



Mf c j N Z_m n

H e Yf A ede N Z_efd j =f)' Fk)

Hf) 02 D ekfe LfX[' < e_X @[ljk Xc JXeb' HR eYe Yfj'_

T_ a Xe ' ., 02, -' J)L)=_ eX)

N 5 &31 + 02/ 1023 ,3+1

@Xo5 &31 + 02/ 1023 ,1+1

Email:info@ginlong.com

Web:www.ginlong.com

Jc Xj X[_ i kf k_ XZk Xc gif[l Zk e Zk gXez Xepj [e k_ j lj i d Xel Xq

Q pfI eZfleki Xep gifYc d fe k_ efn ek fl kgk_ Xj em ik i M*H

Xe[ZfekXZk lj' n n c kip kf i jgfe[kf fof iM;hJ) j



Mf c j ; = =flgc [@m ik

@jki Zk fe GXel Xc

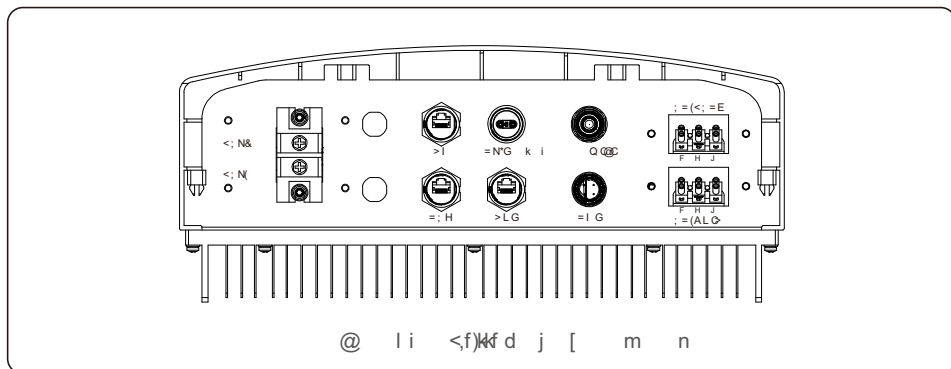
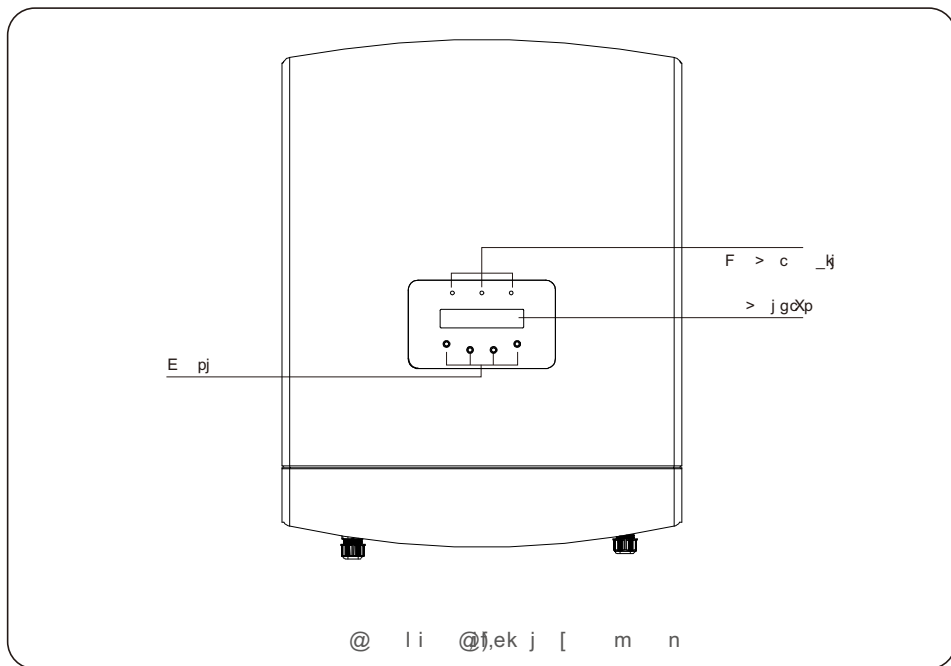
P i, +

H e Yf A ede N Z_efd j =f)' Fk)

,)	Ekif [l Zk fe	-
,)	Jif [l Zk > j Zi gk fe	-
,)-	JXzbX e	.
-)	MX] kp QXie e	/
-)	MX] kp	/
-)-	A e iXc MX] kp @jki l Zk fej	/
-)	Hfk Z]fi Oj	0
.)	l m im n	1
.)	MZi e	1
.)-	E pgX[1
.)	N id eXc =fee Zk fe	1
/)	@j kXk fe	2
/)	M c Zk X Ff ZXk fe]fi k_ @m ik i	2
/)-	Gflek e k_ @m ik i	4
/)	;jj dYc k_ <Xkk ip =XYc j	,,
/)/	;jj dYc k_ ; = =XYc j	, -
/)0	=N @j kXk fe	, .
/)1	;jj dYc l k_ i =XYc j	, /
/)2	F > @[ZXk j	, 1
/)3	Mf c j N Z_P n @jki Xk fe	, 2
0)	l g iXk fe	, 3
0)	GX e G el	, 3
0)-	@]fid Xk fe	, 3
0)	M kk e j	- ,
0)/	; [mXeZ [@]f	--
0)0	; [mXeZ [M kk e j	- /
1)	=fdd jj fe e	, .
1)	Ji gXiXk fe f] =fdd jj fe e	, .
1)-	=fdd jj fe e JifZ [li	, .
2)	Nf l Yc j_ffk e	. -
3)	GX ek eXeZ	. 1
4)	; gg e[o	. 1
4)	Mg Z Xc <XZb(lg =fee Zk fe	. 3

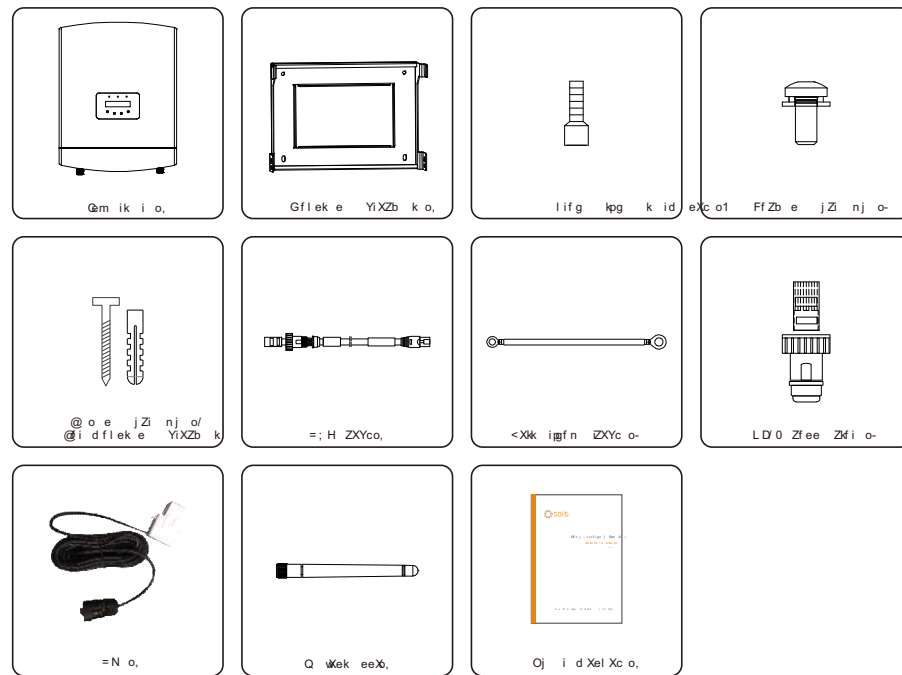
,), Jif [I Zk > j Zi gk f e

N_ Mfc j ;=(=flgc [em ik i j lj _]fi bgjkiXf fke(i [gfn i e iXk fe Jc Xj ejli k_Xk_k_]f@n e k dj XgXZbXeZt [Xf e enk_k_ pfli em ik i5
 jpk d kf X_pYi [jpk d n_ Z_ZXe nfibjnKkf_gXkH iq j d(Zfejldgk fe)
 N_ Mfc j ;=(=flgc [em ik i df[c kpg 5
 L; Q. E / 3 M(OA



