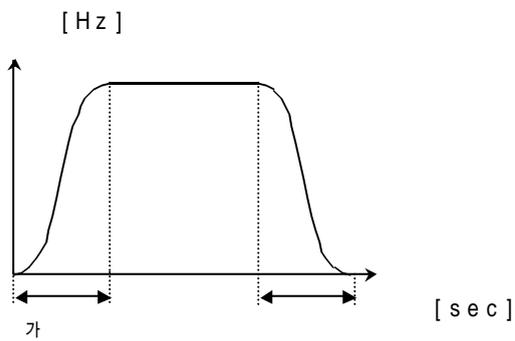
- : Linear, S-Curve, U-Curve
- : 가 ,

가 (Linear)

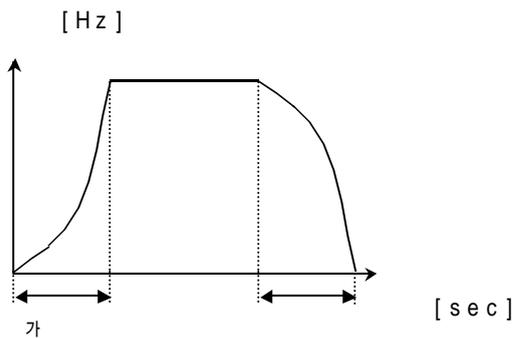


S 가 (S-Curve)

가 가 , 가
가 가 10%
가



U 가 (U-Curve)



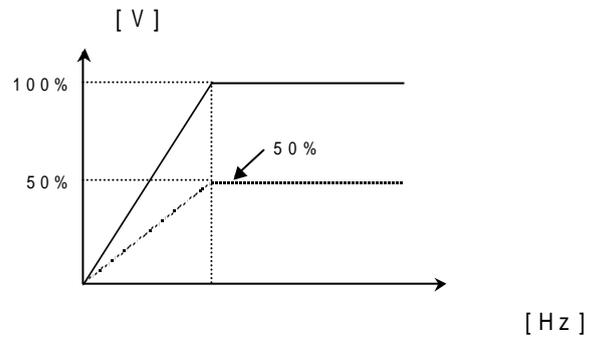
가

FUN 13 :

FUN	Volt control
13	100 %

- : 40 110 %
- :

가

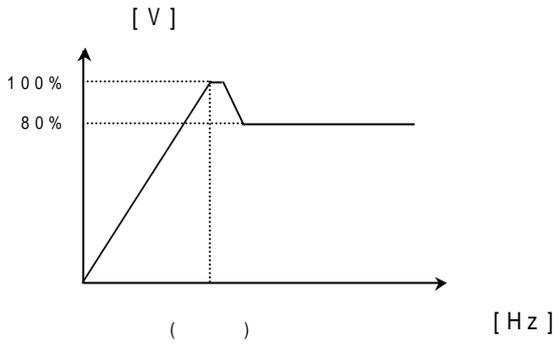


FUN 14 :

FUN	Energy save
14	100 %

- : 70 ~ 100 %
- :

가 가
가

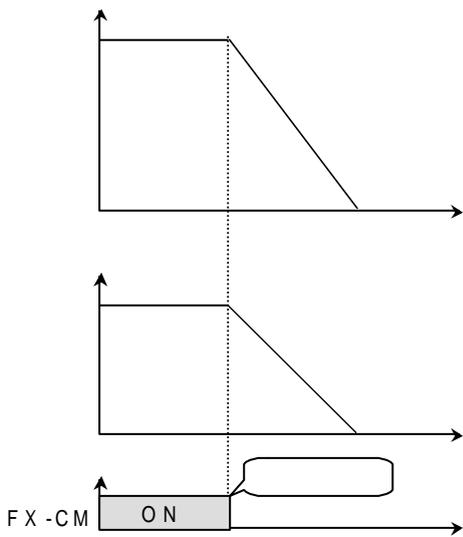


FUN 15 :

FUN Stop mode
15 Decel

- : Decel, DCBR, Free Run
- :

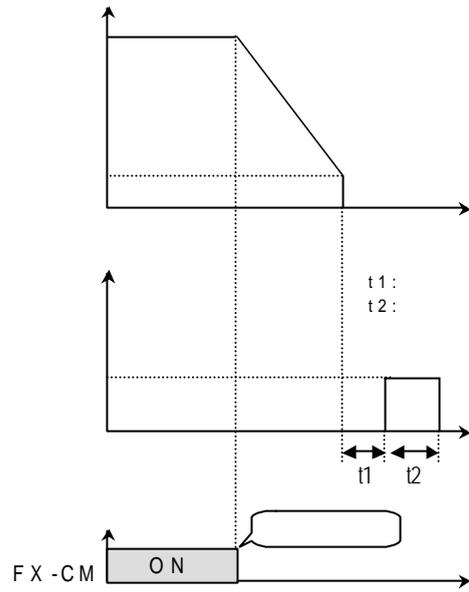
(Decel)



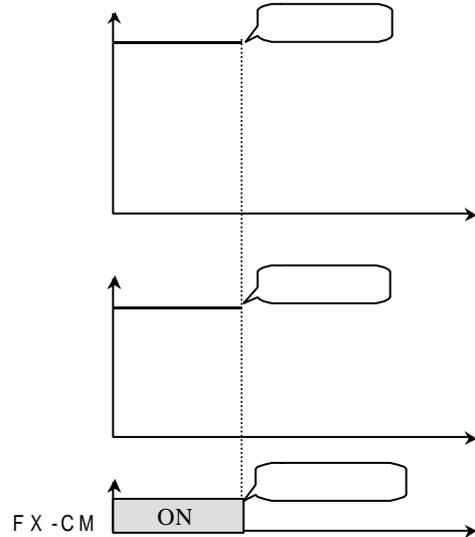
(DCBR)

가

. FUN 33 36



Free Run



FUN 16 19 : V / F

■ :

FUN	User - 1f
16	30.00 Hz

■ : 0 30 Hz

■ :

FUN	User - 1v
17	50 %

■ : 0 50 %

■ : FUN 08 User V/F

가 ,

1f : FUN 16 : User-1f

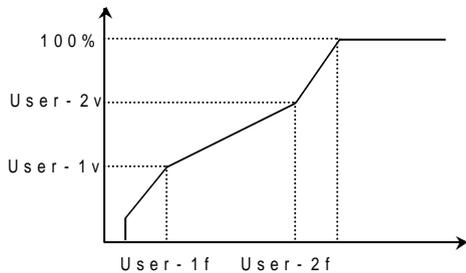
1v : FUN 17 : User-1v

2f : FUN 18 : User-2f

2v : FUN 19 : User-2v

2

4 V/F



FUN 20 :

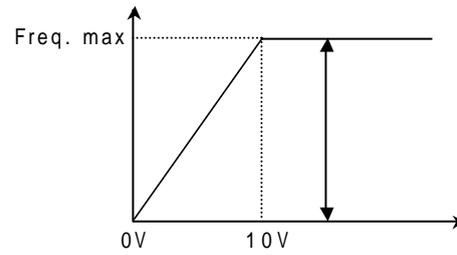
FUN	V - I mode
20	V1

■ : V1, I, V1 + I, V2

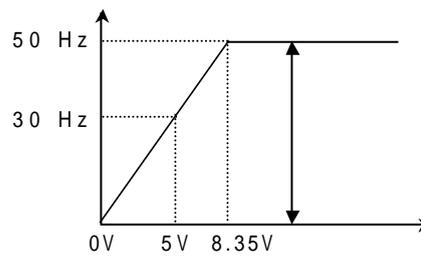
■ : , FUN 01 Terminal

1	(V1)	V1	0
---	------	----	---

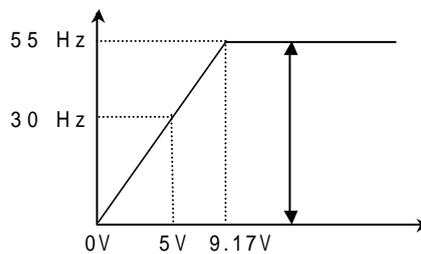
10V



「 」 50Hz

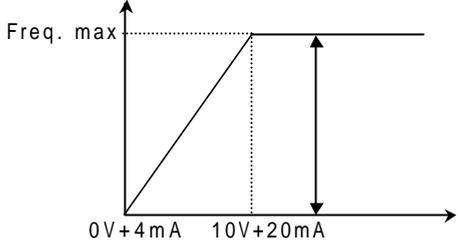
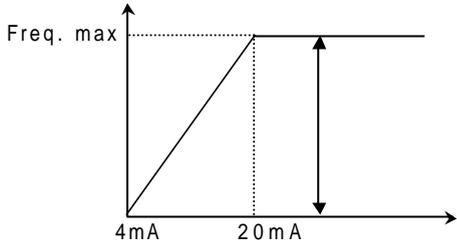


「 」 55Hz



(I)

I 4 ~ 20mA



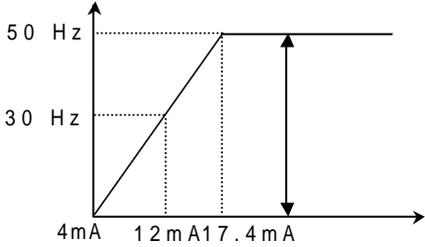
2 (V2)

V2 0 10V

50 Hz

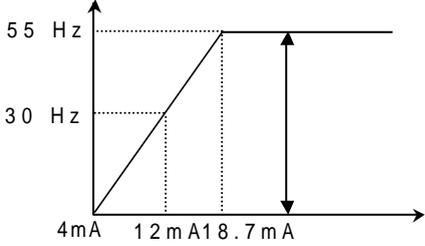
: PI

FUN 65



FUN 21-24 :

55 Hz



FUN	Filter gain
21	25 %

: 1 100 %

(V1+I)

V1

FUN	Analog gain
22	100.0 %

0 10V

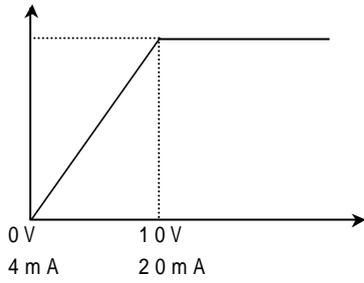
I 4 ~

: 50.0 250.0 %

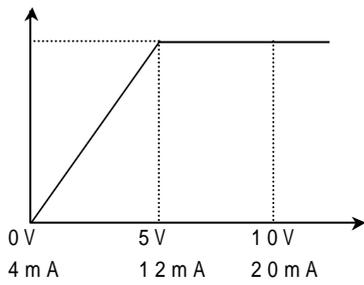
20mA 가

가

100.0% : 10V (20mA)가
 50.0% : 5V (12mA)가



< 100.0% >



< 50.0% >

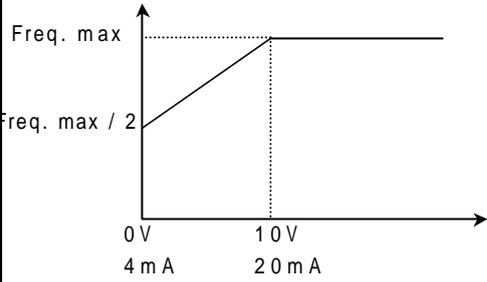
■ :

FUN	Analog bias
23	100.0%

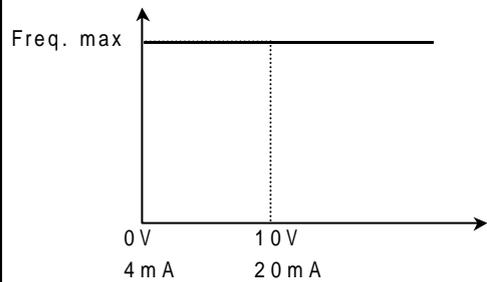
■ : 0.0 200.0%

■ :

