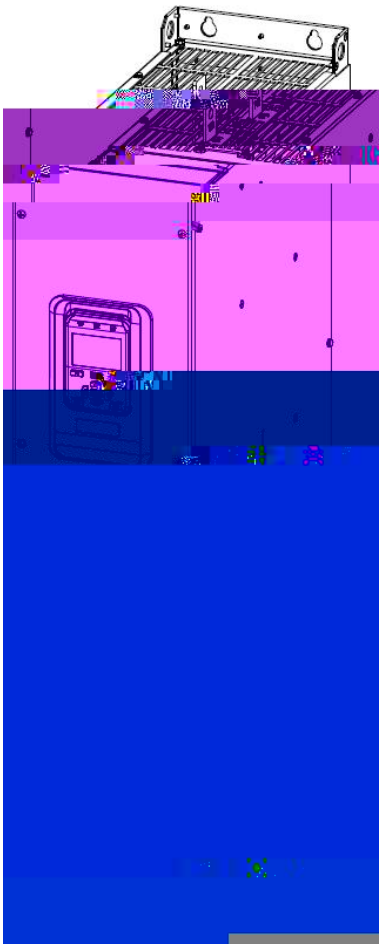
D⌐ HF680N ↓

DC-DC ﺷﺒﺞ ﺝ ﻕ й

' V1.00

м ˋE˜

Wuhan Guide Technology Co.,Ltd.



ĭ h DC-DC

1. ŋ Ԋ
   1.1 ˜
   1.2 ˙
   1.3 Ԋ
2.
   2.1
   2.2 w
   2.3 Ð
   2.4 ĭ h DC-DC ĩ ˚ ę Ũ ė
3. ˚ ę Ḥ
   3.1 ˜ Ь
   3.2 ˚ ę
   3.3 Ð
   3.4 [illegible]
4. Ь 0ó(ñ …%” PÐ
   4.1 DQ-DC Ð˚ ę à Ũ ĭ
   4.2 [illegible] í4ïm ñ Y
   4.3˚ ę Φ Φ

11. Ь Ḡ Ī

11.1 Ḡ Ī ¿

11.2

11.3

11.4 Ð

11.5 Ь Ḡ ќ

Hu

1˜ Ḡ

ضي Ţ Ψ Ḡ ضر ر ˘ ą Ḡ ˆ RCD˜

ڜ RCM˜˘ ą Í ڈ Ḡ ˆ RCD˜

ڜˆ RCM˜ Â

ضي ῡ ت B مقم Ḡ ڜˆ RCD˜ ˘ ضي Ḡ ڜˆ RCD˜

Ω˗ غ ˆ ₣ غ ضر ˘ Í L

₣ RCD˘ ▼ φ RCD Â

2˜ ۱ ۷ ۲ ą

ضي ﻱ Ţ ¨Ḥ ƀ ۱ مخ ң ą ° ج˘ ° ج ṗ شخ Â

˘ ą ٦ ۱ ۱ Í ۱ U ˜ ⌡ Ĭ h DC-DC Í ڜ Â

1.2 ﻣﻮ

(1) ج ﻫ ǐ h - ǐ ﺟ G ǐ h ˜ ﻳﺶ Â

(2) ﻏ ǐ h DC-DC ǐ ﺟ ˆ ˜ H` ˆ à˜ L

à à ŋ ǐ ת ~ ˘ ˘

2.4 ĭ h DC-DC ĭ ڪ ج Ũ غ

ƿ ۔

1. ... ¬ 2 ضي ĭ h DC-DC ĭ ک ک ƀ / ⁘ ƀ ƀ ĭ ƿ Ŀ Ţ ˇ ˘
˜ Ψ H¯ ¬ H °° Â7 ضي à à ę
Ì ... F ʒ¬ 2 ˜Ḥ ضي / ⁘ ƀ Â
2. ˜ 7 ˜Ḥ

ا ح ا ا Â

2.4.2

ضي ṗ˘ ғ ṗ Â

ѽ ˘ G 95%RH˘ Ь¨Ḥ o ˘ Â

Ⓟ˜ ضي Â

ѽ Â

à r ع r Â

à à ĭ Â

˘ Â

ا G 1000 ˘ Â 1000 شي ˘ ₽ 100

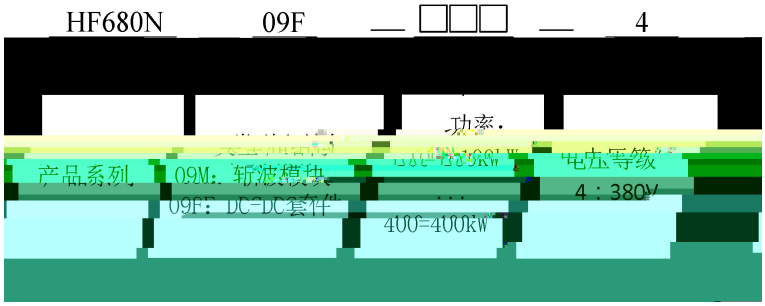
ا 1% ˘ ا ĭ ₹ Â 3000 h ٨

٣ Â

ˈ شي ,˘ ذ ą ث Â

3. ﾟﾟ ﾂ Ḥ

3.1 ﾒﾏ ﾃ

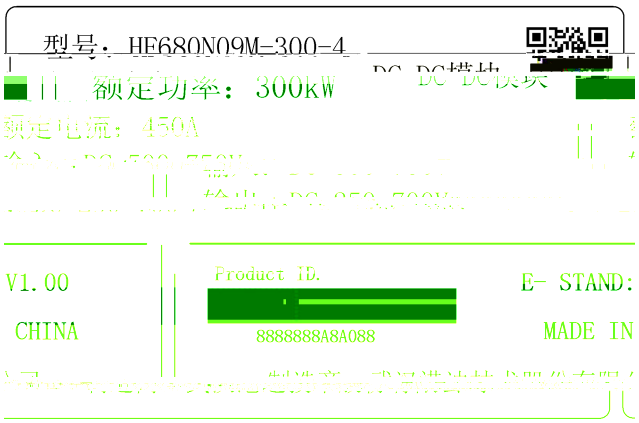


3.1.1 ﾟﾟ ﾂ ﾒﾏ ﾂ O

A	ﾟﾟ ﾂ ↓' 680N ↓
B	ﾟﾟ ﾂ ﾒﾏ' 09M' DC-DC ﾅﾂ 09F' DC-DC Ð
C	W' ' 3 β
D	ﾉ ' ﾉ ﾋ 400V

3-1' ﾟﾟ ﾂ ﾒﾏ

3.1.2 ﾟﾟ ﾂ



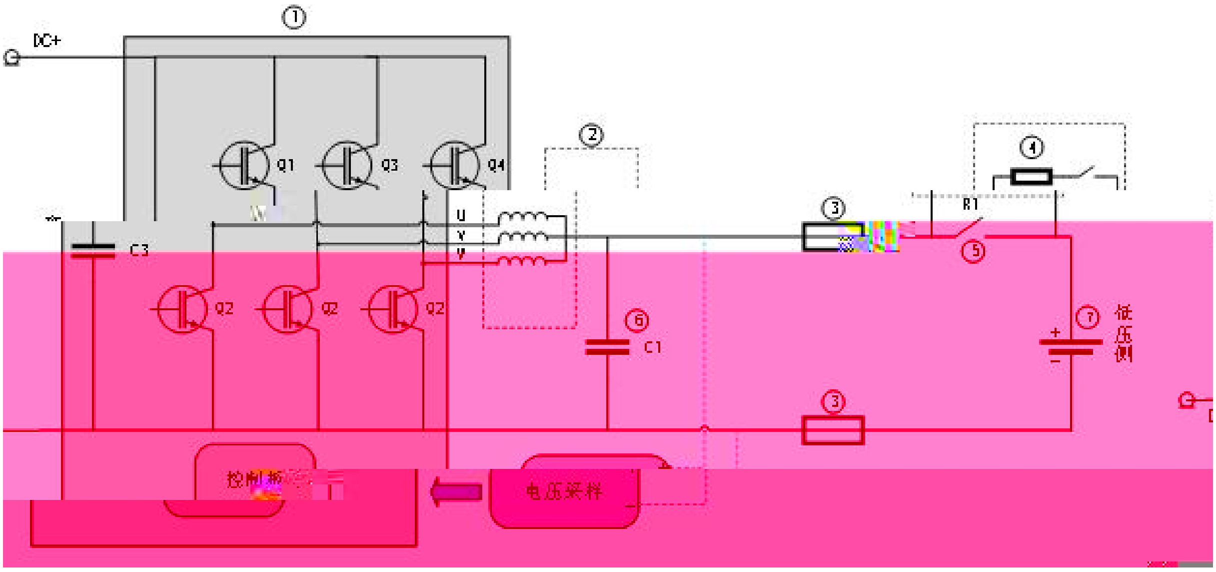
3.1.3 DC-DC Ð ﾒﾏ ﾇ

DC-DC Ð ﾒﾏ	Ơ ﾅﾂ	ᵕ ﾉ V_{DC} V˜	ᵕ (A)	W˜ (kW)	ᵕ ﾉ V_{DC}(V)
HF680N09F-100-4	HF680N09M-100-4	250-700	150	100	500-750
HF680N09F-200-4	HF680N09M-200-4	250-700	300	200	500-750
HF680N09F-265-4	HF680N09M-265-4	250-700	400	265	500-750
HF680N09F-300-4	HF680N09M-300-4	250-700	450	300	500-750
HF680N09F-400-4	HF680N09M-400-4	250-700	600	400	500-750

ʊ جح ɻ ʊ Â

3.3.2

HF680N09F ↓ DC-DC Đ Ɏ̧'



يجـ 1-2 HF680N09F DC-DC Đ يجـ

˜	ɯ			
1	HF680N09M ɯ شجـ	1		
2	ك	3		
3	ɣ ɻ ʊ ك	-	ɧ	G Ḡ
4	˜Ḫ	1		ɥ ᴸ ˜Ḫ
5	₮ h ك	-		˜ ₮ h ك
6	ك	-		
7		-	ɧ	˘ ˜ ầ

