Amphenol PCD Shenzhen	Application Specification for HVSL800	Doc. No.: APCD-TD-493 Rev: F Page 1 of 25
Subject: Application Specification for HVSL800		Eff. Date:2019-12-30

Revision History

Date	Rev.	Updated Content	Originator	Remark
2018-09-27	A	First issue	Verne	
2019-04-23	B	Add 4.6.2assembly instructions	Verne	
2019-05-28	C	Add 2.2assembly instructions	SX.Yang	
2019-06-27	D	Add 25mm² cable	SX.Yang	
2019-11-21	E	Add signal contacts crimping instructions	SX.Yang	
2019-12-30	F	Add P/N, material lists and application devices and tools	SX.Yang	

Prepared by: SX.Yang Checked by ME: Clark Checked by PE: Dick.Rao Approved by: Bruce

Date 2019/12/20 Date:2020/01/04 Date: 2020/01/07 Date: 2020/01/07

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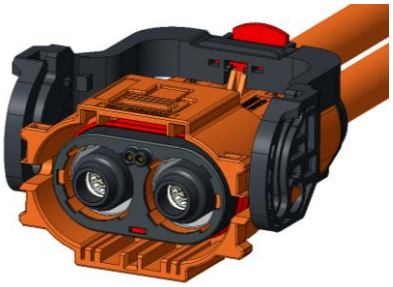
1. SCOPE

This specification covers the requirements for application of the HVSL800/SP01D connectors

1.1 Vertical plug series



HVSL800062/SP01D062 SERIES

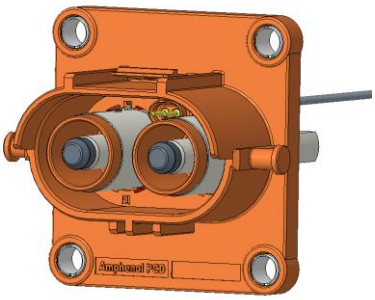
HVSL800063 SERIES

1.2 Right angle series

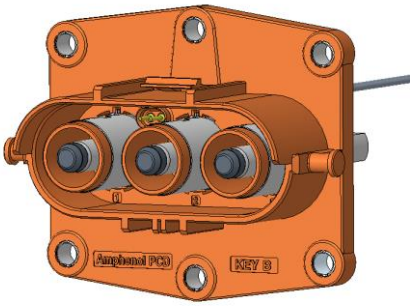
HVSL800082 SERIES

HVSL800083 SERIES

1.3 Socket series



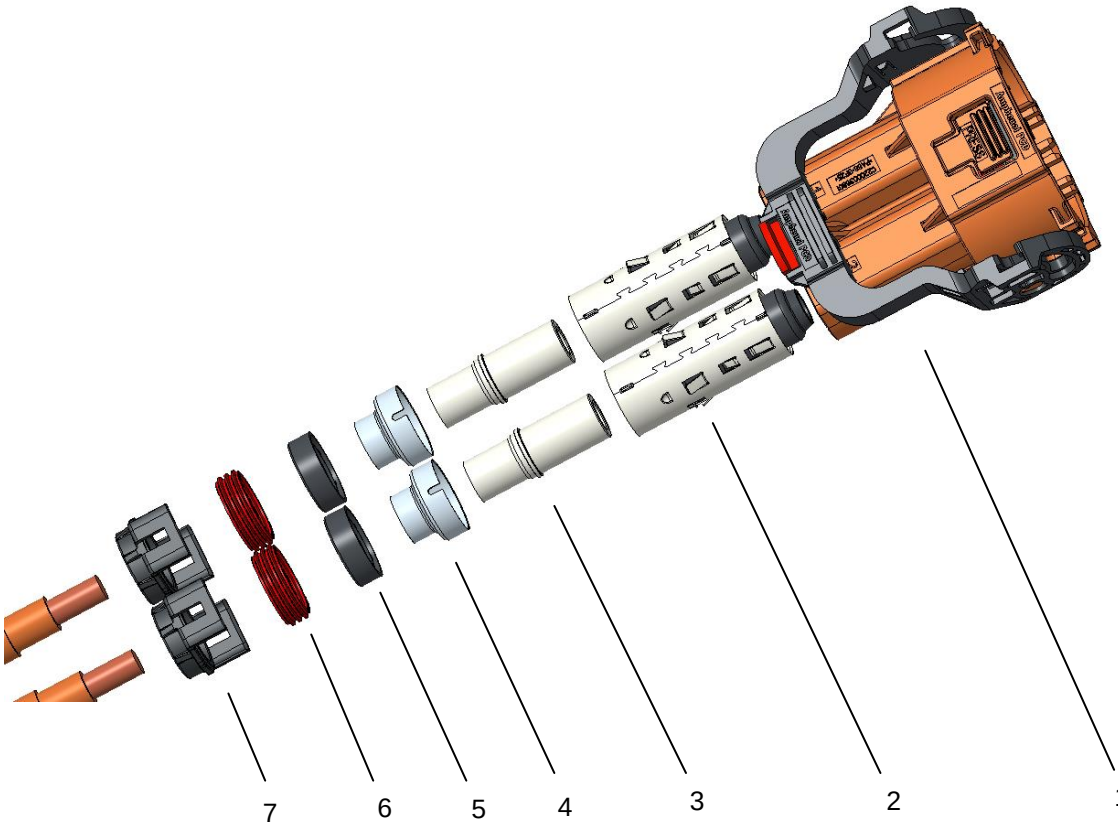
HVSL800022 SERIES



HVSL800023 SERIES

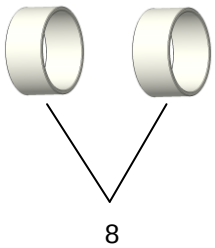
2. PLUG COMPONENTS

2.1 HVSL800062 series product component



HVSL800062 X X XX

- Cable spec: cross-section
- Inter lock option：0 without/ with HVIL
- Key option：A/B/C



