

SurLok Plus® Assembly Instructions

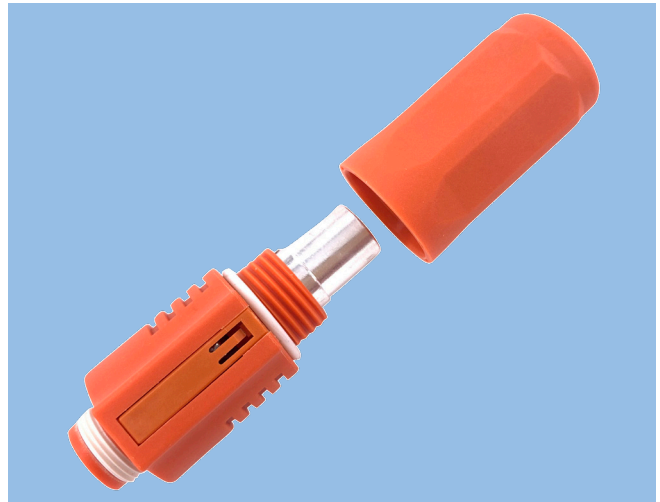
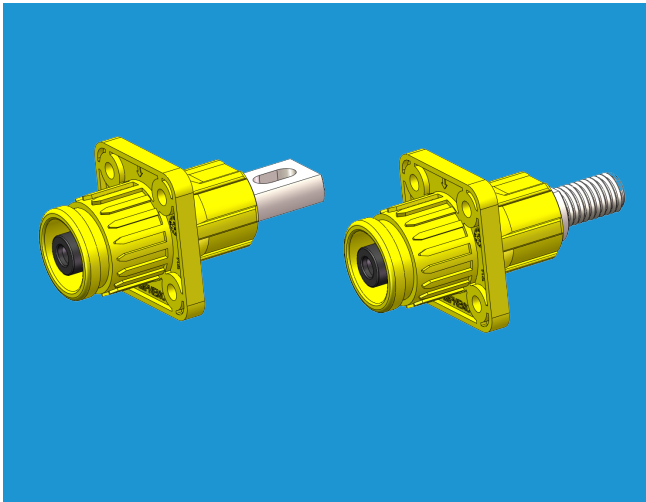
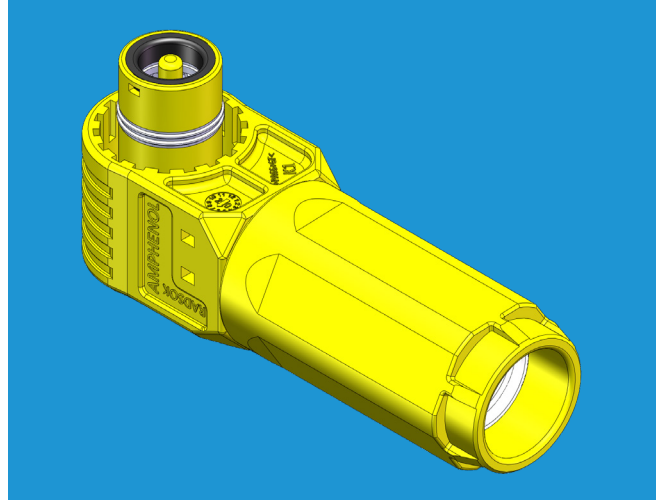
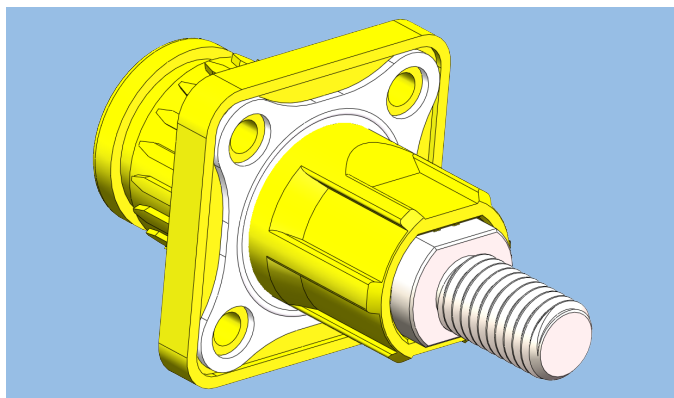
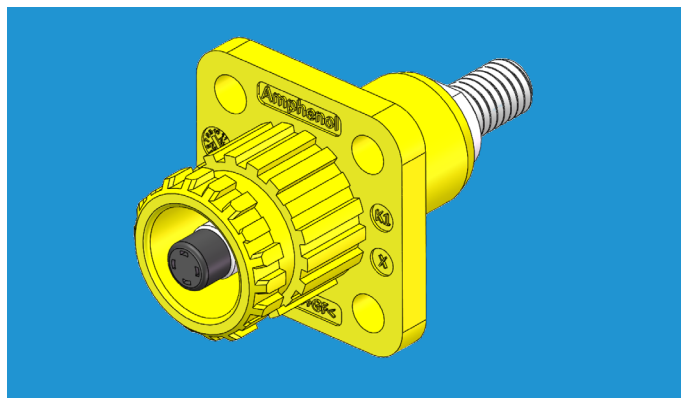


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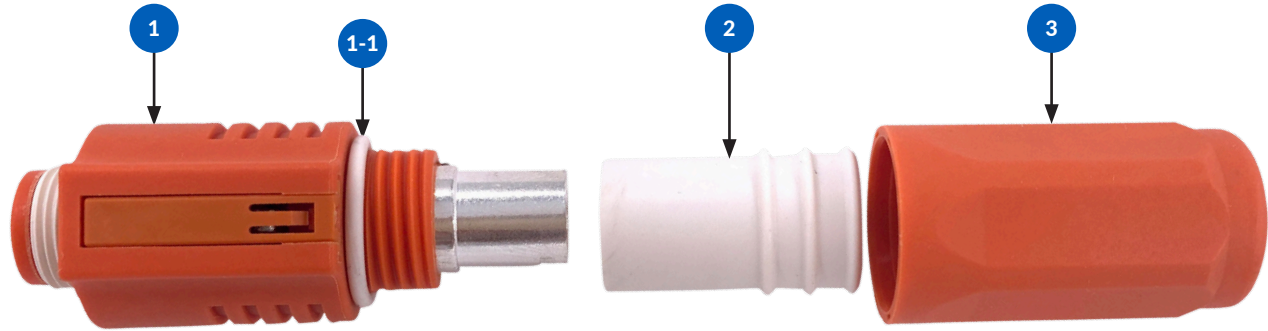
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 5.7mm 1000V
Straight Plug

Part Number:
SLPIPA()B()()



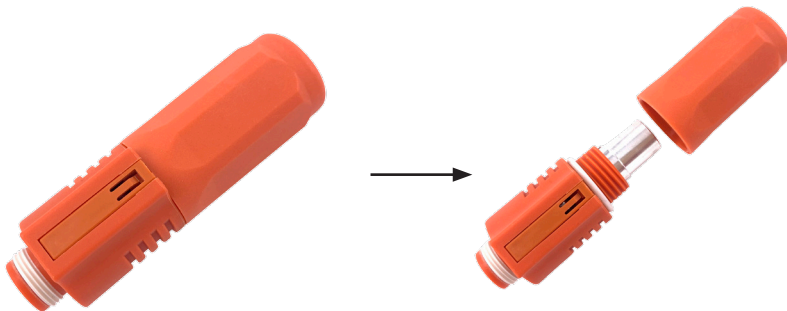
Part 1: Package Contents



1. Connector Body
1-1: O-Ring (not included when there is no sealing requirement)
2. Grommet (not included when there is no sealing requirement)
3. Backshell

Part 2: Plug Assembly

1. Unscrew the backshell (grommet should remain within the backshell)

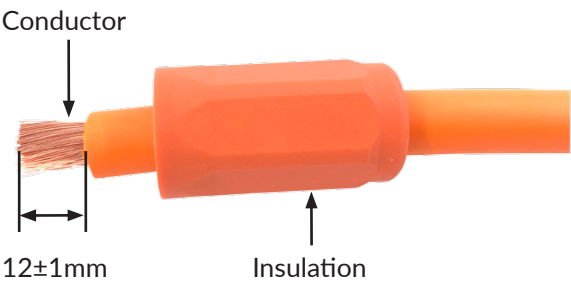


2. Slide the grommet/backshell onto the cable as shown

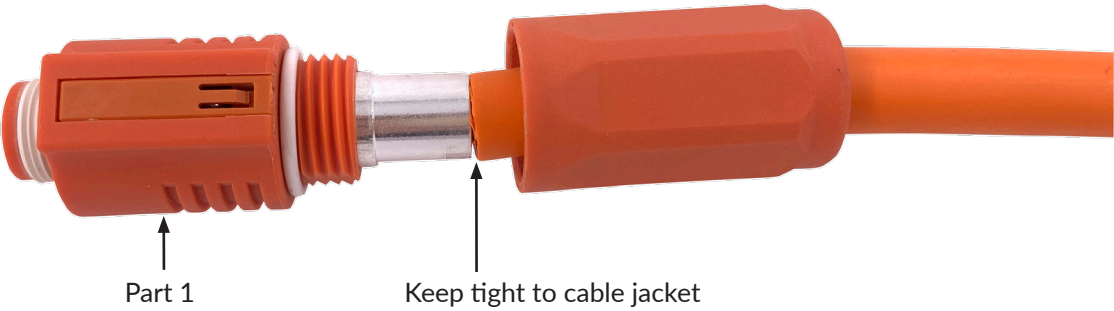


3. Wire cutting and stripping (applies to 16mm² & 25mm² cables).

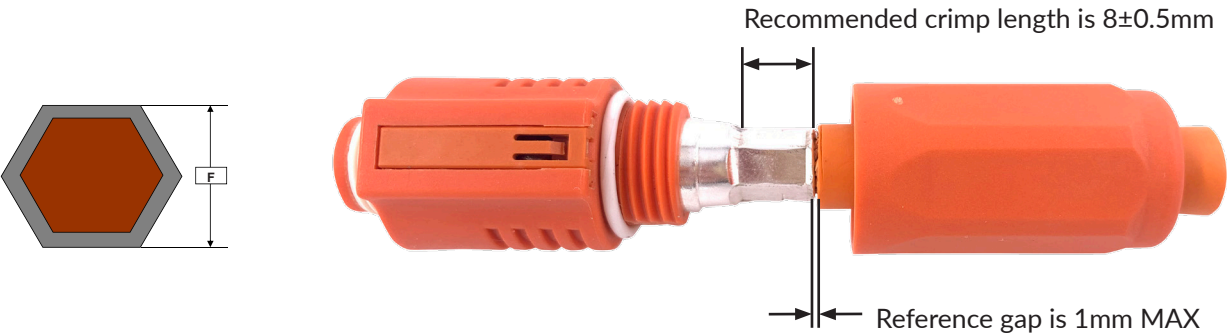
Strip conductor: 12±1mm



4. Install the cable conductor into the connector body lug



5. Crimp wire well as shown below



Cable Size	Cable Range	Recommended crimp dist across Flats F	Cable Pullout Force	Applicable Current
25 mm²	10.20±0.20 mm	7.4±0.1mm	1900N Min.	120A Max.
16 mm²	8.10±0.20 mm	7.0±0.1mm	1500N Min.	100A Max.

Notes: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool and test results including temperature rise and metallographic analysis and pullout force.