' ˘ Đ DC-DC ˗ɻ˜ ˘ ˘ ˜ ắ ҉ Ʈ ɤ ɯ Â

ϸ ľ Ŀ ك Đ ɥ ₮ ʎ ˗ɻ ' ľ Ŀ ك Đ ض ' Ɏ̧ ˘ Ѣ ‰ ك ü ˘ ˜ ɻ Â ľ ɧ Ŀ ك Đ ض ' Ɏ̧ ˘ ك Đ Â

ϸ G ˘ شجـ ˜ ɻ G ₮ ɻ˘ ɣ ɧ ˜ ɥ ɻ ʊ˘ ₮ ɥ ɣ ɻ ʊ Â ɽ ˜ ɻ ʊ h ₮ ɣ ɻ ʊ ɥ h˘ ɣ ˘ ɽ ₮ ɣ ɻ ʊ h ˜ ɻ ʊ ɥ h˘ ɣ Â

3.3.3 Ĩ قمـ D˧

DC
=
AC
~
DC
=
AC
~
DC
=
AC
~
DC
=
AC
~
DC
=
DC
=
M
M

3.4 ﻢﻤﺼﺗ ﻂﻴﺸﻨﺗ

4.2.1 ﺔﺠﺷ ﻂﻴﺸﻨﺗ ﻢﻤﺼﺗ

ﺔﺠﺷ ﺮﻴﻔﻮﺗ ﻲﻓ ﺔﻴﻟﺎﻌﻓ ﺮﺜﻛﺃ ﻞﻠﺤﻛ DC-DC ﻡﺪﺨﺘﺴﻳ

3.4.4 ll Ð ﻡﻡ ﺃ

DC-DC Ð ll Ð ﻡﻡ Ò ﻙ Ð

W

HF680N09F-100-4 GDHF680NHC-100-800

4. Ь

4.1 DC-DC Ð ç à Ũ ĭ

Ũ

´ ھ ضي Ḡ ´ Ţ ٧ ي ‰´

ھ ' ش ٭ G ṗ ط

ھ ¯ Ŧ o

10cm à ˘ ˇ 5cm

ش Â ' ٧ : ч Â ~

ѿ ѽ ę ˘ ˘ Ь ˘

з ѵ Â

Ũ ' ش ض ⌈ à Ţ ˜ à à

ṗ ش Â

Ũ ę Ь 6 ѡ à í

Â Â

Ť ' ض ‰´

-10 Ņ · +40 Ņ ˘

40 Ņ ˘ ą ˘

ٱ 1 Ņ ˘ 1% Â

50 Ņ h ٧ ٣

Â

ٲ G -10 Ņ ˘

ѵ ↑ ѵ Â

-20 Ņ · +60 Ņ ˘ ĩ.

G 1 Ņ / № Â

-20 Ņ · +60 Ņ

70· 106 kPa

٧ 0.7· 1.05 ٧

70· 106 kPa

0.7· 1.05 ٧

60· 106 kPa

0.6· 1.05 ٧

˩ 10Hz Ů f Ů 57Hz ' 0.075mm

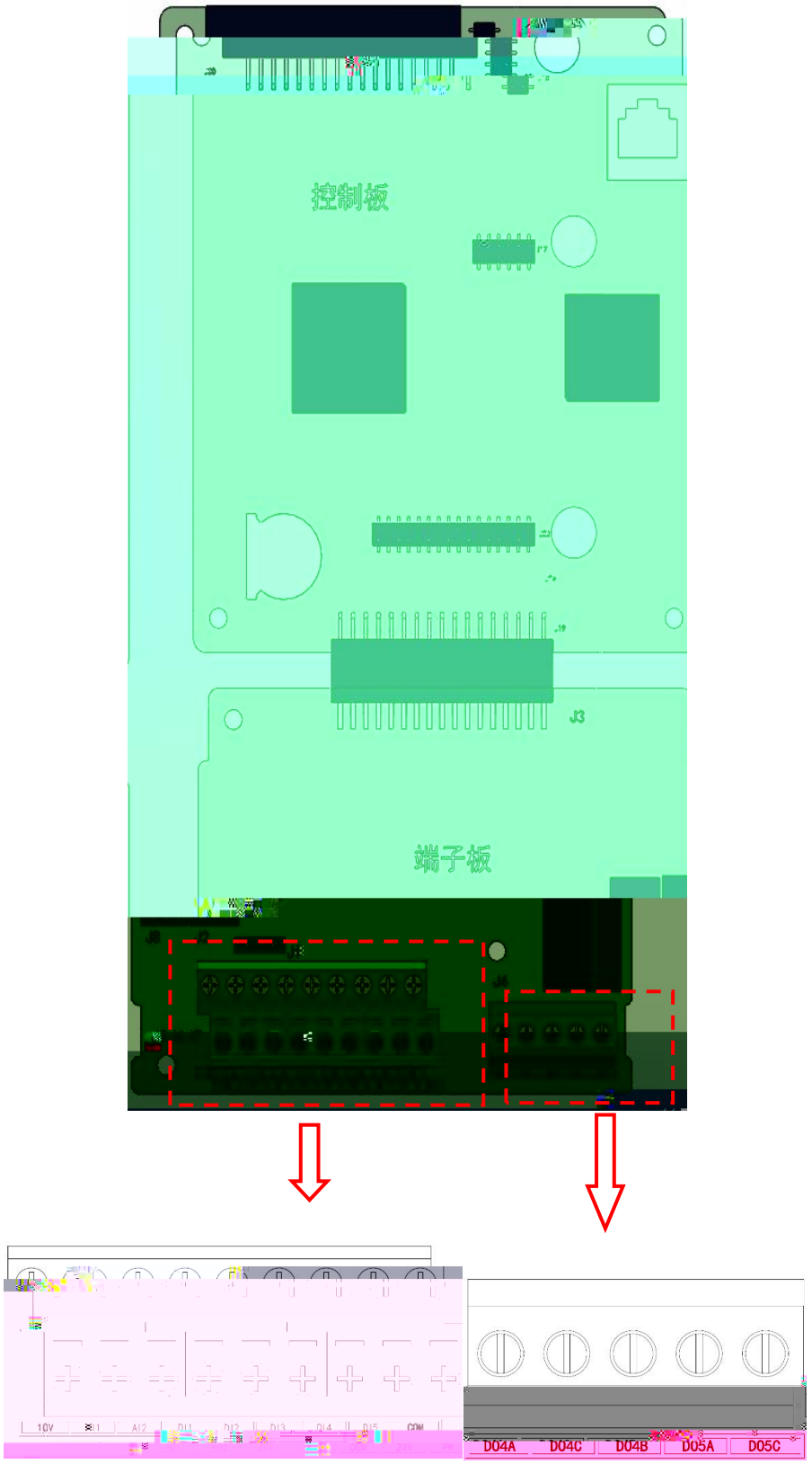
57Hz Ů f Ů 67Hz 0

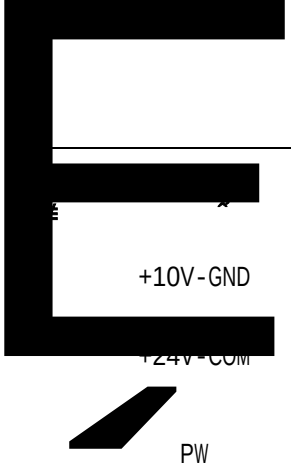
4.2.2 h ⁄

˘ ÈÊ

4.2.4 L

L Ÿ Â


控制板
J3
端子板
10V
AI1
AI2
DI1
DI2
DI3
DI4
DI5
COM
DO4A
DO4C
DO4B
DO5A
DO5C

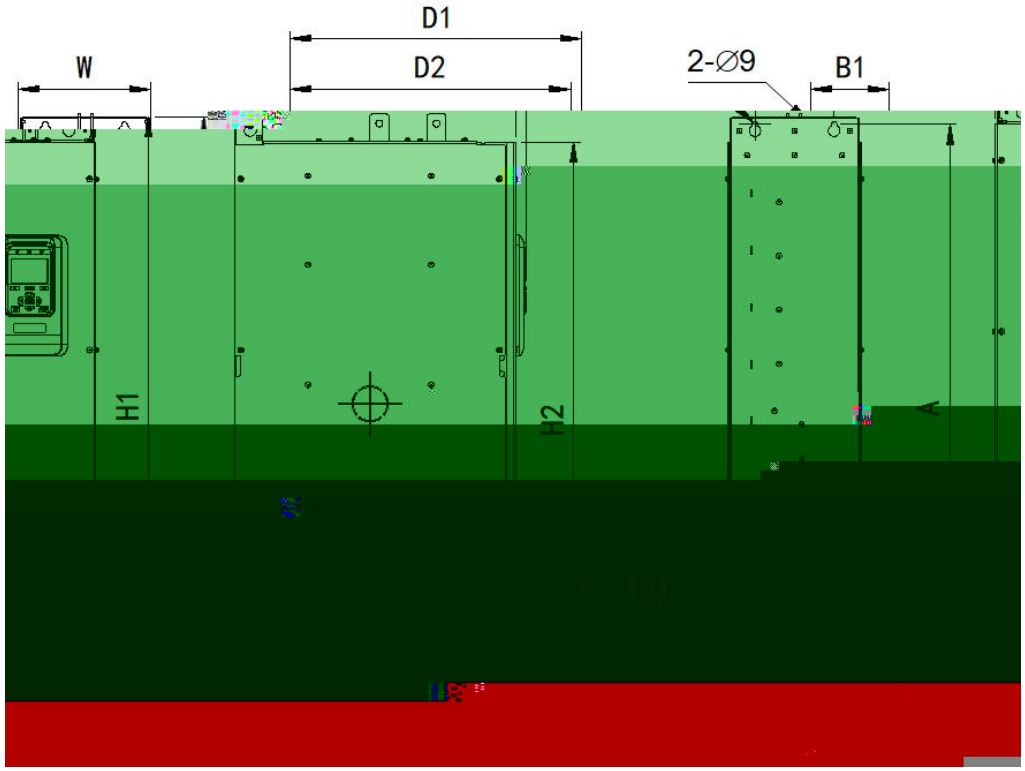


	O	w
+10V-GND	— 10V	h ᴸ +10V ˇ ₮ ' 50mA Â ₩ Ъ ᵝ ᄌ Ъ ˇ ᵝ ᄌ ᵛ ᵯ' 1k ß -5k ß
+24V-COM	— 24V	h ᴸ +24V ˇ ₩ Ъ ~ ₮ Ъ Ė ᴰ ᄌ ₮ ' 200mA
PW	~	₮ ᴺ Ъ¯ 24V ≠ Ḥ˚ ¬ DI1~DI5 àDO1 ˇ PW Ь ˇ ᵻ Ъ¯ 24V