가
 . 0.0 ~ 100.0% , 100.0
 ~ 200.0% 100%



< 150.0% >



< 200.0% >

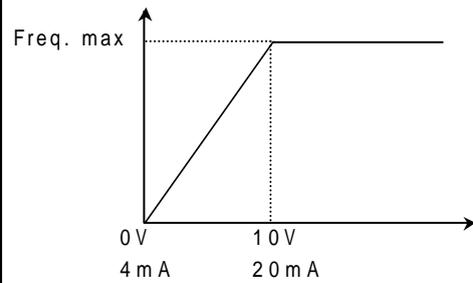
■ :

FUN	Analog dir
24	Direct

■ : Direct , Invert

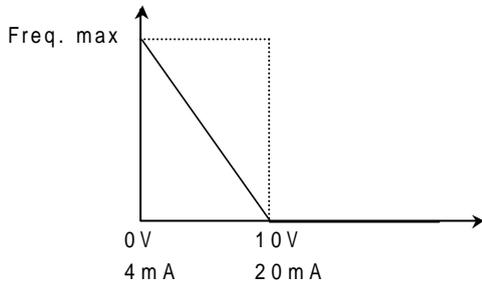
■ :

(Direct)

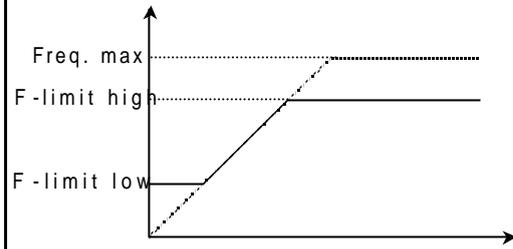


< (Direct) >

(Invert)



< (Invert) >



: 가

: 가

가

FUN 25 27 :

■ :

FUN	Freq. limit
25	--- No ---

■ : No , Yes

■ :

FUN	F - Limit high
26	50.00 Hz

■ : 0 Freq.max Hz

■ :

FUN	F - Limit low
27	0.00 Hz

■ : 0 Hz

■ :

가

FUN 28-32 :

■ :

FUN	Freq. jump
28	--- No ---

■ : No , Yes

■ : 1

FUN	Freq - jump 1f
29	10.00 Hz

■ : 0 Freq.max Hz

■ : 2

FUN	Freq - jump 2f
30	30.00 Hz

■ : 0 Freq.max Hz

■ : 3

FUN Freq - jump 3f
31 50.00 Hz

■ : 0 Freq.max Hz

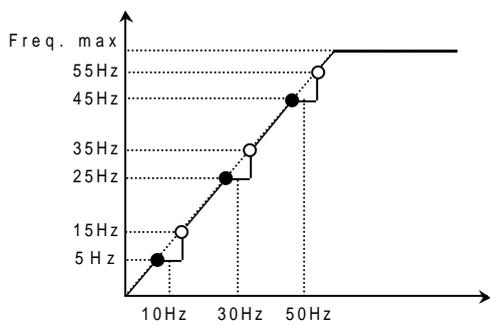
■ :

FUN Freq. band
32 5.00 Hz

■ : 0 30 Hz

■ :

가 10Hz 5Hz
5.01 15Hz
가 30Hz 5Hz
25.01 35Hz
가 50Hz 5Hz
45.01 55Hz



FUN 33 36 :

■ :

FUN DC-br freq.
33 0.50 Hz

■ : 0 60 Hz

■ :

FUN DC-br block
34 2.0 sec

■ : 0.5 5 sec

■ :

FUN DC-br time
35 0.5 sec

■ : 0.1 25 sec

■ :

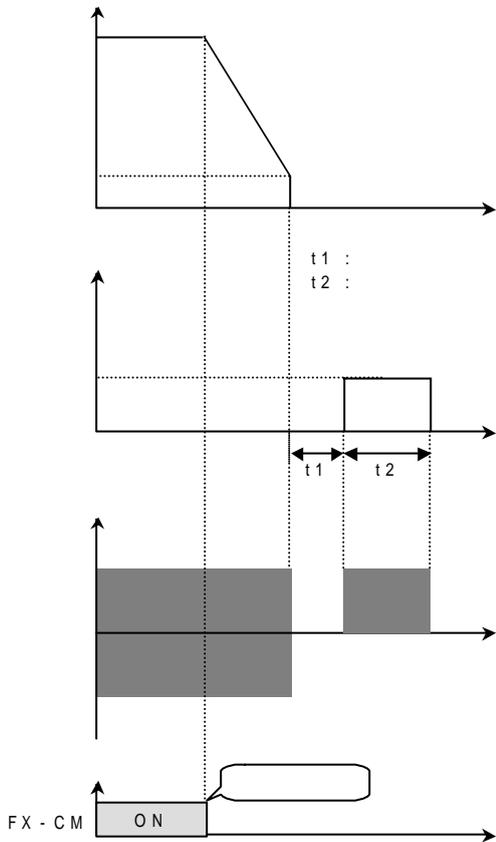
FUN DC-br value
36 1 %

■ : 1 20 %

■ : (FUN 15)

가

가



:
,
0

가

FUN 37 40 :

- :

FUN	Slip compen.
37	--- No ---
- : No , Yes

- :

FUN	Rated slip
38	5.00 Hz

- : 0 5 Hz

- : (r m s)

FUN	M-rated cur.
39	121.5 A

- : 0.1 999 A

- : (r m s)

FUN	No-load cur.
40	4.0 A

- : 0.1 300

- :

$$f = \frac{\text{---}}{\text{---}} \times$$

$$= \text{---} +$$

FUN 41 :

FUN	Inv Capacity
41	SV037iH-4U

- : SV030iH-2U, SV037iH-2U,
 SV045iH-2U, SV055iH-2U, SV030iH-4U,
 SV037iH-4U, SV045iH-4U, SV055iH-4U,
 SV075iH-4U, SV090iH-4U, SV110iH-4U,
 SV132iH-4U, SV160iH-4U, SV220iH-4U,

FUN 42, 43 :

■ :

FUN	Retry number
42	2

■ : 0 10

■ :

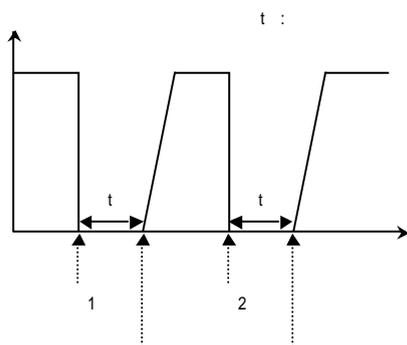
FUN	Retry time
43	1.0 sec

■ : 0 10 sec

■ :

가

, M/C Fail, BX



가
30 가
가

FUN 44 : (A, B, C)

FUN	Relay mode
44	Retry 0

■ : Retry 0, All Trips, LV+Retry 0
LV+All Trips

■ :

Retry 0

가 0

가

가 0

(LV), M/C Fail, (BX)

All Trips

가

(LV), M/C Fail, (BX)

LV+Retry 0

M/C Fail

가 0

가

0

(BX)

LV+All Trips

M/C Fail

가

(BX)

FUN 45, 46 :

FUN	Stall mode
45	Acc+Dec+Std

- : None, Acc, Steady, Acc+Steady, Dec, Acc+Dec, Dec+Steady, Acc+Dec+Std

- :

FUN	Stall level
46	150 %

- : CT : 30 ~ 150 %
VT : 30 ~ 110 %

- :

가

cur.) : FUN39 (M-rated)

가 (Acc) 가

가

(Steady)

가

가

(Dec)

가

가 +

가 ,

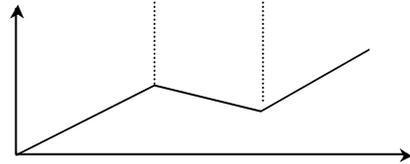
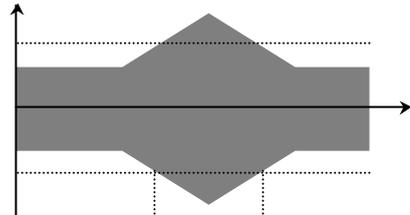
가 +

가 ,

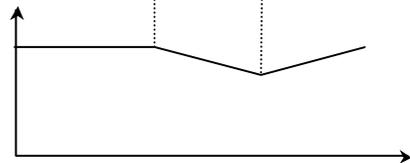
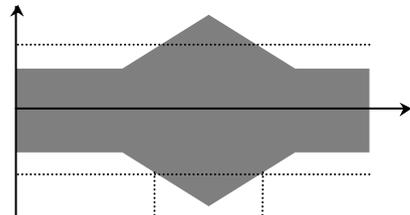
+ ,

가 + +

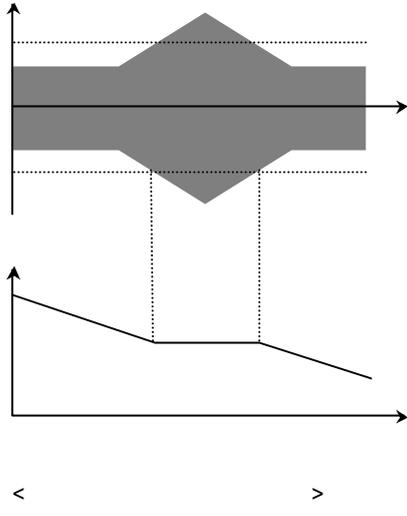
가 , ,



< 가 >



< >



FUN 47,48 :

■ :

FUN	OL level
47	150 %

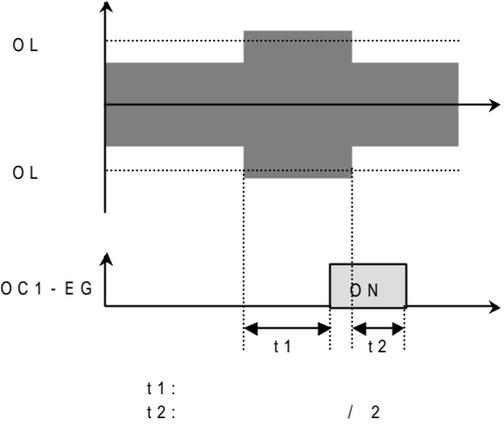
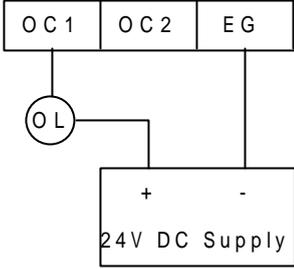
■ : CT : 30 150 %
VT : 30 ~ 110 %

■ :

FUN	OL time
48	10.0 sec

■ : 1 30.0 sec
■ : 가

■ : , Q1(I/O)
07) (OL) .
50 mA , DC 24V,



FUN 49,50 :

■ :

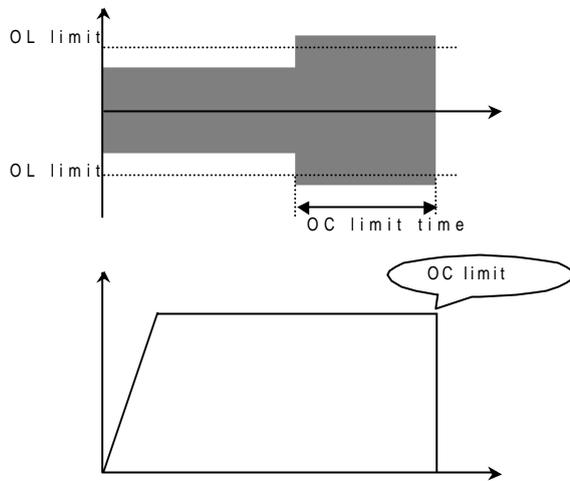
FUN	OC lim. level
49	160 %

■ : CT : 30 200 %
VT : 30 ~ 150 %

■ :

FUN	OC lim. time
50	60.0 sec

■ : 0 60 sec
■ : 가
()



FUN 51 ~ 53 : (ETH)

- :

FUN	ETH select
51	--- No ---
- : No , Yes
- :

FUN	ETH level
52	150 %
- : 110 150 %
- :

FUN	Motor type
53	General
- : General , Special
- :
 가

- FUN 52 [] FUN 39 [] % , 1 가
- 가

, FUN 39
 FUN 39
 (100%)

- FUN 53 []

- General :

가

- Special :

- ETH :