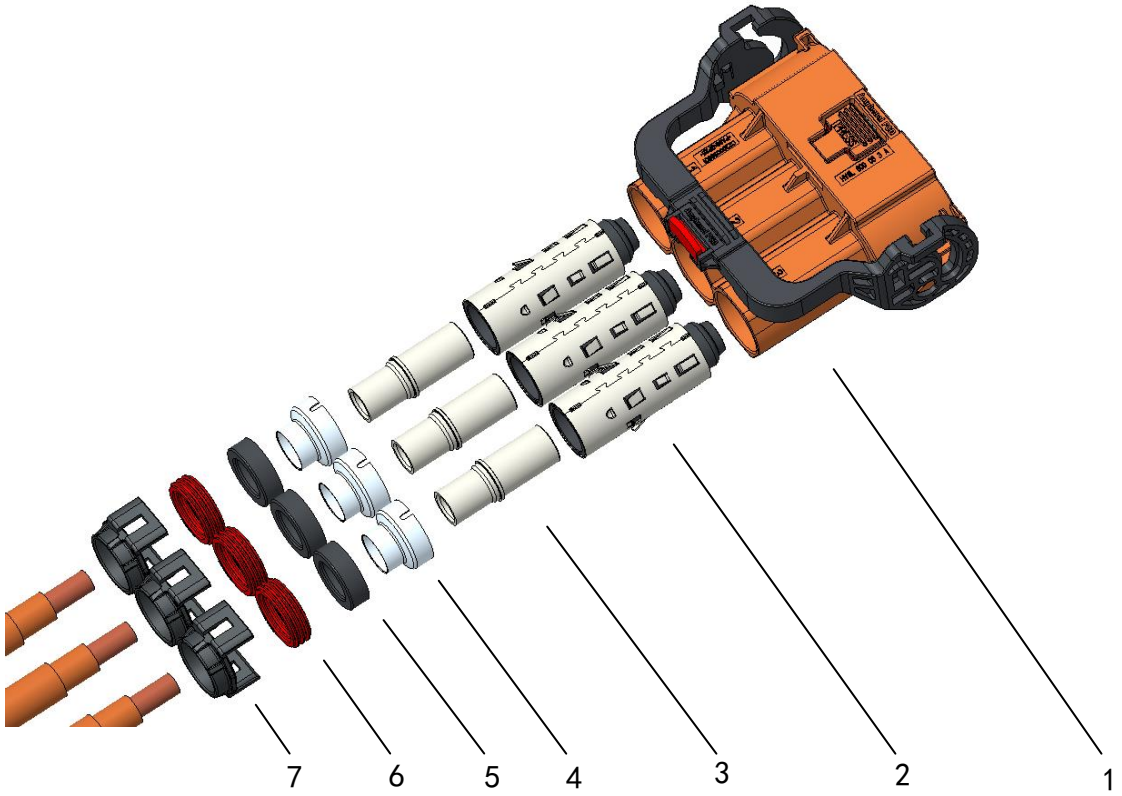
HVSL800062XX25HS needs to increase the shield inner ferrule

HVSL800062XXXX Component

HVSL800062 Material List

Item	APCD P/N	Description	QTY
1	HVSL800062XX	Plug body（HVSL800062AX/ HVSL800062BX/ HVSL800062CX） HVSL800062X1 with HVIL/ HVSL800062X0 without HVIL	1
2	C431003634	Shielding component	2
3	C4200036393	Contacts for 25 mm² cable, HVSL800062XX25/ HVSL800062XX01/ HVSL800062XX25HS	2
	C4200036392	Contacts for 35 mm² cable, HVSL800062XX35	2
	C4200036391	Contacts for 50 mm² cable, HVSL800062XX50/ HVSL800062XX02	2
4	C4310036371	Outer ferrule for HVSL800062XX50	2
	C4310036372	Outer ferrule for HVSL800062XX35/ HVSL800062XX01	2
	C4310036373	Outer ferrule for HVSL800062XX25/ HVSL800062XX25HS	2
	C4310036374	Outer ferrule for HVSL800062XX02	2
5	C4220058231	Baffle for HVSL800062XX50/ HVSL800062XX02	2
	C4220058232	Baffle for HVSL800062XX35	2
	C4220058233	Baffle for HVSL800062XX25/ HVSL800062XX01/ HVSL800062XX25HS	2
6	C4270036451	Cable seal for HVSL800062XX50	2
	C4270036452	Cable seal for HVSL800062XX35	2
	C4270036453	Cable seal for HVSL800062XX25	2
	P03BR00141	Cable seal for HVSL800062XX01	2
	P03BR00197	Cable seal for HVSL800062XX02	2
	P03BR00133	Cable seal for HVSL800062XX25HS	2
7	C4220036831	End cap for HVSL800062XX50	2
	C4220036832	End cap for HVSL800062XX35	2
	C4220036833	End cap for HVSL800062XX25	2
	C4220036834	End cap for HVSL800062XX25HS	2
	C4220036835	End cap for HVSL800062XX01	2
	C4220036836	End cap for HVSL800062XX02	2
8	P03BM00220	Inner ferrule for HVSL800062XX25HS	2

2.2 HVSL800063 series product component



HVSL800063 X X XX

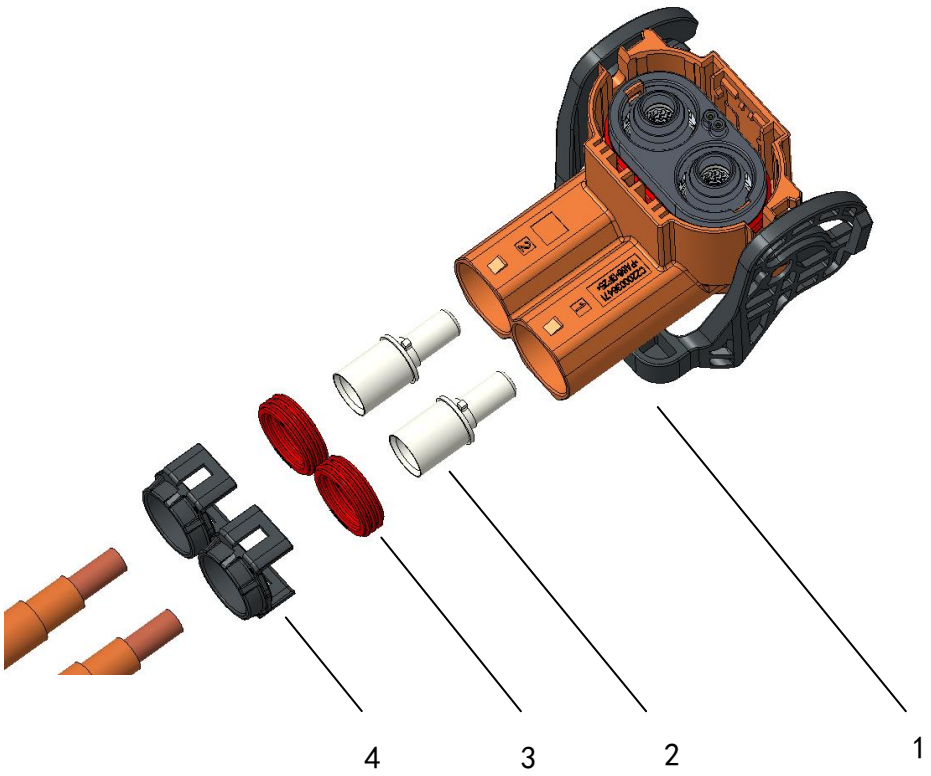
- XX: Cable spec: cross-section
- X: Inter lock option：0 without/ with HVIL
- X: Key option:A/B/C

HVSL800063 Componet

HVSL800063 Material List

Item	APCD P/N	Description	QTY
1	HVSL800063XX	Plug body（HVSL800063AX/ HVSL800063BX/ HVSL800063CX） HVSL800063X1 with HVIL/ HVSL800063X0 without HVIL	1
2	C431003634	Shielding component	3
3	C4200036393	Contacts for 25 mm² cable, HVSL800063XX25/ HVSL800063XX01	3
	C4200036392	Contacts for 35 mm² cable, HVSL800063XX35	3
	C4200036391	Contacts for 50 mm² cable ,HVSL800063XX50/ HVSL800063XX02	3
4	C4310036371	Outer ferrule for HVSL800063XX50	3
	C4310036372	Outer ferrule for HVSL800063XX35/ HVSL800063XX01	3
	C4310036373	Outer ferrule for HVSL800063XX25	3
	C4310036374	Outer ferrule for HVSL800063XX02	3
5	C4220058231	Baffle for HVSL800063XX50/ HVSL800063XX02	3
	C4220058232	Baffle for HVSL800063XX35	3
	C4220058233	Baffle for HVSL800063XX25/ HVSL800063XX01	3
6	C4270036451	Cable seal for HVSL800063XX50	3
	C4270036452	Cable seal for HVSL800063XX35	3
	C4270036453	Cable seal for HVSL800063XX25	3
	P03BR00141	Cable seal for HVSL800063XX01	3
	P03BR00197	Cable seal for HVSL800063XX02	3
6	C4220036831	End cap for HVSL800063XX50	3
	C4220036832	End cap for HVSL800063XX35	3
	C4220036833	End cap for HVSL800063XX25	3
	C4220036835	End cap for HVSL800063XX01	3
	C4220036836	End cap for HVSL800063XX02	3