,)- JXZbX e

k dj XgXZbXeZt [Xf e enk_k_ pfli em ik i5




Q Xepk_ e j d jj e ' gc Xj ZfekZk pfki Yf Xk Mfc j


-) MX] kp Q Xie e

-), MX] kp

N_]f d n e kpg j f] jX] kp ejkl Zk fej]f Xk fe XggiXk ee k_ j [fZl d ek Xj
[jZi Y [Y d n 5


 **30 64 /**
s>Xe it e[ZXk j X_XqXi[f]j j kXk fe Xmf_ ['] nefk i j ldk e
[Xk_ fi j i flj eadip)


 **E0 8 6/**
sQXie e t e[ZXk j X_XqXi[f]j j kXk fe Xmf_ ['] nefk i j ldk
e [Xk_ fi j i flj eadip)


 **20 CB8 /**
s=Xlk fet e[ZXk j X_XqXi[f]j j kXk fe Xmf_ ['] nefk i j ldk
e d efi fi df[iXk eadip)

 **B4/**
shfk t gifm [j k gj k_Xk Xi nXd XYcd Xj f i gk_ iXkf gk f] pfl i
gif [lZk)

-)- A e iXc MX] kp G j k i l Zk fej


 **E0 8 6/**
l e p [m Z j e Zfdgc XeZ n k_ M FP Zf eb4+0k [d k k p k y
LM 30 Xe[OM< ek i]XZ j)


 **E0 8 6/**
Jc Xj [fek Zfee Zk gfj k m & fXYæ kfXk mifle(' X Zf d
ZXl j j i flj [XdX kf k_ em ik i)


 **E0 8 6/**
c Zk ZXc ejkXk fej dljk Y [fe ne XZZi[XeZ ZXc Xe[ekX feXc
c Zk ZXc jX] kp jkXe[Xi[j)


 **E0 8 6/**
>f efk k l Z_ Xep ee i c m gXik lek k 2 [d jz f leej Zk fe
]jfd k_ lk c kp i [Xe[k_ >= egl k)


-) MX] kp

 **20 CB8 /**
L j b f] c Zk Z j_f Zb' [f efk i d f m Z f m i] j N_i j im Z XYc
gXikj ej [' i] i j im Z e kf hl Xk] k [[jXe[mZZi k Z_e Z Xej)

 **20 CB8 /**
L j b f] c Zk Z j_f Zb]jfd e i p j f i j [] ke ZXGZ k k i' [f efk
i d f m Z f m i] f i 2 d el k j Xk i [j z e e i Z k e z j Xc g im Z k Z_e Z
f e p) Q X i i X e p d X p Y n f [[] k_ Z f m i k f j k i X l d f f i n q X k f e)

 **20 CB8 /**
N_ j l i] XZ k d g i X k i f] k_ em ik k f i Z X e i, XZ_ @ g
Nf Xnf [i j b f] Y l e j' [f efk k l Z_ k_ j l i] X k i k f i k n_ c k f g i X
G e m i k i d l j k Y e j k X c [f l k f] k_ i e X Z_ f] Z_ d i

 **E0 8 6/**
l g i X k f e j Y d n d l j k Y X Z Z f d g c j_ [Y p Z_ e Z Z e f i M f c j
X l k_ f i q [g i j f e)

 **E0 8 6/**
l g i X k f i d l j k g l k f e k_ k Z_e Z X e j v k d m n_ f d i e i f Z j j e Z X j
f] X e p c Z k i Z X c _ X q X i [j)

-). Hfk Z]fi Oj

N_ em ik i Xj Y e Zfejkl Zk [XZZfgjc ZXYc k jk] kX Xe[k Z_e ZXc
l [c e j) Oj k_ em ik i e ejkXk fej]f d k k e j g Z] ZXk fej l

- ,) J idXe ek ejkXk fe j i hl i []
-) N_ c Zk ZXc ejkXk fe dljk dgc ZXcXc ik_ lXk fej Xe[jkXe[Xi[j)
- .) N_ em ik i dljk Y ejkXc [XZZj k i l Zk f d f j k k [e k_ j d Xel Xq
- /) N_ em ik i dljk Y ejkXc [XZZi i [Zk k k Z_ k_ ZXc j g Z] ZXk fej)

.) I m i m n

/) @j kXαXk f e

.), MZI e

Mf c j ;=(flgc [em ik i Xfgk F=> jZ j ke' kXk j'gXg iXk e e]fidXk fe Xe[j ke j f] k_ em ik i)

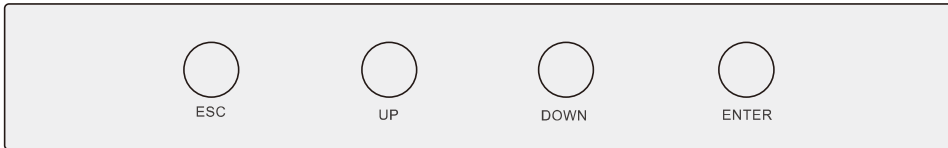
.)- E pgX[

N_ i Xi]fli b pj fe k_]ifek gXe c f]]i d c dmkfiki _k 5

M=' OJ' >I QH Xe[HN L b pj) N_ b pgX[j lj [jf

• MZifae k ifl _ k_ [jgXp [fgk fej>I QH bOJpjXe[

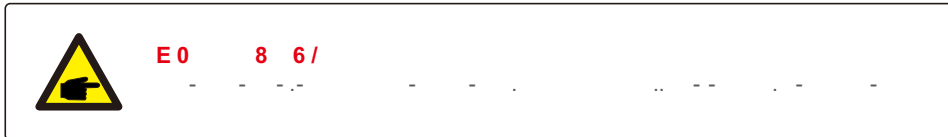
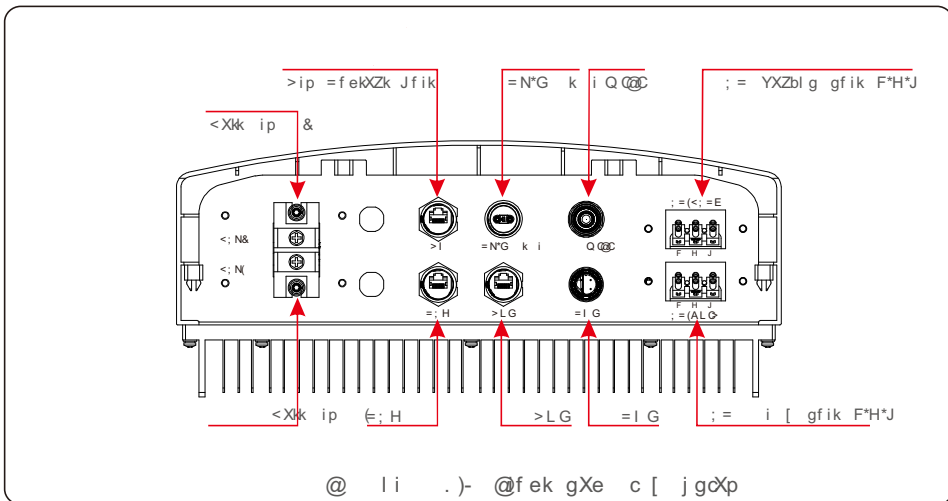
• ;ZZ jj Xe[df[]p k_ j ke j k_ M-pj Xe[HN L b



