

Amphenol PCD Shenzhen	Application Specification for HVSL1200 Connector	Doc. No.: APCD-TD-395
		Rev.: B
		Page 1 of 11
Subject: Application specification for HVSL1200 connector		Eff. Date: 2019/08/05

Revision History				
Date	Rev.	Updated Content	Originator	Remark
2018-01-24	A	First release	SX.Yang	
2019-08-05	B	Add explode view and correct clerical mistake	SX.Yang	

Prepared By: SX.Yang	Checked By: Clark	Approved By: Bruce
Date: 2019-08-05	Date: 2019-08-05	Date: 2019-08-05

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1. SCOPE

This specification covers the requirements for application of the HVSL1200 connector



Straight Plug

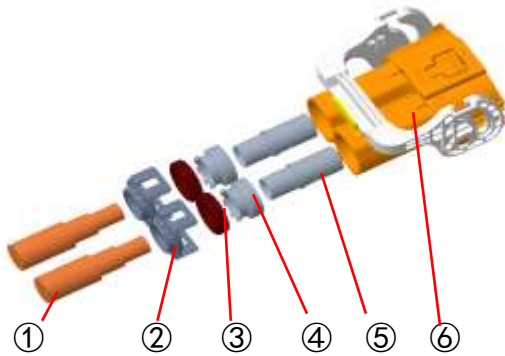


Right Angle Plug



Receptacle

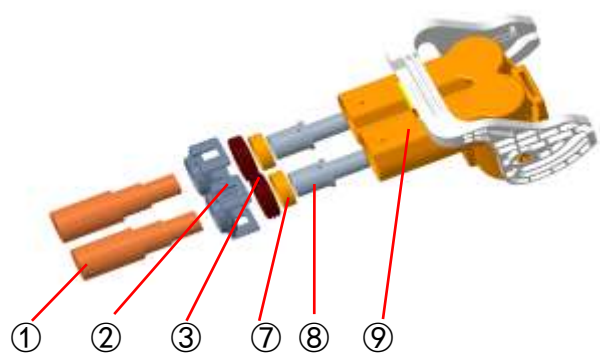
2. COMPONENTS



Straight Plug

Connector accessories for 70mm² cable

INDEX	APCD P/N	DESCRIPTION	QTY
①	C210005107	70mm ² cable	2
②	P03BC2200053871	End cap	2
③	P03BC2700052141	Cable seal	2
④	P03BC31000516411	Shield tube	2
⑤	HVSL12000670	Contact	2
⑥	-	Housing	1



Right Angle Plug

Connector accessories for 70mm² cable

INDEX	APCD P/N	DESCRIPTION	QTY
①	C210005107	70mm ² cable	2
②	P03BC2200053871	End cap	2
③	P03BC2700052141	Cable seal	2
⑦	P03BC3100051631	Shield tube	2
⑧	HVSL12000870	Contact	2
⑨	-	Housing	1

**Straight Plug
Connector accessories for 95mm² cable**

INDEX	APCD P/N	DESCRIPTION	QTY
①	P03BC0008	95mm ² cable	2
②	P03BC2200053872	End cap	2
③	P03BC270005214	Cable seal	2
④	P03BC310005164	Shield tube	2
⑤	HVSL12000695	Contact	2
⑥	-	Housing	1

**Right Angle Plug
Connector accessories for 95mm² cable**

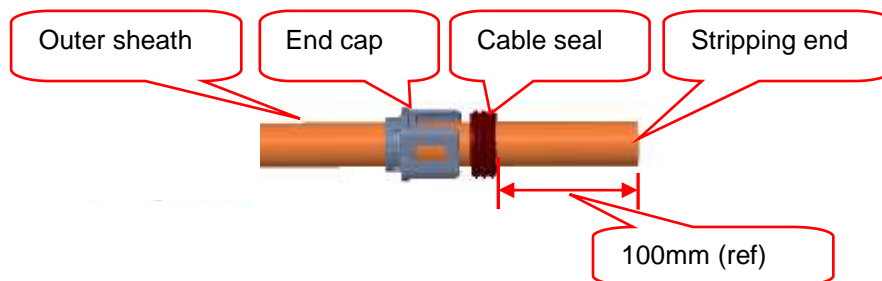
INDEX	APCD P/N	DESCRIPTION	QTY
①	P03BC0008	95mm ² cable	2
②	P03BC2200053872	End cap	2
③	P03BC270005214	Cable seal	2
⑦	P03BC310005163	Shield tube	2
⑧	HVSL12000895	Contact	2
⑨	-	Housing	1