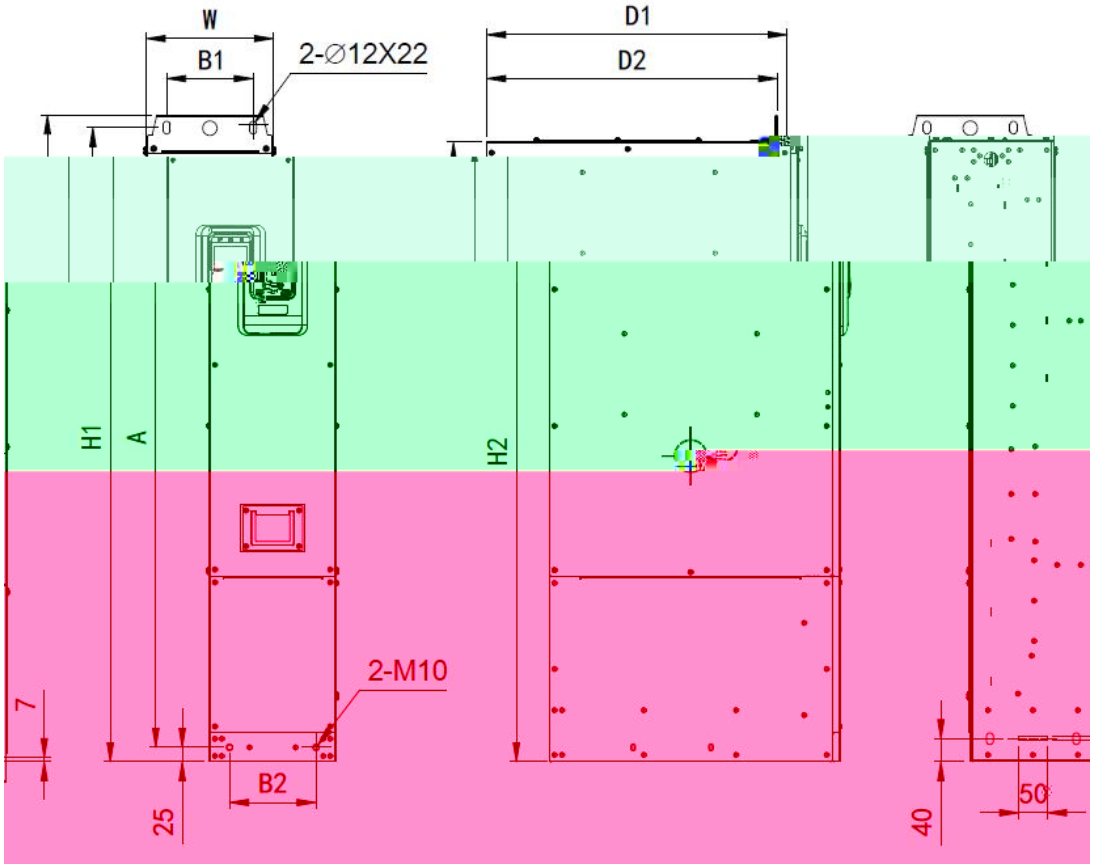
≠ ˆ O w

DC+24V

4.3 ج



B4 قمم يد



B5

W		^ ч β' mm~					^ ч β' mm~			^ 8.8 ~	^ kg~
		H1	H2	W	D1	D2	A	B1	B2		
HF680N09M-100-4	B4	920	880	210	462	444	899	125	150	4-M8	55
HF680N09M-200-4											
HF680N09M-265-4											
HF680N09M-300-4											
HF680N09M-400-4	B5	1122	1075	221	522	505	1075	150	150	4-M10	80

5. ƀ

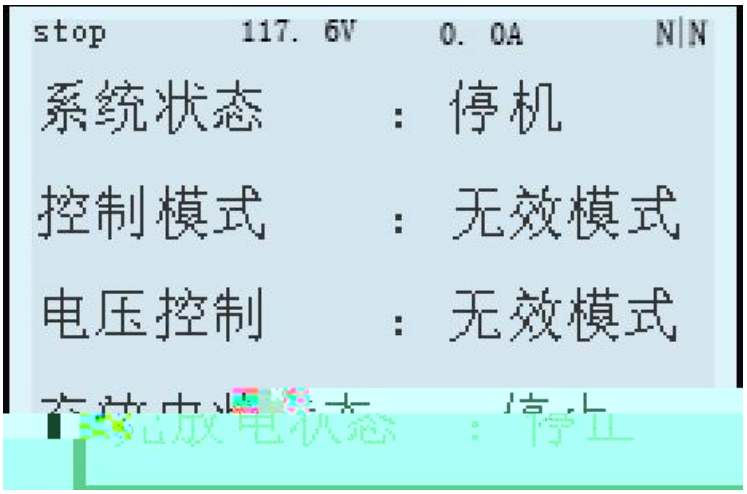
5.1 ƀ

HF680N09M ǐ h DC-DC ǐ ƍ ƀ ˆ ƺ ч ƀ ƍ˜ Ǘ ƶ Â´ Ơ F1 à LOCAL/REMOTE à F2 à RUN à STOP à Ǘ à /RESET à ˚ ɛ ENTER ˘ ˆ ≠ ˈ DC-DC ǐ ƍ ǎ ˘ ˘ L ɛ Å Â

5.2 ƀ

ỵ h ϟ ė Ή β ϟ Â ε; β ϟ ∫ Ή β ϟ˘ η Ή
Â ε Ή β ϟ ϶ ∫;; β ϟ˘ ģ;; Â3 ϒ ;; Ή ϑ ⋮ ỵ˘
ỵ ή U˘ ˆ ENTER Â ă ą ˗ β Â
ƀ D˗ °° ę ˘ ą RUN ė STOP Ω˗ ė Å DCDC ώ ă
ғ Ⓟ ∫ ض ~ ˘ LOCAL/REMOTE Ⓟ ض/ Â

5.3 Δ



Δ Ţ˘ ´ Ơ Ľ Ŀ ė Ľ˘ 2 ѡ W Ч Â
' ш ê ˜Ḥ Ì à ê ϗ Ì à ê ∓ Ì à ê ϼ| Ì

W

˜Ḥ stop Å ~ à charge ˜Ḥ ~ à
Discharge ~;;;

ϗ ϗ˘ ϟ β :V

∓ ╠ ∓ ˘ ϟ β' A

ϼ

ϼ|

ο ' ₩ 4 ₡ ˘ ⁚⁚ Й ¬ ˘ ɣ Ь □ ₫ '

ﻀ Δ Й˘ Й ENTER ˆ ɣ Ґ ∤ [%] Ŀ Â Й F1/F2 ₹ Δ

˘ ~ h ∤ Â

5.4 ê h ∤ Ì

ê h ∤ Ì Ţ˘ ´ Ƈ Ţ Ɣ ∤˘ №≠ ~ Ɣ w ƀ Â

h ∤

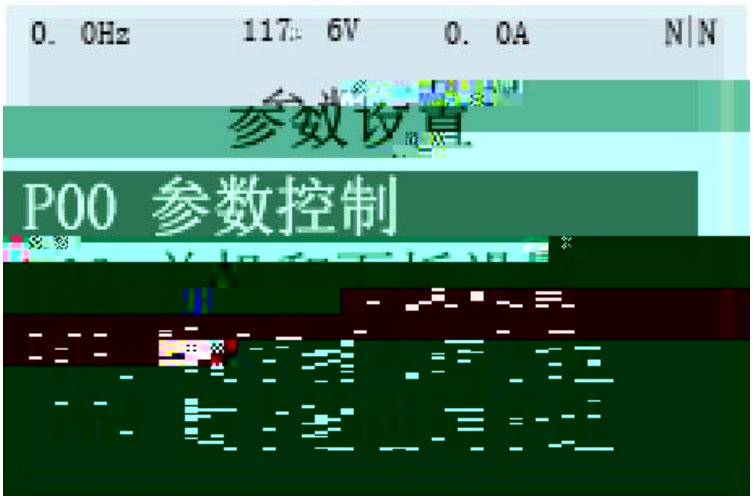
∤ ˆ	∤		w
1	Reference Set ₫ ų	₫	₫ ų
2	Parameter Edit ₫	₫	/
3	Current Error ╠	╠	Ḥ
4	Current Warning ╠ ϸ	╠	ϸ Ḥ
5	Error Event Log	Ḡ	∤˘ r A

7 Option Set ẅ ė ẅ Ḥ

8

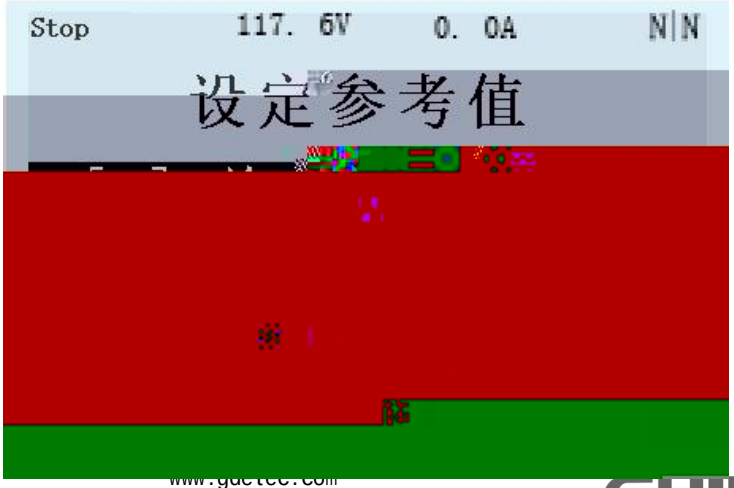
5	Version ~	L ϕ Ð ~ Ė ƀ ϕ Ð ~
6	Disp Work Time	