@ li .), E pgX[

.). N id eXc =fee Zk fe

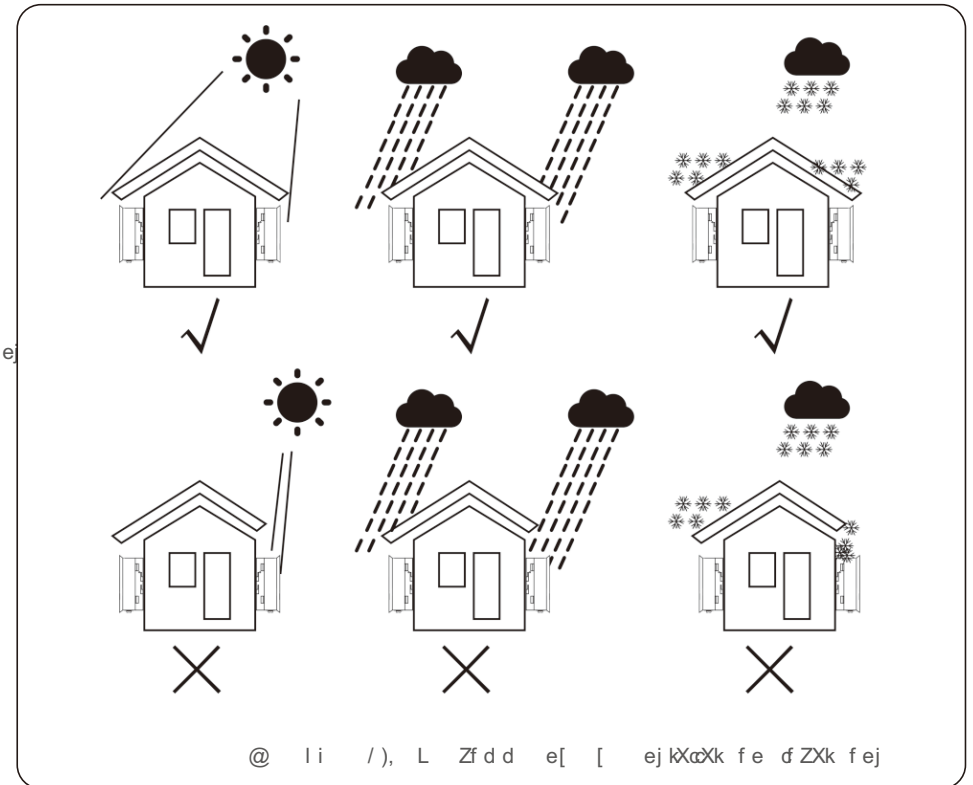
Mf c j ;=(flgc [em ik i j [] i ek]if d enaf iikXα'fgc Xj [i] i k k_ ejkl Zk fe Y dn Y]fi jXk Zfee Zk fe)



/), M c Zk X FfZXk fe]fi k_ @m ik i

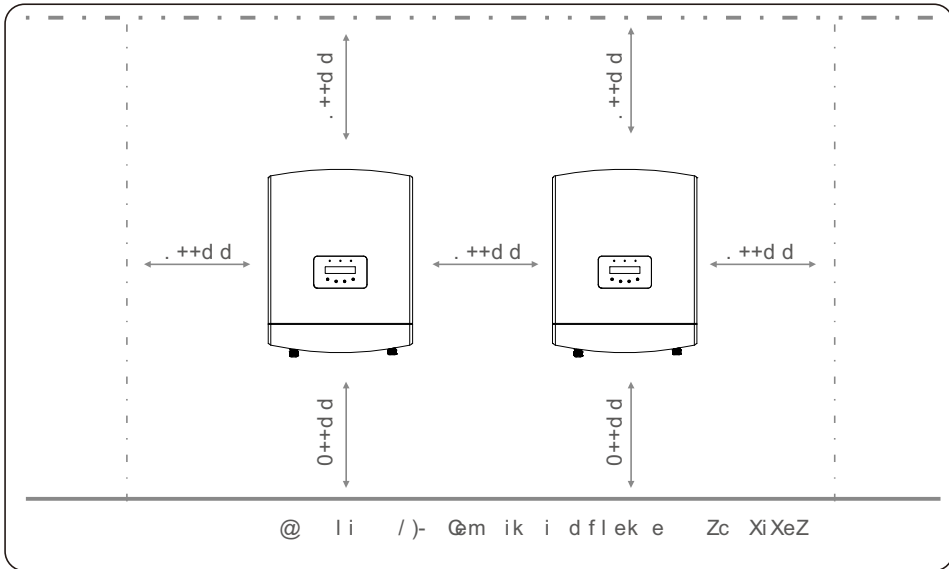
Nf j c Zk X fZXk fe]fi k_ em ik i'Zk k i]fXf j fē d Y Zfej [i [5

- ogfjli k [i Zk jlec _k dXp ZXl j [flk kegfh Qi j i Zfdd e[[k Xnf [ejkXα e k_ em ik i e [i Zk jlec _k)
- Q j i Zfdd e[[k_Xk k_ em ik X Z]fc ej kXα Y [ek n_ Z_ [f je'k oZ [,*/+)



/) ǂj kXǂk f e

- ǂj kXǂk f e X nXǂ f i j k f e j k l Z k i Z X g X Y ǂ f k Y X _ k f] k _ e m i k i
- ǂj kXǂk m i k Z X ǂ n k _ X d X o d l d e Z c e i f] j &*(ǂ Z [[e k _ j d X p Z X i j f l g l k g f n i [i X k e)
- N f X n f [f m i _ X k e ' X n X p j d X b j l i X i k X i f l ǂ n k _ f] e m i k i j e f k Y f Z b [) ; d e d l d Z c X i X e Z f] . + + d d j _ f Y d k n Y ǂ e g l e m i k i j f i f Y a Z k X e [0 + + d d Z c X i X e Z Y k n e k _ Y f ǂ f n d i k] i k X e [k _ i f l e [)