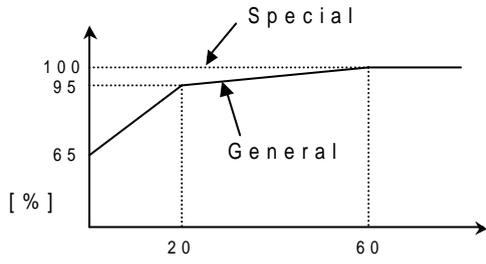
$$\frac{\left[\frac{[FUN 52]}{100\%} \right]^2 - 1}{\left[[FUN 39] \times \right]^2 - 1} \times 60$$

- 가

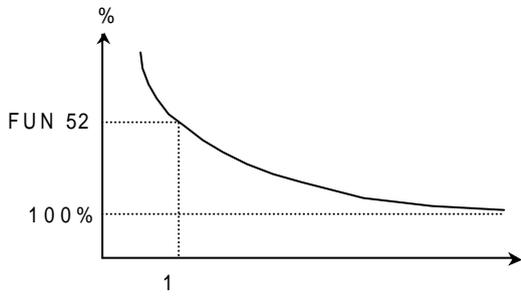
20Hz ,
 $(0.125 \times + 92.5) \div 100$

20Hz ,
 $(1.5 \times + 65) \div 100$

(I²T)



< >



< >

FUN 54 :

FUN	Pole number
54	4

■ : 2 12

■ :

FUN 55 58 :

FUN	IPF selection
55	---Yes---

■ : No , Yes

■ : 가

FUN	ss acc. time
56	20.0 sec

■ : 0.1 600 sec

■ :

FUN	ss dec. time
57	30.0 sec

■ : 0.1 600 sec

■ :

FUN	ss gain
58	100 %

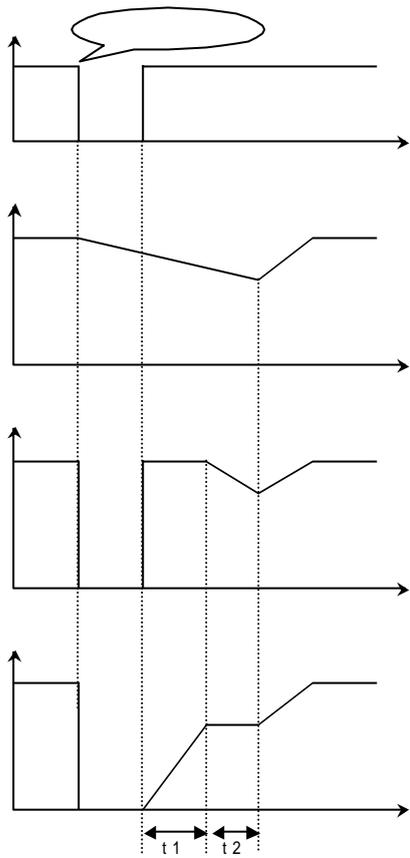
■ : 0 200 %

■ :

: 15msec

: 가

(GD),



t1: 가

t2:

FUN 59 :

FUN	RST-restart
59	--- No ---

■ : No , Yes

■ : Yes

가

가

가

가

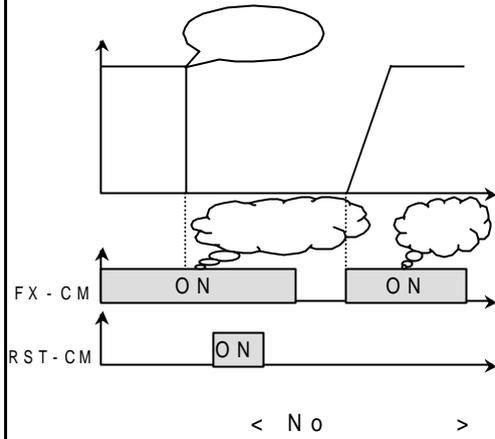
가

No

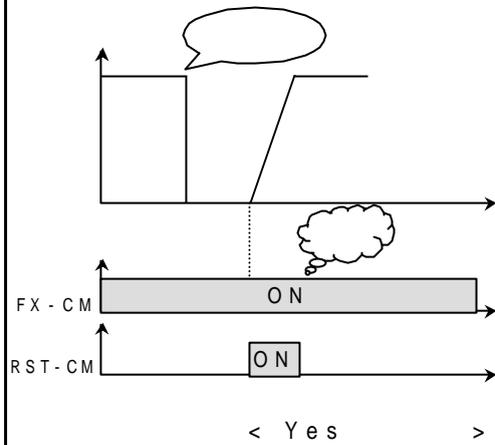
OFF

ON

가



< No >



< Yes >

FUN 60 :

FUN	Power on st
60	--- No ---

■ : No , Yes

■ : Yes

가

가

가

가

No

OFF

ON

가

FUN 61 :

FUN Carrier freq
61 6 kHz

- : 45 Page
- :
가 . PWM 가
- 가

FUN 62 72 : PI

- : PI

FUN PI - control
62 --- No ---

- : No , Yes

- : PI

FUN P - gain
63 10

- : 1 30,000

- : PI

FUN I - gain
64 50

- : 1 30,000

- : PI

FUN PI-fb select
65 I

- : I , V1 , V2

- : PI

FUN PI-fb flt. G
66 25 %

- : 1 ~ 100 %

- : PI

FUN PI-fb gain
67 100 %

- : 50 250 %

- : PI

FUN PI-fb bias
68 100 %

- : 0 200 %

- : PI

FUN PI-fb dir
69 Direct

- : Direct , Invert

- : (, , , ,)

: PI

FUN 65 ~

FUN 69
20 ~ FUN 24

: PI

FUN 20

: PI FUN 65

■ : PI

FUN	I_term scale
70	100 %

■ : 0 100 %

■ : PI

FUN 64

■ : PI

FUN	PI error dir
71	Direct

■ : Direct , Invert

■ : PI ()

■ : PI

FUN	Regul bypass
72	--- No ---

■ : No , Yes

■ : PI MMC

()

FUN

. Yes , PI
가 가

FUN 94 : CT / VT

FUN	CT / VT
94	Constant Trq

■ : Constant Trq, Variable Trq

■ : (CT)

Constant Trq , 가

(VT) Variable Trq

Variable Trq

()

VT

: Variable Trq 가

. Variable Trq

FUN 95 :

FUN	Para. read
95	--- Yes ---

■ : No , Yes

■ :

No

FUN 96 :

FUN	Para. write
96	--- Yes---

- : No , Yes

- :

No

FUN 97 :

FUN	Para. init
97	--- Yes---

- : No , Yes

- :

No

FUN 98 :

FUN	Para. lock
98	0

- : 0 255

- :

(12)

FUN	▷ Para. lock
98	0

(12) , 가

3. I/O

I/O 00 :

I/O	Jump Code
00	11

- : 01 65
- :

- : PROG Key 11
Enter Key

I/O	Aux2 output
11	COMM

Up, Down Key

I/O 01-06 :

- : P1

I/O	P1 input
01	SPD_L

- : P2

I/O	P2 input
02	SPD_M

- : P3

I/O	P3 input
03	SPD_H

- : P4

I/O	P4 input
04	ACCT_L

- : P5

I/O	P5 input
05	ACCT_M

- : P6

I/O	P6 input
06	ACCT_H

- : SPD_L , SPD_M , SPD_H
JOG , ACCT_L , ACCT_M
ACCT_H , UP , DOWN , HOLD ,
DIS_OPT , COMM_CONN
EXT_DCBR , EXT_TRIP ,
INTERLOCKS

- :

SPD_L , SPD_M , SPD_H

	0	1	2	3	4	5	6	7
SPD_L	0	1	0	1	0	1	0	1
SPD_M	0	0	1	1	0	0	1	1
SPD_H	0	0	0	0	1	1	1	1

0: inactive (off), 1: active (on)

: * 0 (FUN 01)가

Key :

Terminal :

* 1 7 I/O (13-19)

* (FUN 02)가

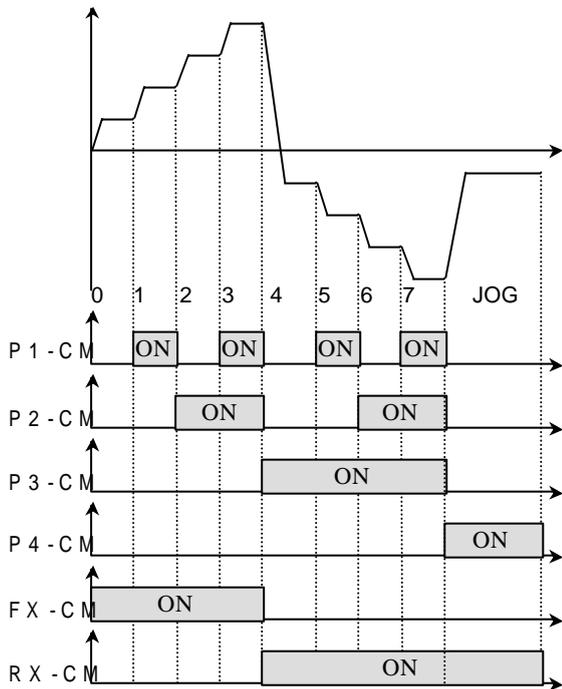
Key :

Terminal : FX,RX

) P1 SPD_L ,
P2 SPD_M ,
P3 SPD_H ,
P4 JOG .

0 DRV 00
 1 7 I/O 13 19
 I/O 12
 FX, RX

P1,P2,P3,P4,FX,RX



<< >>

JOG
 I/O 12

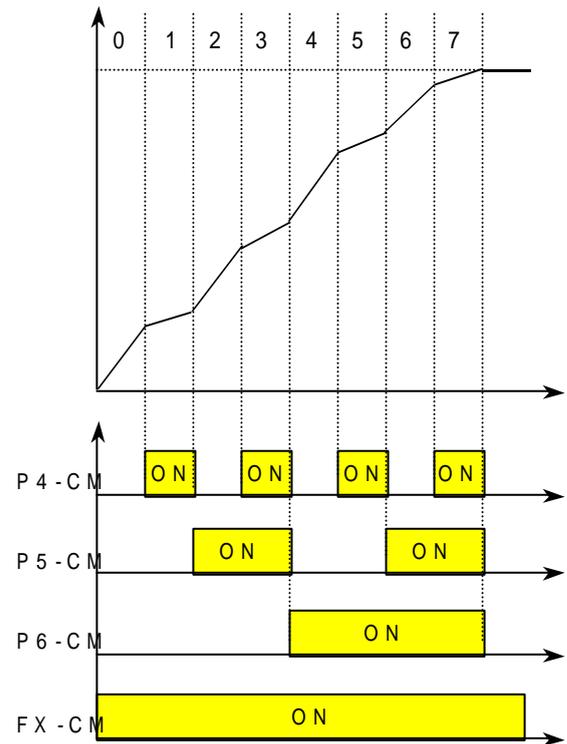
ACCT_L, ACCT_M, ACCT_H
 1 7 가

가

가	0	1	2	3	4	5	6	7
ACCT_L	0	1	0	1	0	1	0	1
ACCT_M	0	0	1	1	0	0	1	1
ACCT_H	0	0	0	0	1	1	1	1

: 0 가 DRV 01,02
 1 7
 가 I/O 20 33

) P4 ACCT_L
 P5 ACCT_M
 P6 ACCT_H
 P4,P5,P6 가

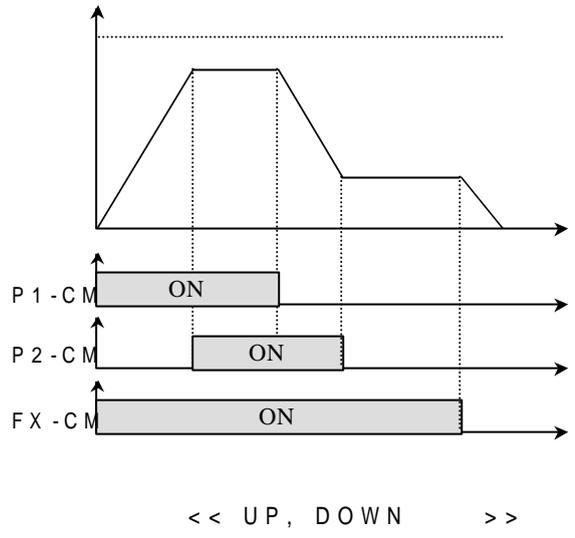


<< 가 >>

UP,DOWN up, down 가

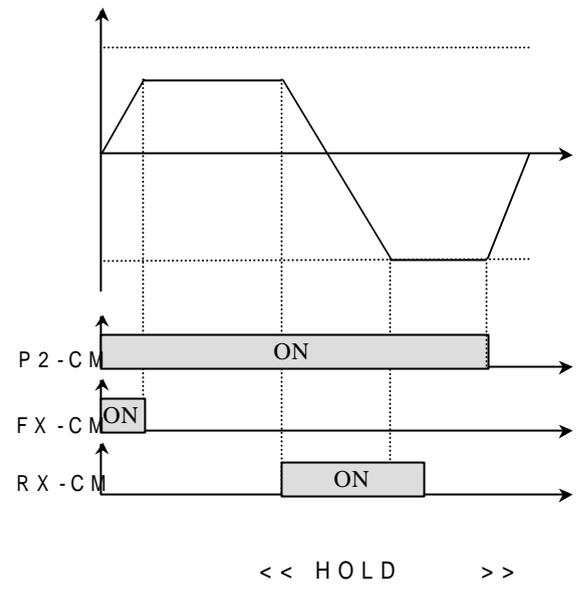
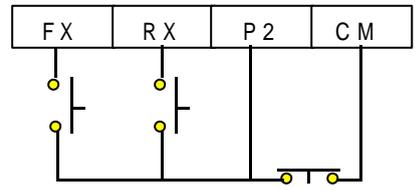
: 가

) P1 UP ,
 P2 DOWN ,
 P1, P2 UP ,
 DOWN .