5.4.2ê ǎ Ì ٧



ǎ
ˆ Parameter Setting˜
˜ ٧˘ ĺ ° ج ٭ ǎ Â

5.4.3ê ǎ ٧ Ì ٧



˘ È˜ www.gdetec.com

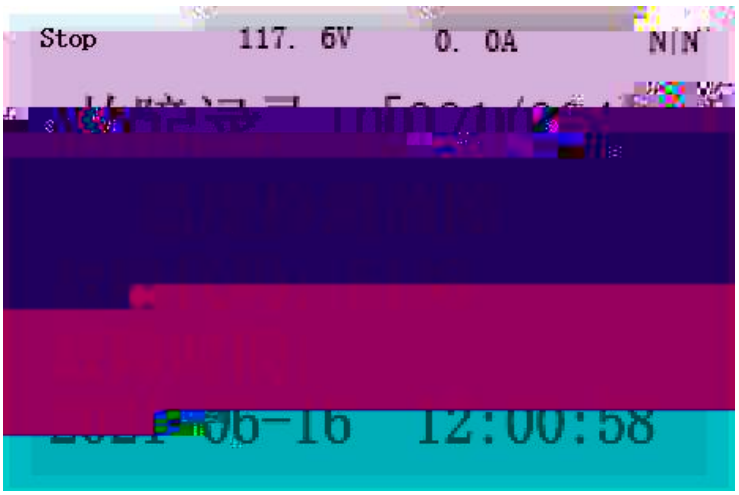
ǎ ṿ^ Reference Set˜
ᵒᵒ ƈ Ⴆ ṿ Â

´ Ↄ Ⴑ ˜ w Â

˜	Ⴑ	Ⴑ	w
1	Parameter Initialization ă Δ .	ă Δ .	ч Δ ụ Â
2	Delete Fault		
3	System Restart β 3 ⋇Ↄ	Ↄ	L β˘ G
4	Backup Para Pad ă м ⌠		ضي ă м
5	Restore Para Pad ă ⌠ DSP		⁄ ң ╠ м ă
6	Compare Para Pad ṗ ă	˘ ^	ă Ė м ă U ↓ ₮ ḱ ă м ă ч Δ . U ₮ ∧ ụ ˘ ₮ ă ј ₮ ∧ ụ ĩ ă ~
7	Admin Password	ă Δ .	ч Δ ụ Â

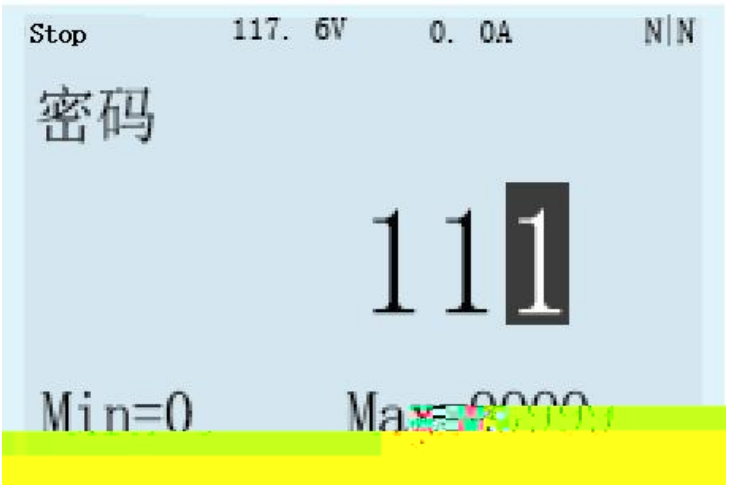
l' Enter Ł ˆ γ ˜ ќ ă Â ' ă ₩ Ψ ă
˘ ғ м ў˘ Þ ˘
Ł

5.4.5ê Ì ٧



ˆ Fault Record˜
˘ ˆ γ Ηυ Đ Ḥ Â Đ ρ ˘ ˆ γ
Ηυ Đ Ḥ ˘ ´ ˘ ˘ ˘ Ü Ỵ
Â

5.4.6ê ŋ Ì ٧



ŋ ˆ Access Permissions˜
٧ Ţ ˆ ą à ă ≠

6. :

6.1. ƀ

DCDC ƀ ا à à w ̃ w P09.03 ò └ Ô DCDC
ﺝﺷ ƀ ﺽﺿ ا ˘ w

1. DCDC ﺝﺷ ˜ ʊ Ꮋ ч ا ʊ˘ ₣ ч ʊ
2. DCDC ƀ ﺽﺿ ˘ w Ӣ ˘ w ɒ h˘ à w ɒ ч
˘ ﺝﺷ ˇḢ ’ ˘ w ɒ ч ѵ ˘ ﺝﺷ ’

6.1.1 ا

DCDC ﺝﺷ̂ ɣ ƀ ﺽﺿ ا ˘ ﺝﺷ ʊ ا ا ʊ ا └ ч ا ѵ˘ ﺽﺿ w
ﺥ Ꮋ ṕ̂ ɣ ч U ˪̂ ا Â ا ̂ ɣ № ч ˇḢ , ˘
˫ Â

ˇḢ

ﺽﺿ P9.03ò └ Ô ч [1] ا ╠ Ӣ˘ P9.04ò ا └ Ô ч [1]ˇḢ ,
DCDC ﺝﺷ̂ ɣ ا ʊ ا └ﺽﺿ ا ѵ , ɾ ʊˇḢ Â

ا , ,w ɢ ѵ ˘ ѵ Ь ₩ ˘

ă Ь □˘ Ї ɾ : ă 8 ľ v Ł· Â

ﺽﺿ P9.03ò └ Ô ч [1] ا ╠ Ӣ˘ P9.04ò ا └ Ô ч [2] ,
DCDC ﺝﺷ̂ ا ʊ ا └ﺽﺿ ا ѵ , ʊ ɢ ا ʊ ˇḢ ’

ا , ,w ɢ ѵ ˘ ѵ Ь ₩ ˘

ă Ь □˘ Ї ɾ : ă 8 ľ v Ł· Â

˫

ﺽﺿ P9.03 ò └ Ô ч 1 ò ا Ô ╠ Ӣ˘ P9.04 ò ا └ Ô ч 3 ò ˫
Ô, DCDC ﺝﺷ ا ʊ ا └ﺽﺿ ا ѵ , ʊ ˫ ˇḢ Â
ا ʊ ا ɣ ɢ ѵ ˘ ’ ا ʊ ا ɢ ѵ ˘ ˇḢ ’

ا , ,w ɢ ѵ ˘ ѵ Ь ₩ ˘

ă Ь □˘ Ї ɾ : ă 8 ľ v Ł· Â

6.1.2

P9.03ð Ô 8.2.2

6.123 w

P9.03ð Ô ч 3

ㅓ ㅇ ㅓ ㅕ. U2

‰ È й' K = 1/2

ќ ㅓ ㅇ ㅓ ‰ ' P01.0 = K

6.2.2 ㅇ ㅓ ‰

ㅇ ㅓ ㅕ. U1

ㅇ ㅓ ㅕ. U2

‰ È й' K = 1/2

ќ ㅇ ㅓ ‰ ' P01.22 = K

6.2.3 ‰

A ㅓ ㅕ. Ia1

A ㅓ ㅕ. Ia2

‰ È й' Ka = 1/2

ќ ㅇ ㅓ ‰ ' P01.2 = Ka

B ㅓ ㅕ. Ib1

B ㅓ ㅕ. Ib2

‰ È й' Kb = 1/2

ќ ㅇ ㅓ ‰ ' P01.3 = Kb

B ㅓ ㅕ. Ic1

B ㅓ ㅕ. Ic2

‰ È й' Kc = 1/2

ḱ ʊ ㄱ ‰ ' P01.4 = Kc

6.3.Ḡ

DCDC ⱳ ᴸ Ḡ ˇ ғ Ḡ ˆ ą Ь ' ₣ ˇ DCDC ⱳΨ Å
ˇ ғΨ℗ h ᶎγ Ḡ ŋ Â

6.3.1 ㄱʊ ˇ ㄱḠ

w	O		
P7.00	ㄱʊ ㄱ ỵ	400V ㄱʊ ㄱ ㄱ	**[800V]**
P7.01	ㄱʊ ㄱ ỵ		

6.3.6 h ৵(৵) ∞

w	O	
P7.18	h ৵(৵) ∞	h ৵(৵) ∞ [2.0s]