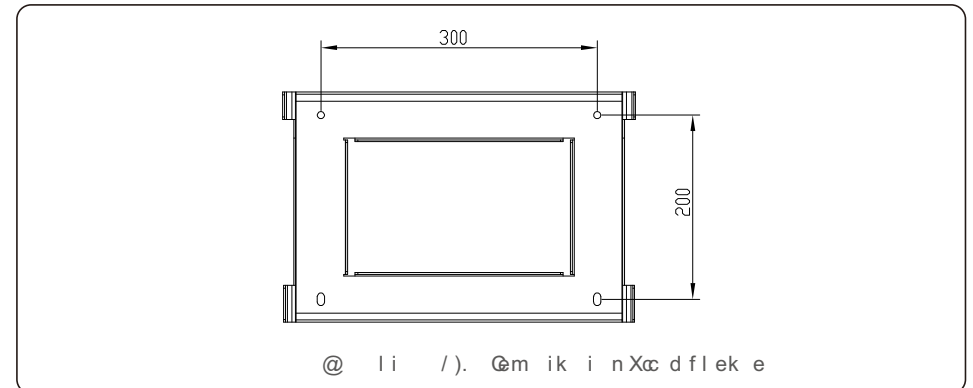
- P j Y c k p f] k _ F > j X e [F => j _ f l d) Y Z f e j [i [
- ; [h l X k m e k ǂ k f e d l j k Y g i f m [])

 **B4/**
H f k _ e j _ f l d Y j k f i [f e f i g ǂ Z [ǂ i X ǂ) k k _ e

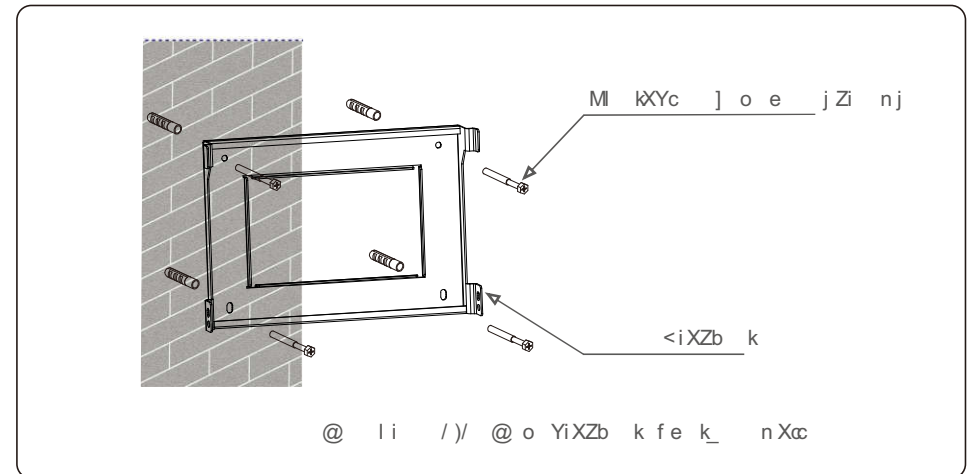
/) ǂj kXǂk f e

/)- G f l e k e k _ ǂ m i k i

, 0 b > d e j f e j f] d f l e k e Y i X Z b k 5



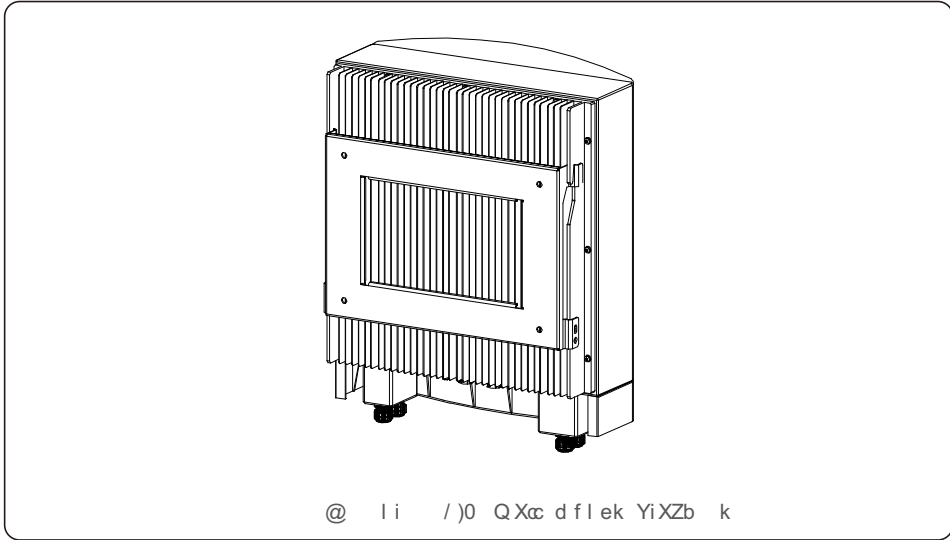
l e Z X j l k X Y c d Z X k f e _ X j Y] f l e [X Z Z f g j c ǂ j k f i /] i k f] l i /). X e] l i /) / X e [d f l e k k _ n X ǂ Y i X Z b k k f k _ n X ǂ) N _ e m i k i j _ X ǂ Y d f l e k [m i k Z X ǂ) N _ j k g j k f d f l e k k _ e m i k i X i c j k [Y d n 5 ,) M c Z k k _ d f l e k e _ _ k f] ǂ i b k Y i X Z b f l e k X ǂ d _ f c j) @ i Y i Z b n X ǂ ' k _ g f j k f e f] k _ Y _ f b ǂ X Y c _ f l ǂ i k _ o g X e j f e Y f d j



 **E0 8 6/**
N _ e m i k i d l j k Y d f l e k [m i k Z X ǂ)

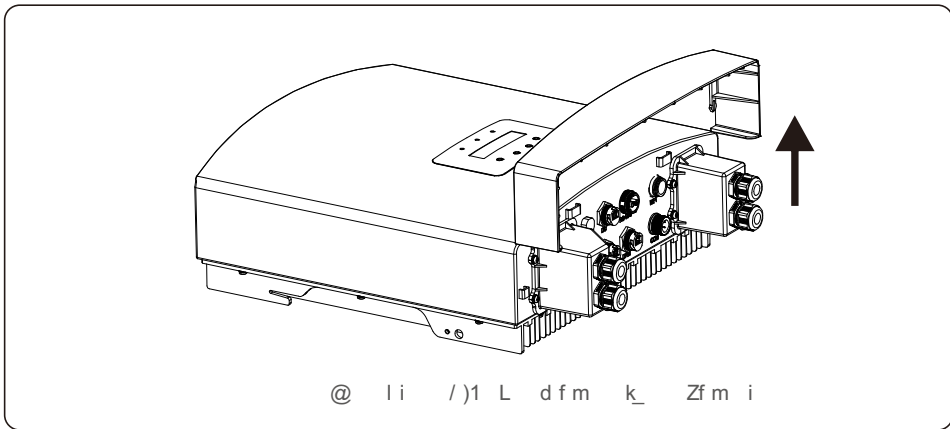
/) @j kXαXk f e

-) F jk l g k_ em ik i Y ZXi j dXf eXrf Xp[YKcp jk k_ YXZb YiXZb k fe k_ em ik i n k_ k_ Zfem o j Zk fe XZbk_k) dBXæek ek_ Yi em ik i fe k_ dflek e YiXZb k Xe[dXb jli k_ Zi em ik i j@) li /)0



@ li /)0 QXα dflek YiXZb k


Jc Xj dXb jli kf i dfm k_ Zfmf] Kk k_ enYf Kk di Y jfi Xjj dYc e k_ k id eXq)
L dfm k_ Zfm i Xj j_fne e k_ g Xki [Xe[Zf dfe kf c]k k_ Zfm i' dXb jli k_ YiZbc j fe k_ c]k Xe[i i_kZ]φ[dfjj Xe [Zfi