Recommended crimping tool: Manual hydraulic crimper

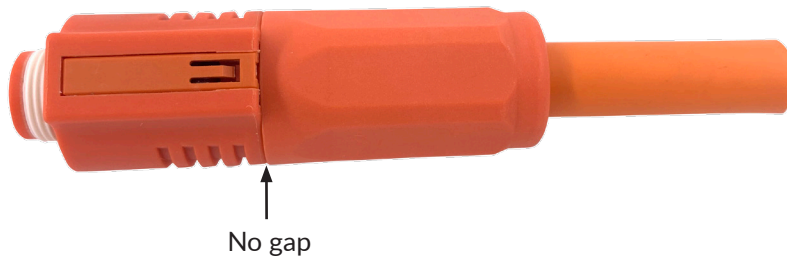
Die: 25mm² die for 25mm² cable

16mm² die for 16mm² cable



6. Assemble the grommet and backshell. Tighten backshell to the indicated location shown in the below picture by hand or tool. The recommended torque is shown in the table below.

Recommended torque of rear shell		
Cable Size	Cable O.D.	Torque
16 mm ²	8.1±0.2 mm	1.0~1.2 N.m
25 mm ²	10.2±0.2 mm	1.0~1.2 N.m



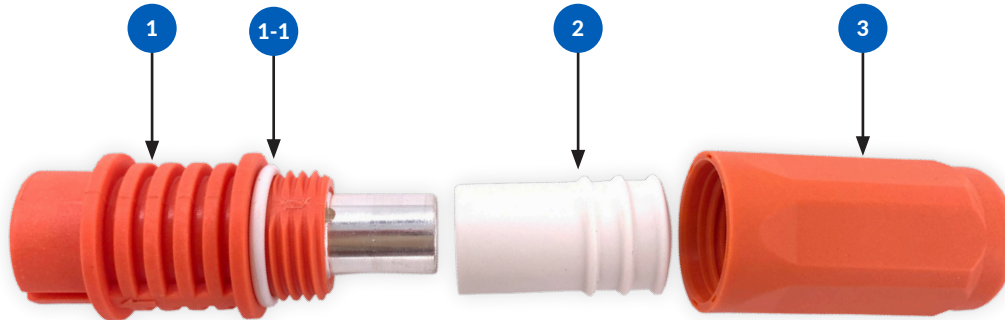
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 5.7mm 1000V
Inline Receptacle

Part Number:
SLPCRA()B()()



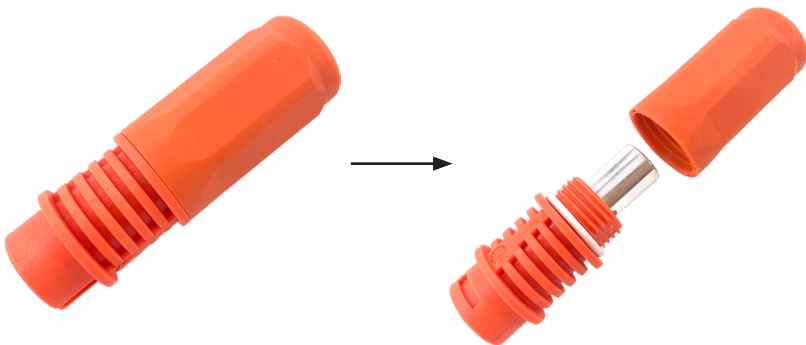
Part 1: Package Contents



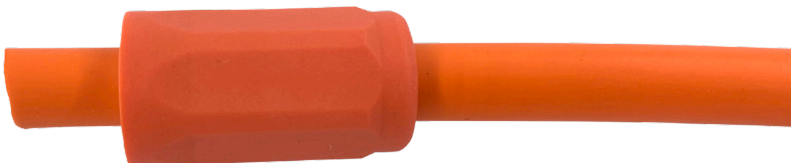
1. Connector Body
1-1: O-Ring (not included when there is no sealing requirement)
2. Grommet (not included when there is no sealing requirement)
3. Backshell

Part 2: Receptacle Assembly

1. Unscrew the backshell (grommet should remain within the backshell)

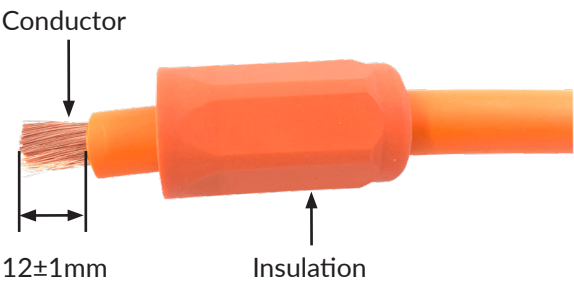


2. Slide the grommet/backshell onto the cable as shown

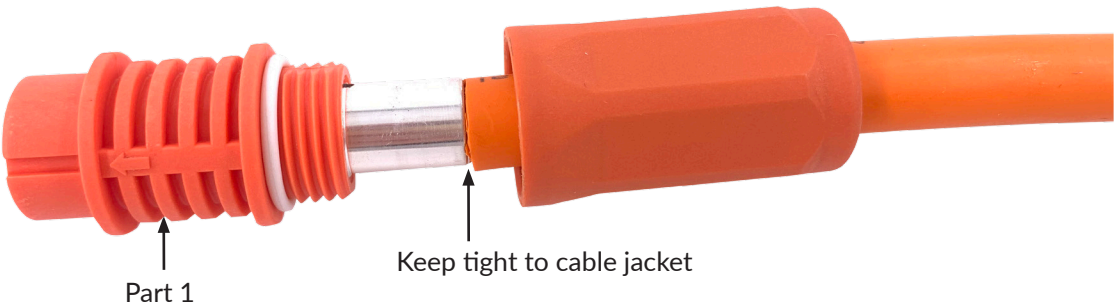


3. Wire cutting and stripping (applies to 16mm² & 25mm² cables).

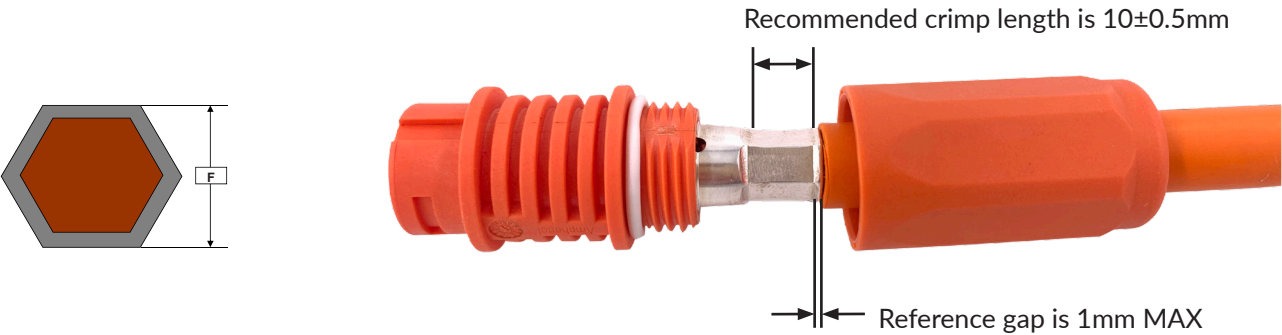
Strip conductor: 12±1mm



4. Install the cable conductor into the connector body lug



5. Crimp wire well as shown below



Cable Size	Cable Range	Recommended crimp dist across Flats F	Cable Pullout Force	Applicable Current
25 mm²	10.20±0.20 mm	7.4±0.1 mm	1900N Min.	120A Max.
16mm²	8.10±0.20 mm	7.0±0.1 mm	1500N Min.	100A Max.

Notes: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool. Test results including temperature rise, metallographic analysis, and pullout force.

Recommended crimping tool: Manual hydraulic crimper

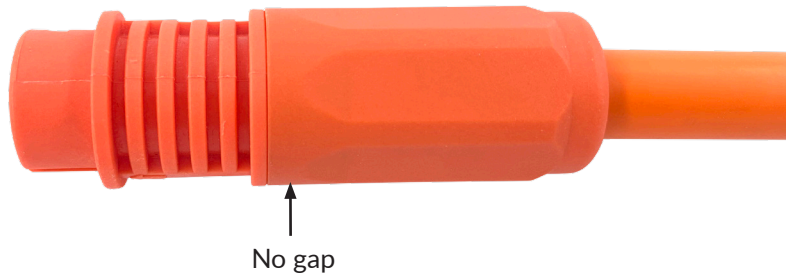
Die: 25mm² die for 25mm² cable

16mm² die for 16mm² cable



6. Assemble the grommet and backshell. Tighten backshell to the indicated location shown in the below picture by hand or tool. The recommended torque is shown in the table below.

Recommended torque of rear shell		
Cable Size	Cable O.D.	Torque
25mm ²	10.2±0.2 mm	1.0~1.2 N.m
16mm ²	8.1±0.2 mm	1.0~1.2 N.m



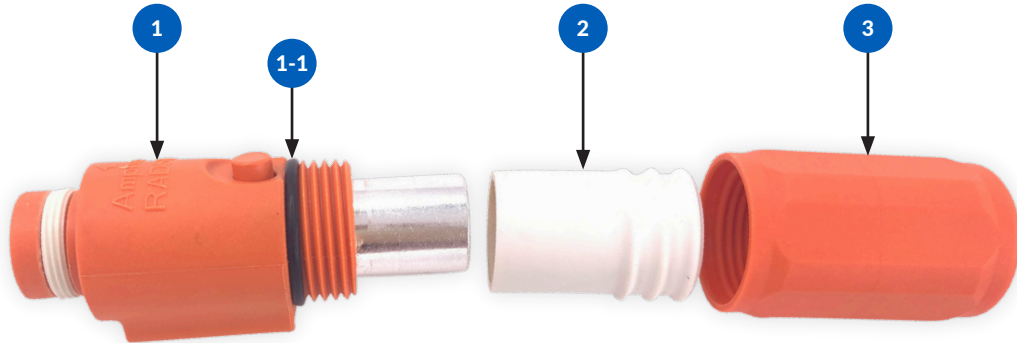
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 8.0mm 1000V
Straight Plug

Part Number:
SLPIPB()B()()



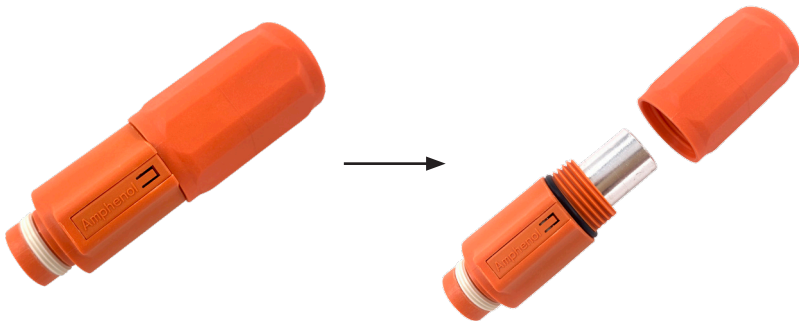
Part 1: Package Contents



1. Connector Body
1-1: O-Ring (not included when there is no sealing requirement)
2. Grommet (not included when there is no sealing requirement)
3. Backshell