2.3 HVSL800082 series product component



HVSL800082 X X XX

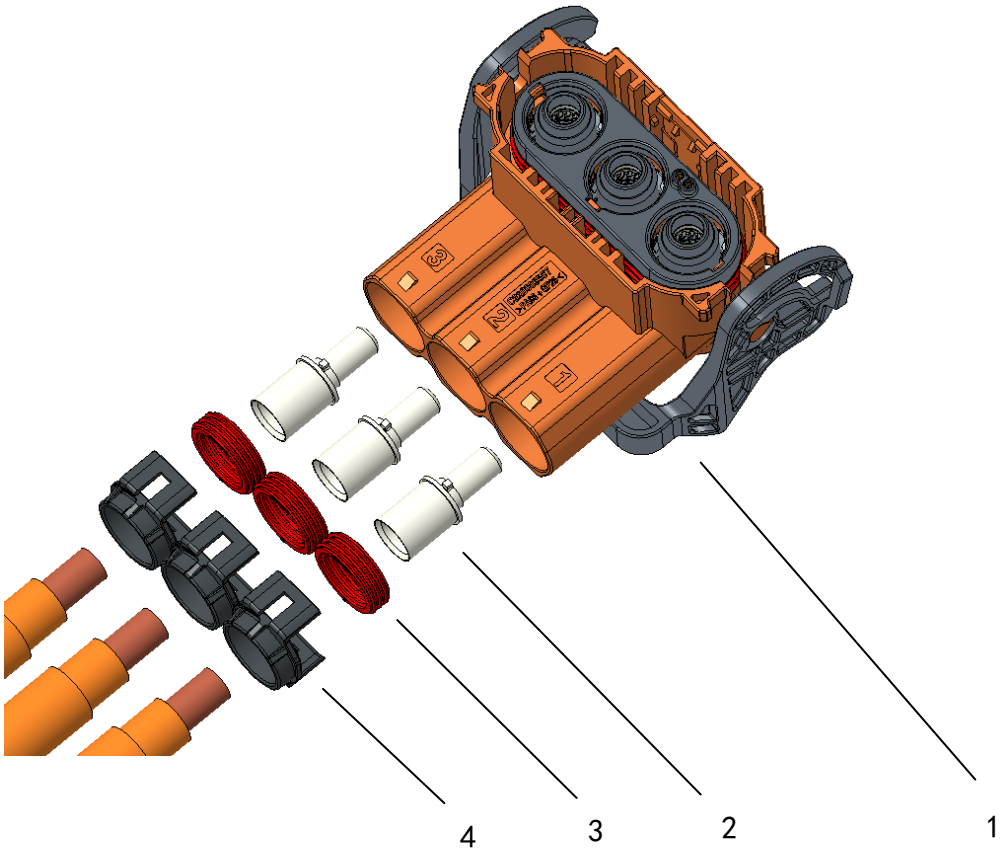
- Cable spec: cross-section
- Inter lock option：0 without/ with HVIL
- Key option：A/B/C

HVSL800082 Component

HVSL800082 Material List

Item	APCD P/N	Description	QTY
1	HVSL800082XX	Plug body（HVSL800082AX/ HVSL800082BX/ HVSL800082CX）。HVSL800082X1 with HVIL/ HVSL800082X0 without HVIL	1
2	C4200036543	Contacts for 25 mm² cable, HVSL800082XX25/ HVSL800082XX01 /HVSL800082XX25HS	2
	C4200036542	Contacts for 35 mm² cable, HVSL800082XX35	2
	C4200036541	Contacts for 50 mm² cable,HVSL800082XX50/ HVSL800082XX02	2
3	C4270036451	Cable seal for HVSL800082XX50	2
	C4270036452	Cable seal for HVSL800082XX35	2
	C4270036453	Cable seal for HVSL800082XX25	2
	P03BR00141	Cable seal for HVSL800082XX01	2
	P03BR00197	Cable seal for HVSL800082XX02	2
	P03BR00133	Cable seal for HVSL800082XX25HS	2
4	C4220036831	End cap for HVSL800082XX50	2
	C4220036832	End cap for HVSL800082XX35	2
	C4220036833	End cap for HVSL800082XX25	2
	C4220036834	End cap for HVSL800082XX25HS	2
	C4220036835	End cap for HVSL800082XX01	2
	C4220036836	End cap for HVSL800082XX02	2

2.4 HVSL800083 series product componet



HVSL800083 X X XX

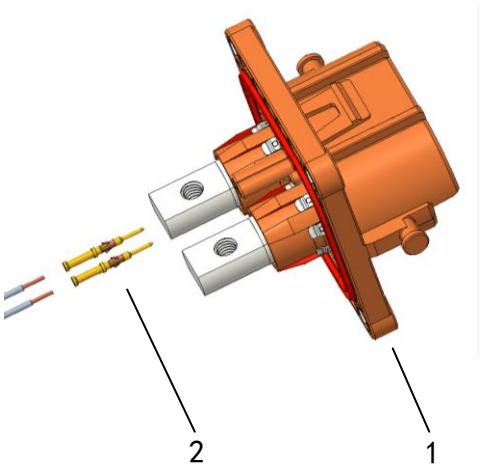
- Cable spec: cross-section
- Inter lock option：0 without/ with HVIL
- Key option: A/B/C

HVSL800083 Component

HVSL800083 Material list

Item	APCD P/N	Description	QTY
1	HVSL800083XX	Plug body（HVSL800083AX/ HVSL800083BX/ HVSL800083CX）。HVSL800083X1with HVIL/ HVSL800083X0 without HVIL	1
2	C4200036543	Contacts for 25 mm² cable, HVSL800083XX25/ HVSL800083XX01	3
	C4200036542	Contacts for35 mm² cable,HVSL800083XX35	3
	C4200036541	Contacts for 50 mm² cable,HVSL800083XX50/ HVSL800083XX02	3
3	C4270036451	Cable seal for HVSL800083XX50	3
	C4270036452	Cable seal for HVSL800083XX35	3
	C4270036453	Cable seal for HVSL800083XX25	3
	P03BR00141	Cable seal for HVSL800083XX01	3
	P03BR00197	Cable seal for HVSL800083XX02	3
4	C4220036831	End cap for HVSL800083XX50	3
	C4220036832	End cap for HVSL800083XX35	3
	C4220036833	End cap for HVSL800083XX25	3
	C4220036835	End cap for HVSL800083XX01	3
	C4220036836	End cap for HVSL800083XX02	3