HOLD 3 wire

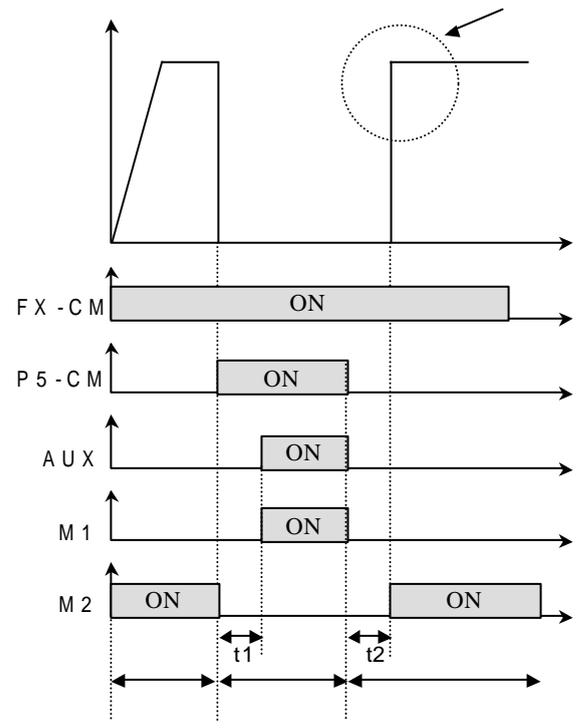
) P2 HOLD ,
 P2 HOLD



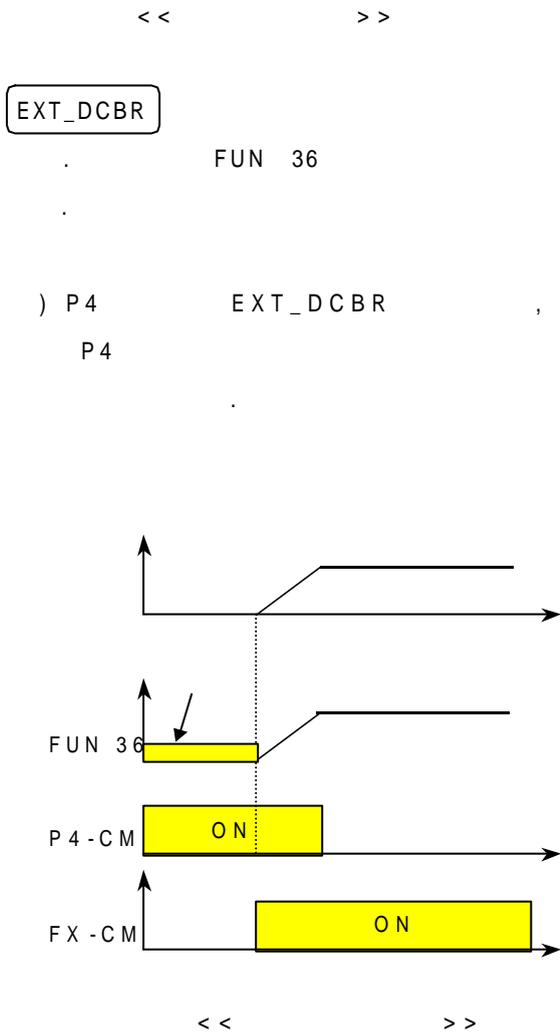
DIS_OPT Disable

COMM_CONN

) P5 COMM_CON , P5



t1, t2: 500msec (interlock time)



EXT_TRIP

:

:

INTERLOCKS MMC

I/O 07 11 :

■ : OC 1

I/O OC1 output
 07 FST_LO

■ : OC 2

I/O OC2 output
 08 FDT_HI

■ : OC 3

I/O OC3 output
 09 OL

■ : AUX 1

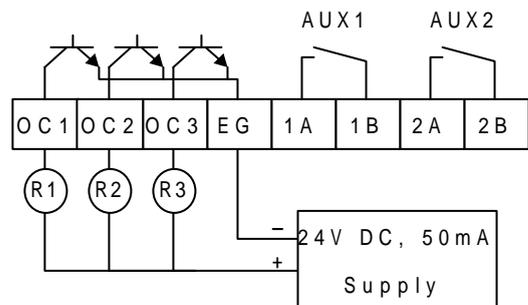
I/O AUX1 output
 10 Comm

■ : AUX 2

I/O AUX2 output
 11 Comm

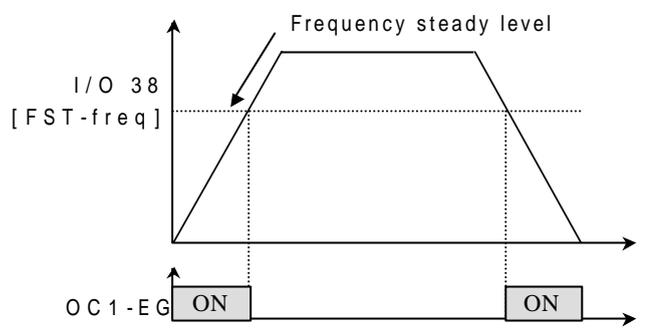
■ : FST_LO , FST_HI
 FDT_HI , FDT_PULSE
 FDT_BAND , OL
 STALL , LV
 RUN , COMM
 STEP_L , STEP_M
 STEP_H

■ : OC1,OC2,OC3
 , AUX 1,2(1A, 1B, 2A, 2B)



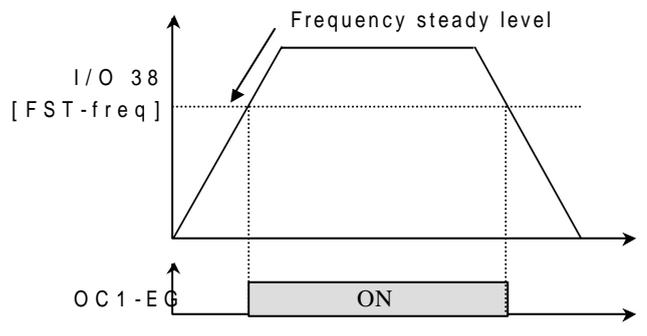
<< >>

FST_LO () I/O 38 FST



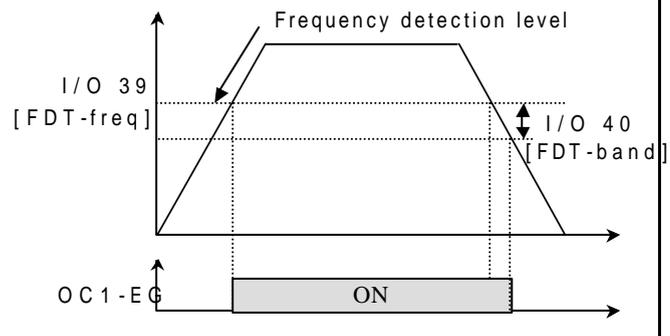
<< OC1 FST_LO >>

FST_HI() I/O 38 FST



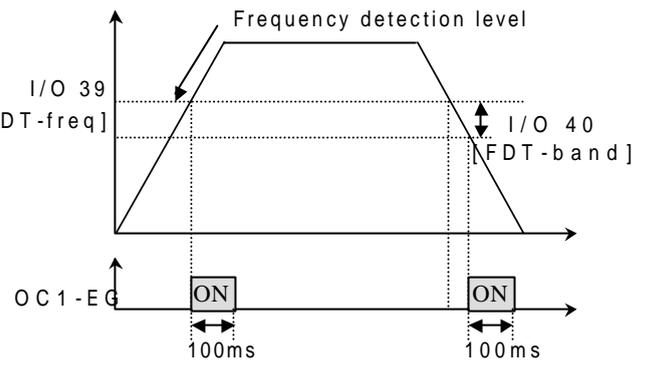
<< OC2 가 FST_HI >>

FDT_HI() I/O 39 FDT
, I/O 40 FDT



<< OC3 FDT_HI >>

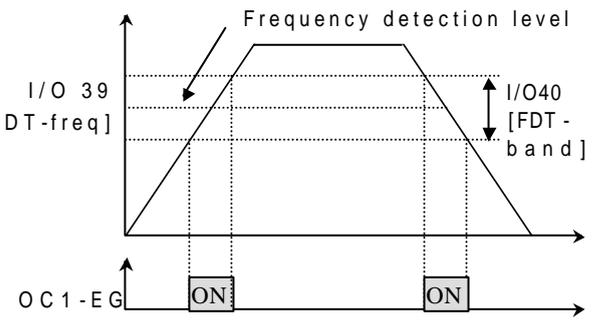
FDT_PULSE () I/O 39 FDT
, I/O 40 FDT
100msec



<< OC1 FDT_PULSE >>

FDT_BAND() I/O 40 FDT
가

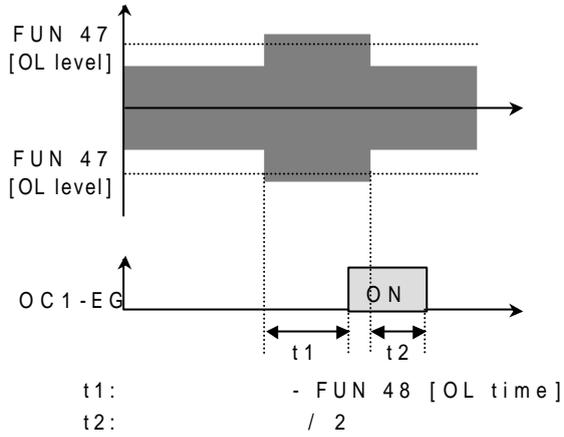
FDT 가 OFF



<< OC1 FDT_BAND >>

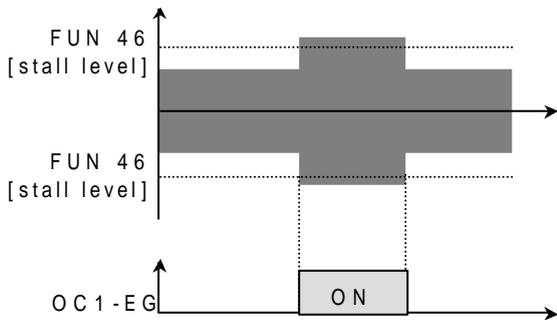
OL () 가
(FUN 47)
(FUN 48)