Part 2: Plug Assembly

1. Unscrew the backshell (grommet should remain within the backshell)

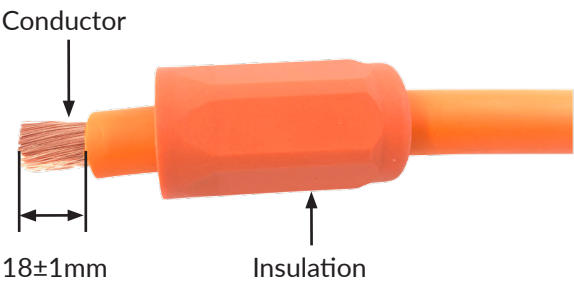


2. Slide the grommet/backshell onto the cable as shown

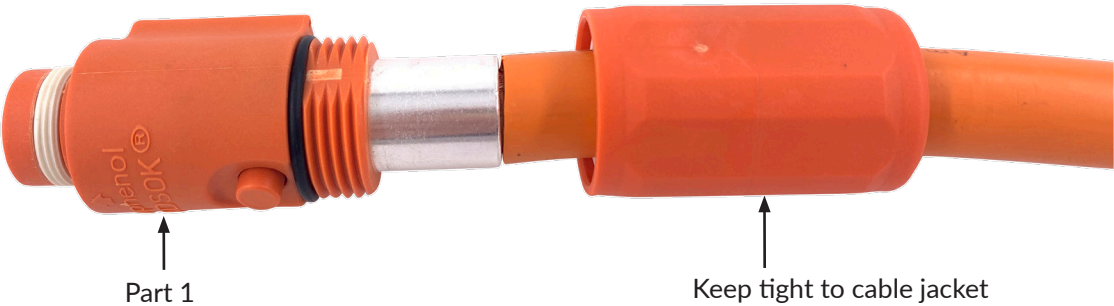


3. Wire cutting and stripping (applies to 25 mm², 35 mm² & 50 mm² cables).

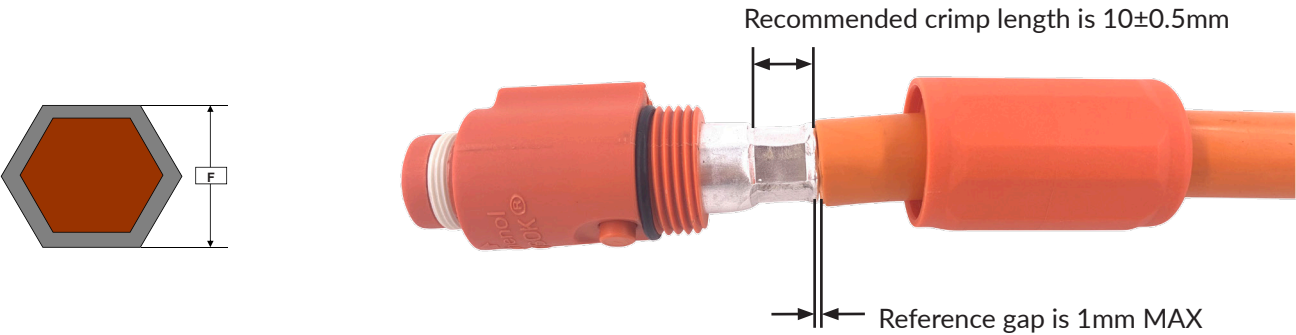
Strip conductor: 18±1mm



4. Install the cable conductor into the connector body lug



5. Crimp wire well as shown below



Cable Size	Cable Range	Recommended crimp dist across Flats F	Cable Pullout Force	Applicable Current
25 mm ²	10.20±0.20 mm	9.0 ± 0.1mm	1900N Min.	120A Max.
35 mm ²	11.50±0.30 mm	9.0 ± 0.1mm	2300N Min.	150A Max.
50 mm ²	13.60±0.30 mm	10.2 ± 0.1mm	2800N Min.	200A Max.

Notes: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool. Test results including temperature rise, metallographic analysis, and pullout force.

Recommended crimping tool: Manual hydraulic crimper

Die: 25mm² die for 25mm² cable

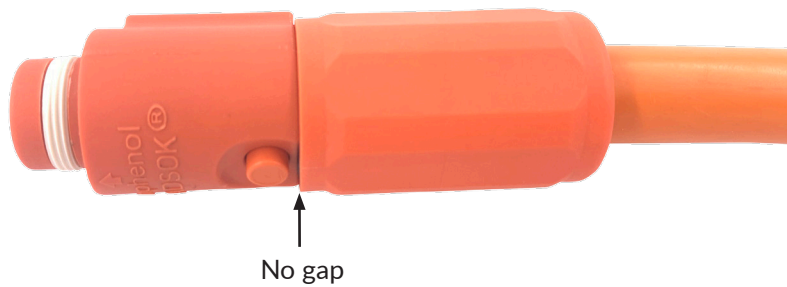
35mm² die for 35mm² cable

50mm² die for 50mm² cable



6. Assemble the grommet and backshell. Tighten backshell to the indicated location shown in the below picture by hand or tool. The recommended torque is shown in the table below.

Recommended torque of rear shell		
Cable Size	Cable O.D.	Torque
25mm ²	10.2±0.2 mm	1.0~1.2 N.m
35mm ²	11.5±0.3 mm	1.0~1.2 N.m
50mm ²	13.6±0.3 mm	1.2~1.5 N.m



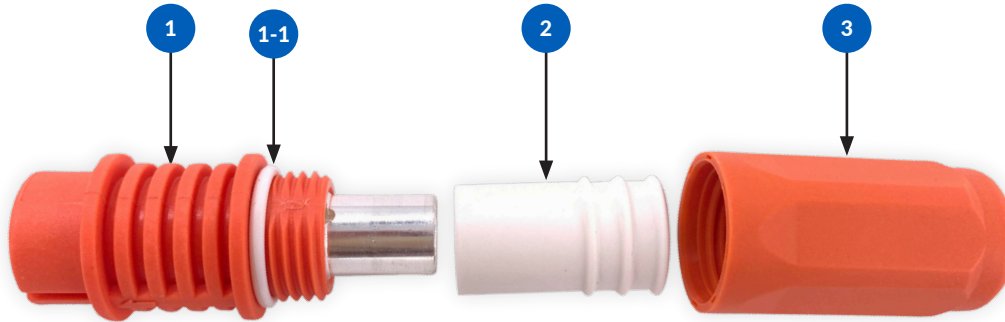
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 8.0mm 1000V
Inline Receptacle

Part Number:
SLPCRB()B()()



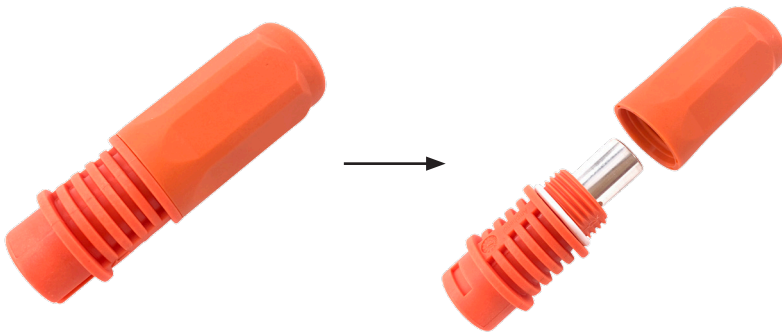
Part 1: Package Contents



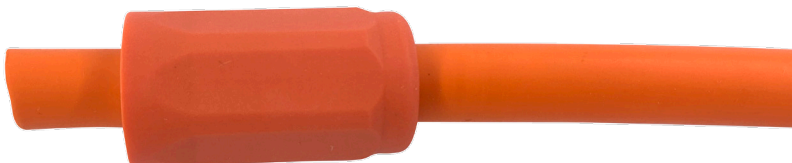
1. Connector Body
1-1: O-Ring (not included when there is no sealing requirement)
2. Grommet (not included when there is no sealing requirement)
3. Backshell

Part 2: Plug Assembly

1. Unscrew the backshell (grommet should remain within the backshell)

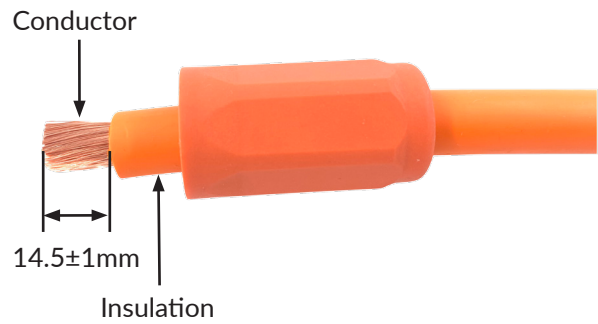


2. Slide the grommet/backshell onto the cable as shown

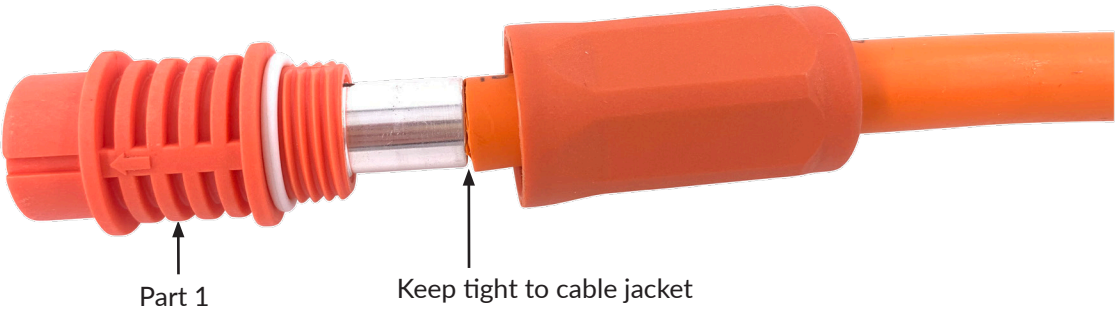


3. Wire cutting and stripping (applies to 16mm² & 25mm² cables).

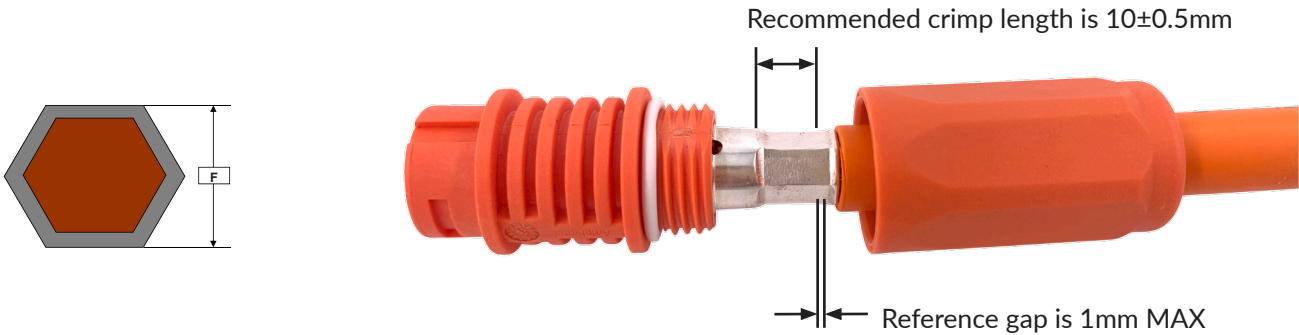
Strip conductor: 18±1mm



4. Install the cable conductor into the connector body lug



5. Crimp wire well as shown below



Cable Size	Cable Range	Recommended crimp dist across Flats F	Cable Pullout Force	Applicable Current
25 mm²	10.20±0.20 mm	7.2 ± 0.1mm	1900N Min.	120A Max.
35 mm²	11.50±0.30 mm	9.0 ± 0.1mm	2300N Min.	150A Max.
50 mm²	13.60±0.30 mm	10.2 ± 0.1mm	2800N Min.	200A Max.

Notes: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool. Test results including temperature rise, metallographic analysis, and pullout force.

Recommended crimping tool: Manual hydraulic crimper

Die: 25mm² die for 25mm² cable

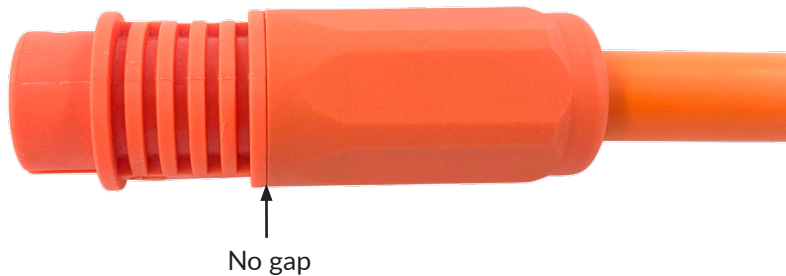
35mm² die for 35mm² cable

50mm² die for 50mm² cable



6. Assemble the grommet and backshell. Tighten backshell to the indicated location shown in the below picture by hand or tool. The recommended torque is shown in the table below.