3. ASSEMBLY INSTRUCTIONS FOR STRAIGHT PLUG

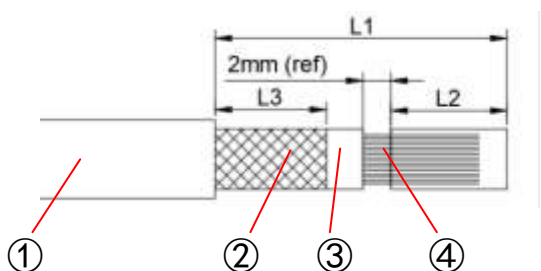
3.1 Cable specification:

Cable spec.	Cable OD (mm)
70mm ²	18.7±0.5
95mm ²	21.3±0.6

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



3.3 Strip and remove outer sheath, screening braid, inner sheath and conductor from the end as shown below:

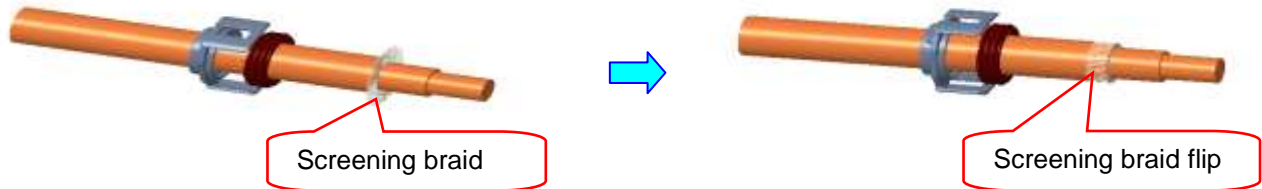


①—Outer sheath ②—Screening braid
③—Inner sheath ④—Conductor
Stripping dimensions for exposing cable

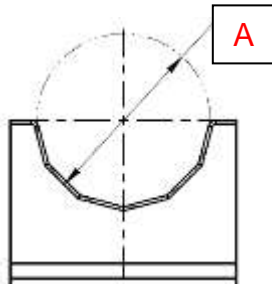
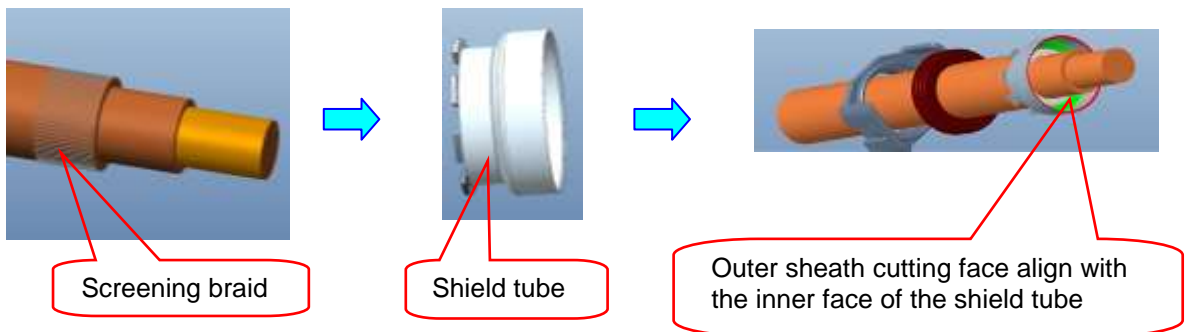
Cutting dimensions

Cable spec.	L1 (mm)	L2 (mm)	L3 (mm)
70mm ²	38.0±0.5	21.0±0.5	7.0 (ref)
95mm ²	38.0±0.5	21.0±0.5	7.0 (ref)