가
(FUN 48) 1/2 가 OFF



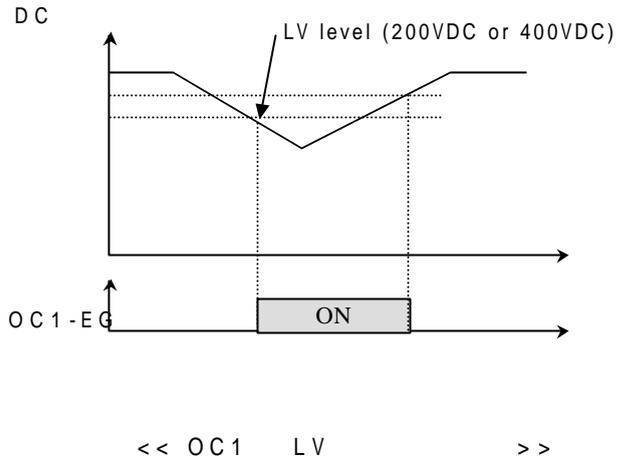
<< OC1 OL >>

STALL () 가 , ,

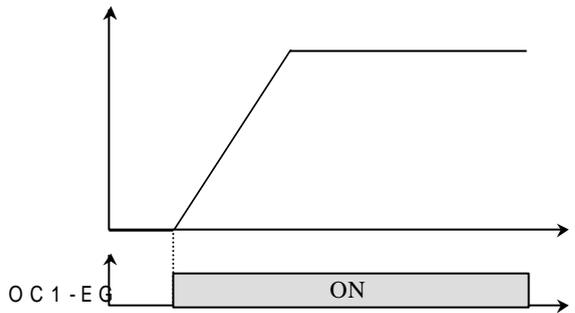


<< OC1 STALL >>

LV()



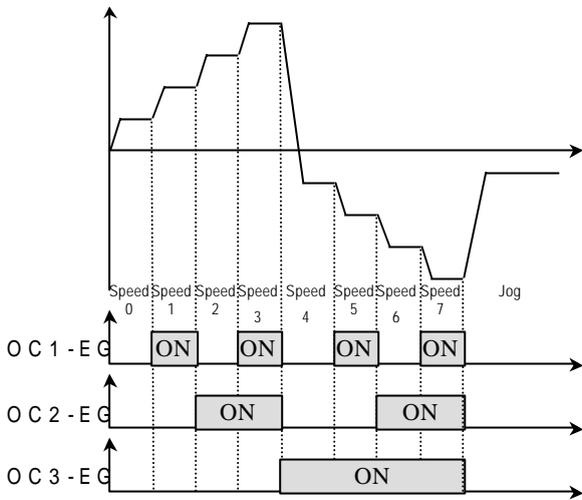
RUN () 가



<< OC1 RUN >>

COMM

STEP_L, STEP_M, STEP_H
binary



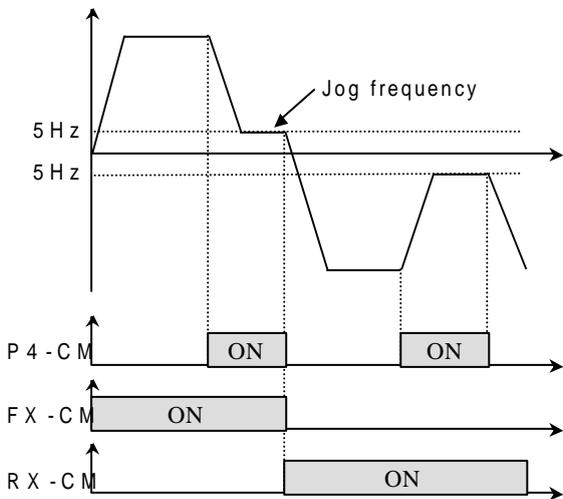
<< OC1 STEP_L, OC2가 STEP_M,
OC3 STEP_H >>

I/O 12 :

I/O Jog freq.
12 30.00 Hz

- : 0 ~ 400 Hz
- :

) I/O 04 P4 JOG



<< >>

I/O 13 19 :

I/O Step freq-1
13 10.00 Hz

⋮

I/O Step freq-7
19 37.00 Hz

- : 0 ~ 400 Hz
- :
- 7

I/O 20 33 : 가

I/O Acc. Time-1
20 1.0 sec

⋮

I/O Dec. Time-7
33 7.0 sec

- : 0 6000 sec
- : 가
- 7 가

I/O 34, 35 :

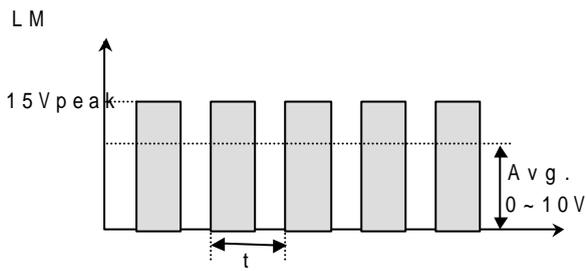
I/O LM meter
34 Voltage

- : Voltage , Current

I/O LM adj.
35 100 %

- : 0 ~ 120 %
- :

0 ~ 10V
I/O 35



(1/t) = 1.8kHz

10V
I/O 34 current
150%
10V

duty (%) :

$$\left(\frac{\text{pulse width}}{\text{period}} \right) \times 2/3$$

$$\left(\frac{\text{pulse width}}{\left(\frac{10V}{1.5} \right)} \right) \times 2/3$$

, VT :

$$\left(\frac{\text{pulse width}}{\left(\frac{10V}{1.1} \right)} \right) \times 2/3$$

(LM - CM) :

$$\left(\frac{\text{pulse width}}{\text{period}} \right) \times 10V$$

$$\left(\frac{\text{pulse width}}{\left(\frac{10V}{1.5} \right)} \right) \times 10V$$

, VT :

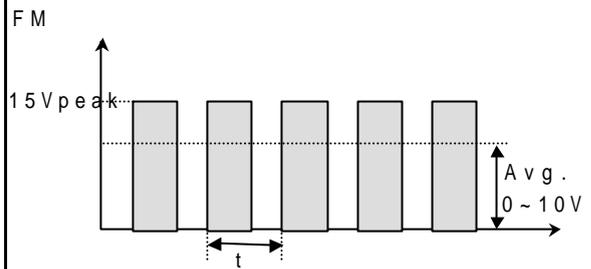
$$\left(\frac{\text{pulse width}}{\left(\frac{10V}{1.1} \right)} \right) \times 10V$$

I/O 36 :

I/O	FM adj.
36	100 %

- : 0 ~ 120 %
- :

0 ~ 10V
I/O 36



(1/t)

10V

(1/t) :

$$\left(\frac{\text{pulse width}}{\text{period}} \right) \times 1.8\text{kHz}$$

duty (%) :

$$\left(\frac{\text{pulse width}}{\text{period}} \right) \times 2/3$$

(FM - CM) :

$$\left(\frac{\text{pulse width}}{\text{period}} \right) \times 10V$$

I/O 37 :

I/O	Io adj.
37	100 %

- : 0 ~ 120 %
- : 4~20mA

4mA,

20mA

가

I/O 37

I/O 38, 40 :

■ :

I/O	FST - freq.
38	0.05 Hz

■ : 0.5 400 Hz

■ :

I/O	FDT - freq.
39	60.00 Hz

■ : 0.5 400 Hz

■ :

I/O	FDT - band
40	1.00 Hz

■ : 0 30 Hz

■ :
 (FST - freq),
 (FDT - freq)
 (I/O 07-11)

I/O 41, 42 :

■ :

I/O	Mul. factor
41	100

■ : 0 999

■ :

I/O	Div. factor
42	100

■ : 1 999

■ : DRV 04 가

FUN 54

$$= \frac{120f(\quad)}{P(\quad)}$$

I/O 43, 44 :

■ :

I/O	Ter. input
43	1000000001

■ :

I/O	Ter. output
44	10001

■ : FX, RX, P1 P6
 OC1, OC2, OC3

P6	P5	P4	P3	P2	P1	X	X	RX	FX
1	0	0	0	0	0			0	1

0 : Circuit inactive

1 : Circuit active

AUX2	AUX1	OC3	OC2	OC1
1	0	0	0	1

I/O 45 : S/W version

I/O S/W version
45 2.04

- : S/W version

I/O 46, 47 :

I/O Last fault1
46 OC trip

I/O Last fault2
47 OV trip

- :
- : Prog, Up, Down Key

I/O Last fault1
46 35.60 Hz

I/O Last fault1
46 325.7 A

I/O Last fault2
47 60.00 Hz

I/O Last fault2
47 147.6 A

I/O 48, 49 :

I/O Option 1
48 None

- : None, RS485, Modbus RTU, Fnet, Device Net

I/O Option 2
49 None

- : None, MMC

- :
- 가

RS485

RS485
RS485

Modbus RTU

Modbus RTU
Modbus RTU

Fnet

PLC (LG-GLOFA)
(1Mbps) 가

Fnet

MMC

MMC (Multi Motor Control)

MMC

Device Net

Device Net

Device Net

I/O 50 :

I/O	Inv. number
50	1

- : 1 - 31
- : RS485

I/O 51 :

I/O	Baud - rate
51	9600 bps

- : 1200, 2400, 4800, 9600, 19200 BPS
 - : RS485
- Baud -rate

I/O 52 :

I/O	Comm. timeout
52	10.0 sec

- : 0 - 60 sec
- :

Time

Out error BX
0
Time Out error

I/O 53 : PG

I/O	PG slip freq.
53	5.00 Hz

- : 0 - 10 Hz

- : PG

I/O 54 : PG

I/O	PG. P-gain
54	10

- : 0 - 255
- : PG . PG

I/O 55 : PG

I/O	PG. I-gain
55	30

- : 0 - 255
- : PG . PG

I/O 56 : PG

I/O	PG. F-gain
56	100

- : 0 - 255
- : PG . PG

I/O 57 :

I/O	Enc. pulse
57	512 pulse

- : 100, 500, 512, 1000

1024, 2000, 2048, 4000 Pulse
 ■ : PG
 . PG
 가
 PG

I/O 58 :

I/O	DI mode
58	Freq.1

■ : None, Freq.1, Freq.2
 ■ : DI/DA . 12
 가

I/O 59 :

I/O	DA mode
59	Freq

■ : Freq, Voltage, Current
 ■ : DI/DA
 4-20mA

I/O 60 :

I/O	DA adj.
60	100 %

■ : 80 - 120%
 ■ : ()

() 4mA,
 () 20 mA

I/O 61 : Fnet

I/O	FN : St.	ID
61		1

■ : 1 - 63
 ■ : Fnet

I/O 62 : ID

I/O	DN : MAC	ID
62		0

■ : 0 - 63
 ■ : Device Net

I/O 63 :

I/O	DN : BaudRate
63	125 kBPS

■ : 125 kBPS / 250 kBPS / 500 kBPS
 ■ : Device Net

I/O 64 :

I/O	DN : Out Inst
64	Instance 20

■ : 20 / 21 / 100 / 101

- : Device Net

I/O 65 :

I/O	DN	In	Inst
65		Instance	70

- : 70 / 71 / 110 / 111
- : Device Net



SV - iH

1.

가 , 가 P - N DC 30V
가
PWM

2.

2.1

- 1) 가 가.
- 2) 가.
- 3) 가.
- 4) 가.
- 5) 가.

2.2

- 1) 가 :
- 2) :
- 3) 가.
- 4)
- 5)
- 6) PCB 가.
- 7) PCB 가.



2.3 가

1) 가

가

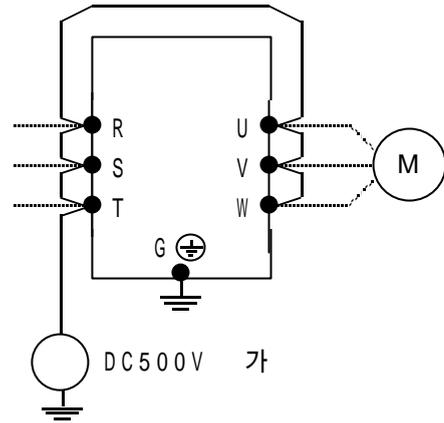
2) () .(

.)

3) 가

가

.(DC 500V 가 .)