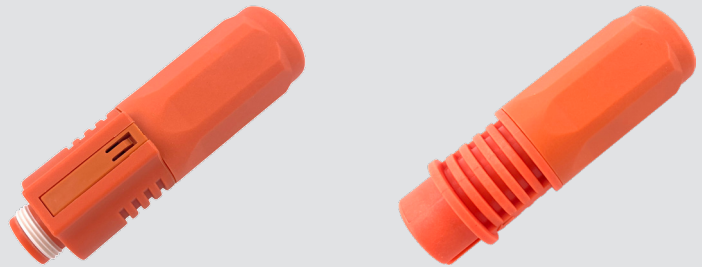
Recommended torque of rear shell		
Cable Size	Cable O.D.	Torque
25mm ²	10.2±0.2 mm	1.0~1.2 N.m
35mm ²	11.5±0.3 mm	1.0~1.2 N.m
50mm ²	13.6±0.3 mm	1.2~1.5 N.m



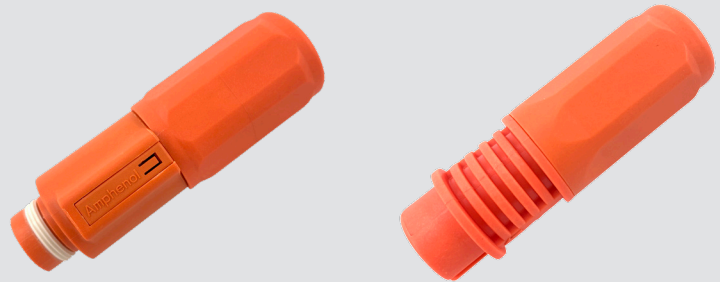
CABLE ASSEMBLY WORK INSTRUCTION

**SurLok Plus® 5.7 & 8.0mm 1000V
Inline Receptacle and Straight Plug
Mating and Unmating Guide**

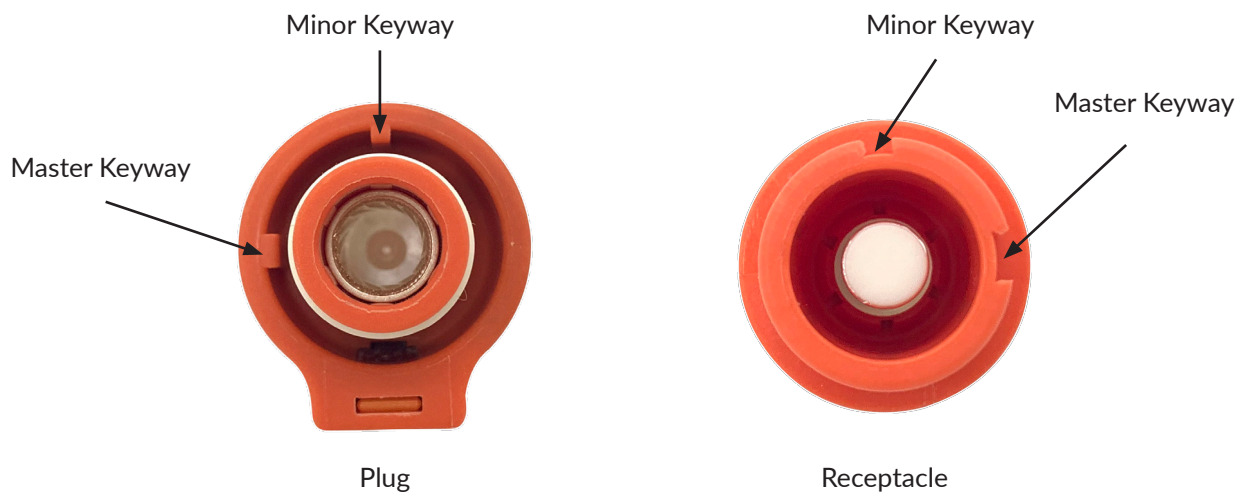
5.7mm SurLok Plus® Connector



8.0mm SurLok Plus® Connector

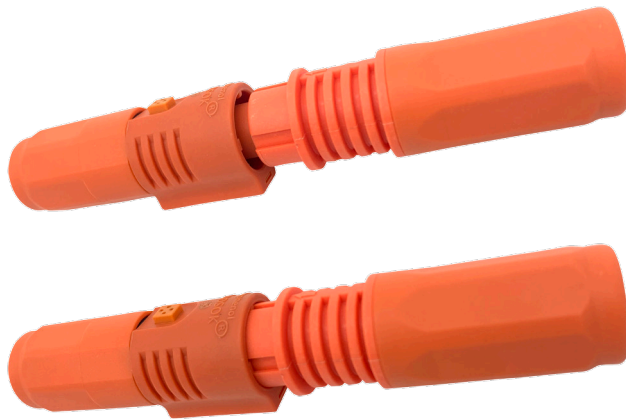


Part 1: Keyway Description



Part 2: Mating Operation

1. Initial mating: Align the master keyway of the receptacle and plug (skip this step if there is no keyway/key option), and push the plug vertically into the receptacle as shown in the diagram.



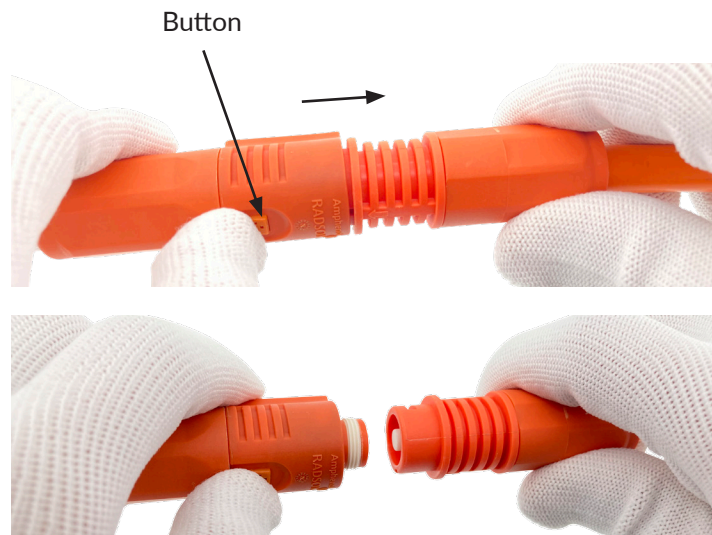
2. Continue mating plug into receptacle, until you hear an audible "click" to indicate that the plug and receptacle are fully mated.



Note: Attempt to unmate the plug and receptacle (without pressing lock button) by hand to confirm they are properly mated.

Part 3: Unmating Operation

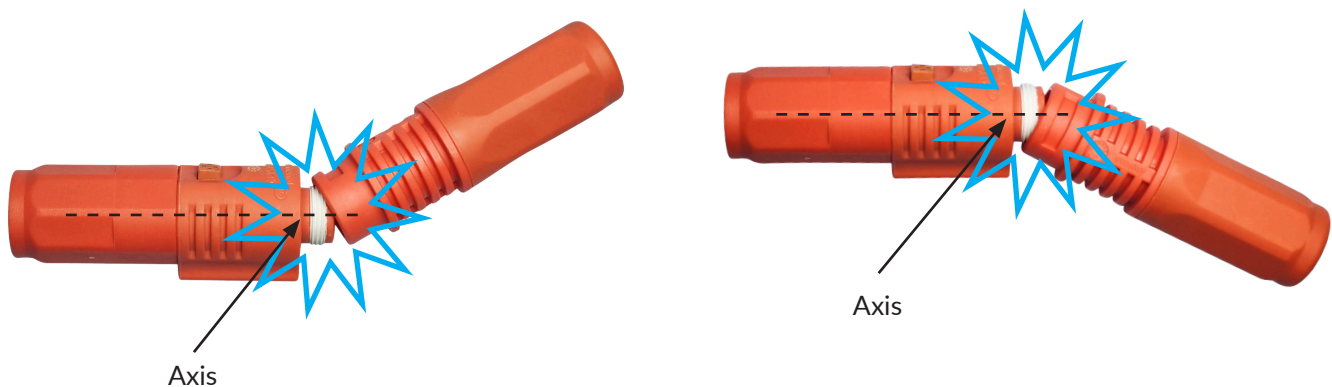
1. After shutting down the electrical current, press the button and pull the plug horizontally from the receptacle, in the direction shown below.



Note: For end use, the separation active space required is 129mm minimum, this does not include the active space for hand or tool operation.



2. Do not deviate from the axis direction of the receptacle until unmating is complete in order to eliminate potential damage to the connectors.



Note: This product is not suitable for live mating and unmating. At the same time, it is recommended to add a protection mechanism to the equipment to prevent accidental unplugging.

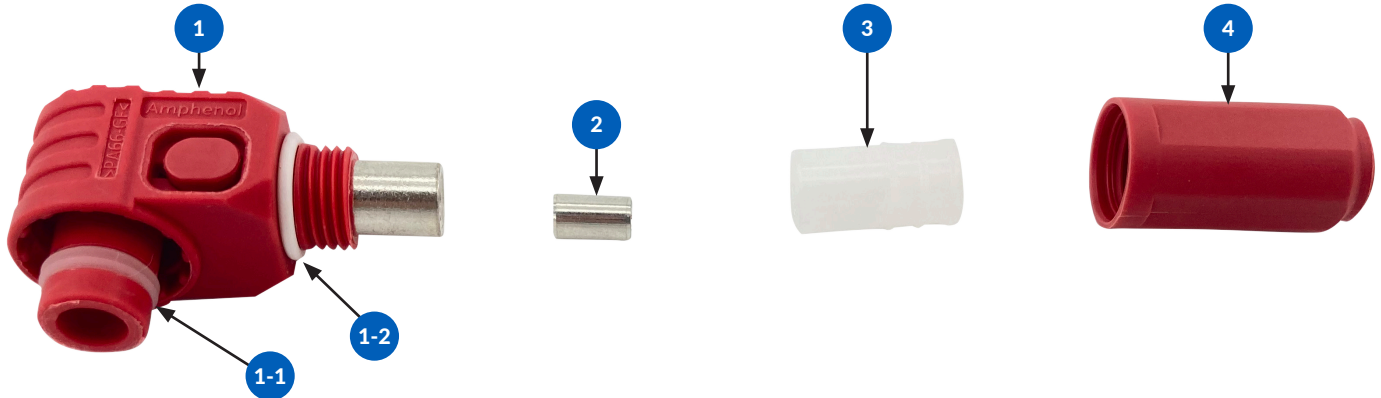
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 3.6mm 1500V
Right Angle Plug

Part Number:
SLPHPM()B()()



Part 1: Package Contents



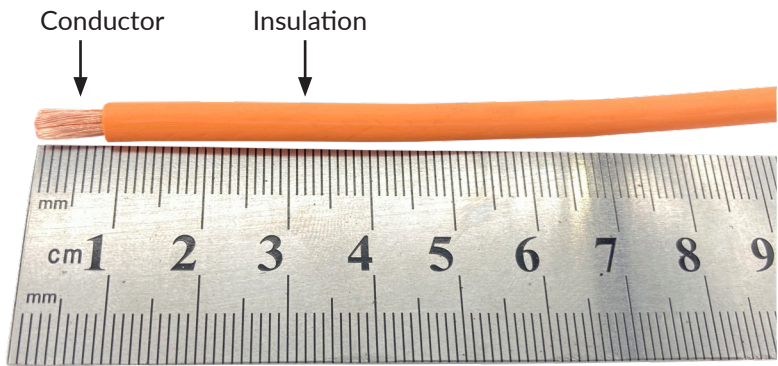
1. Connector Body
1-1: Barrel sealing (not included when there is no sealing requirement)
1-2: O-Ring (not included when there is no sealing requirement)
2. 6mm² Barrel (only provided when the 6mm² option is selected)
3. Grommet (not included with non-sealed option)
4. Backshell