2.5 HVSL80002XX series product component

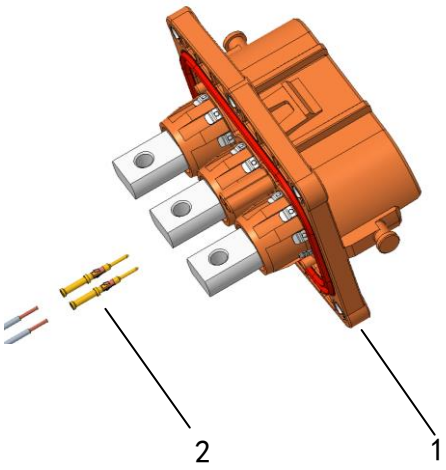


HVSL800022 X X

Inter lock option：0 without/ with HVIL

Key option: A/B/C

HVSL800022 Component



HVSL800023 X X

Inter lock option：0 without/ with HVIL

Key option: A/B/C

HVSL800023 Component

HVSL800022 Material list

Item	APCD P/N	Description	QTY
1	HVSL800022XX	Socket body （HVSL800022AX/ HVSL800022BX/ HVSL800022CX） HVSL800022X1 with HVIL/ HVSL800022X0 without HVIL	1
2	C420003643	Signal contacts HVSL800022XX	2

HVSL800023 Material list

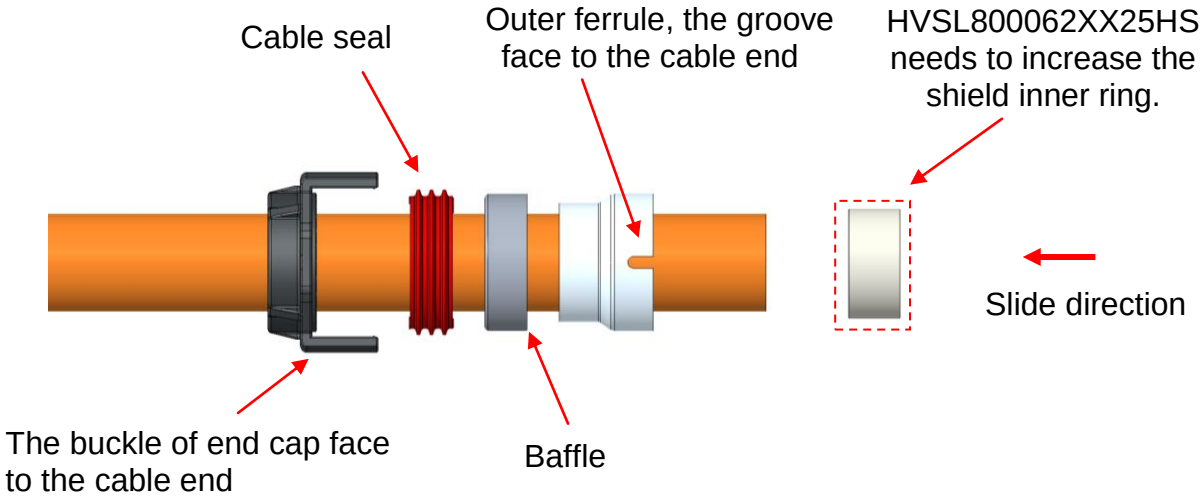
Item	APCD P/N	Description	QTY
1	HVSL800023XX	Socket body （HVSL800023AX/ HVSL800023BX/ HVSL800023CX） HVSL800023X1with HVIL/ HVSL800023X0 without HVIL	1
2	C420003643	Signal cotacts HVSL800023XX	2

3. ASSEMBLY INSTRUCTIONS FOR VERTICAL PLUG

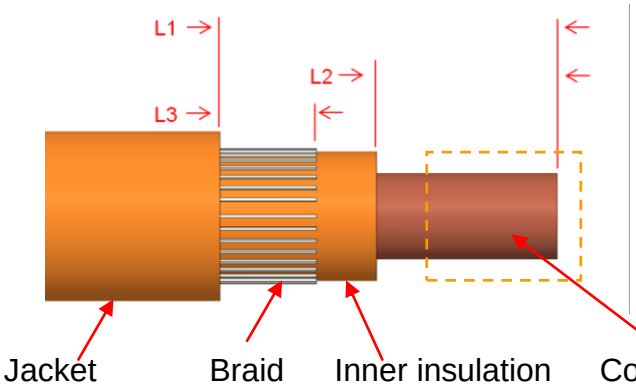
3.1 Cable option:

Cable spec	OD(mm)	Connector P/N
25mm²	10.9-11.5	HVSL80006XXX25HS
25mm²	11.6-12.2	HVSL80006XXX25
25mm²	13.2-13.8	HVSL80006XXX01
35mm²	13.8-14.5	HVSL80006XXX35
50mm²	15.2-15.8	HVSL80006XXX02
50mm²	16.2-16.8	HVSL80006XXX50

3.2 In order shown in figure, slide end cap, cable seal, baffle and outer ferrule onto the cable



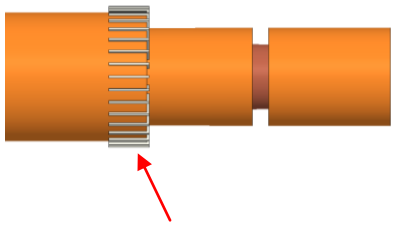
3.3 Strip and remove jacket, braid, inner insulation and conductor from the end as shown below:



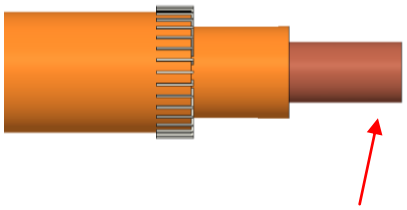
Cable spec	L1(mm)	L2(mm)	L3(mm)
25mm²	28.0±0.5	15.0±0.5	8.0ref
35mm²	28.0±0.5	15.0±0.5	8.0ref
50mm²	28.0±0.5	15.0±0.5	8.0ref