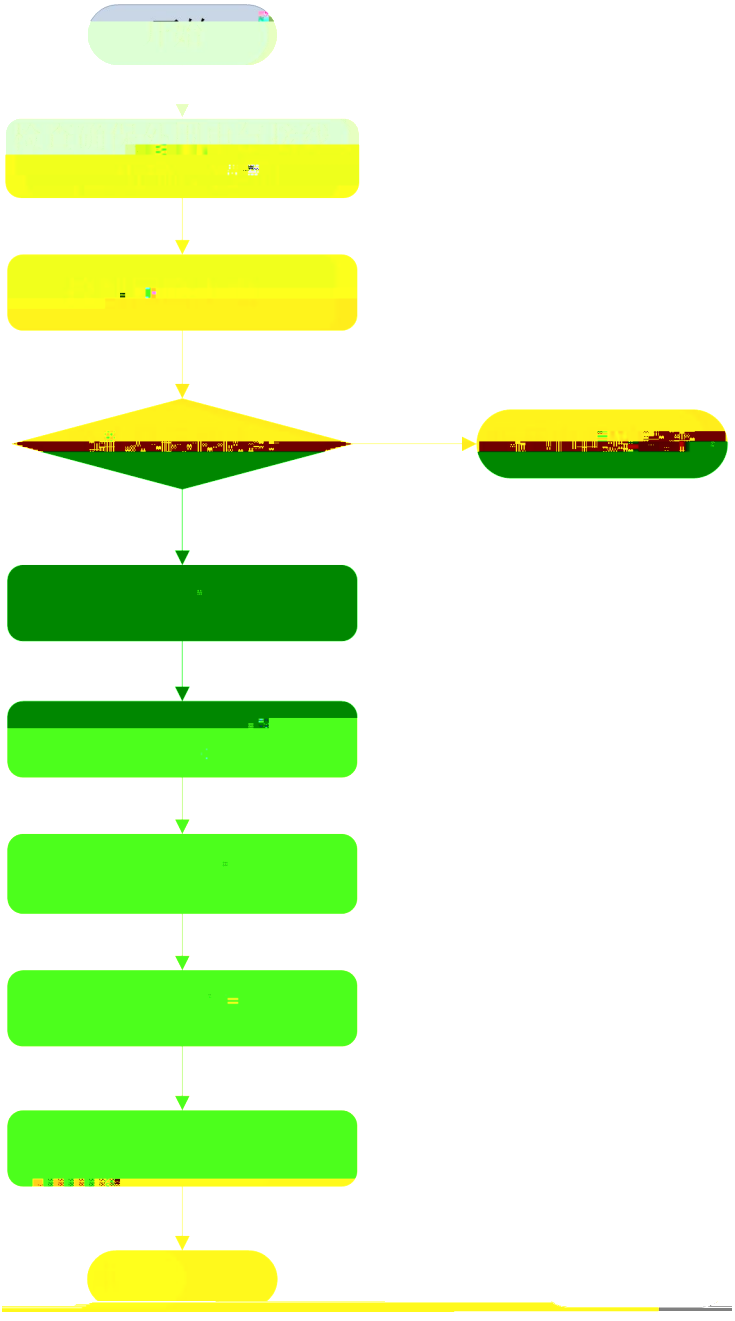
6.3.7 Ḡ ą

w	O	
P7.21	৲ ৺ ৲Ḡ ą	[0] [1] ą
P7.23	৷ ৲ ৺ ৲Ḡ ą	[0] [1] ą
P7.24	Ḡ ą	[0] [1] ą
P7.25	Ḡ ą	[0] [1] ą
P7.26	h ৵ ₽	[0] [1] ą
P7.27	h ৵	[0] [1] ą
P7.28	৵ ₽	[0] [1] ą
P7.29	৵	[0] [1] ą

7. ㅓ

h : ᵒᵒ ᴇ ˘ ˊ ˩ ᶄ ⁛ à ɇ

ЙҸ ᵴ ˈ



7.1. ЭЮ

└ ⁛ ╠˘ Ⱶ ⁛ ╠‰ ƀ ˫

7.2. ₹ Ⴖ

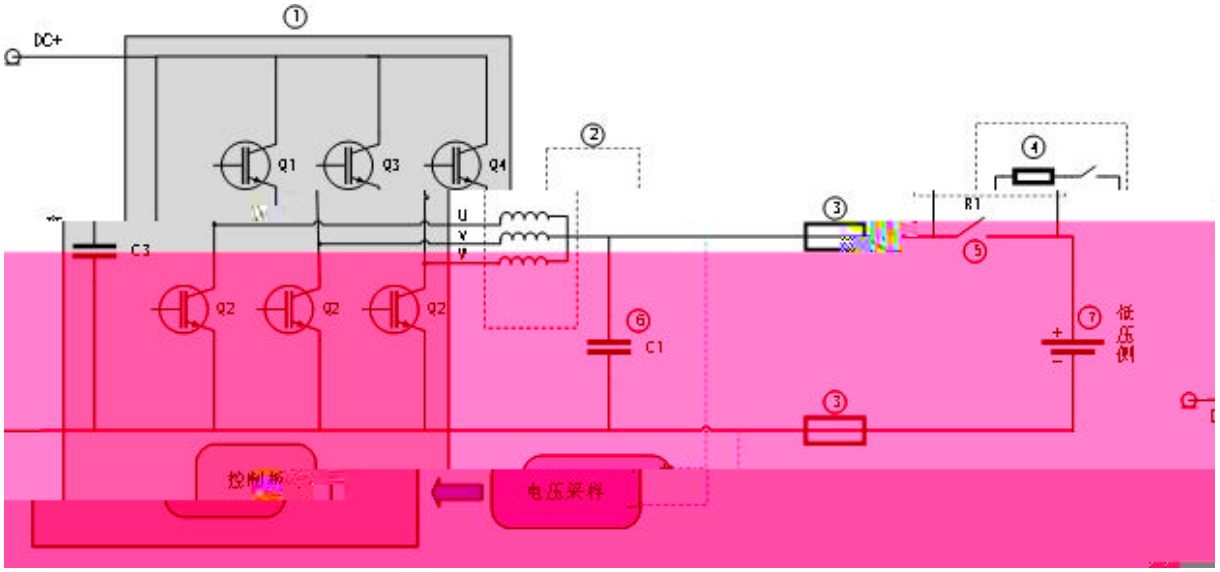
└ЭЀ ⁛ U˘ ѽ ₹ Ⴖ ѵ Â Ї ᵣ ƀ ă Ґ5.4.4 ê w Ї Ь

, ă Δ ˫ U, Ψ ~ Ω

7.3.2 ǎ

ɢ DCDC ˘ ą ,˘ Ḥ Â

w̄ ' Й Ь Â



7.4. ǎ

7.4.1 ƀ

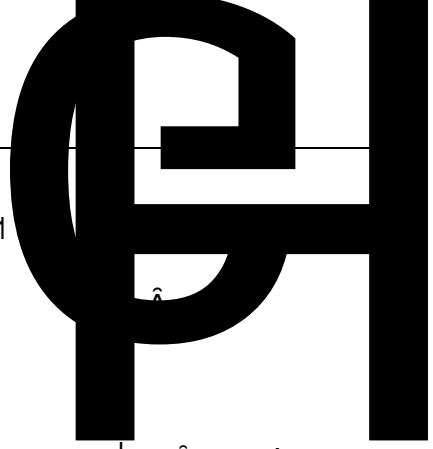
L ч ⁄ Ţ ˜Ḥ à˜ w P09.03 ò L Ô ɛ

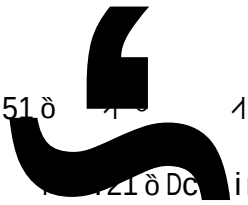
P09.04

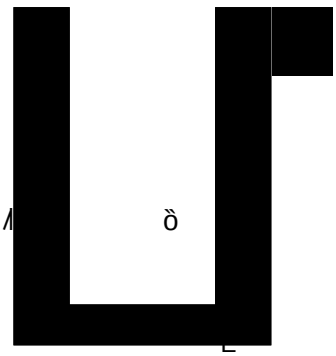
ò ⁄ L Ô Ь ƀ

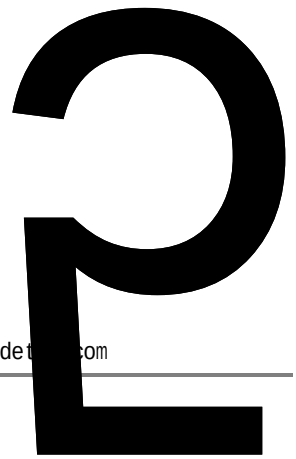
L ˆ P09.03˜ ⁄ L ˆ P09.04˜

⁄ ˆ ˜Ḥ ˜









ψ ⁻ ˜Ḥ ˘ Ḡ ʊ ≀ Ь ψ P09.40 Â ʊ ≀

P09.40 ˘ ˜Ḥ ч 0

2. ʊ ≀ L' ≀ Й, P09.39ð ʊ ≀ L Ô ˘ DCDC

ψ ⁻ ˘ Ḡ ʊ ≀ Ь ψ ʏ ɢ P09.39 Â ʊ ≀

ʏ ɢ P09.30 ˘ ч 0

3. ≀ ʊ ≀ L' ≀ Й, ≀ ṿ˘ ضي Й, L ƀ

ˆ

w Ḡ ~

4. ≀ ʊ ≀ L' ≀ Й, ≀ ṿ˘ ضي Й, L ƀ ˆ w

Ḡ ~

' ʊ ≀ L , ≀ ʊ ≀ L ṿ ч ≀

Й, ≀ ṿ Â

7.4.4 h ⸮ ă̋

h ⸮ ˜ ă̋ Й, '

w	O	ṿ	
P3.03	~ 4	10 [h ⸮]	h ⸮ ĭ Ḥ˝
P3.04	~ 5	9 [⸮]	⸮ ĭ Ḥ˝
P4.03	∓ 4	8 [h ⸮ Ḥ˝]	h ⸮ ∓ Ḥ˝
P4.04	∓ 5	7 [⸮]	⸮ ∓ Ḥ˝
P8.16	h ⸮ ˜	1.0	-
P8.17	h ⸮ Ꝑ	2.5	-
P7.17	h ⸮ Ꝑ ∞	5.0	-
P7.18	h ⸮ ∞	2.0	-

		]	
P9.03	L	1 [⁄]	-
P9.04	⁄ L	1 [ˇH]	-
P33.0	ProfiNet ą	0ˈ 1ˈ ą	ч1ą
P33.21	~ [W4]	1 [L 0]	L Й
P33.23	~ [W5]	18 [⁄V]	⁄

L Й ˈ

β	1	0	
Bit0		Å	⁄ Ø˙ ˘ Ḡ
Bit1	Ḡ	Ḡ	-
Bit2	Ḡ	Ḡ	-
Bit3	β		-
Bit4			⁄ ˘ Ḡ
Bit5	ϸ		ϸ⁄ ˘ Ḡ
Bit6	L .A		L .A
Bit7	L .B		L .B
Bit8	⁄ L .A		⁄ L .A
Bit9	⁄ L .B		⁄ L .B
Bit10	Ḡ	Ḡ	-
Bit11	Ḡ	Ḡ	-
Bit12	Ḡ	Ḡ	-
Bit13	Ḡ	Ḡ	-
Bit14	Ḡ	Ḡ	-
Bit15	Ḡ	Ḡ	-

Й ˈ

β	1	0	
Bit0	‰		-
Bit1			-
Bit2			-
Bit3	ϸ		-
Bit4-5	ˇH		00ˈ Å 01ˈ ˇH 10ˈ
Bit6-7	L		00ˈ 01ˈ ⁄ L 10ˈ L 11ˈ w L
Bit8-9	⁄ L		00ˈ 01ˈ ˇH 10ˈ 11ˈ ¬
Bit10	Ḡ	Ḡ	-
Bit11	Ḡ	Ḡ	-
Bit12	L	ض L	1ч ˘ 0ч ض L

Bit13-15			000' Δ . 001' Å 010' 011' 100' ϸ 101' ˜Ḥ 110' ‰ 111' PB Δ .