3.4 Raise screening braid (7.0mm) equally over perimeter, then flip over to wrap the outer sheath:

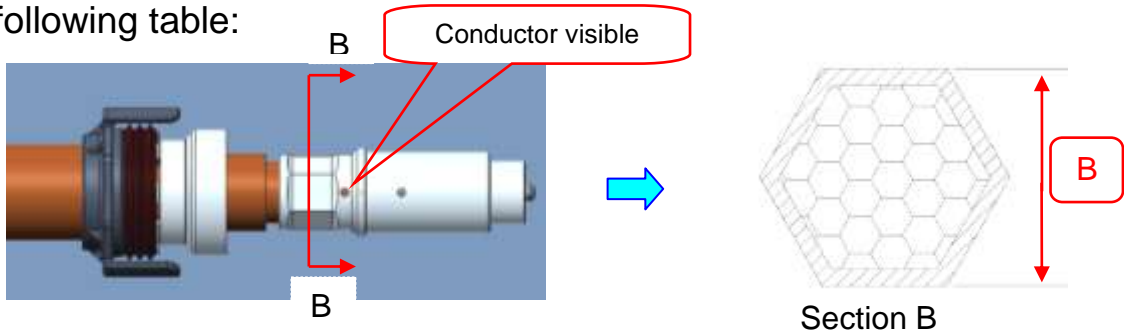


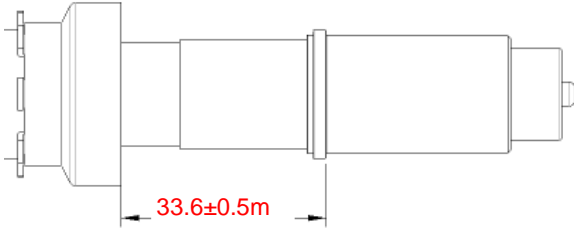
3.5 Then slide shield tube onto the screening braid, align the shield tube inner face with the outer sheath cutting face. Crimp shield tube with tool. The retention force must be ensured to meet spec list in following table:



Cable spec.	Tool No.	Machine name	Dimension A (mm)	Retention force (N)
70mm ²	HVSL-P059-001	UP60 crimping machine	20.0±0.1 (ref)	≥100
95mm ²	HVSL-P059-002	UP60 crimping machine	23.0±0.1 (ref)	≥100

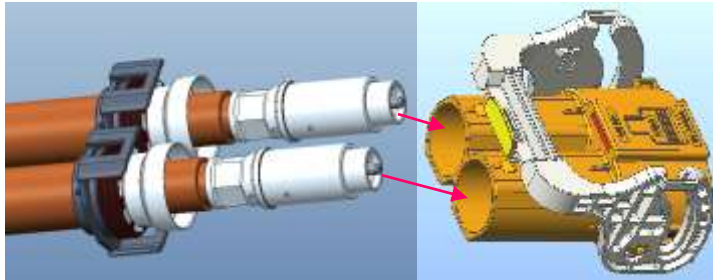
3.6 Insert conductor into the hole of the contact, then crimp it with tool or machine. The retention force must be ensured to meet spec list in following table:



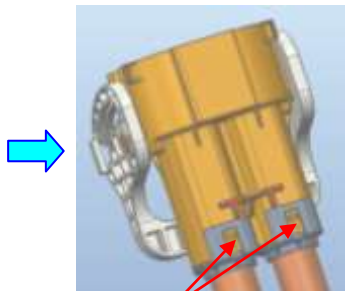
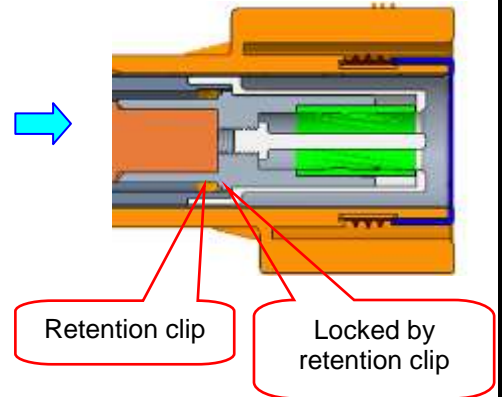


Cable spec.	Machine name	Dimension B (mm)	Retention force
70mm ²	Hexagonal dies-less crimping machine	12.8±0.1 (ref)	≥3400N
95mm ²	Hexagonal dies-less crimping machine	13.5±0.1 (ref)	≥4200N