@ li /)1 L dfm k_ Zfm i

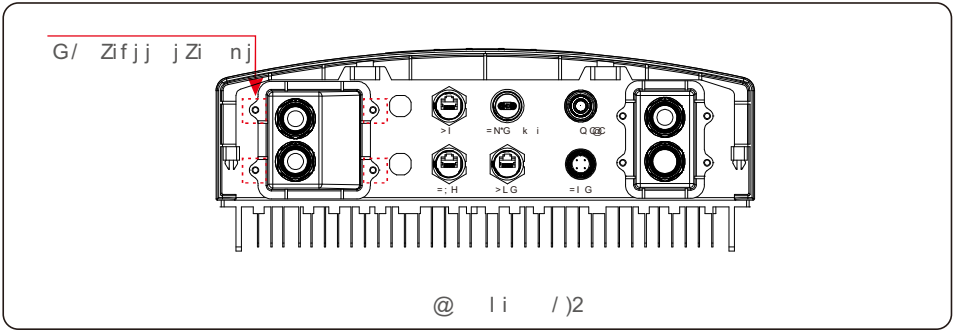
/) @j kXαXk f e

/). ;jj dYc k_ <Xkk ip =XYc j

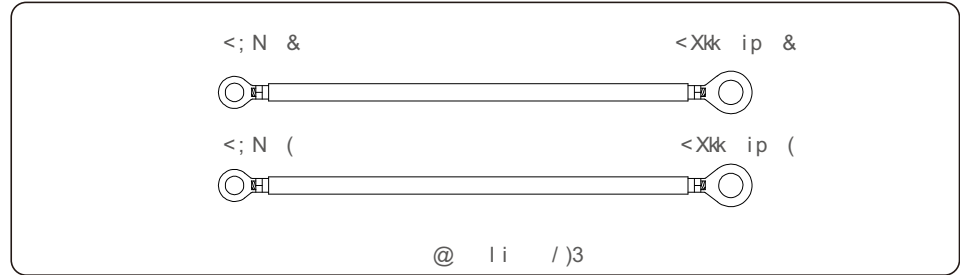
 **E0 8 6/**
@Zfii Zk gf dXi kp f] k_ YXkk ip ZXyc gi Xpd Xe X[ekkf] Xd X fe k_ [m Z)

 **E0 8 6/**
Nf Xrf [>= ;iZ' Mfc j i Zfd d e]j ej kZc eY kp = jre YXkk i j Xe[;=(flgc [@em ik i) ejli k_ Zfii Zk gf dXi kp f] YXkk i jZkYe]fi kf Zfee em ik i)

Mk g ,) Jc Xj ledZb k_ /%/ jZi nj fe kgfk YZkkfapZgniki Xj j_fne e k_] li)
Mk g -) @j ik k_ YXkk ip gfn i ZXyc j k_e gXZXi(giff] jreKfm celk fe k_ Zf <i Xb k_ g dXk Z] d fe k)
Mk g .) @jk e k_ YXkk ip gfn i ZXyc j Xepf<:kN k<jdN&eXq fe k_ em ik i) dXb jli k_ dY q fe ZXyc Xe[em ik i dXkZ_lg)
Mk g /) FfZb k_ /%/ jZi nj Xe[] o k_ eZmiki i]ekf k_ Mk g 0) =fee Zk k_ fk_ i j [f] k_ YXkk kip kgfn YXkkZXq



@ li /)2

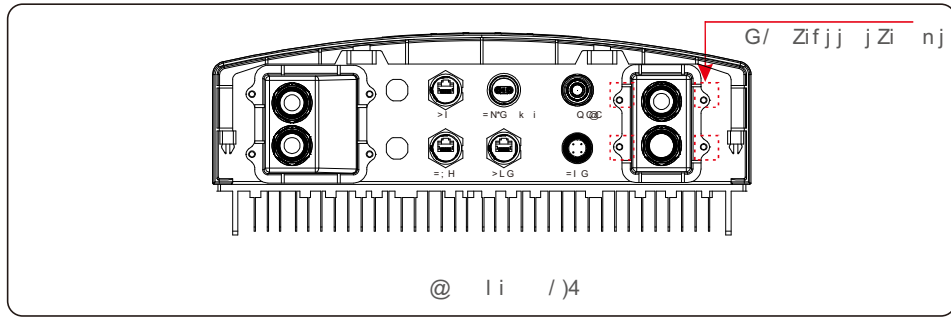


/) @j kXcXk f e

/)/ ;jj d Yk_ ; = XYc j

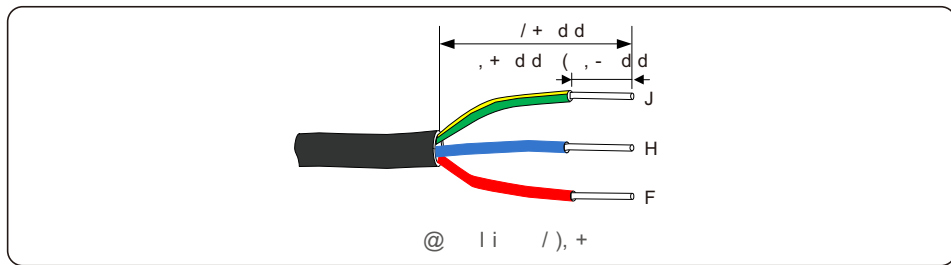
N_ i Xi knf ; = k id eXg Xe[k_ Xj l d Yk_ j k kj] fXdYf
 ; = YXZblg gfik Xe[; = i [gfik)

Mk g ,) Jc Xj l e f Zb k_ /%@/ jZi nj fe k_ Zk ; fe Z f n i g i Xj j_fne e k_ Y d n
] li)



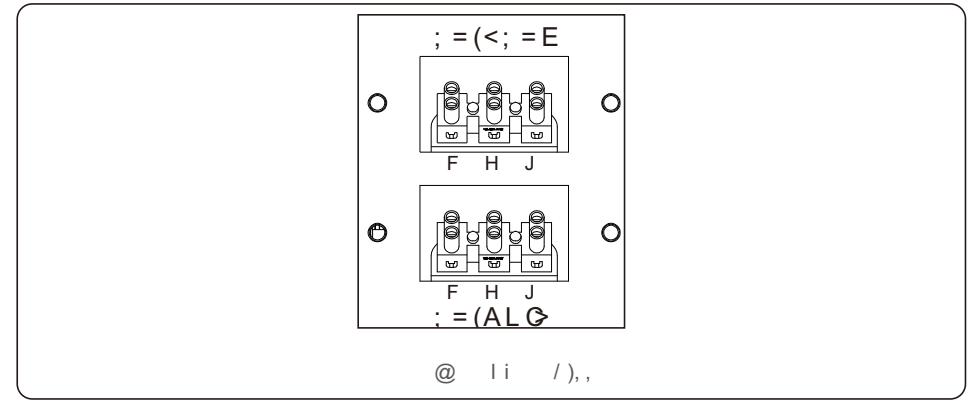
Mk g -) @j ik k_ ; = i [ZYc j Xe[; e f YXZblg ZZYc j g f e] e n Xk i (giff) j n m c
 el k fe k_ Z f m i' < i Xb k_ g d j k Z] d f p l k j) G X b Z X y d n k_ e k_ Z f i i Z k
 j g Z] Z X k f e j Xj j_fne e k_ k X y c Y d n)
 L d f m X c e k_ f] / + d d f] k_ Z Y c a z b i k Xe [e j] k k g f e k_ X c e k_ f] , + , - d d)

> jZi Y	Hl d i Zxc mXd
Q i [Xd k i	1r, - d d
Ni X m i j Zifjj j Zk fe Xc Xi	X 1d d
ogfjli F e k_	, - d d



Mk g .) @j k e k_ ; = ZYc j f e k_ k id k e Xj J d e Xj k_ d X b m j l i k_ Z f i i Z k
 g f d i t p) e j l i k_ X k k_ Z f i i Z k Z f e [l Z f i + j H] k k e i h l [k_ Z f i i Z k k id e Xg

/) @j kXcXk f e



WARNING:
 Observe the terminal layout of terminal block.
 Do not connect the phase lines to "PE" terminal, otherwise the inverter will not function properly.