⁘ β Ω ˜ [W4] bit0 =1 ˇ DCDC ˇ bit0=0 ˇ DCDC Å
⁘ β Ω ˜ [W5] ∤ ẏˇ 0-1000 0 ~ 1000V

7.5.4 ą Modbus └Ω Å

ą Modbus └Ω Å Ӣ '

w	O	ẏ	
P8.00	Ω˙	3 [MODBUS]	-
P8.01	└	1 [ƀ]	-
P8.02	∤ └	1 [ƀ]	-
P8.03	Å	1 [Å]	-
P8.04	ɒ	3 [Modbus]	-
P9.03	└	1 [∤]	-
P9.04	∤ └	1 [˜Ḥ]	-

Modbus └ Ӣ '

β	1	0	
Bit0		Å	⁘ ˥ Ω˙ ˇ Ḡ
Bit1	Ḡ	Ḡ	-
Bit2	LOCAL	REMOTE	ˇ ضر Ⓟ
Bit3	FAULT_RESET		-
Bit4	EXT_FAULT		⁘ ˥ ˇ Ḡ
Bit5	EXT_ALARM		ϱ⁘ ˥ ˇ Ḡ
Bit6	CtrlMode.A		└ ⁼ .A
Bit7	CtrlMode.B		└ ⁼ .B
Bit8	VoltCtrlType.A		∤ └ ⁼ .A
Bit-	¦		

Bit0	Ready	
Bit1	RUN	Sto

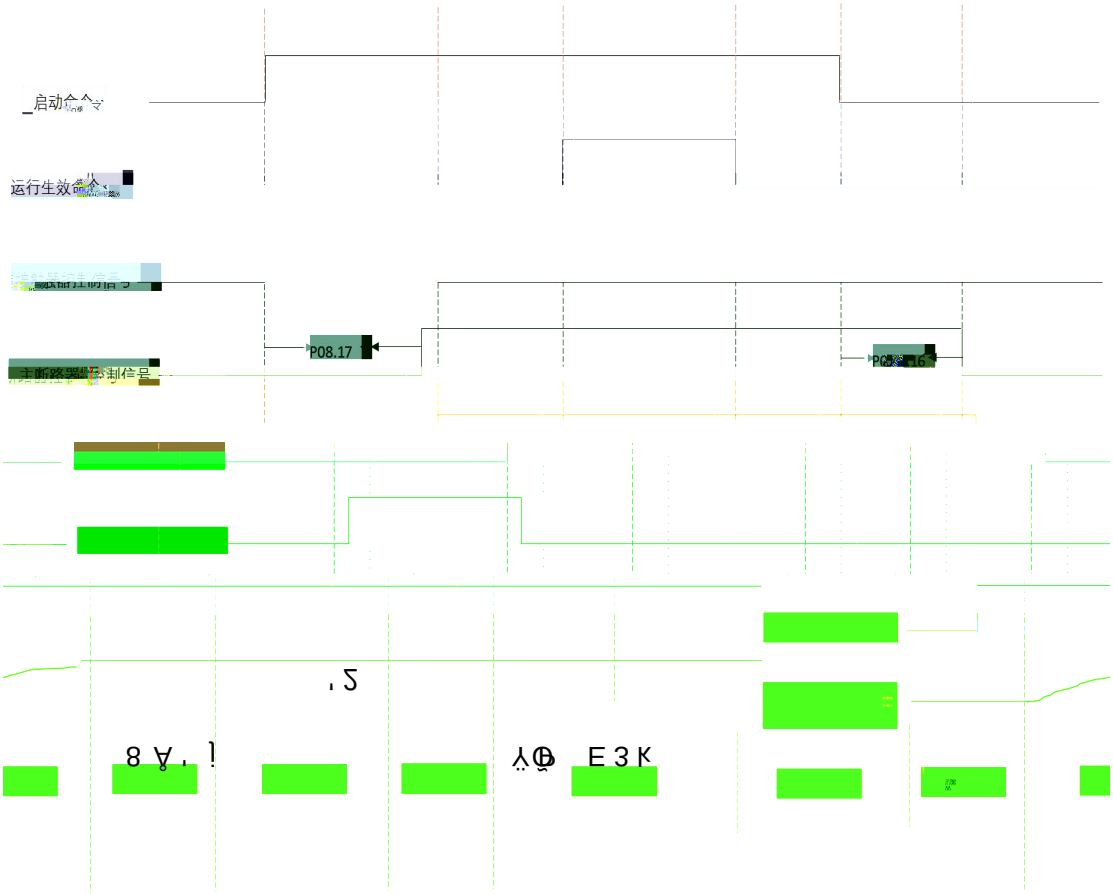
1 01 Address = 1 01

8. W جشم

8.1. L ط

L L جشم h ˘ جشم L β ɒ ضي ڀ ® ΐ Ω
˜ W Â
جشم G ˢ ₩ ↓ β Â

8.1.1 Ω¯ ط ↓ ¡



1> ↑ ק ... P7.17 5 ~ ˇ P7.18
ч 2 ~ ˇ ↕ ↑ ק ... /
2> h ק ... P7.17 5 ~ ˇ P7.18
ч 2 ~ ˇ ↕ ↑ ק ... /
3> ↑ ק └Ḥ ч D04 ˇ ↑ ק ĩ Ḥ ч DI4
4> h ק └Ḥ ч D05 ˇ h ק ĩ Ḥ ч DI5
5> شي ą ٧ ١ ט h ק c ˇ h

Bit6	L .A		L .A
Bit7	L .B		L .B
Bit8	۱ L .A		۱ L .A
Bit9	۱ L .B		۱ L .B
Bit10	Ḡ	Ḡ	-
Bit11	Ḡ	Ḡ	-
Bit12	Ḡ	Ḡ	-
Bit13	Ḡ	Ḡ	-
Bit14	Ḡ	Ḡ	-
Bit15	Ḡ	Ḡ	-

8.1.3

β	1	0	
Bit0	‰		-
Bit1			-
Bit2			-
Bit3	ɒ		-
Bit4-5	˜Ḥ		00' Å
			01' ˜Ḥ
			10'
Bit6-7	L		00'
			01' ۱ L
			10' L
			11' w L
Bit8-9	۱ L		00'
			01' ˜Ḥ
			10'
			11' ـ
Bit10	Ḡ	Ḡ	-
Bit11	Ḡ	Ḡ	-
Bit12	L	㎜" ک	

8.1.4

bit13-15	O	
000(S1)	Δ .	Δ . └ ۱ ˇ Ð ~ S2
001(S2)	Å	Ƣ˥ Ɒ Uˇ ~ S3
101(S3)	˜Ḥ	˜Ḥ Uˇ ~ S4. ₹ ~ S6
110(S4)	‰	└ Ɒ ǐ ۱ˇ ˇ w Ŀ ˇ ~ S5
010(S5)		Å Ɒ ˇ ~ S2˜ ₹ ~ S6˜ ɒ ~ S7
011(S6)		β Ɒ ˇ ~ S2
100(S7)	ɒ	ɒ Uˇ ~ ╠ ₩ ⊥
111(S8)	PB Δ .	PN ą ˇ ~ S8˜ Δ . Uˇ ~ S2

8.2. Ỵ

8.2.1 ۱

۱ ضِ Ь Ђ Ţˇ Ь Ь Ђ ضِ˜Ḥ Ӣ ' Ӣ ң ѫ ۱ ˇ ۱ ˆ ɣ № ˇ Ӟˆ ɣ Â ۱ Ỵˆ ɣ P10.00 Â

w	O	
P8.01	└	[0]IO **[1] Ђ ɣ └ ч ɒ** [2]Modbus [3]Dp
P8.02	۱ └	[0]IO **[1] Ђ ɣ └ ч ɒ** [2]Modbus [3]Dp
P9.03	└	[0] **[1] ۱ ч ۱ └** [2] [3]w
P9.04	۱ └	[0] **[1]˜Ḥ ч˜Ḥ** [2] [3] ˩
P9.00	۱	۱ ۱ Ỵ

		(ı ų)
P8.04	ɒ	[0] [1]AI1 [2]AI2 [3]Modbus [4]Dp
P8.08	ı	ı Й, ;¦ ˥ Ь Й, ₩ ; ч5.0%/s, γ ı ч ų

' P8.04 ɒ ч 0' ˜ Â ĺ ŗ ă̋

ľ5.4.3ê ă ų Ì Ŀ

ƀ ض Й, '

Й, ı . ˘ ɾ ı ʊ ı Â

w	O	
P8.01	Ŀ	[0]IO **[1] ƀ γ Ŀ ч ɒ** [2]Modbus [3]Dp
P8.02	ı Ŀ	[0]IO **[1] ƀ γ Ŀ ч ɒ** [2]Modbus [3]Dp
P9.03	Ŀ	[0] **[1] ı ч ı Ŀ** [2] [3]w
P9.04	ı Ŀ	[0] [1]˜Ḥ **[2] ч** [3] ˫
P9.00	ı	ı ı ų (ı ų)
P8.08	ı	ı Й, ;¦ ˥ Ь Й, ₩ ; ч5.0%/s, γ ı ч ų
P9.21	Dc-Link ı Ŀ ų	Й˘ ı ʊ ı
P9.26	Dc-Link ı Ŀ ų	Й˘ ı ʊ ı
P9.51	ı ʊ ı Ŀ	0: ƀ 1' Modbus 2' Dp
P9.52	ı ʊ ı Ŀ	0: ƀ 1' Modbus 2' Dp

		[1] ۱ [2] ! ✗ ч L [3]w
P9.01		ă , ŷ ẏ ˜
P8.04	ɒ	[0] [1]AI1 [2]AI2 [3]Modbus [4]Dp
P8.06	ă	0: ɒ P8.04 1: ۱ ᵾ
P8.09	ж	˘ w ;:;:; ۱ ь Й, □ ; ч 5.0%/s, ү ч ẏ

'

P8.04 ɒ ₩ч 0 (ᵻ ш „ ~ Ǝ Â ĺ ᵣ ă

ľ 5.4.3 ê ă ẏ Ì Ŀ ; ч ľ %Ŀ ˘ ă ч №

,

ч ľ A Ŀ ˘ ă ч ;