	(H/W) 가 200%	DRV Fault 05 OC trip
	가	DRV Fault 05 OV trip
()	가 160%,	DRV Fault 05 OC limit
	50% 가	DRV Fault 05 GF trip
FUSE	IGBT 가	DRV Fault 05 Fuse open
	가	DRV Fault 05 Over heat
	: 150% 1	DRV Fault 05 ETH
IGBT ARM	가 IGBT	DRV Fault 05 SC trip
()	가	DRV Fault 05 EXT trip
		DRV Fault 05 LV trip
	, BX 가 BX 가 OFF	DRV Fault 05 BX
	0.5) 가 (150% 1 , 200%	DRV Fault 05 Inv OLT
M / C	M/C CVT 가	DRV Fault 05 M/C Fail

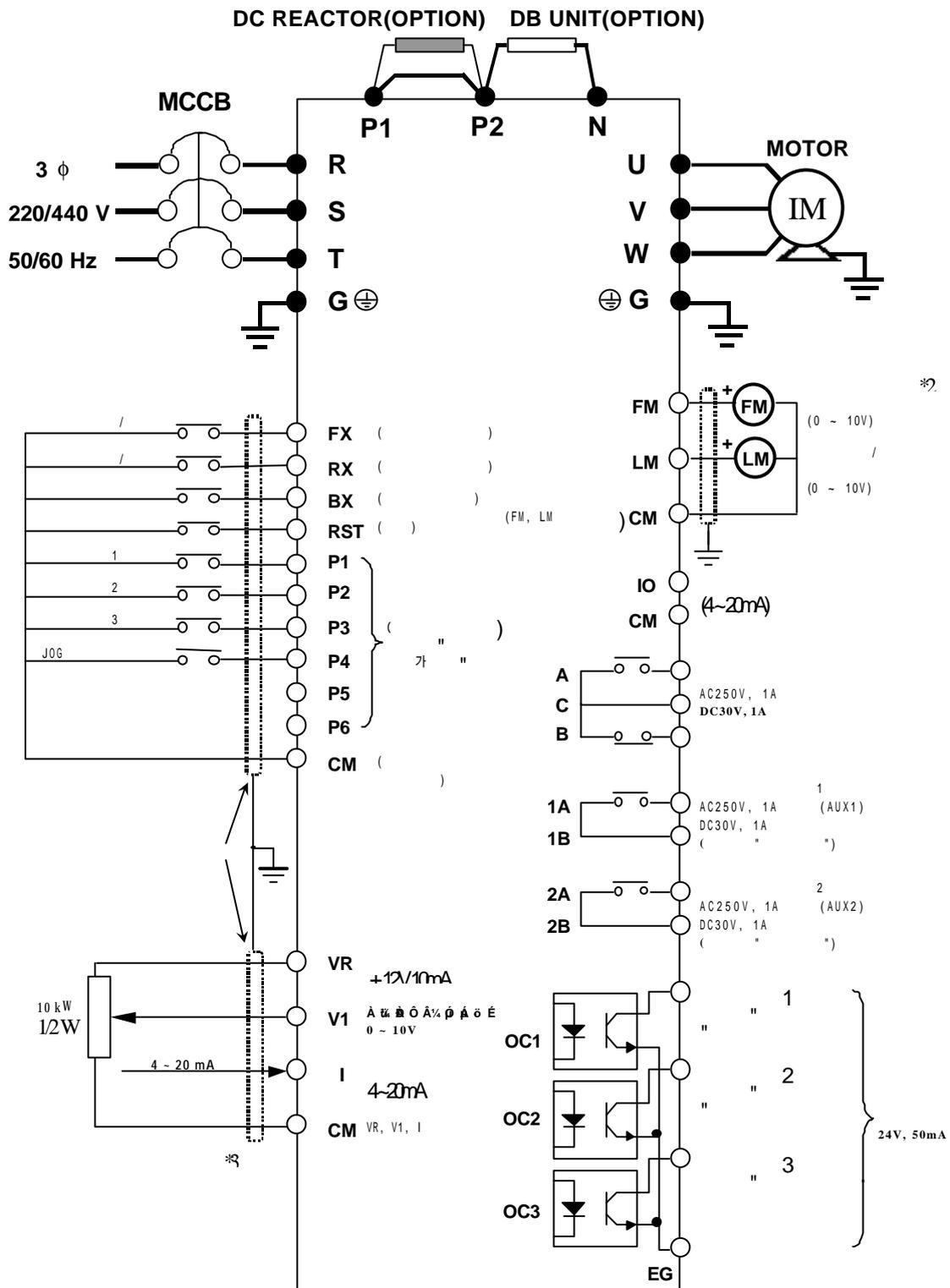
	1) GD ² 가 2) 가 3) Free Run 가	1) 가 2) 3)) IGBT
	1) GD ² 2) 가 3)	1) 2) UNIT 3)
()	1) 가 2) 3) V/F	1) , UP 2) 3) V/F
	1) 2) 3) On - Off	1) 2) 3)
FUSE	1) 2) 3)	1) Fuse 2)) Fuse Open Trip IGBT가 3) 가
	1) 2) 3) 가	1) 2) 3) 40
	1) 가 2) ETH 3) 4) V/F 5)	1) 2) ETH 3) 4) V/F 5)
()		
	1) 2) .(, 가 3))	1) 2) 3)
	1) 가 2)	1) , UP 2)
M / C	3) M / C 4) CVT	3) M / C 4) CVT