Mk g /) FfZb k_ /%@/ jZi nj Xe[] o k_ e z h m i k i j e k k_

/)0 = N @j kXcXk f e

L; Q. E(/3 M(0A em ik i i hl i j X = N k d] X n i k i k d k g f n i i [)
 N_ j n @ gif m [e j f i d X k f e k_ L; Q. E(/3 X M(0A n_ e r e k k Z_Xi f i [j Z_Xi
 k_ Y X k i p k_l j d X o d q e k_ j d (Z f e j l d g k f e i X k)

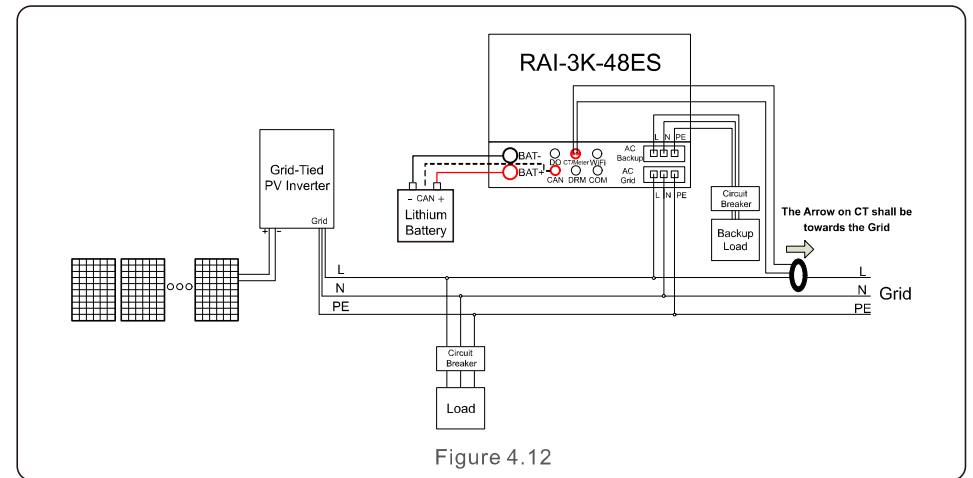
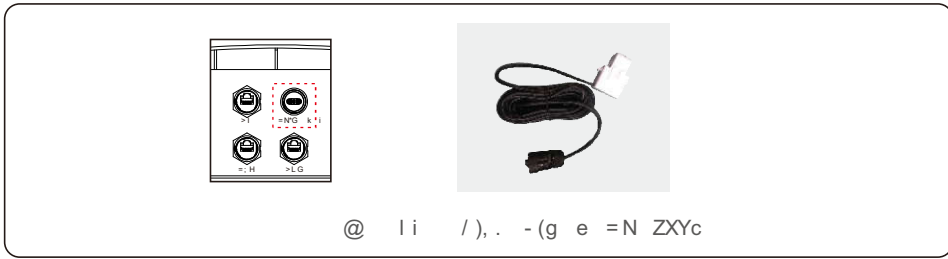


Figure 4.12

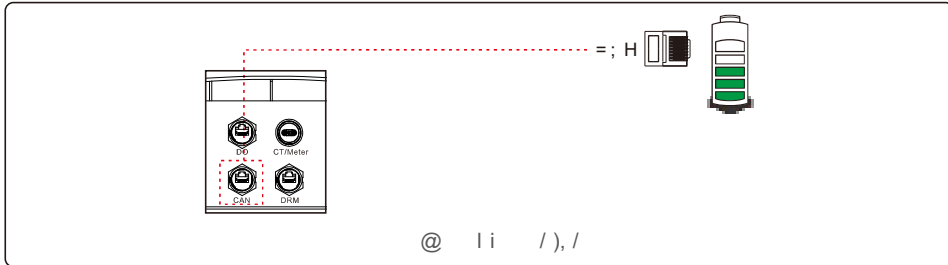
/) @j kXcXk f e

/) @j kXcXk f e



@ li /),. -(g e =N ZXYc

/)1 ;jj dYc l k_ i =XYc j
1GYKW 20 ITRR SOGYTS IGH K



@ li /),/



B4/

N_ =;H ZXYc eXYc j k_ Zfddle ZXk fe Y kn Xe[ekk_ F enfeik
YXk ip]ifd <S>' JSFI H' kZ
Jc Xj Z_ Zb]fi dX jkdXk Yc c lp Zf Y]fi ejkXcXk fe)

Mk g ,) Nxb flk k_ =;H ZXYc k id eXcedXibj e[;Xk fbf <Xk ip" fe k_ fk_ i e[)
Mk g -) OejZi n k_ jn m c elk]ifd =;H gfik
Mk g @j ik k_ LD/0 k id eXc n k_ =;H dY c ek k_ Xj k; d k g fik jkn m c elk
Mk g /) =fee Zk k_ fk_ i e[k k_ YXk ip)

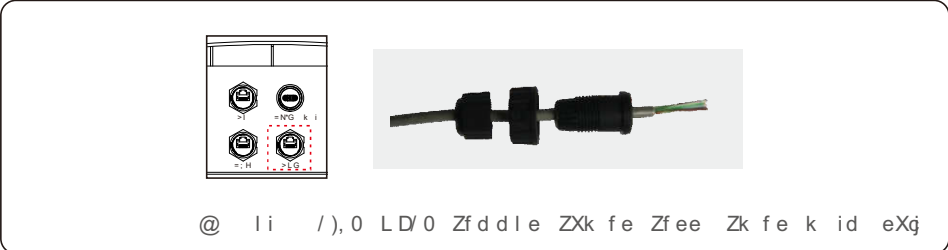


B4/

@i =;H ZXYc g e / Yd Xe[g e 0 l j n l] f fi (Yd Xi
Zfddle ZXk fe)