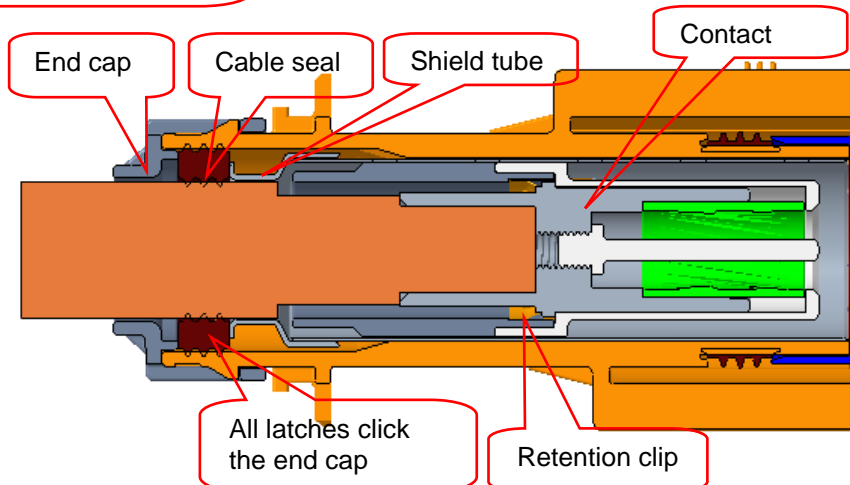
3.7 Feed the crimped contacts together with cable through the housing of the connector until it is fully locked by retention clip. Slide cable seal and end cap onto connector housing until it is fully locked by audible latching. The latches are completely visible for safe locking after the installation:



Insertion orientation



Completely latch visible



4. TEST INSTRUCTIONS FOR STRAIGHT PLUG

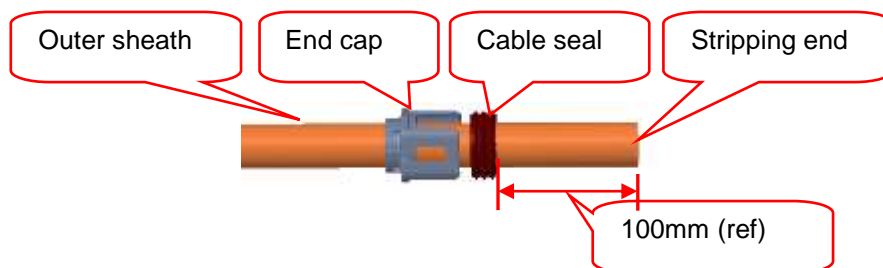
- 4.1 100% Hi-pot test, insulation test:
AC3000V, 60s, leakage current≤5mA.
DC500V, 60s, insulation resistance≥100MΩ.
- 4.2 100% continuity test.
- 4.3 100% IPX7 water proof test.

5. ASSEMBLY INSTRUCTIONS FOR RIGHT ANGLE PLUG

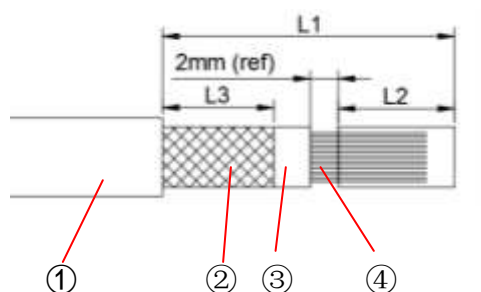
5.1 Cable specification:

Cable spec.	Cable OD (mm)
70mm ²	18.7±0.5
95mm ²	21.3±0.6

5.2 In order shown in figure, slide end cap and cable seal onto the cable sheath:



5.3 Strip and remove outer sheath, screening braid, inner sheath and conductor from the end as shown below:

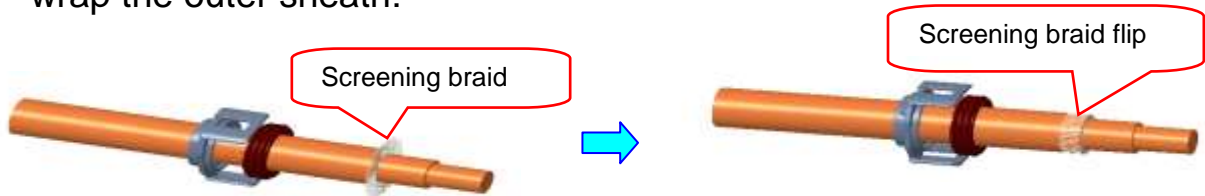


Cable spec.	L1(mm)	L2(mm)	L3(mm)
70mm ²	38.0±0.5	21.0±0.5	7.0 (ref)
95mm ²	40.0±0.5	21.0±0.5	9.0 (ref)