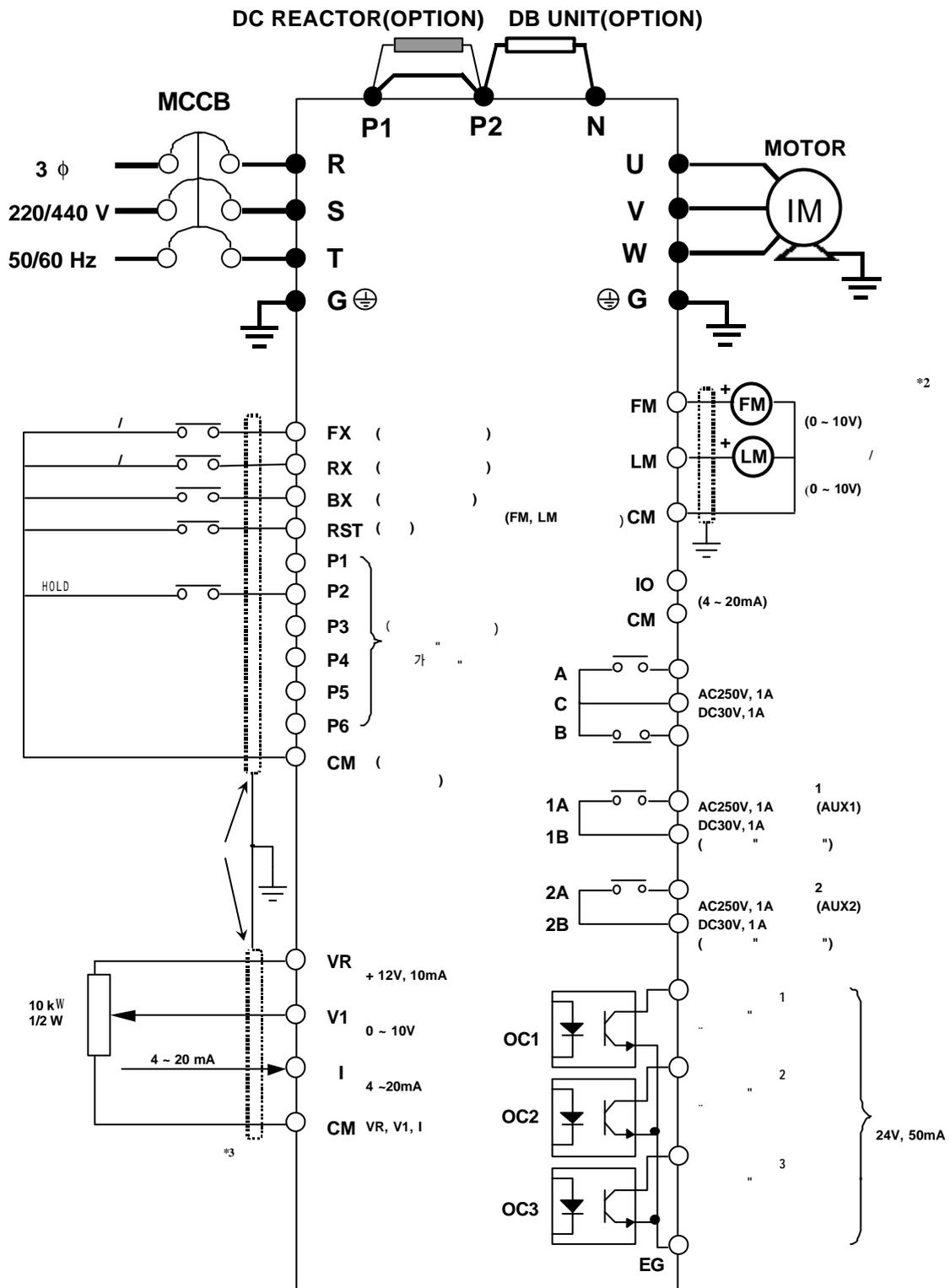
Reset

가

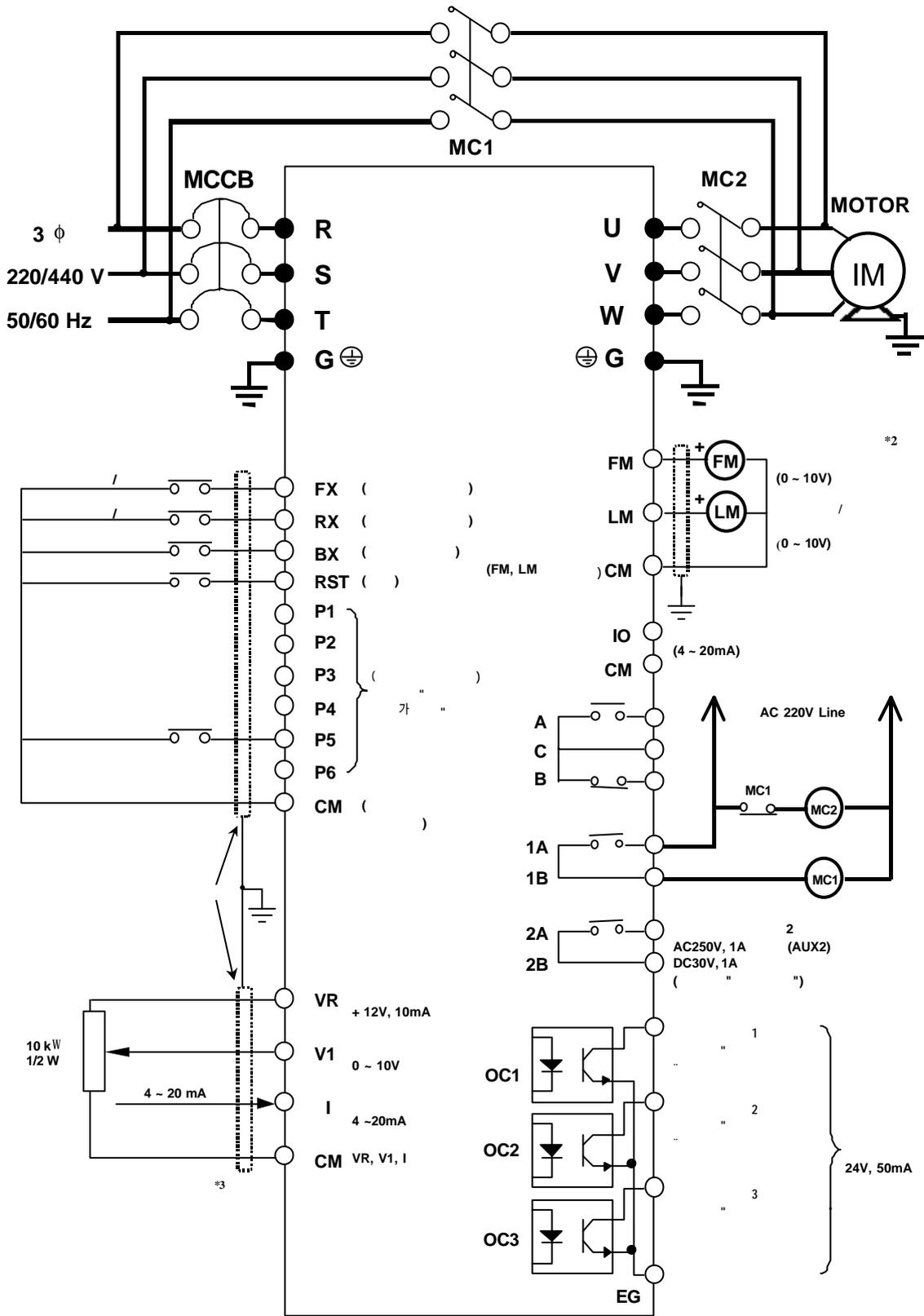
A/S

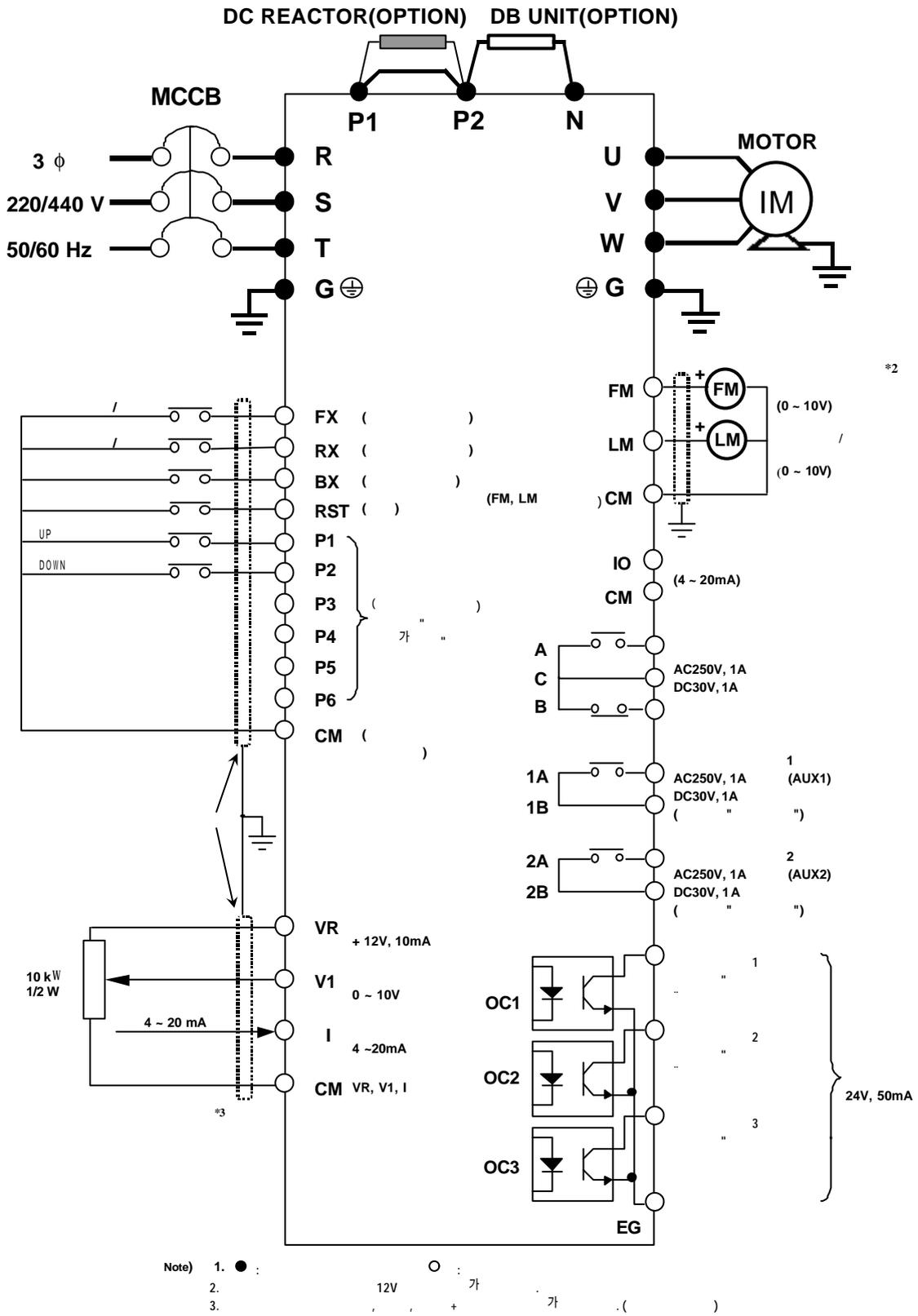


Note) 1. ● : 12V 가 .()
 2. ○ : 가
 3. , + 가 .()



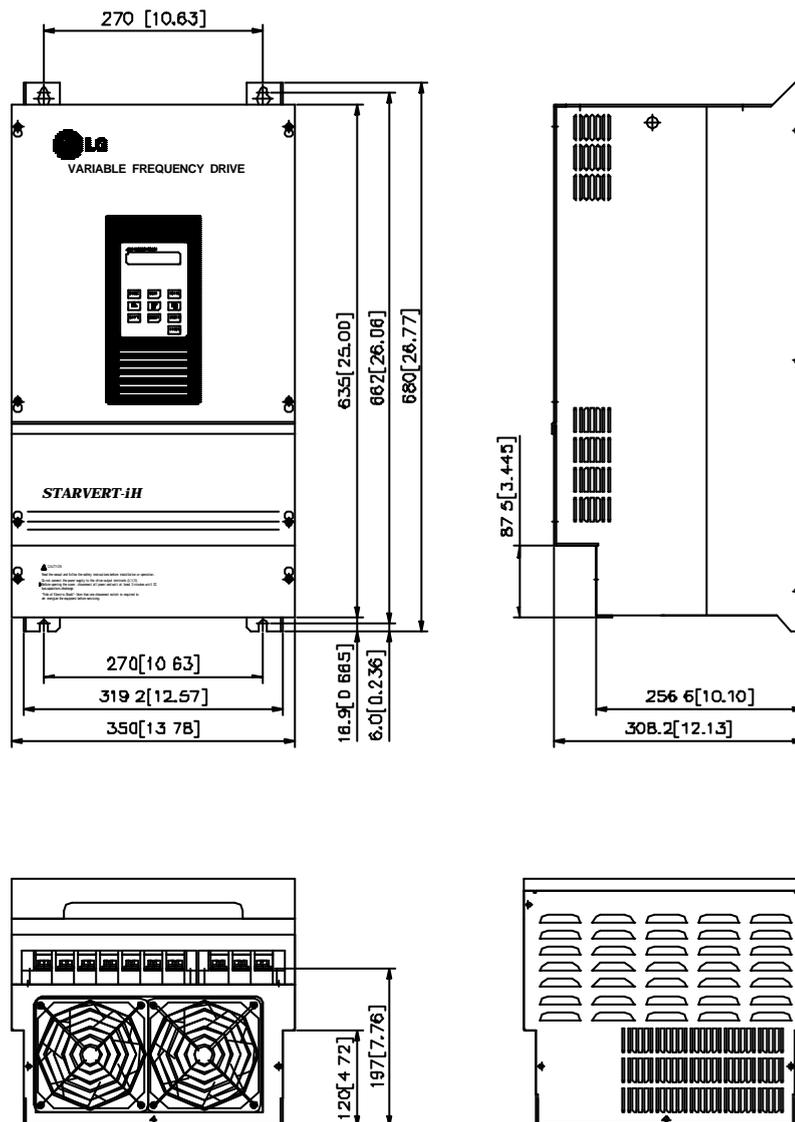
Note) 1. ● :
2. ○ :
3. 12V 가
+ 가 . ()



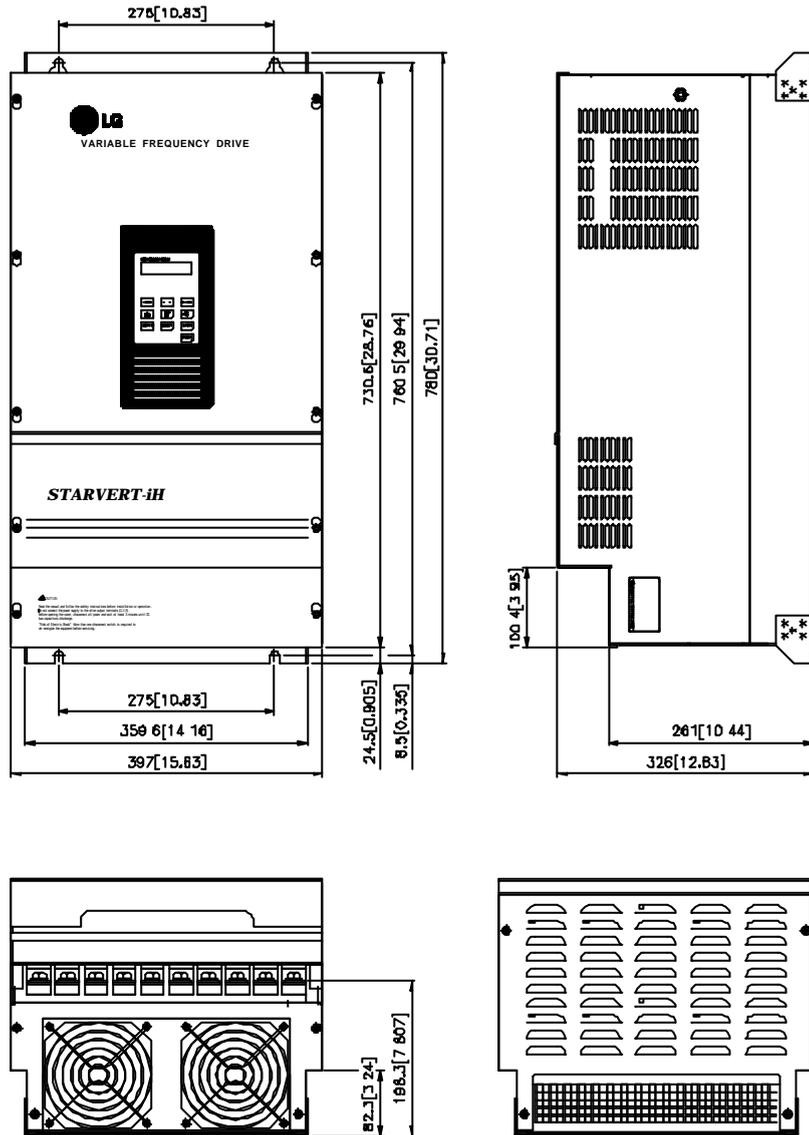


: mm [inch]