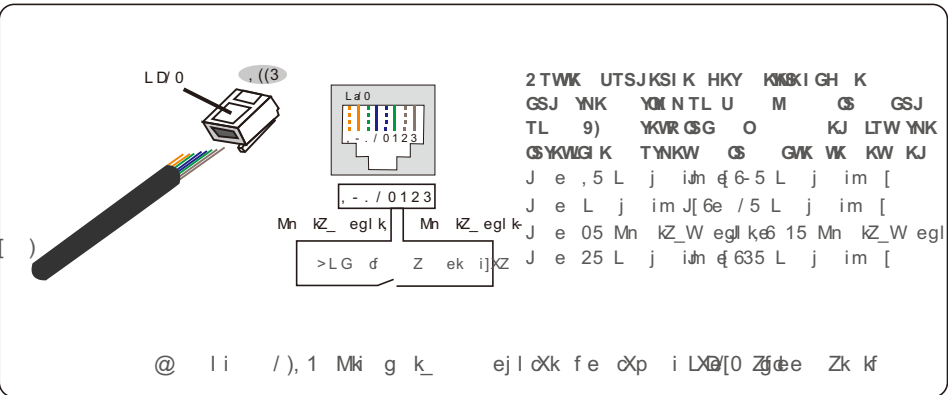
TMO GYKMGK ITRR SOGYTS IGH K : S LTWC

Ff Z ek ij]XZ j i hl i [Yp A43 Xe[XkAZMe jYXe[Xig kXk [Yp X j dgc
jn kZ_ fi ZfekXZfi) Q_ e k_ jn kZ_ j flg_ e ZernZikki[ZXe fg iXk [efidX
Q_ e k_ jn kZ_ j Zdfj [' k_ em k k fl k l k c g f n [L Z k f q if n k_ e Oj)
J e 0 Xe[J e 1 f] LD/0 k id eXc j lj ek]fi]XZ_ Zfree Zk fe)
Jc Xj]f d n j k gj Y d n k f Xj j d Yc >L G k f l) D / 0 Zfree
Mk g ,) @j ik k_ e knfib ZXYc ek k_ fe Zf ed d l Zk Zk k id eXc f] LD/0)



@ li /),0 LD/0 Zfddle ZXk fe Zfree Zk fe k id eXg

Mk g -) Oj k_ e knfib n i jki gg l dXk k f e j k X p g k f] k_ Zfddle ZXk fe
ZXYc); Zzf i [e k k_ j k X e [X i [c e j h i e Z], 1 f Z f e e Zk k_ n i k f k
f] LD/0' Xe[k_ e l j X e knfib ZXYc k i d X g e k f k c _ k)



@ li /),1 Mk g k_ ej l dXk fe dXp i LD/0 Zf d e Zk k f

Mk g .) =fee Zk LD/0 k f >LG gfik c f Z ek j]XZ



B4/

Nf lj k_ j] l e Zk fe' gc Xj ZfekXZk k_ d X el] X Z i i)

/) 0j kXcXk f e

/)2 F > 0[ZXk j

N_ i Xi k_i F > e[ZXfij fe k_ eMfdkj i; = L=f[[gcA] l iX0 Xe[
n_ Z_ e[ZXk k_ nfib e jkXj f] k_ em ik i)

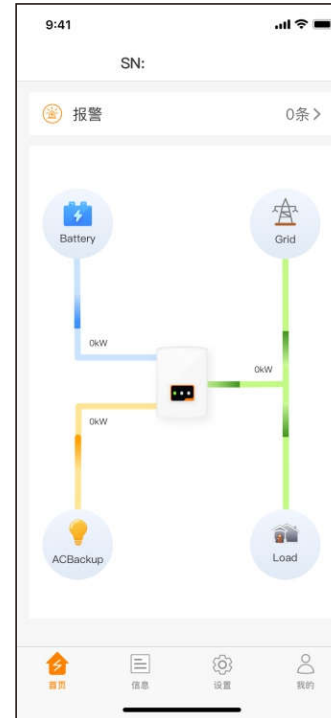


F _k	MkXj	> jZi gk fe
● JI Q L	I H	N_ em ik i ZXe [k Zk >= gfn i)
	I @@	Hf >= gfn i)
● I J L; NC H	I H	N_ em ik i j]l ap fg iXk feX0
	I @@	N_ em ik i _Xj jKgg [fg iXk e)
● ; F; LG	@F; MBCHA	N_ em ik i j e k Xc q e)
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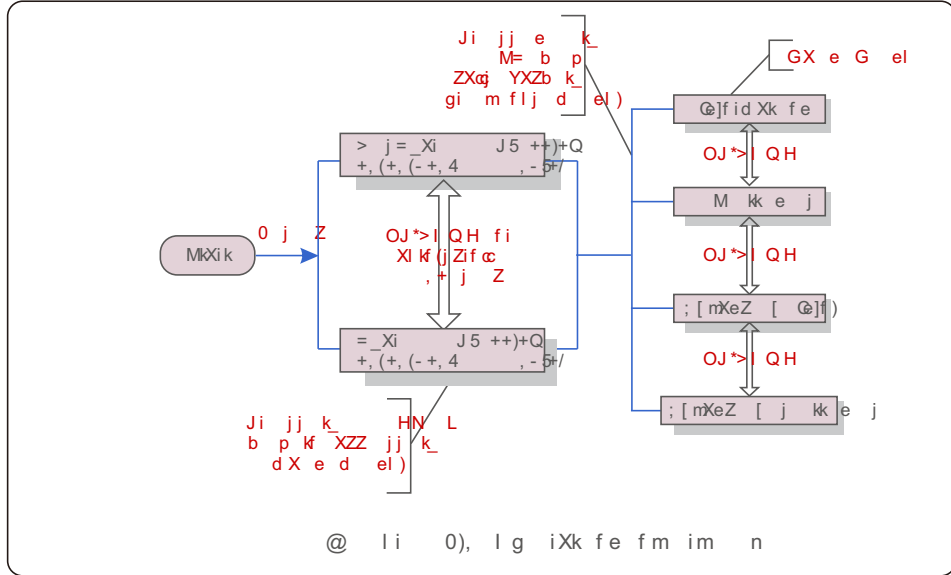
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AYTVGK 4SKVM AKY AB3 TJKYAKGMSICUJGK,
- 4 UTW T KW ABY OIVGK K KY G TW K YGW 7 8

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Q nXek kf jn kZ_ YXZb kf ;lkf df[' j dgp kkie if]]k[j' k_ e k j
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ETVPSM RTJK T KW GYKVKY KY (5VKV R S D 6 D KY
8SQG AKYGM



N_ j]l eZk fe j Xggc ZXYc Yp dX ek eXeZ g' niffee c f e p
fg iXk fe n æ gi m ek k_ em ik i j]f di p fib e gif

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j k k e j k f e X c k_ > L G [] X i d j k k e j s l @ @ '] > k Q j k s l H ' Y l
ek i]XZ l e (Z f e e Z k [k f k_ j n k Z_ f i f l g e ' j k k_ e j n i k i B G C n æ [j g d p
s F d k Y p > L G t X e [k_ em ik i f l k l k g r d k n [d Y q i f)
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ek i k_ i _ k g X j n f i [Y] f i j k e i n j g X j n f i [!) Q H b p k f d f m k_ Z l i j f i) J i j j k_ O J b p k f i m j k_ k_ n X d H N J i l j b p k f o Z l k k_ J i j j k_ M = b p k f i k i e k f k_ g i m f l j d e l)