Part 2: Plug Assembly

1. Screw out the rear backshell, then remove the grommet and barrel



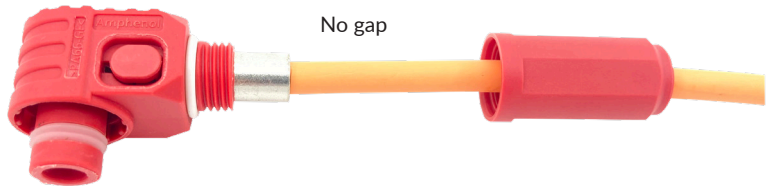
2. Cut and strip wire, per illustration below (applies to 10mm² & 6mm² cables)
Strip conductor: 7±0.5mm



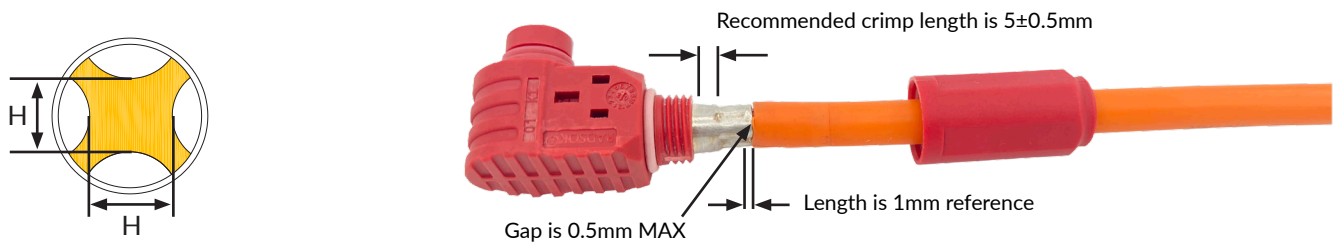
3. As shown below, slide the barrel onto the wire (for the 10mm² option, skip this step). Then install the barrel into the backshell and use the threading fixture to install the grommet into the backshell and thread the wire.



4. Install the wire into the wire well of the connector body



5. Crimp the wire well as shown



Cable Size	Cable Range	Recommended Crimp Height H	Cable Pullout Force	Apply Current
10mm ²	6.25±0.2 mm	3.6±0.1 mm	450N Min.	70A Max.
6mm ²	4.8±0.2 mm		320N Min.	50A Max.

Notes: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool. Test results including temperature rise, metallographic analysis, and pullout force.
Recommended crimping tool: Hydraulic press

6. Assemble grommet and backshell



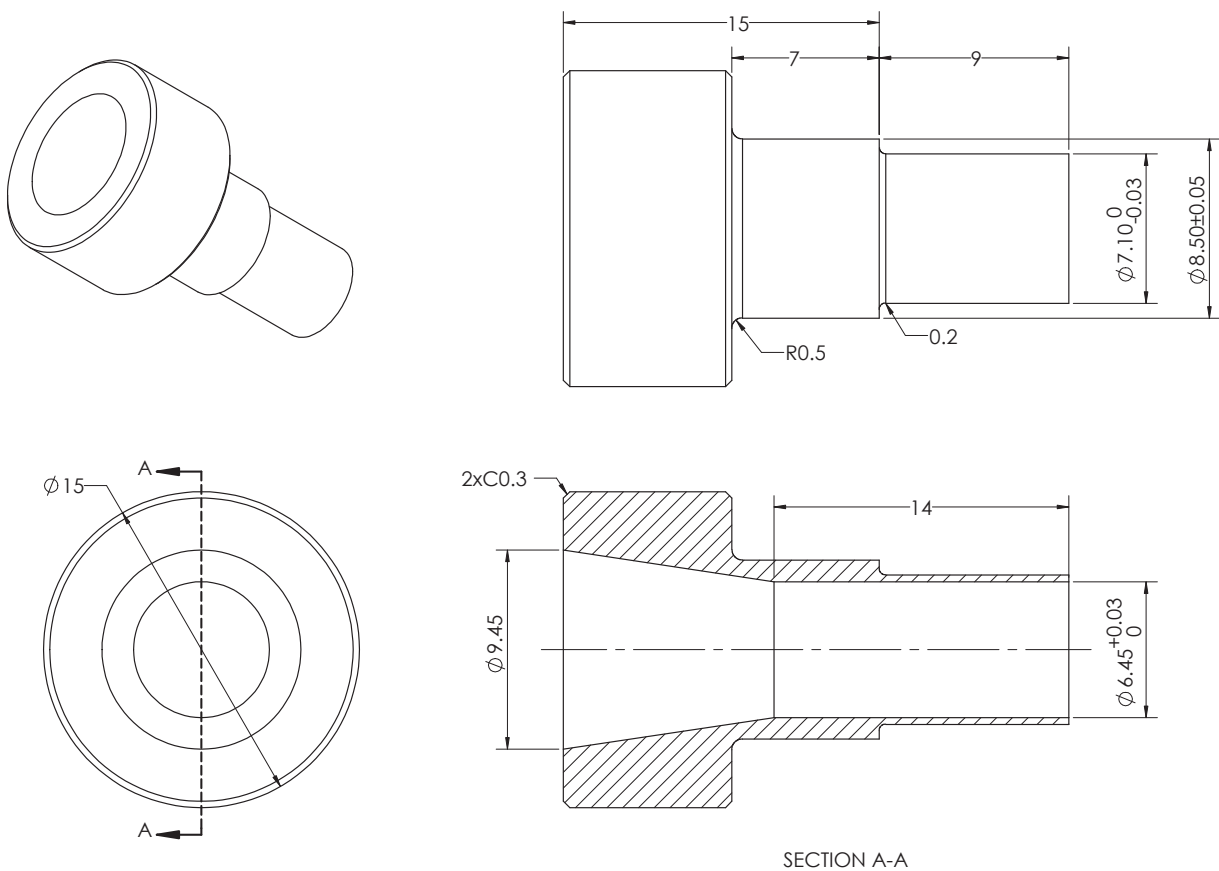
Tighten backshell to the indicated location shown as picture above by hand or tool

The recommended torque as below:

10mm²: 0.5~0.6N.m

6mm²: 0.5~0.6N.m

Attachment: Specifications of threading fixture



Material spec: SKD11

CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 3.6mm 1500V
Receptacle Busbar Type

Part Number:
SLPHIRMBP()()



Part 1: Package Contents



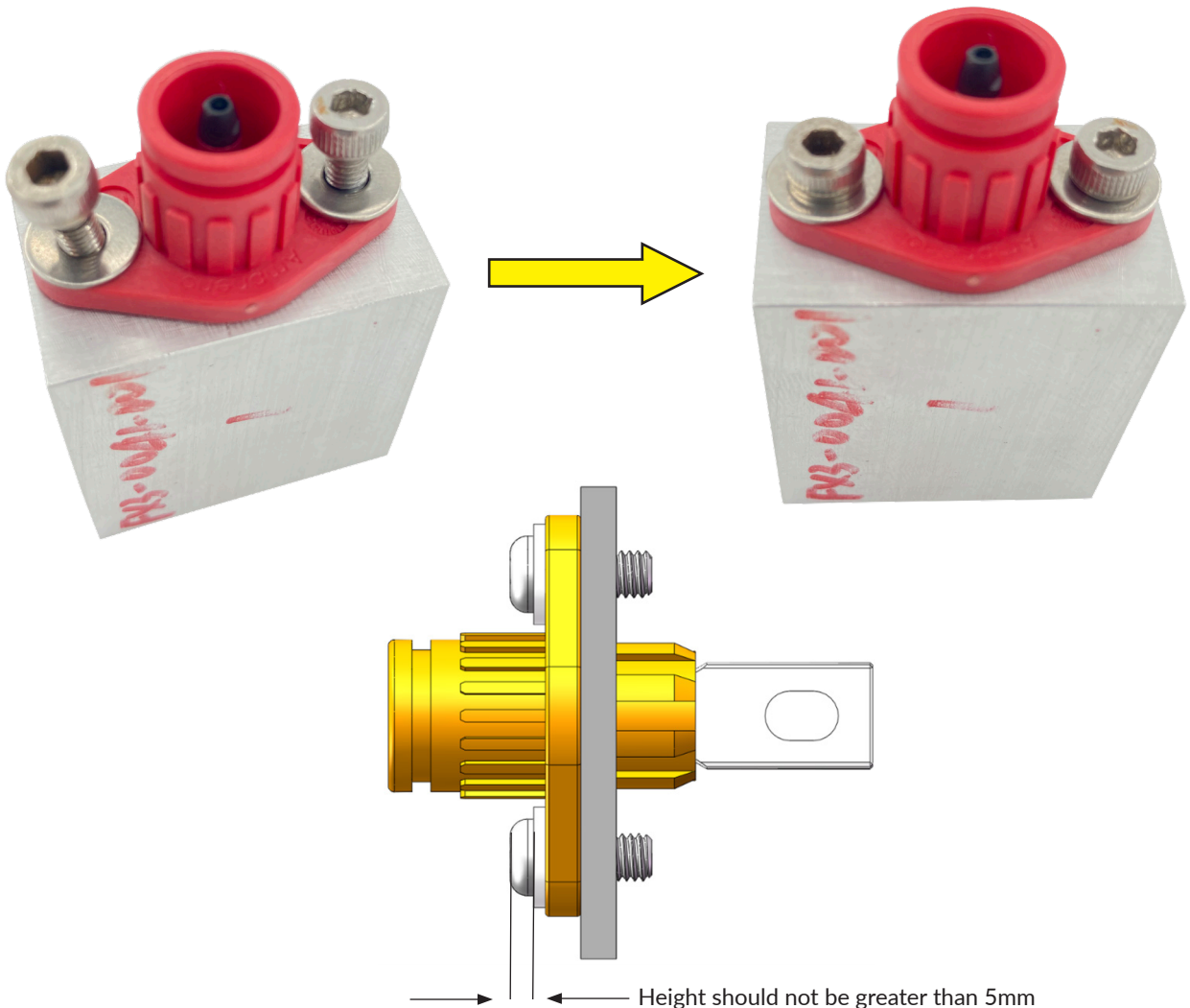
Receptacle connector for busbar type

Note: There will be no gasket provided when there is no sealing requirement

Part 2: Receptacle Assembly

1. Tighten housing onto the panel with M5 screws (recommended torque: 0.4-0.7N.m)

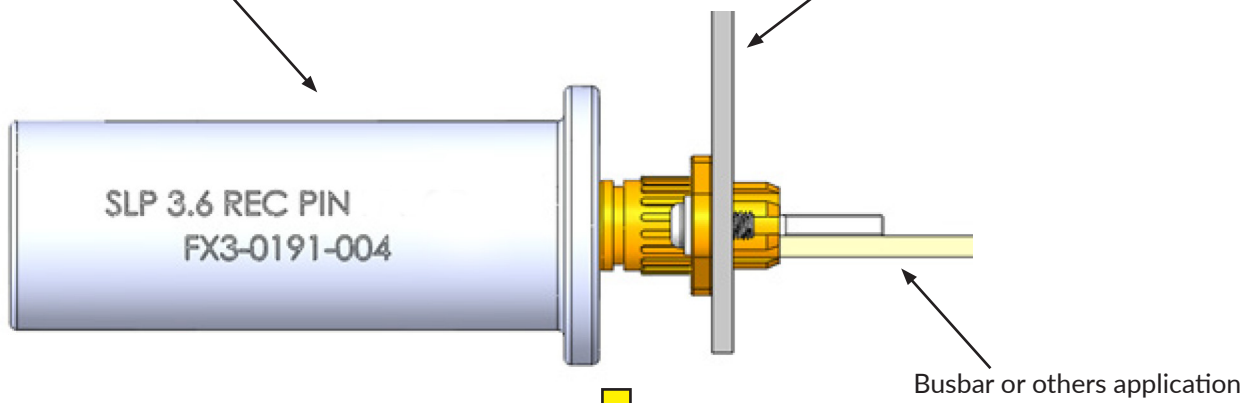
- (1) Recommended M4 bolts refer to GB/T70.2-2015
 - (2) Recommended M4 Spring washer refer to BS 4464:1969(2004)