3.4 Raise braid (8.0mm) equally over perimeter，then flip over to wrap jacket, insert the conductor into the contact.

① ②

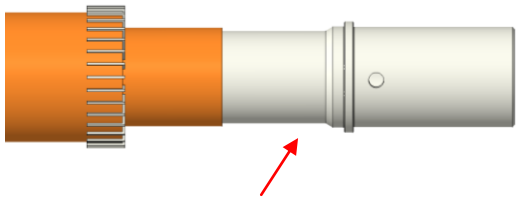


Braid flip



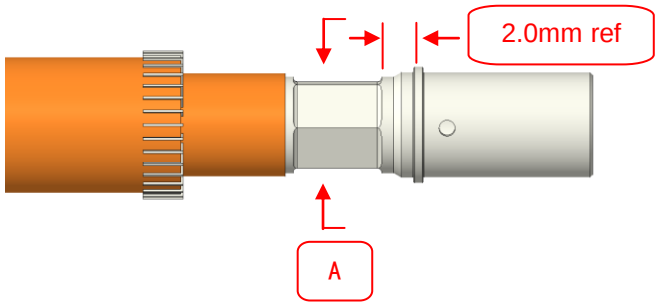
Remove the inner insulation

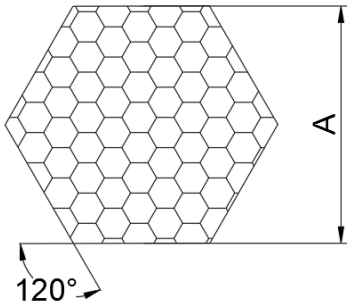
③



Insert conduct into the contact

3.5 Crimp the contact: The retention force must be ensured to meet spec list in below table

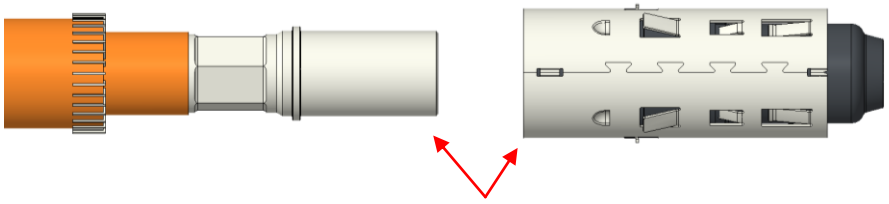




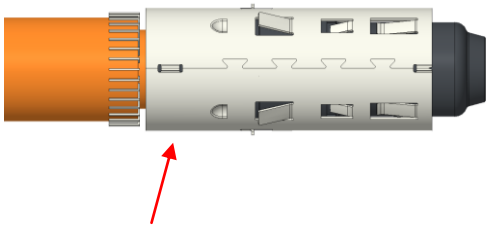
Cable sepc	Size A(ref)	Retention force
25mm²	7.3mm	≥1900N
35mm²	9.2mm	≥2300N
50mm²	10.5mm	≥2800N

3.6 Insert the contact into the shielding component first.

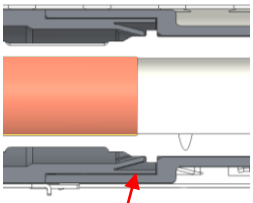
① Insertion direction



Insert contact into the shielding component

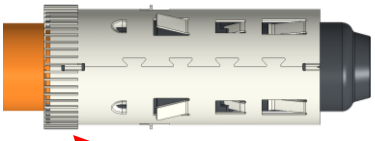
② 

Finish insertion

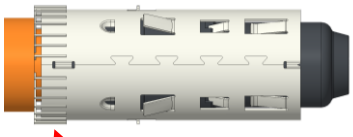
③ 

Contact locked by the tab

3.7 Then flip the braid forward to cover the metal shell of the shielding component, install the outer ferrule on the metal shell.Need cut off a part of braid if the outer ferrule can not be installed on the shell.

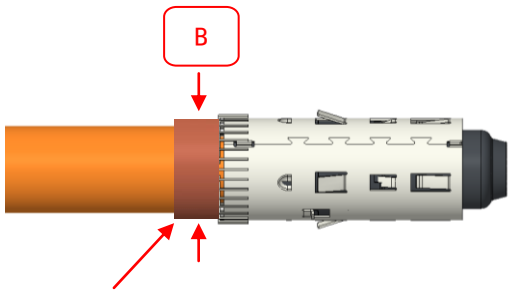
① 

Flip the braid forward, braid cover the metal shell

② 

Cut off a part of braid

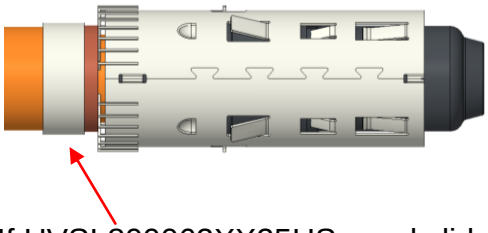
3.8 Wrap copper foil over the jacket according to size shown in the right table.



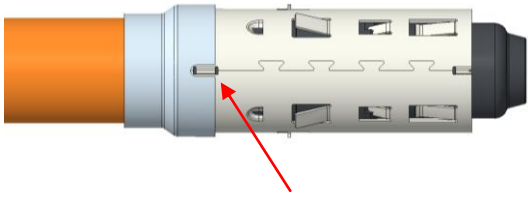
Wrap copper foil

ferrule	Size B (mm)ref
C4310036371	Φ17.4
C4310036372	Φ14.8
P03BM00220	Φ11.4
C4310036373	Φ13.0
C4310036374	Φ16.1

3.9 Slide the outer ferrule on the metal shell

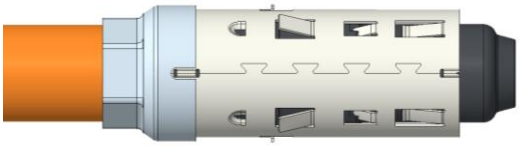


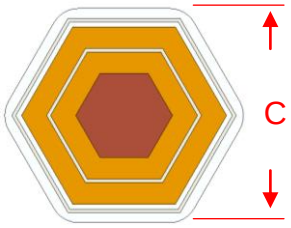
If HVSL800062XX25HS need slide shielding inner ferrule on the copper foil



The groove of the outer ferrule oriented to the convex of the shielding shell.

3.10 Crimping the outer ferrule, the size and retention force must meet the requirements shown in below table.

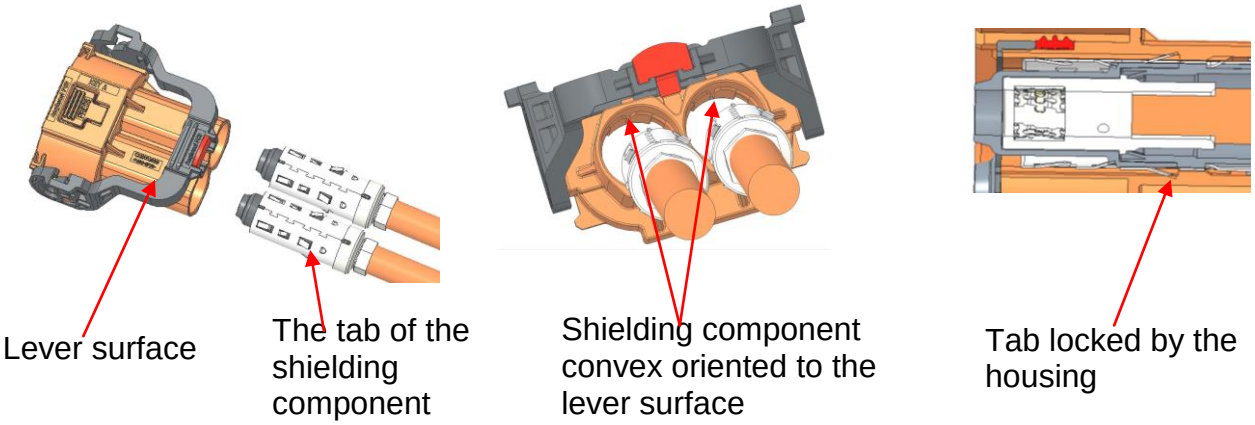




Outer ferrule	Size C (mm)ref	Retention force（N）
C4310036371	16.0	≥150N
C4310036372	13.6	≥150N
C4310036373	12.0	≥150N
C4310036374	15.0	≥150N