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IP(<OM	>= <l j fm inf dX	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
OH(<OM	>= <l j nf dX jXd gc e iifi	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
>=(HN@	<Xk ip l m iZii ek	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
@A@ F(@	Ai [=lii ek NiXZb e	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
IP(A(C	Ai [l m iZii ek	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
;= NiXej ek fm Zii ek	;= NiXej ek l m iZii ek	=_ Zb] k_ YXZbl g gfik j j_fik [L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
>=@@ OFN	l m i >= ea Zk fe	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
@<N(I P(C	@<N l m iZii ek	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
IP(N G	@k ieXc l m i N dg iXdi	=_ Zb] k_ em ik i ejkXk fe d i hl i d ekj cjk [e k_ dXelXc L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
L @p=_b(@ F	L @p @l dk	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
ALG@HN@-	Ai [@k i] i eZ +-	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
@(; >	Ai [=lii ek MXd gc e	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
IP(C Ni	Ai [NiXej ek l m iZii ek	L jkXik k_ em ik i'] k_]Xi dk jk @ o ZfekXZk Mfc j Xjk i(jXc j im Z)
IP(PYXk(B	<Xk ip BXi[nXi l m iZii	=_ Zb] k_ YXk ip j Zfii Zkp Zfee Zk [fii k_ YXk ip ZfekXZk i j [jZfee Zk [Lek jkXik k_ YXk ip' L jkXik k_ em ik i'] k_]Xi dk jk @ o jk' ZfekXZk Mfc j Xjk i(j im Z)

2) Nif I Yc j_ffk e

2) Nif I Yc j_ffk e

0 G/R K G/K5GO VK JK I VU/YTS	AT YTS
I P(FF=	FF= BXi[nXi l m iZii ek L jkXik k em ik i'] k_]Xi dk j k α o jk'
I P(PYXk	<Xk ip l m inf dX =_ Zb] k_ YXk ip fm inf dX j k e j i_ xjfeXYc] k_ YXk ip i' XZ_ j k e f] c])
OH(PYXk	<Xk ip Oe[inf dX =_ Zb] k_ YXk ip fm inf dX j k e j i_ xjfeXYc] k_ YXk ip i' XZ_ j k e f] c])
>MJ(<(@ OFN	Mxm >MJ =_ Zb iifi L jkXik k em ik i'] k_]Xi dk j k α o jk'
HI (<Xk ip	<Xk ip Hfk =fee Zk [=_ Zb] k_ YXk ip j Zfii Zkp Zfee Zk [fi k_ YXk ip ZfekZkfi j [j Zfee Zk [' L jkXik k_ YXk ip)
I P(PYXZblg	Gem ik e l m inf dX L jkXik k em ik i'] k_]Xi dk j k α o jk'
I m i(FfX[<XZblg l m id X[=_ Zb] k_ YXZblg gfik j j_fik [fi k_ dX[j Xi i k_Xe k_ c d kXk fe)
=N(@X c	=N GekXc [@X c =_ Zb] =N j Zfii Zkp ejkXc [fi k_ ZXyc j Xi Yifb e*dfj e)
G NV#fddW@CF	G k i =I G @X c =_ Zb] k_ =N*G k i j k e j Zfii Zk fi k_ ZXyc j Xi Yifb e*dfj e)
=;HV#fddW@CF	<Xk ip =;H @X c =_ Zb] k_ =;H ZXyc j Zfii Zkp Zfee Zk [fi k_ ZXyc j Xi Yifb e*dfj e)
>MJV#fddW@CF	>MJ =I G @X c L jkXik k em ik i'] k_]Xi dk j k α o jk'
;xid(<GM	<Xk ip <GM ;xid L kXik k_ YXk ip']]Xi dk j k α o jk' gc Xj ZfekZk YXk ip dXel]XZi i fi ejkXc i)
<XHXd (@CF	Qife <Xk ip Gf[c GXb jli k_ XZk Xc YXk ip df[c d XkZ_ j k_ j c Zk fe fe em ik i F=>)

B4/



Q k_ em ik i [jgXpj Xep Xxid d [jXe NXYc c2]k6 gc Xj
Wie f]] k_ em ik i Xe[nX k]fi 0 d kXk jeY]fk) Q k_]X di g ij jk' gc Xj ZfekZk pflil dZXc i[k]k Y im Z Z ek i

Jc Xj b g i X[p n k_ pfl k_]fαn e]fi e]ZfekZk fe Y l j)
 ,) M i Xc eldY i f] Mfc j Gem ik i6
 -) N_ [jk Ylfi* Xc i f] Mfc j GekXc [XnX
 .) GekXcXk fe [Xk)
 /) N_ [jZi gk fe f] gifYc d)) k_ [XpXpd [jfX k F=> Xe[k_ j f] k_ F > jkXj e[ZXfi ce_kj] fiYk é i[Xfd k_ G]fid Xk fe j lYd el i] i k M Zk fe 1)- n α Xgf Y _ G]d
 0) N_ jpk d Zfe] liXk fe)
 1) Sf li ZfekZk [kX g)

NXYc 2), @X dk d jjX Xe[[jZi gk fe

3) Mg Z] ZXk f ej

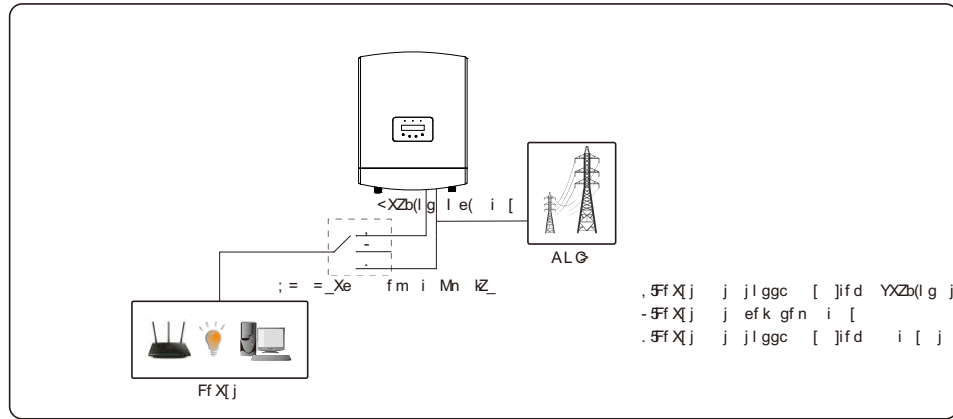
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> jgXZ d ek gfn i]XZkfi	+j3 c X[e kf +)3 X e
NB> ' iXk [gfn i	7.
=fee Zk fe g_Xj	M e c
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N_ dXo dld flklk]Xldk Zii ekJ V	-+
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1 GYKW	
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l l k l k fm i Zii ek gifk Zk fe	S j
l l k l k fm i m dX gifk Zk fe	S j
k dg iXk i gifk Zk fe	S j

3) Mg Z] ZXk f

4 LLO KSI	
GXo) <Xk ip Z_Xi]] Z eZp	4/)+
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J Xb flklk gfn iUQ V >liXk feJ V	,)0%iXk [' ,+j
Mn kZ_ k d UJ V	7.
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A YKR GVR KYKW	
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Q _k UJ V	,0
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= k] ZXk fe	C =1- / 22(, ' C =1, +++(1(, *(-*(. */' P> /, +05+, 3' P> +, -1' C =1-, +4' C =1-+ / +), ' ; M 222)-' A43' A44

4) ; gg e[o

4), Mg Z Xc <XZb(l g =fee Zk fe



Q L;Ce [j dX ek eXeZ ' k_ e djkjn kZ_ j=Mn= k_ kf fgnj k fe . Xj j_fne
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 ; = _Xe fm i Mn kZ_ j X .i[gXikp k_ d'p eA k e d ggc)