P8.06 ă ч 0 ˘ ɒ P8.04 ' ч 1 ˘ ɒ

۱ ح ' ۱ ح ĺ ᵣ ă ľ 8.3.1 ۱ ح Ŀ

8.2.3 w

w	O
P8.01	L

ş ą

B]WD Ln

T]wodpns

8#.04M

[w ypoqe c BP ?S

' .gdetec.com UIDE 55

		[4]Dp
P8.09		˘ W ;:;: ^1 Ь Й; □ ; Ч5.0%/s, Y Ч V

P8.04 Б Ч 0' ^ Â Í r ă

l'5.4.3ê ă v Ì L ;

P8.12 =2 Ь ă ˇ ĭ ų ƀ ч Ω¯ ∤ ă
P8.12 =3 Ь ă ˇ ą ų 80% ƀ ч Ω¯ ∤ ă

8.3. W

8.3.1 ∤ ڪ

DCDC جشم ا ∤ ت ∤ ڪ W ' ضي ƀ ч ЙĮˇ ∤^ ∤ ت ∤~ ĩ
. ˇ ¯ DCDC جشم ٢ ∤ ت ˇ ∫ ∤ ضي W ∤ مخ ṗ Â ∤ ت
∤ ڪ W Ţˇ ∤ ت ∤ Ь ∤ ت ∤ ڪ ų ˜ ЙĮ يح '

ك

8.4.1 Modbus

Modbus Йį'

w	O	
P32.01	MODBUS ID	Min=1 à Max=255 ч 1
P32.02	MODBUS غمم	[0]:RS485; [1]:RS232 ч RS485
P32.03	MODBUS	[0] 9600 BPS [1] 14400 BPS [2] 19200 BPS [3] 38400 BPS [4] 56000 BPS [5] 57600 BPS [6] 115200 BPS
P32.4	β	[0] None_8_1_CFG [1] Even_8_1_CFG [2] Odd_8_1_CFG [3] None_8_2_CFG [4] Even_8_2_CFG [5] Odd_8_2_CFG
' ¥º ă US Â	U ĭ ح ˘ ĭ ح	U 'P ˘ MODB

Modbus ٦ ضي خ '

ɒ Ω ~ ث ɒ^ w ' 05H~

modbus β ضي خ 10 L	O	Ч	R/W
0	Å	0: Å ' 1' '	W
1	Ḡ	Ḡ	-
2	ض Ⓟ	1' Ⓟ	W
3	β	1' β'	W
4		0' ' 1' '	W
5	ɒ	0' ' 1' ɒ'	W
6	ɓ .A	00: 01: ٨ 10:	W
7	ɓ .B		W

		11: W	
8	ا .A	00: 01: ˜H	W
9	ا .B	10: 11: ˗	W
10-15	Ḡ	Ḡ	-

modbus β ضخ 10 L	O	Ч	R/W
0	‰	0′ ’ ‰ ,	R

7 -

OX ˛ɾ ɪ ˛ʌ ˛ʌ ɬ Ғ w ɾ ɾ ˆ ˆ Ҫ Ҫ

Ҫ ɬ ɕ ɕ

· ι -

modbus 10 خي ضر L	O	Ч	R/W
0	DI ~	DI ~	R
50	~ 1[V]	100 => 1.0[V], -10 ~ +10[V]	R
51	~ 1[I]	100 => 1[mA], 0 ~ 20[mA]	R
52	₹ 2[V]	100 => 1.0[V], -10 ~ +10[V]	R
53	₹ 2[I]		

12	₣ B	100=>10.0A	R
13	₣ C	100=>10.0A	R
17	۱	100=>10.0V	R
18	۱	100=>10.0V	R
19		100=>10.0	R
21	۱%	100=>1.0%	R
22	₣w %	100=>1.0%	R
23	₣ %	100=>1.0%	R
50	A01 ₣ 1	10 => 1.0[%]	R/W
51	A02 ₣ 2	10 => 1.0[%]	R/W
60	٦	[07..00] : ٦ [15..08] : ɐ ٦	R
62	ǎ	[07..00] : ٦ [15..08] : ɐ ٦	R
100	۱ [0.1%]	10 => 1.0%	R/W
101	۱ 0.1V]	10 =>1.0V	R/W
102	0.1%	10 =>1.0%	R/W
103	0.1A	10 =>1.0A	R/W
104	w 0.1%		R/W
105			

8.4.2 PN

DCDC شجـ ᴸ PN ᵒ ˇ PN ∖. ą PN W , ą
PN DCDC شجـ Ω¨ ˇ Ь Ɒ Â ᴰ Ţ ч ƀ Â

L

β	1	0
Bit0		Å
Bit1	Ḡ	Ḡ
Bit2	Ḡ	Ḡ
Bit3	β	
Bit4		
Bit5	ꝑ	
Bit6	L .A	

6

			101' ˜Ḥ 110' ‰ 111' PB Δ .

'

ƀ ą ƀ ضي ® W ˘ ضي DCDC جشع ~ ҥ ╠ ą ضر
DCDC جشع ƀ ' DCDC غجشع ɒ ® ƀ

9. ă

9.1. w ă №

ă ~ Ь ₹	P0 ă L P2 P3 ~ P4 ₹
~ Ь ₹ Ğ ă	P5 ~ P6 ₹ P7 Ğ ă
Ω Å L	P8 Ω ă
DCDC ˜ ă ヽ ¨Ḥ ﺷﺠ ă Modbus	P9 DCDC L P10 ﺷﺠ ă P32 Modbus

		ч ˘ ˥ ƀ
1		L
3	L .a	β 1 ɛ β 0 L Ḥ ˘ 00
4	L .b	˘ 01 ∕ ˘ 10 ˘ 11 w
5	∕ L .a	β 1 ɛ β 0 ∕ L Ḥ ˘ 00
6	∕ L .b	˘ 01 ˇḤ ˘ 10 ˘ 11 ˥
7	Å	L Å
8	β	β w
9	Ø ☋	Ø ☋ Ɒ
10	h ☋	h ☋ Ɒ
11	Å Ḥ	~ ч
12	Å Ḥ .NC	~ ∀ ч
13	FUNC 12	
14	FUNC 13	
15	FUNC 14	
16	FUNC 15	

9.2.2 ₣ P4

w	O		₀	ẏ
P4.0	₣ 1	w ˇ ₣	0˙ 15	0
P4.1	₣ 2	w ˇ ₣	0˙ 15	0
P4.2	₣ 3	w ˇ ₣	0˙ 15	0
P4.3	₣ 4	w ˇ ₣	0˙ 15	0
P4.4	₣ 5	w ˇ ₣	0˙ 15	0

w ˇ ₣ w Й ˈ

ẏ	w	
0		κ ∨ w
1	Ḥ	ч
2	₣	˚ ☋ Ṻ ˘ ₣ ON Ḥ
3		˚ ☋ ‰

P5.6	AI1 ỵ	AI1 ỵ	-300.0˙ 300.0 [%]	0.0 [%]
P5.7	AI1 ۱	AI1 ۱	-10.00˙ 10.00 [V]	10.000 [V]
P5.8	AI1	AI1	0.00˙ 20.00 [mA]	20.000 [mA]
P5.9	AI1 ỵ	AI1 ỵ	-300.0˙ 300.0 [%]	100.0 [%]
P5.18	AI2 قمم	[0] [1]0˙ +10V [2]-10˙ +10V [3]0˙ 20mA	0˙ 3	3
P5.19	AI2	AI2 Â ỵ ỉ ևخ ỉ ˗ ą Â ỵ ↕ Ψ ỵ;; Й ˗ p ڑ Ψ ỉ Â	0.0˙ 1000.0 [ms]	25.0 [ms]
P5.20	AI2 ۱ Ẓ	AI2 ۱ Ẓ	-10.00˙ 10.00 [V]	0.000 [V]
P5.21	AI2 Ẓ	AI2 Ẓ	-20.00˙ 20.00 [mA]	0.000 [mA]
P5.22	AI2 ۱	AI2 ۱	-10.00˙ 10.00 [V]	0.000 [V]
P5.23	AI2	AI2	0.00˙ 20.00 [mA]	0.000 [mA]
P5.24	AI2 ỵ	AI2 ỵ	-300.0˙ 300.0 [%]	0.0 [%]
P5.25	AI2 ۱	AI2 ۱	-10.00˙ 10.00 [V]	10.000 [V]
P5.26	AI2	AI2	0.00˙ 20.00 [mA]	20.000 [mA]
P5.27	AI2 ỵ	AI2 ỵ	-300.0˙ 300.0 [%]	100.0 [%]

9.2.4 î į Ax

P6.21	AO2 ֆի Ֆ	AO2 ֆի Ֆ (P6.14 Ч [13] ѵ)	0.0˙ 100.0 [%]	0.0 [%]
P6.22	AO2	AO1 Â Ֆ ѵ Ї Ш ֆ Ї ą Â ѵ ↕ Ψ Ֆ ѵ Й ֆ р ֆ Ψ Ї Â	0.0˙ 1000.0 [ms]	10.0 [ms]

7-1 Ֆ

ѵ	O		ʌ
0	Ֆ	ү ۱ ʊ Ֆ	
1	ү ۱ ʊ ۱	ү ۱ ʊ Ֆ ۱	
2	Ֆ w	Ֆ w	
3	۱	۱ (№ Ֆ)	
4		° ҫ (150Ņ № Ֆ)	
5	DP	Profibus	
6	ă	ү ă P6.7 P6.21 ѵ Ֆ	
7	ض	˙ β Ð ѵ Ֆ	

9.2.5 Ḡ ă P7

w	O		ж	ѵ
P7.00	۱ ʊ ۱ ѵ	۱ ʊ ۱ ۱	600˙ 820 [V]	800 [V]
P7.01	۱ ʊ ۱ ѵ	۱ ʊ ۱ ۱	300˙ 500 [V]	350 [V]
P7.02	ʊ ۱ ѵ	ʊ ۱ :0 ă "		