3.11 Insert the shielding component into the plug housing.

① ② ③

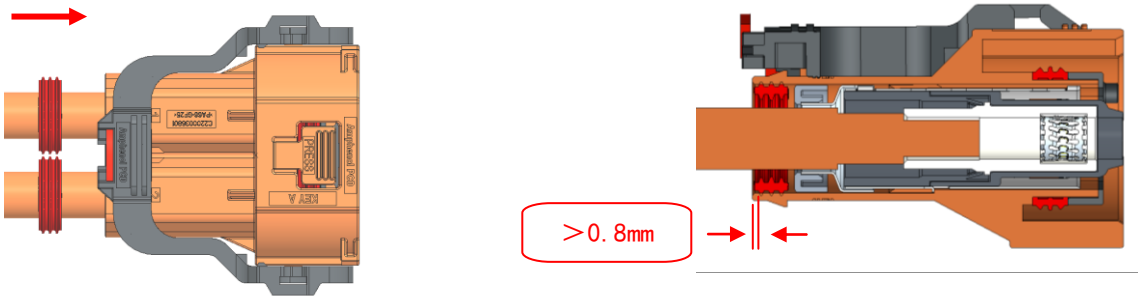


3.12 Slide the baffle into the housig shown in below figure.

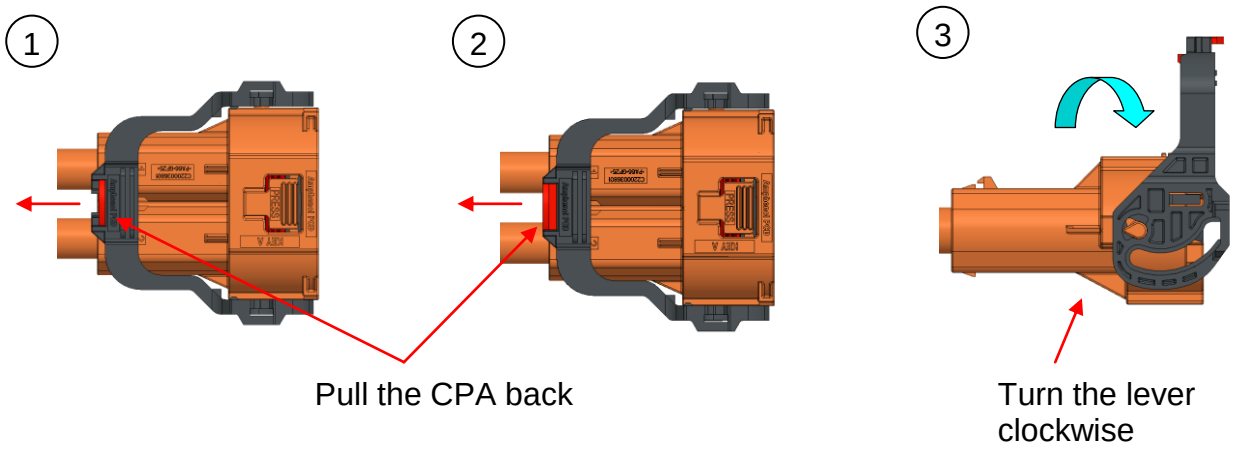
① ②

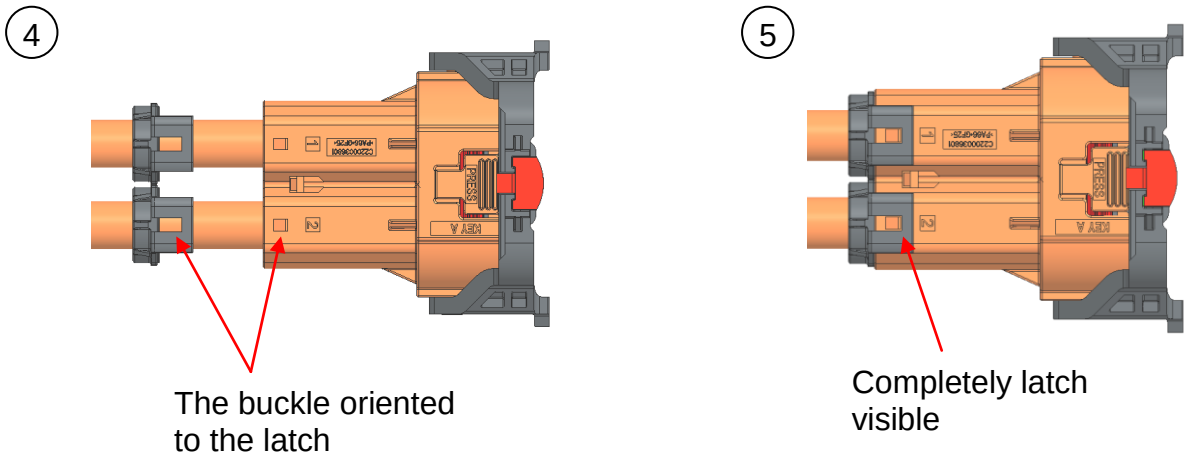
3.13 Slide the cable seal into the housing shown in below figure.