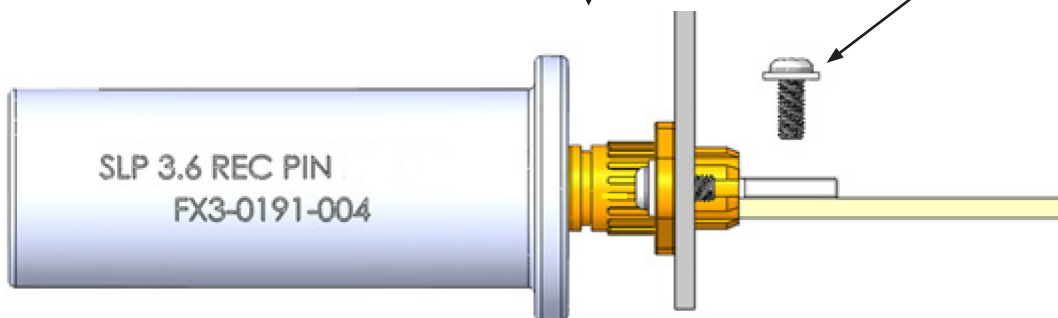
2. Connect receptacle terminal with customer's busbar

Terminal Fixture
(Amphenol PN: FX3-0191-004)

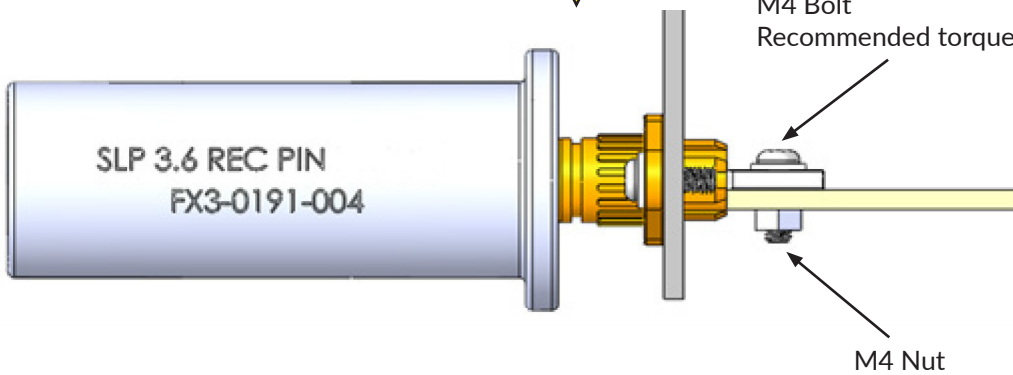
Panel



M4 Bolt



M4 Bolt
Recommended torque: 1.2-1.5 N.m



- 1): Pass the receptable tail through the hole of mounting panel
- 2): Insert the terminal fixture (Amphenol PN: FX3-0191-004) into the receptacle
- 3): Pass bolt through washer and copper busbar and nut in proper order
- 4): Tighten screws by tool, then remove the terminal fixture

Notes:

- The busbar (or others application) needs to be fixed during installation. The customer shall verify the recommended torque based on your application and modify it if neccessary.
- The function of the terminal fixture is to reduce the deflection of the terminal installation process, and the customer can determine wthether it is needed according to the acutal process.
- During the process of using the terminal fixture, the handle should be tightly held to prevent it from swinging.

Revision History

Revision	Date	Notes
A	July 29, 2020	First release
B	July 27, 2023	Add terminal fixture

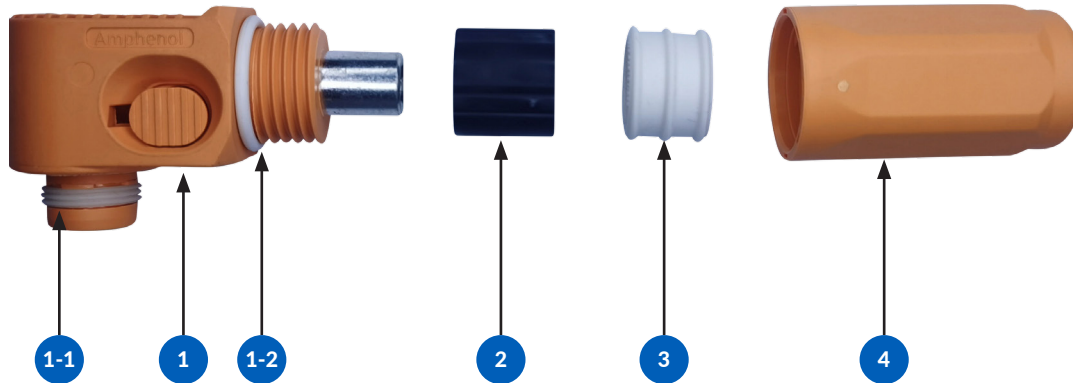
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 5.7mm 1500V
Right Angle Plug

Part Number:
SLPHPA()B()()



Part 1: Package Contents



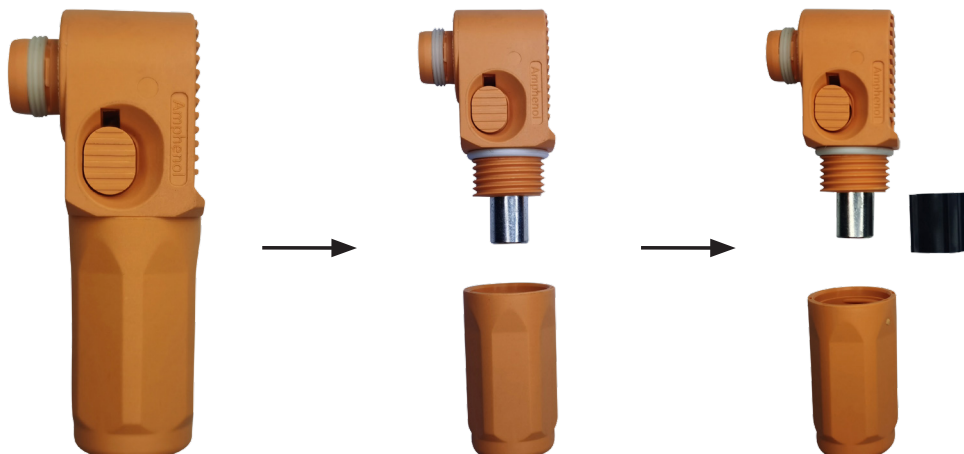
1. Connector Body
1-1: Barrel sealing (not included when there is no sealing requirement)
1-2: O-Ring (not included when there is no sealing requirement)
2. Bracket (not included when there is no sealing requirement)
3. Grommet (not included when there is no sealing requirement)
4. Back Shell

Part 2: Plug Assembly

Step 1: Un-assemble rear attachments

Screw out the rear shell then take out the bracket.

Notes: The grommet should be kept inside of rear shell.



Step 2: Wire stripping

Strip the insulator of $16.0 \pm 0.5\text{mm}$.

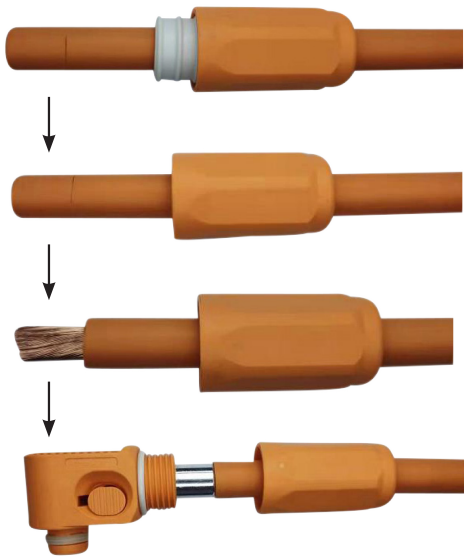
Notes: The cut insulator should kept cover on the conductor.



Step 3: Preloaded rear attachments

Wire pass through rear shell and grommet, then take off the cut insulator.

Finally put the conductors of cable into the lug of connector body.



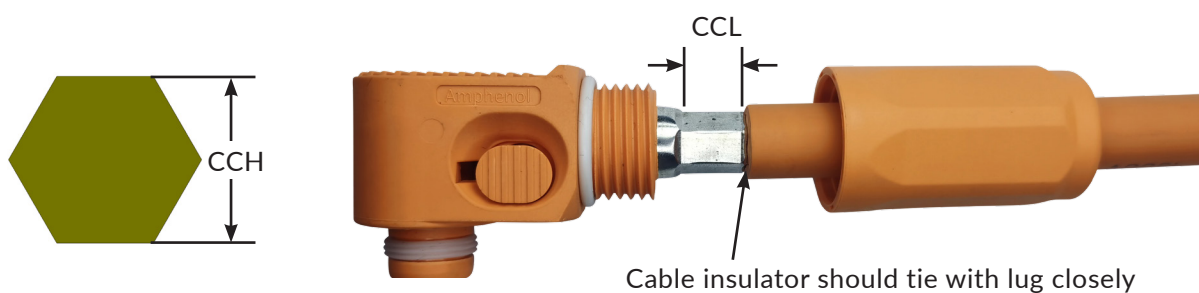
Step 4: Crimping the lug

Crimp lug together with cable conductor according to below table.

Recommended crimping parameter				
Cable size	Cable O.D.	CCH	CCL	Pullout force
16mm^2	$8.1 \pm 0.2\text{mm}$	$7.0 \pm 0.1\text{mm}$	$8.0 \pm 0.2\text{mm}$	1500N Min.
25mm^2	$10.2 \pm 0.2\text{mm}$	$7.45 \pm 0.1\text{mm}$	$8.0 \pm 0.2\text{mm}$	1900N Min.

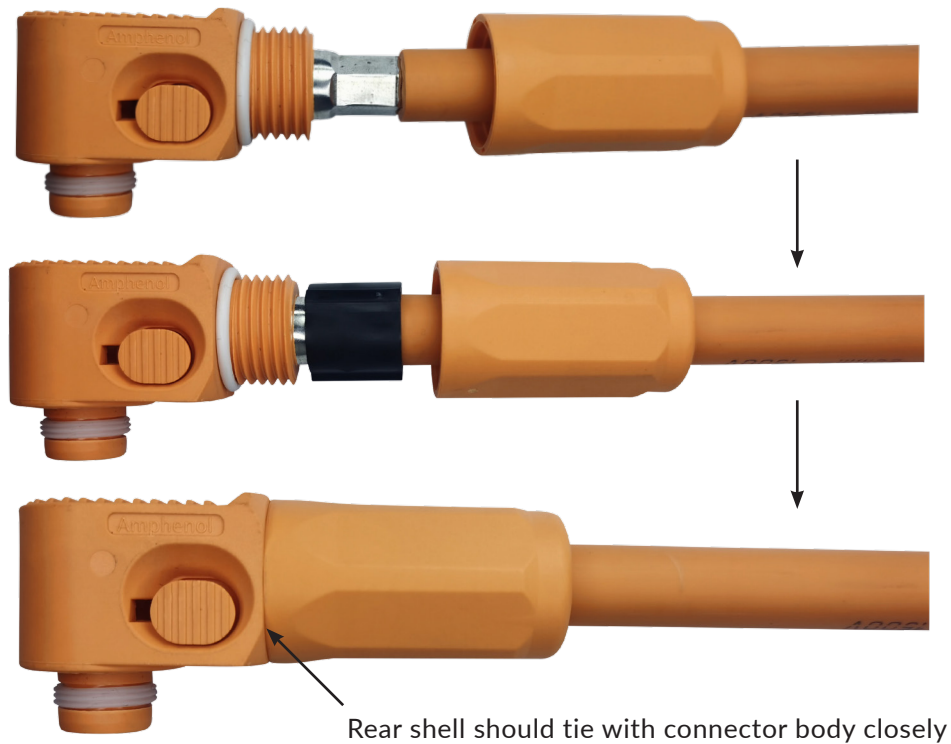
Notes:

The recommended crimp sizes are only for reference. The customer shall adjust them according to cable specification and crimp tool and test results including temperature rise and metallographic analysis and pullout force, etc.