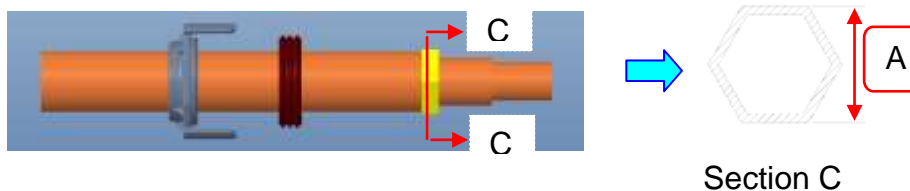
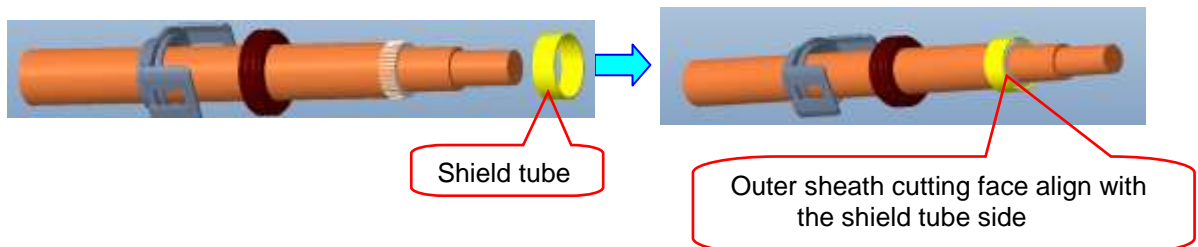
Cutting dimensions

- ①—Outer sheath
 - ②—Screening braid
 - ③—Inner sheath
 - ④—Conductor
- Stripping dimensions for exposing cable

5.4 Raise screening braid (7.0mm) equally over perimeter, then flip over to wrap the outer sheath:

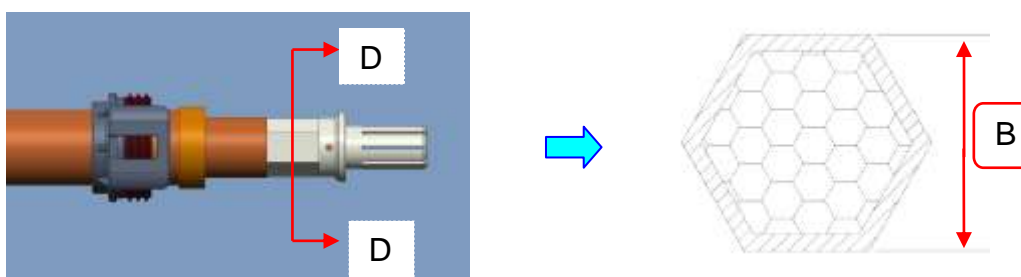


5.5 Then slide shield tube on to the screening braid, align the shield tube side with the outer sheath cutting face. Crimp shield tube with tool. The retention force must be ensured to meet spec list in following table:



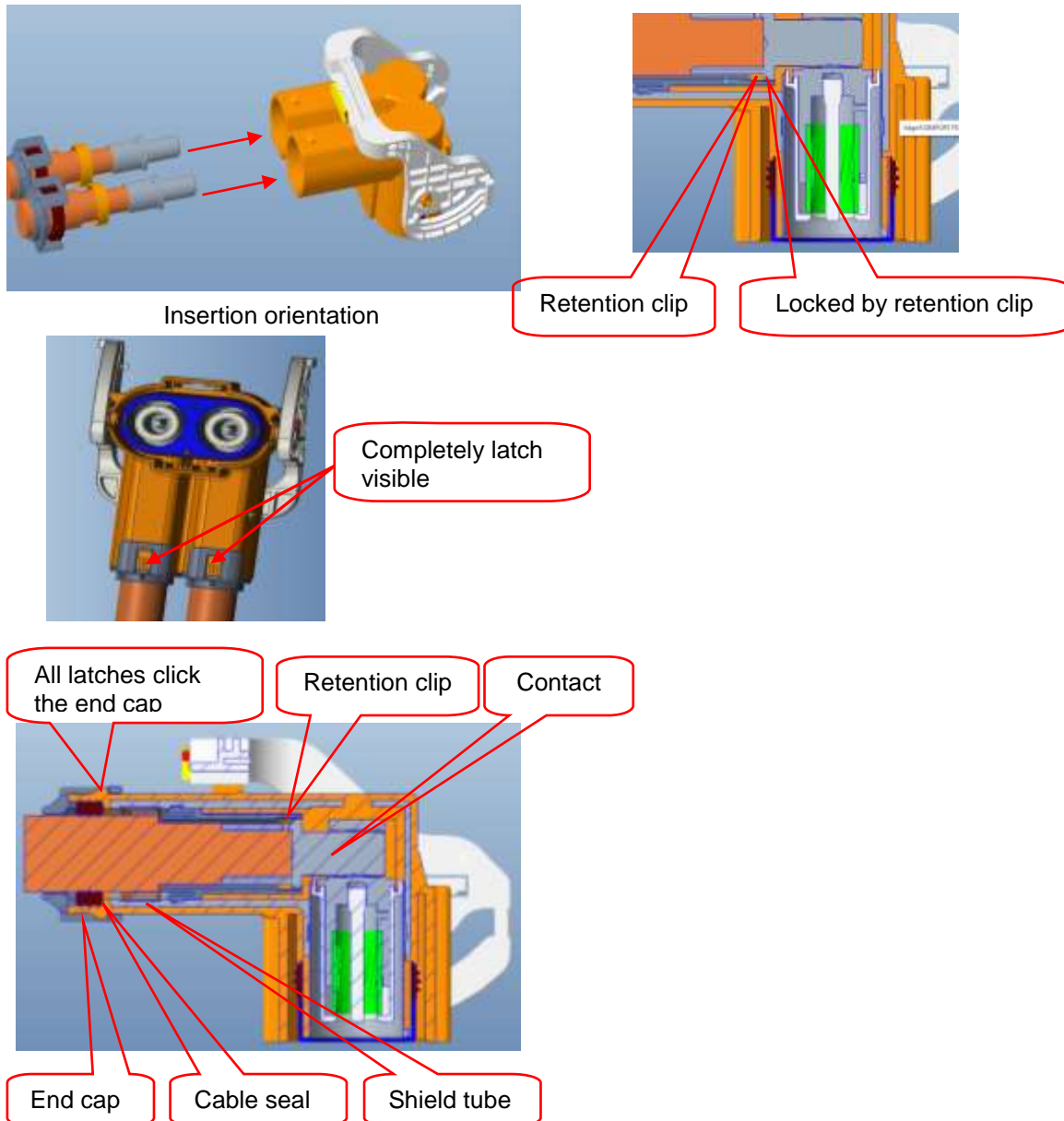
Cable spec.	Machine name	dimension A (mm)	Retention force (N)
70mm ²	Hexagonal die-less crimping machine	20.0±0.1 (ref)	≥100
95mm ²	Hexagonal die-less crimping machine	21.0±0.1 (Ref)	≥100

5.6 Crimp the contacts according to the as below standard, The following inspection dimensions at minimum must be verified:



Cable spec.	Machine name	Dimension B(mm)	Retention force (N)
70mm ²	Hexagonal die-less crimping machine	12.8±0.1 (ref)	≥3400
95mm ²	Hexagonal die-less crimping machine	13.5±0.1 (ref)	≥4200

5.7 Feed the crimped contacts together with cable through the housing of the connector until it is fully locked by retention clip. Slide cable seal and end cap onto connector housing until it is fully locked by audible latching. The latches are completely visible for safe locking after the installation:

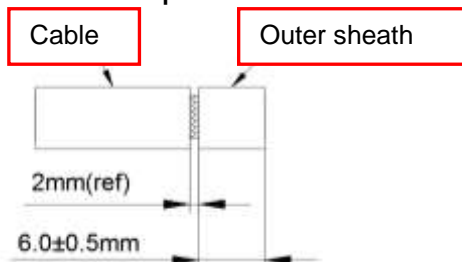


6. TEST INSTRUCTIONS FOR RIGHT ANGLE PLUG

- 6.1 100% Hi-pot test, insulation test:
AC3000V, 60s, leakage current \leq 5mA.
DC500V,60s, insulation resistance \geq 100M Ω .
- 6.2 100% continuity test.
- 6.3 100% IPX7 water proof test.