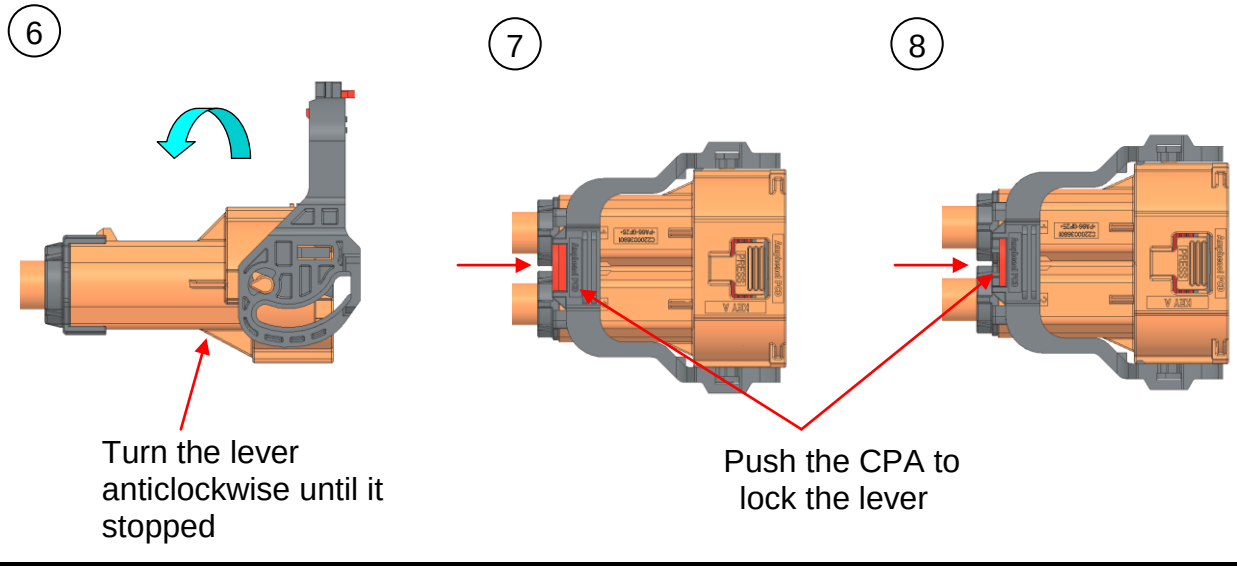
① ②



3.14 Unlock CPA, turn the lever clockwise, slide the end cap on the housing, the buckle of end cap locked by the latch.





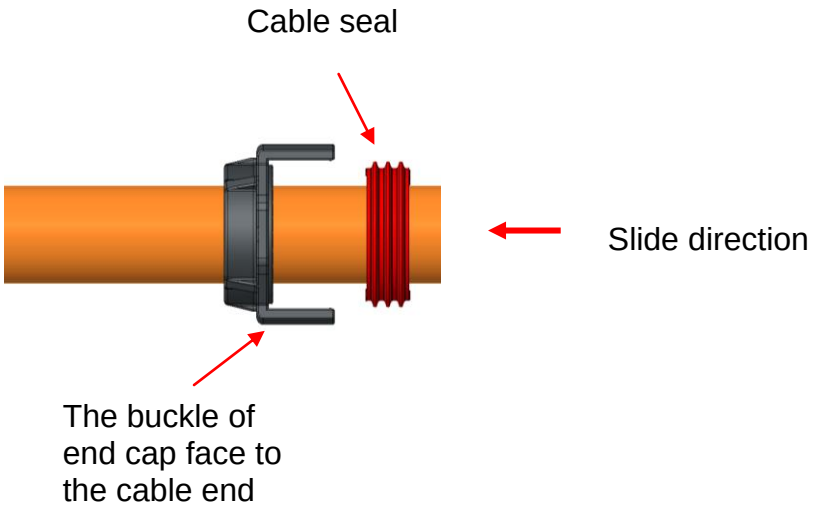


4. ASSEMBLY INSTRUCTIONS FOR SOCKET (RIGHT ANGLE)

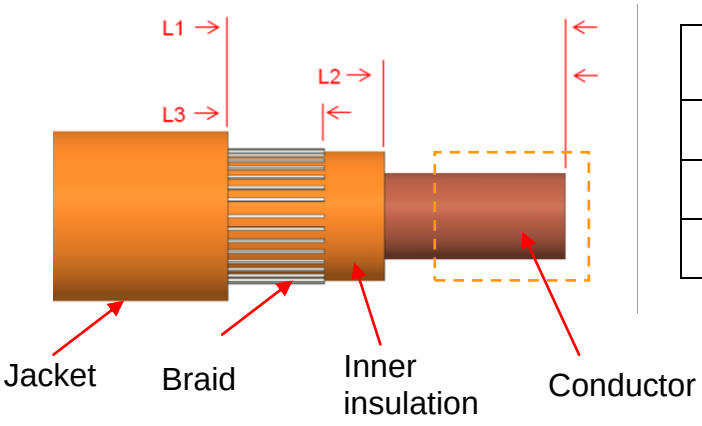
4.1 Cable option:

Cable spec	OD(mm)	Connector P/N
25mm²	10.9-11.5	HVSL80008XXX25HS
25mm²	11.6-12.2	HVSL80008XXX25
25mm²	13.2-13.8	HVSL80008XXX01
35mm²	13.8-14.5	HVSL80008XXX35
50mm²	15.2-15.8	HVSL80008XXX02
50mm²	16.2-16.8	HVSL80008XXX50

4.1 In order shown in figure, slide end cap and cable seal onto the cable

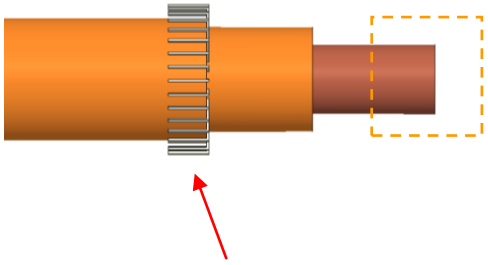


4.1 Strip and remove jacket, braid, inner insulation and conductor from the end as shown below:

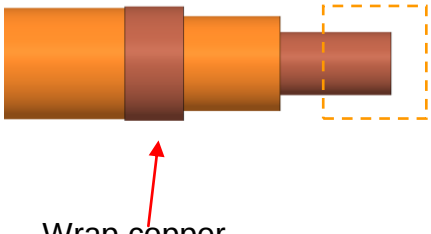


Cable spec	L1(mm)	L2(mm)	L3(mm)
25mm²	26.0±0.5	15.0±0.5	8.0ref
35mm²	26.0±0.5	15.0±0.5	8.0ref
50mm²	26.0±0.5	15.0±0.5	8.0ref

4.2 Flip the braid to cover the jacket, then wrap 2~3 layer copper foil.

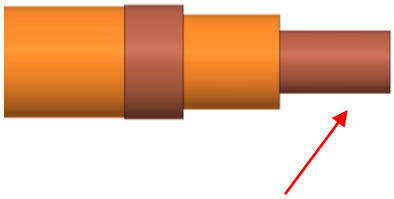


Flip braid

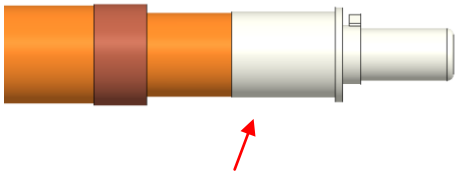


Wrap copper foil 2~3 layer

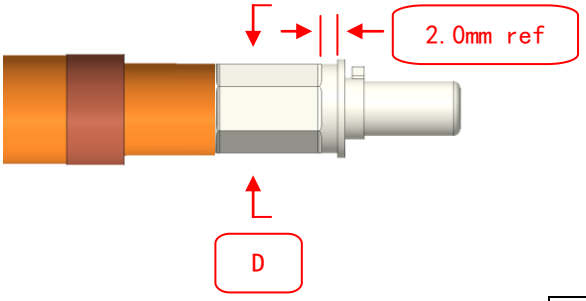
4.1 Remove the insulation, then insert the coductor into the contact, finally crimp the contact. The size and retention force must meet the requirements shown in below table.

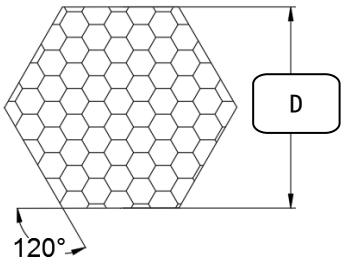


Remove the insulation



Insert the conductor into the contact

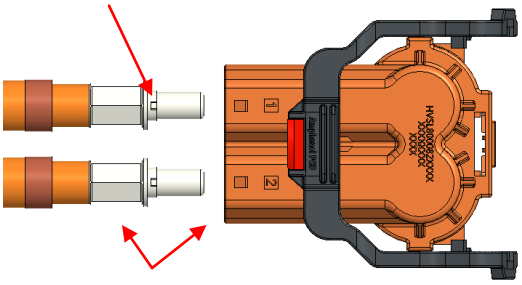




Cabel spec	Size D(ref)	Retention force
25mm²	7.3mm	≥1900N
35mm²	9.2mm	≥2300N
50mm²	10.5mm	≥2800N

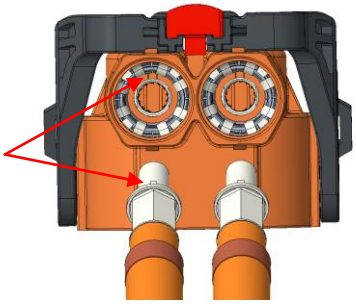
4.2 Insert the contacts into the housing shown in below figure