ǎ

9.2.6 Ø¬ L P8

w	O		ж	ų
P8.00	Ø¬	[0] ~ [1] ƀ [2]Dp [3]MODBUS [4]Ḡ	0˙ 4	1
P8.01	L	[0]IO [1] ƀ [2]Modbus [3]Dp	0˙ 3	1
P8.02	۱ L	[0]IO [1] ƀ [2]Modbus [3]Dp	0˙ 3	1
P8.03	Å	[0] Å (Ḡ) [1] Å	0˙ 1	1
P8.04	ɒ	[0] [1]AI1 [2]AI2 [3]Modbus [4]Dp	0˙ 4	0
P8.06	ă	0: ɒ P8.04 1: ۱ ʊ	0˙ 1	0
P8.08	۱ ж	۱ Й,	0.0˙ 300.0 [%/s]	5.0 [%/s]
P8.09	ж	˘ w	0.0˙ 300.0 [%/s]	5.0 [%/s]
P8.11	L Ø¬	[0] [1]Ø	0˙ 1	1
P8.12	Ø¬ ۱	[0] ۱ ų [1]Ø¬ ۱ ă [2] ĩ ų [3]ﻩ ų 80%	0˙ 3	3
P8.13	Ø¬ ۱	P8.12=1 ˘ Ø¬ ۱ ų P8.13 ų	0˜ 300 [%]	90 [%]
P8.14	֍ ĩ Ḥ̂	֍ ĩ Ḥ̂	0.01˙ 5.000 [s]	0.1 [s]
P8.15	h ֍ ĩ Ḥ̂	h ֍ ĩ Ḥ̂	0.01˙ 5.00 [s]	0.5 [s]
P8.16	h ֍ ˜	h ֍ ˜	0.1˙ 6000.0 [s]	1 [s]
P8.17	h ֍ Ɋ	h ֍ Ɋ	0.1˙ 10.0 [s]	2.5 [s]

		1: Even_8_1_CFG 2: Odd_8_1_CFG 3 None_8_2_CFG 4: Even_8_2_CFG 5: Odd_8_2_CFG		
P32.05			0, 100 [s]	0 [s]

9.2.10 P33

w	O		مخ	٧
P33.0	Profibus ą	[0] [1] ą	0˙ 1	0
P33.1	خي ضر	PLC	1˙ 255	1
P33.2	قمم	[0]PPO 1 [1]PPO 2 [2]PPO 5 [3]GUIDE	0˙ 3	2
P33.3	~ ٧ ṗ	٧	0˙ 16	14
P33.4	₹ ٧ ṗ	٧	0˙ 16	14
P33.5	˗ ƀ	[0] Å [1] ⋮ Å [2] ᵽ ⋮ Å [3]		

		[4] ¦ 10000		
P33.17	~ [W2]	7-2	0˙ 38	0
		[0] ¦ 1		1
P33.18	~ [W2]	[1] ¦ 10 [2] ¦ 100 [3] ¦ 1000 [4] ¦ 10000	0˙ 4	0
P33.19	~ [W3]	7-2	0˙ 38	0
P33.20	~ [W3]	[0] ¦ 1 [1] ¦ 10 [2] ¦ 100 [3] ¦ 1000 [4] ¦ 10000	0˙ 4	0
P33.21	~ [W4]	7-2	0˙ 38	1
P33.22	~ [W4]	[0] ¦ 1 [1] ¦ 10 [2] ¦ 100 [3] ¦ 1000 [4] ¦ 10000	0˙ 4	0
P33.23	~ [W5]	7-2	0˙ 38	18
P33.13				

			[3] ¦ 1000 [4] ¦ 10000		
P33.31	~	[W9]	7-2	0.38	0
P33.32	~ [W9]		[0] ¦ 1 [1] ¦ 10 [2] ¦ 100 [3] ¦ 1000 [4] ¦ 10000	0.4	0
P33.33	~	[W10]	7-2	0.38	0
P33.34	~ [W10]		[0] ¦ 1 [1] ¦ 10 [2] ¦ 100 [3] ¦ 1000 [4] ¦ 10000	0.4	0
P33.35	~	[W11]	7-2	0.38	0
P33.36	~ [W11]		[0] ¦ 1 [1] ¦ 10 [2] ¦ 100 [3] ¦ 1000 [4] ¦ 10000	0.4	0
P33.37	~	[W12]	7-2	0.38	0
P33.38	~ [W12]		[0] ¦ 1 [1] ¦		33.

		[2]¦100 [3]¦1000 [4]¦10000		
P33.45	₮ [W0]	7-3	0˙48	0
P33.46	₮ [W0]	[0]¦1 [1]¦10 [2]¦100 [3]¦1000 [4]¦10000 [5][%]¦1 [6][%]¦10 [7][%]¦100	0˙7	0
P33.47	₮ [W1]	7-3	0˙48	0
P33.48	₮ [W1]	[0]¦1 [1]¦10 [2]¦100 [3]¦1000 [4]¦10000 [5][%]¦1 [6][%]¦10 [7][%]¦100	0˙7	0
P33.49	₮ [W2]	7-3	0˙48	0
P33.50	₮ [W2]	[0]¦1 [1]¦10 [2]¦100 [3]¦1000 [4]¦10000 [5][%]¦1 [6][%]¦10 [7][%]¦100	0˙7	0
P33.51	₮ [W3]	7-3	0˙48	0
P33.52	₮ [W3]	[0]¦1 [1]¦10 [2]¦100 [3]¦1000 [4]¦10000 [5][%]¦1 [6][%]¦10 [7][%]¦100	0˙7	0
P33.53	₮ [W4]	7-3	0˙48	1
P33.54	₮	[0]¦1 [1]¦10	0˙7	0

P33.63 [W9] 7-3 0˙ 48 13
[0] ¦ 1

P33.64 [W9]

22	w [Kw]
23	w [%]
24	˜Ḥ [A]
25	[A]
26	[A]
27	₣ 1[%]
28	₣ 2[%]
29	∨ └[%]
30	⋮ └[%]
31	˜Ḥ └ [V]
32	└ [V]
33	∧ ∧ └ [V]
34	∧ ∧ └ [V]
35	∧ ↺˜Ḥ ∧ 1[V]
36	∧ ↺˜Ḥ ∧ 2[V]
37	∧ ↺ ∧ 1[V]
38	∧ ↺ ∧ 2[V]

7-3 ₣

∨	
0	
1	0
2	1
3	2
4	3
5	4
6	5
7	ă 0 32bit
8	ă 1 32bit
9	ă 2 32bit
10	ă 3 32bit
11	ă 4 32bit
12	ă 5 32bit
13-16	Ḡ
17	˜
18	₣
19	∧
20	∧
21	₣ A
22	∧
23	₣ w Kw
24	A ₣
25	B ₣
26	C ₣
27	₣ A ∧

10. ï

10.1 þ ٦

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WO1	‰ :;: SYS_NOT_RDY (Ready)	⌠ ‰ ~ ٨˘

ϸ ϥ	ϸ Ḥ	ϸ ∕ ⁄	
W25	ɾ 5 SLV5_CAN_ERR	˘ ɾ 5	˘ ɾ 5 ϥ

10.2 ϥ

Ӣ ϥ '

ϥ	Ḥ	
[E050]	U ^ Ь˜ β˜ ERR_UT not reset	IGBT ϥ IGBT ⌐ ĭ ⌐ ϥ U ⁘
[E052]	V ^ Ь˜ β˜ ERR_UT not reset	IGBT ϥ IGBT ⌐ ĭ ⌐ ϥ U ⁘
[E054]	W ^ Ь˜ β˜ ERR_UT not reset	IGBT ϥ IGBT ⌐ ĭ ⌐ ϥ U ⁘
[E065]	h ϲϹ Ϩ…	h ϲϹ ϥ h ϲϹ DO Ḥ˜ ϥ h ϲϹ DO Ḥ˜ ϥ DCDC ϫϬ DO ă ϥ DCDC ϫϬ DI ă ϥ
[E066]	ϲϹ Ϩ…	ϲϹ ϥ ϲϹ DO Ḥ˜ ϥ ϲϹ DO Ḥ˜ ϥ DCDC ϫϬ

[E220]	Ũ ᵹ CRC MEMORY CRC ERR	L
[E221]	ᾰ PARAMETER ERROR	ᾰ ϩ ¨

10.3

	Ʉ	
	o L Ղ	o L DC24V
	o˜Ḥ ֆ Ղ ₾	o DO Ṿ o DO ⌡˜Ḥ ֆ
	oh ֆ Ղ ₾	o DO ⌡ h ֆ
	o ~ Ղ№	o ~ №
	o ɒ Ḥ˜ Ղ ч ON	o ɒ Ḥ˜ ч ON
ʏ ʅ ʊ	o Ղ ɇ COM	o COM
₣	o ʅ Ղ	o

11. Ь Ḡ Ī

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1. ~ ᴅ⁻ ᵊᵖ ᓫ

11.2

Ч Ъ D⌐ ᵒᵒ ج Ü ˇ Ḡ ˇ D⌐ ᵒᵒ ج ą ث ˇ

D⌐ ᵒᵒ ج ˇ ṗ Ѝ ˈ

	ṗ	∞≠ ‰
	1. à 2. à r	1. > 40Ṇ Å ٧ < 95% o 2. ء ˇ à r
ˈ ↓	1. 2. D⌐ ᵒᵒ ج r	1. ˇ 2. r ˇ كل
D⌐ ᵒᵒ ج r	1. ⁻ à ↑ 2.كل 3. à	1. ⁻ à ∓ ٥ 2. كل à ء 3. ⁻
~ à ∓ ă	1. ~ ↑ 2. ∓	1. ~ ↑ ض ṁ ṗ 2. ∓ ض ٧ ٢ Ѝ

11.3

Ч Ъ DC-DCᵒᵒ ج Ü ˇ Ḡ ì ˇ ^ ↑

٢ ṗ~ ᵒᵒ ج ˇ ṗ Ѝ ˈ

	ṗ	
K	K ٦ ⁻	
w ˝Ḥ ᘏ ð	à	↑ ŋ
ᘏ	à	↑ ŋ
	٦ ĭ à ء	
	كل ġ ⁻ ٦ 2’	1¨ 2¨
PCB	à	↑ ŋ

ˇ È˜

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2à ч ъ ŋ˘ Ғ ȝ¸ 2 ǐ Â

3à й ṗ ˆ ǐ˙ ˘ Ƀз Â

M Ȅ˜

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