Step 5: Assemble rear attachments

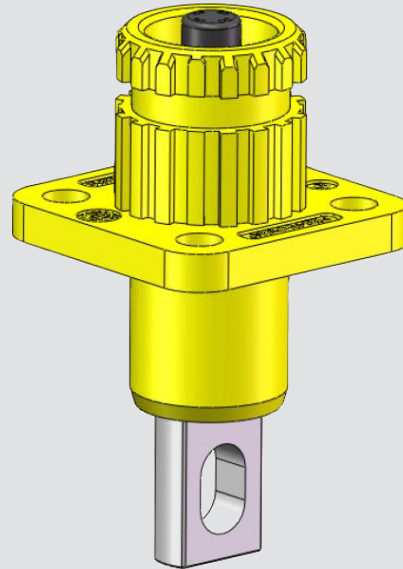
Put the bracket onto the lug of connector body, then tighten rear shell to the indicated location shown as picture by hand or wrench (recommended torque is $0.9 \pm 0.1 \text{ N.m}$).



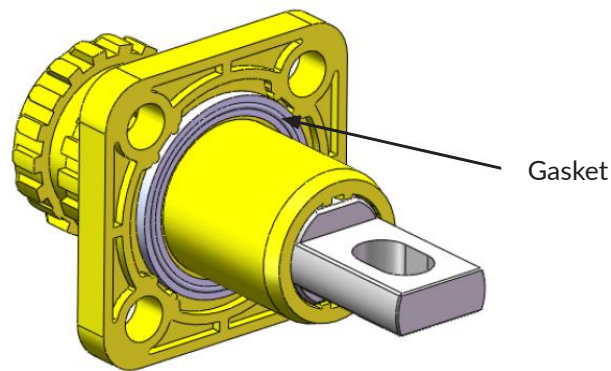
ASSEMBLY WORK INSTRUCTION

SurLok Plus® 5.7mm 1500V
Receptacle Busbar Termination

Part Number:
SLPHIRABP()()



Part 1: Package Contents

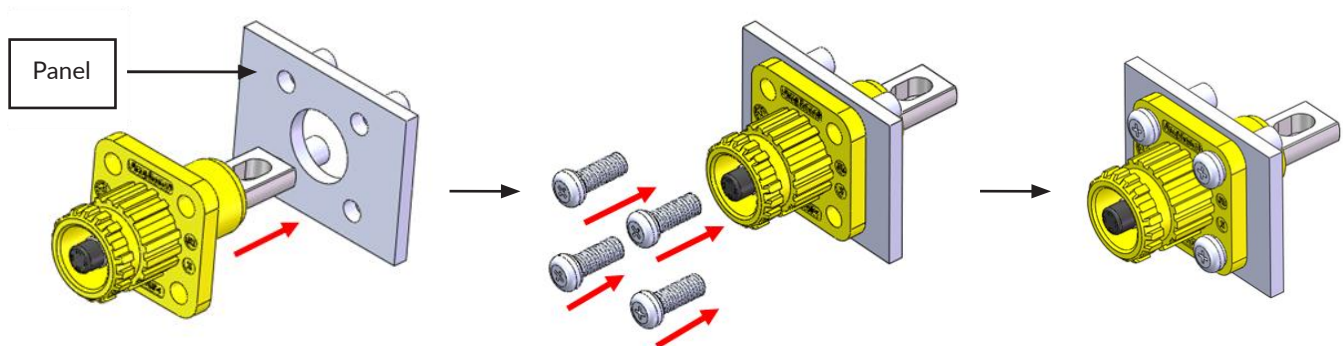


1. Receptacle Shell

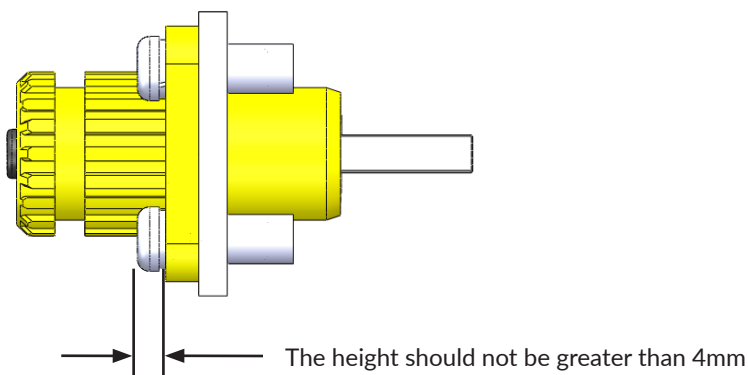
1-1: Gasket (Not included when no sealing requirement)

Part 2: Receptacle Assembly

1. Tighten housing onto the panel with M4 screws (recommended torque is $0.8 \pm 0.1 \text{ N.m}$)

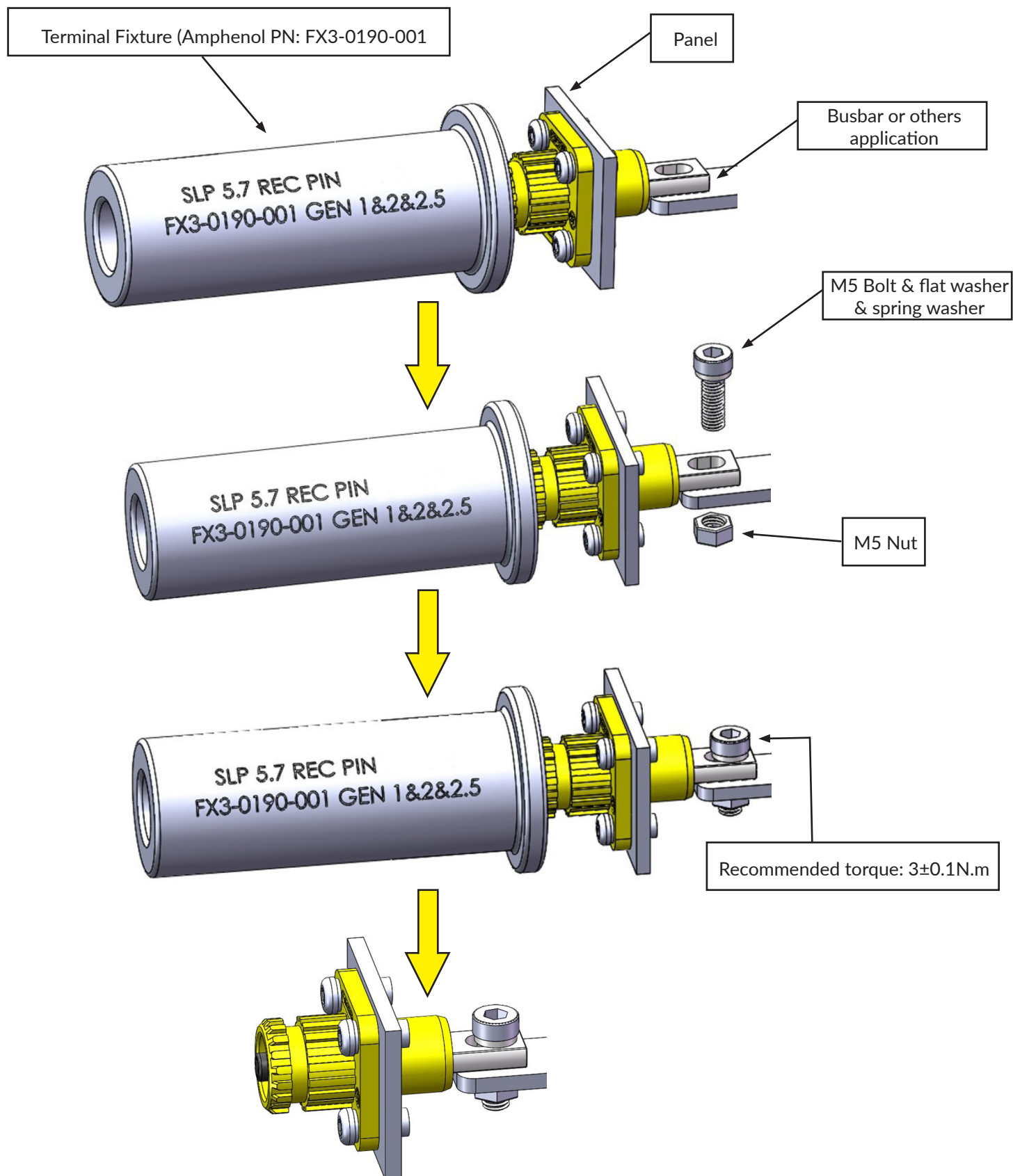


Recommended screw is GB 9074.3 M4.



Note: The customer shall verify the recommended torque based on your application and modify it if necessary.

2. Connect receptacle terminal with customer's busbar copper



- 1): Pass receptacle tail through the hole of the mounting panel
- 2): Insert the terminal fixture (Amphenol PN: FX3-0190-001) into the receptacle
- 3): Pass studs through washer and copper busbar and nut in proper order
- 4): Tighten screws by tool, then remove the terminal adjusting fixture

Notes:

- The busbar (or others application) needs to be fixed during installation. During the process of using the terminal fixture, the handle should be tightly held to prevent it from swinging. The customer shall verify the recommended torque base on your application and modify it if necessary. The function of the terminal fixture is to reduce the deflection of the terminal installation process, and the customer can determine whether it is needed according to the actual process.

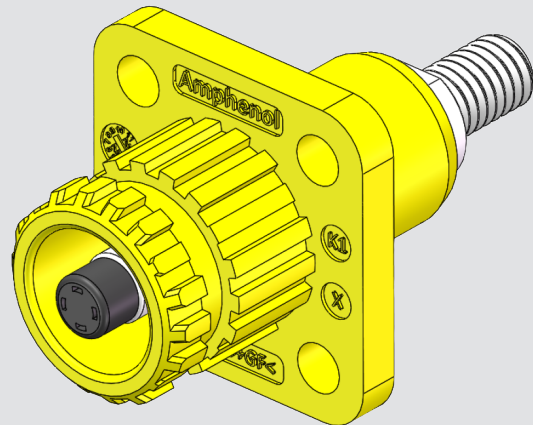
Revision History

Revision	Date	Notes
A	Dec. 18, 2021	First release
B	April 15, 2022	Update Recommended Torque
C	July 21, 2023	Update package contents

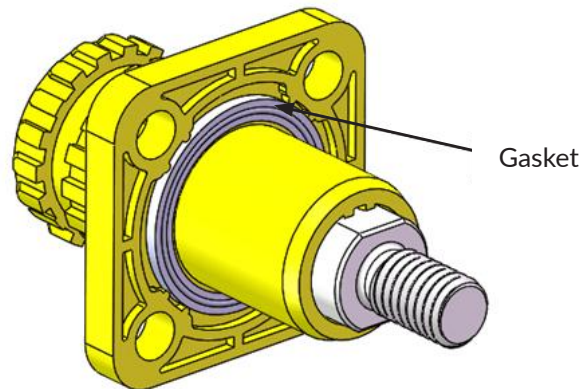
ASSEMBLY WORK INSTRUCTION

SurLok Plus® 5.7mm 1500V
Receptacle Threaded Termination

Part Number:
SLPHIRATP()()