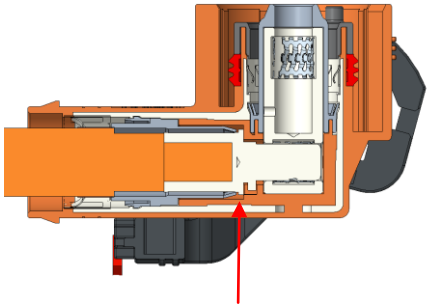
The convex of the contact



Insert the contact into the housing

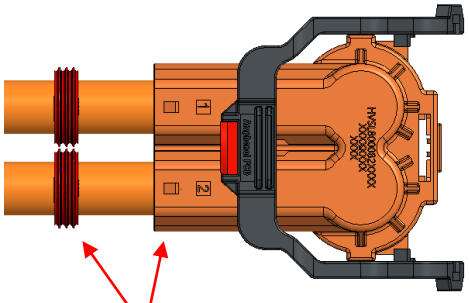
The convex oriented to the groove in the housing





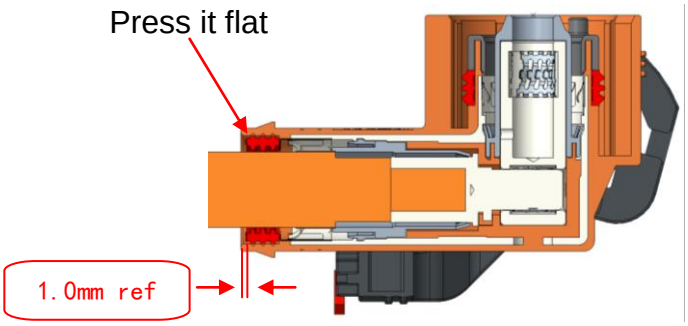
Contact locked by the tab

4.3 Push the cable seal into the housing.

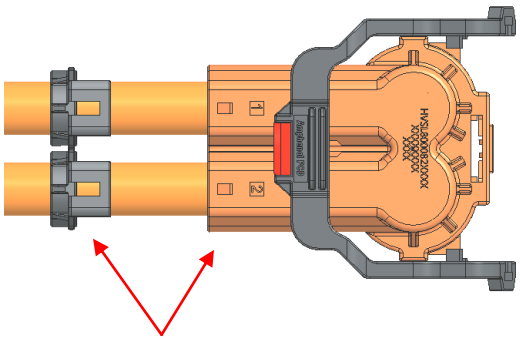


Push the cable seal into the housing

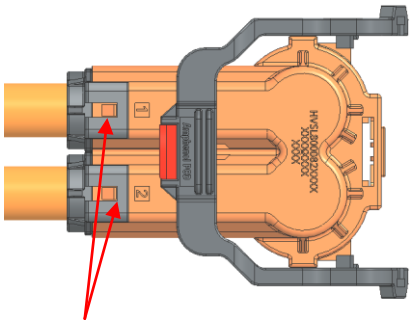
Press it flat



4.4 Slide the end cap toward the housing, the buckle of end cap locked by the latch.



The buckle oriented to the latch



Completely latch visible

5. TEST INSTRUCTIONS

5.1 100% Hi-pot test, insulation test:
AC 3000V, 5S, leakage current≤5mA.
DC 500V,10S,insulation resistance≥100MΩ。

5.2 100% continuity test

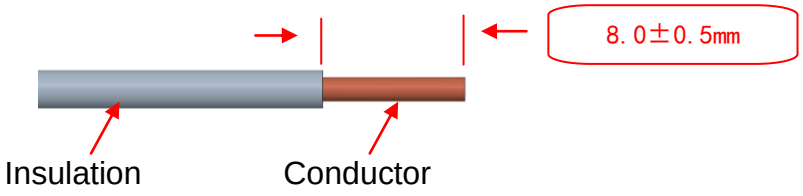
5.3 100% IP67 water proof test（matched with socket）

6. ASSEMBLY INSTRUCTIONS FOR SOCKET

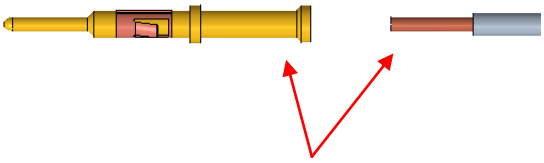
6.1 Cable option:

Cable spec	OD(mm)
0.5mm²	1.5-1.7
0.75mm²	2.1-2.5

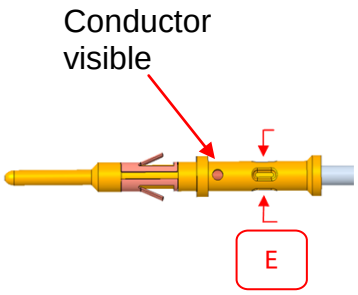
6.2 Strip the signal cable insulation from the end as show below figure.

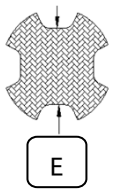


6.3 Insert the conductor into the contact and crimp it, the size and retention force see below table.



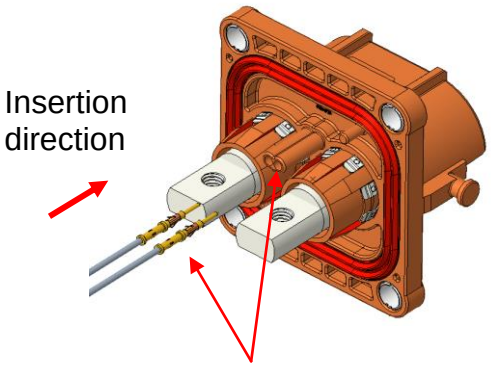
Insert conductor into the contcact



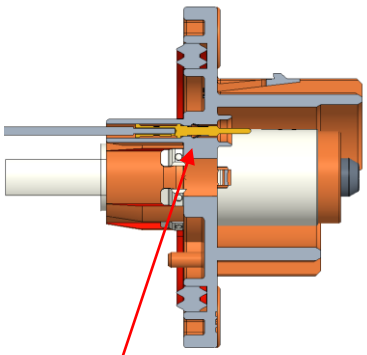


Cable	Retention force	Size D mm
0.5mm²	≥70N	0.95±0.05
0.75mm²	≥90N	1.10±0.05

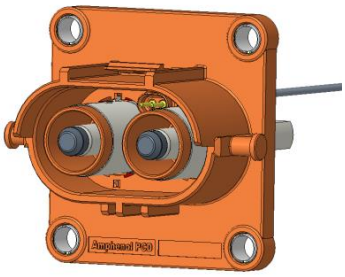
6.4 Insert the signal contacts into the housing



Insert contact into the housing



Contact tab locked by the housing with audible click.



7. TEST INSTRUCTIONS FOR SOCKET

7.1 100% Hi-pot test, insulation test:
AC 3000V, 5S, leakage current ≤5mA.
DC 500V,10S, insulation resistance ≥100MΩ。

7.2 100% continuity test

8. APPLICATION DEVICES AND TOOLS

Item	Tool name	Description	Picture	Tool P/N
1	Hexgonal dies-less crimping machine	Crimping contact		HC200
2	Electrical crimping tool	Crimping outer ferrule		APSM240-10
3	pneumatic crimping tool	Crimping signal contact		WA22
4	Universal positioner	Make the correct crimping position		SK2/2
5	Extractor tool	Remove power contacts(4pcs), HVSL80006X series.		HVTOOL-800-001
6	Extractor tool	Remove signal contacts HVSL80002X series		HVTOOL11R

单击下面可查看定价，库存，交付和生命周期等信息

>>Amphenol(安费诺)