7. ASSEMBLY INSTRUCTIONS FOR RECEPTACLE

- 7.1 Strip and remove outer sheath from the end as show below:
Cable spec.:0.5mm²



- 7.2 Crimp signal terminal, APCD P/N: C420005523

After crimping, retention force \geq 75N

Tool: Adjustable crimp tool

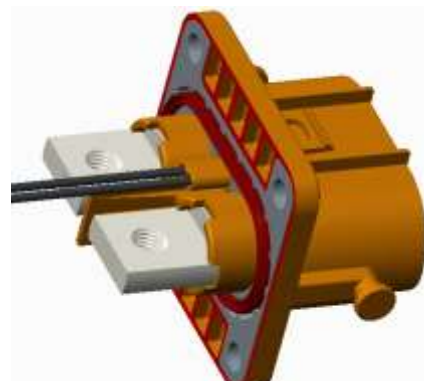
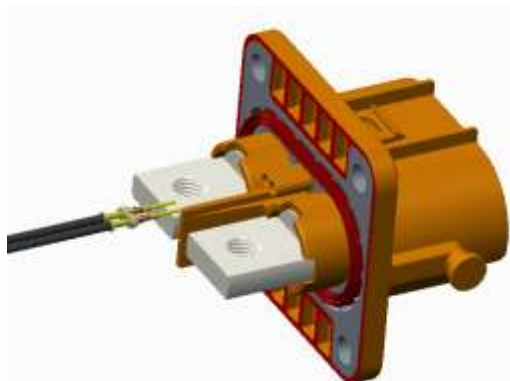
Model No: WA27

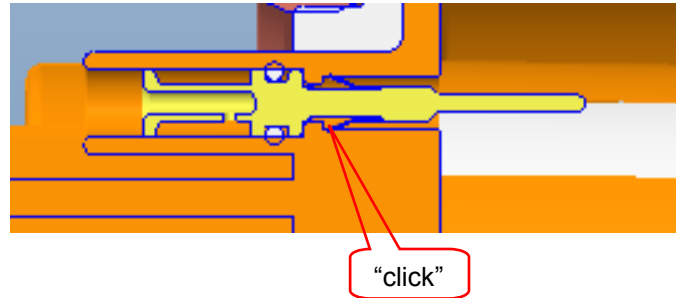
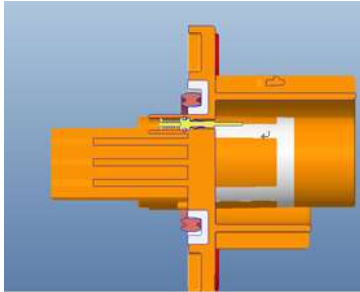
Universal positioner

UH2-5



- 7.3 Insert the signal terminal into the hole of the receptacle until it is fully locked by audible latching:





Terminal correct position

8. TEST INSTRUCTIONS FOR RECEPTACLE

8.1 100% Hi-pot test and insulation test:

AC3000V, 60s, leakage current \leq 5mA.

DC 500V, 60s, insulation resistance \geq 100M Ω .

8.2 100% continuity test.

9. APPLICATION DEVICES AND TOOLS

Item	APCD material P/N	Description	Tool	Tool P/N	Device
1	P03BC31000516411	Shield tube	Die	HVSL-P059-001	UP60 crimping machine
2	P03BC310005164	Shield tube	Die	HVSL-P059-002	UP60 crimping machine
3	HVSL12000670	70mm ² male contact	-	-	Hexgonal dies-less crimping machine
4	HVSL12000695	95mm ² male contact	-	-	Hexgonal dies-less crimping machine
5	P03BC3100051631	Shield tube	-	-	Hexgonal dies-less crimping machine
6	P03BC310005163	Shield tube	-	-	Hexgonal dies-less crimping machine
7	HVSL12000870	70mm ² female contact	-	-	Hexgonal dies-less crimping machine
8	HVSL12000895	95mm ² female contact	-	-	Hexgonal dies-less crimping machine
9	C420005523	Signal terminal with O-ring	-	-	Adjustable crimp tool WA27F Universal positioner UH2-5

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