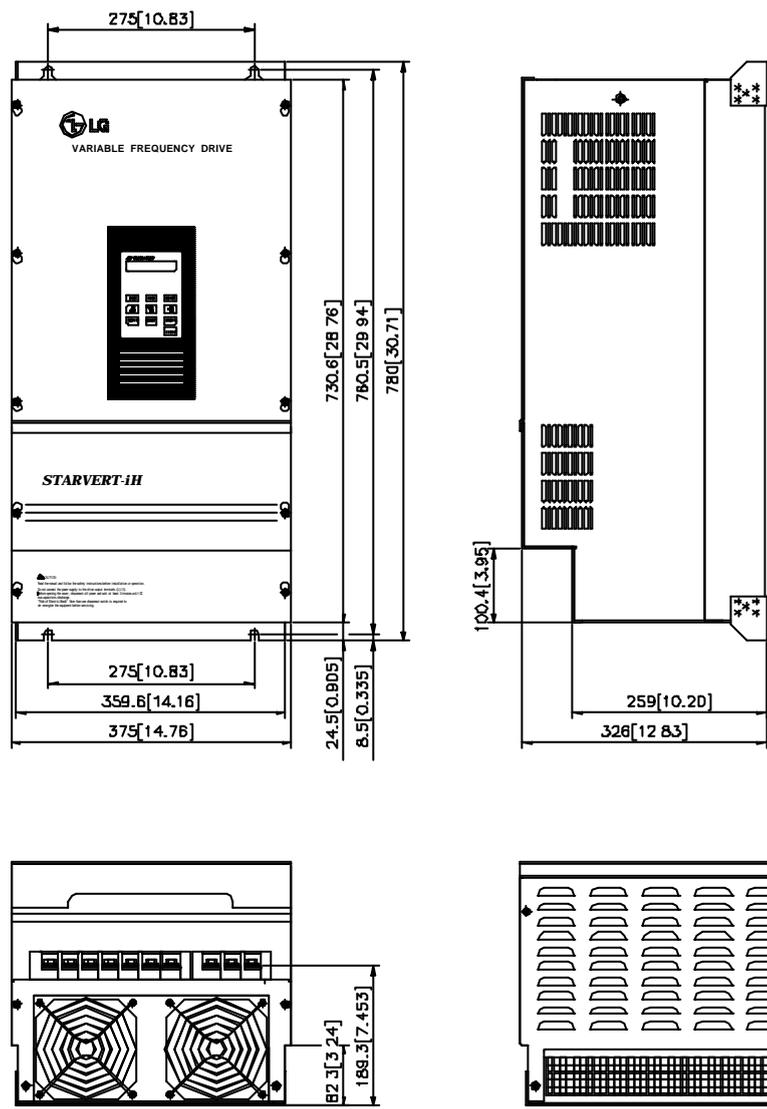
1. SV030, 037iH-2U, SV030, 037iH-4U



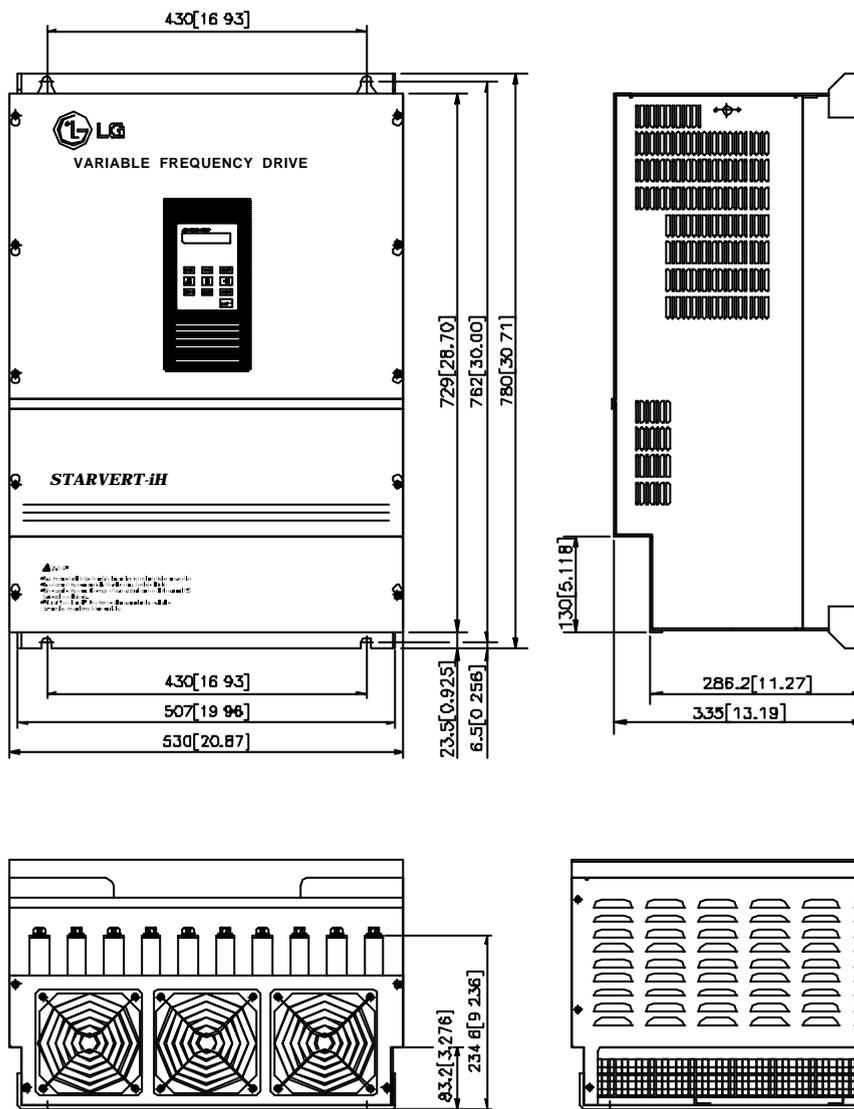
2. SV045, 055iH-2U



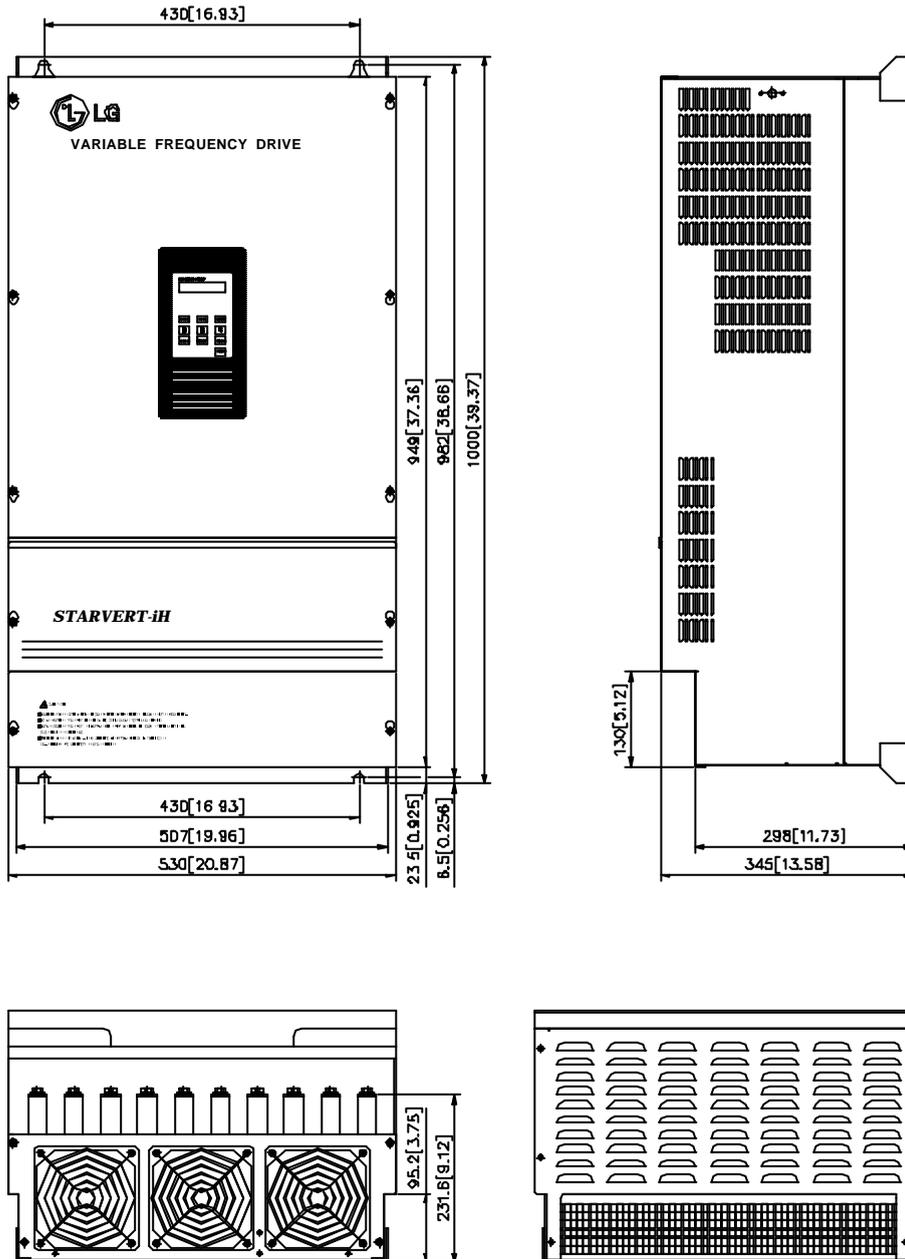
3. SV045, 055, 075iH-4U



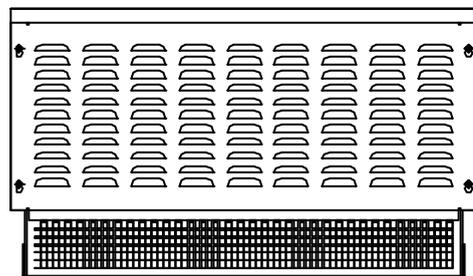
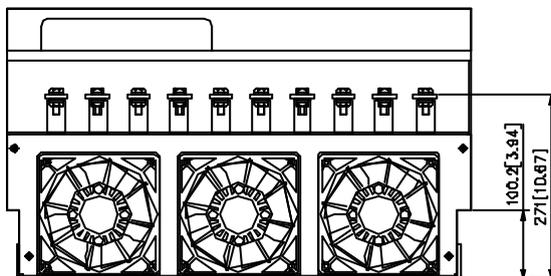
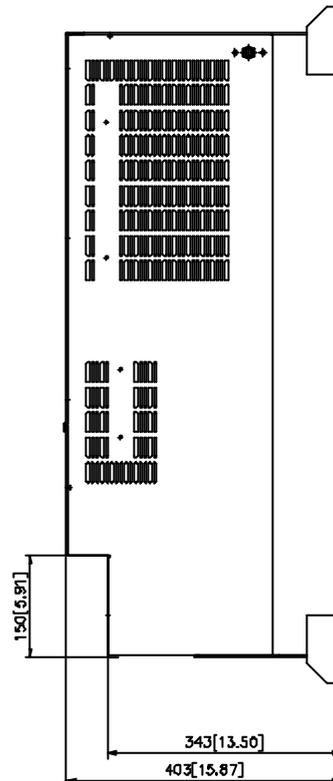
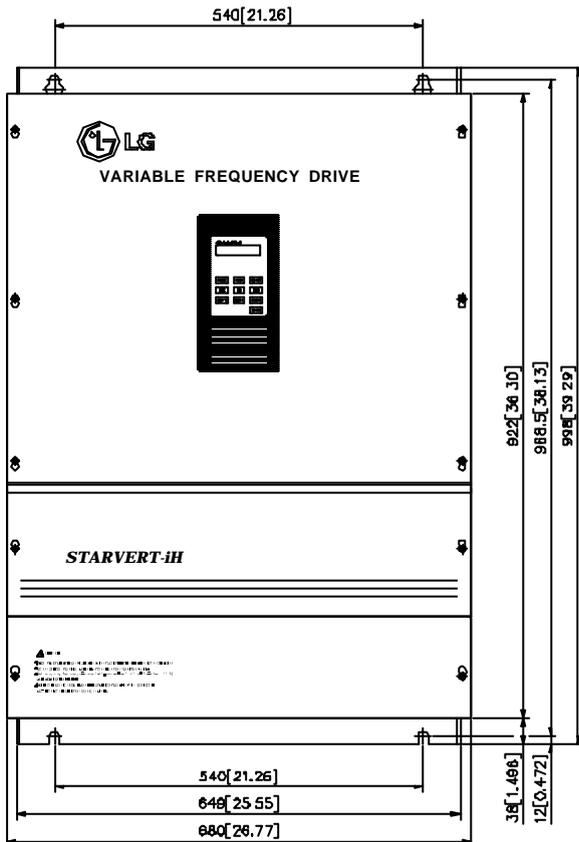
4. SV090, 110iH-4U



5. SV132, 160iH-4U



6. SV220iH-4U





	LG		
	SV - iH		
	SV <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> iH <input type="checkbox"/> U		

LG	12	가
18	,	.

-
-
- (, , 가 ,)
- 가
- LG
-

LG (<http://www.lgis.com>) 가



		Version No.		
1	2001. 3	2.00		
2	2001. 9	2.02	S/W version up	
3	2002. 5	2.04	S/W version up	