Part 1: Package Contents

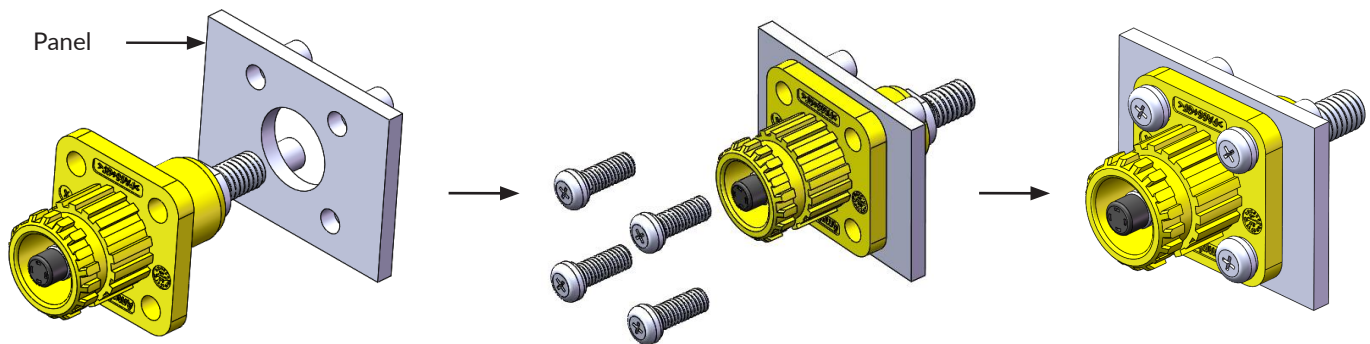


1. Receptacle Shell

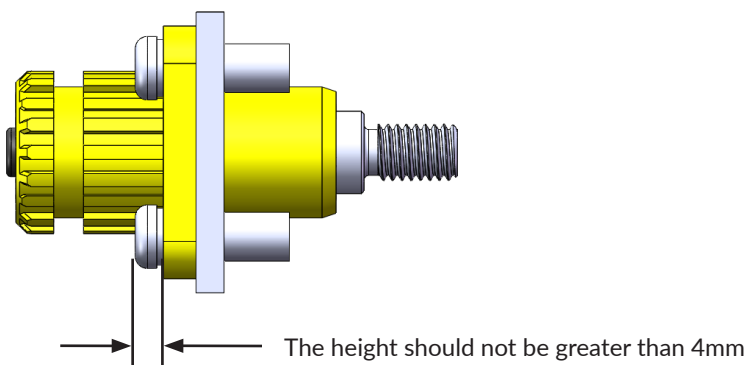
1-1: Gasket (Not included when no sealing requirement)

Part 2: Receptacle Assembly

1. Tighten housing onto the panel with M4 screws (recommended torque is $0.8 \pm 0.1 \text{ N.m}$)

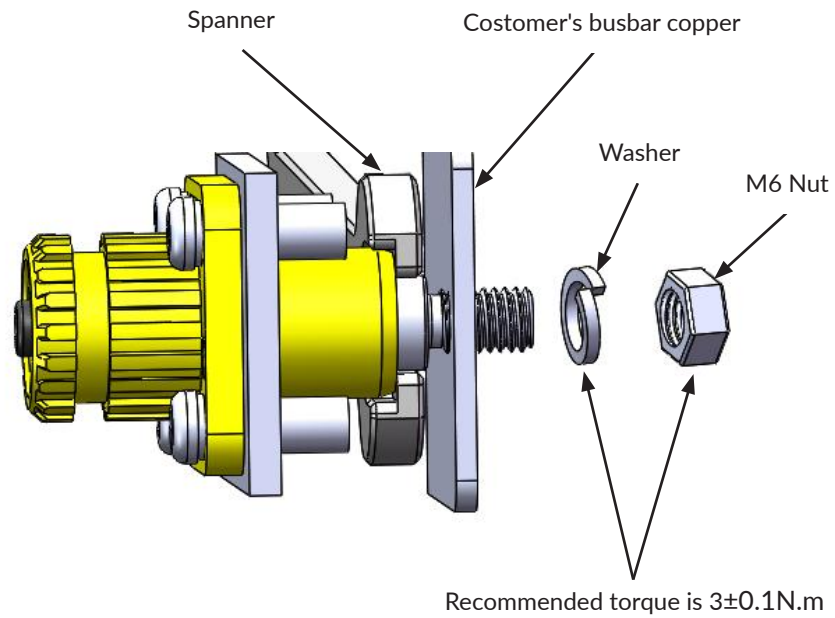


Recommended screw is GB 9074.3 M4.



Note: The customer shall verify the recommended torque based on your application and modify it if necessary.

2. Connect receptacle terminal with customer's busbar copper.

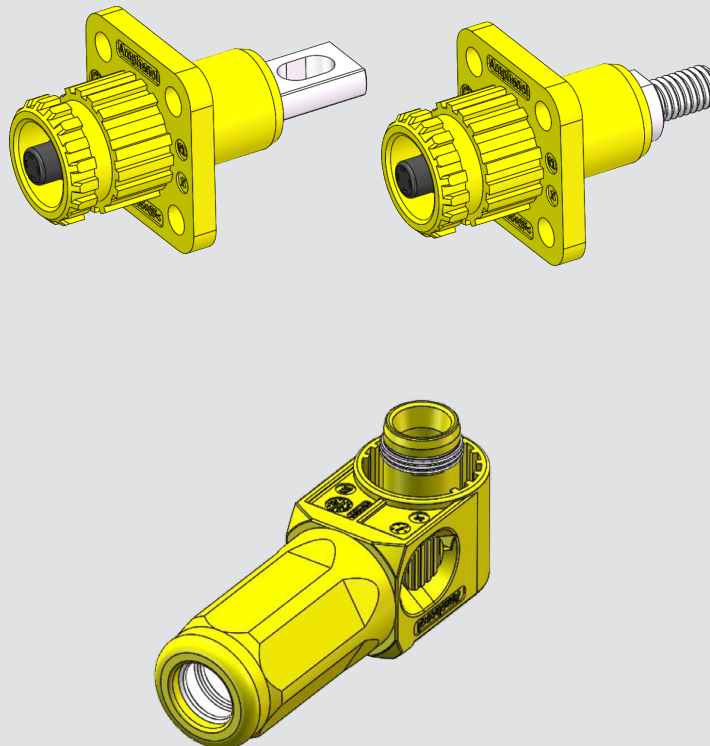


Notes: The customer shall verify the recommended torque based on your application and modify it if necessary.

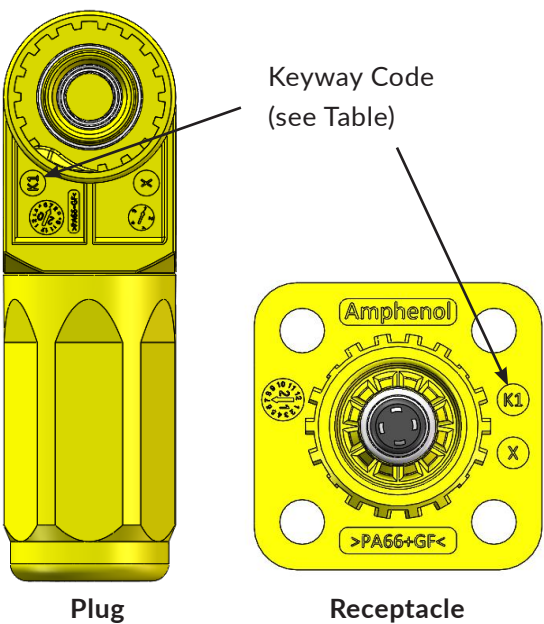
The customer shall confirm whether the electrical clearance between the panel and the copper bar meets the requirements according to the actual application.

ASSEMBLY WORK INSTRUCTION

SurLok Plus® 5.7mm 1500V
Right Angle Mating and Unmating Guide



Part 1: Keyway Description



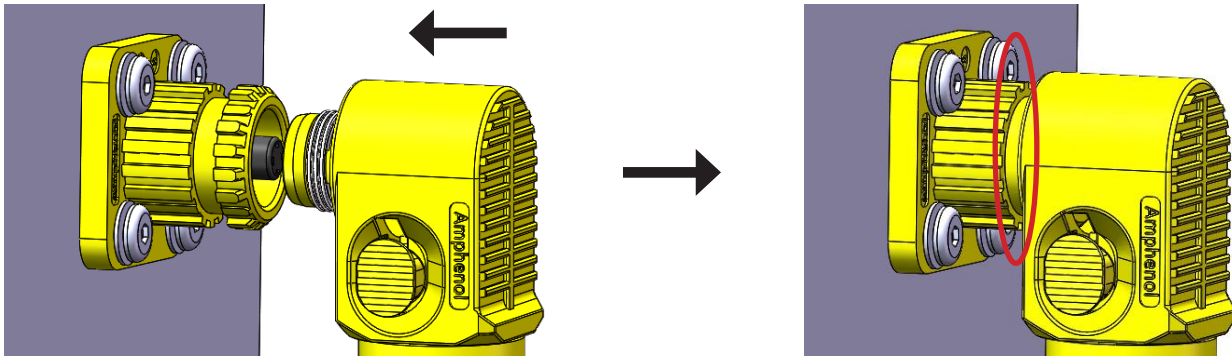
Keyway Code Table	
Y°	Keyway Code
20°	K1
30°	K2

Notes:
This product is not suitable for live plugging and unplugging.

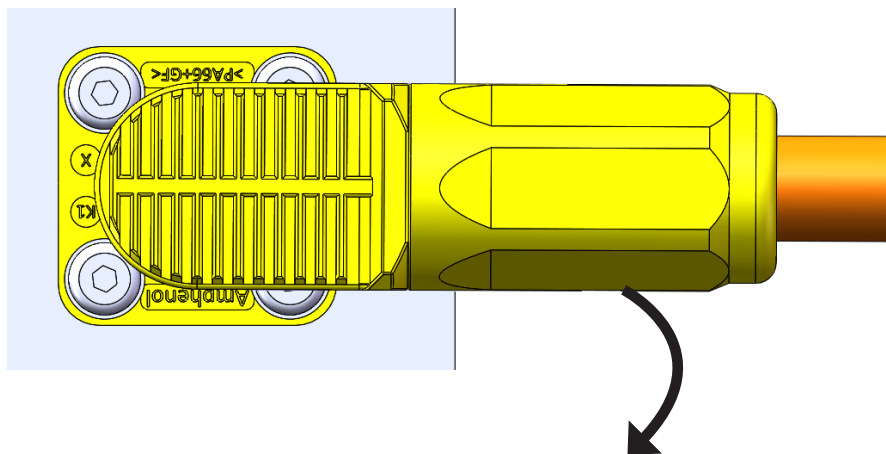
In order to prevent the plug from being pulled out by mistake, it is recommended to add a protection mechanism on the device

Part 2: Mating Operation

Step 1: Preliminary mating: Insert the plug and receptacle into the following positions shown in the figure.



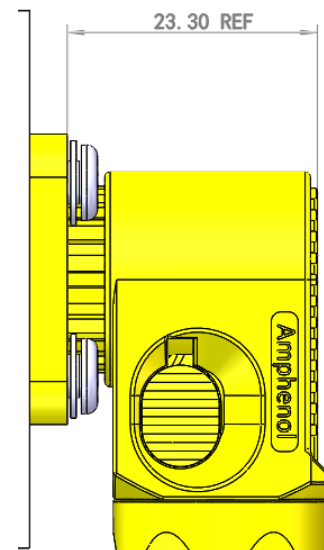
Step 2: Rotate the Plug and adjust the outgoing direction of the cable to the desired position.



Step 3: Align the key with the keyway and push the plug vertically into the receptacle, until hear a "click" to indicate that plug and receptacle mated well.

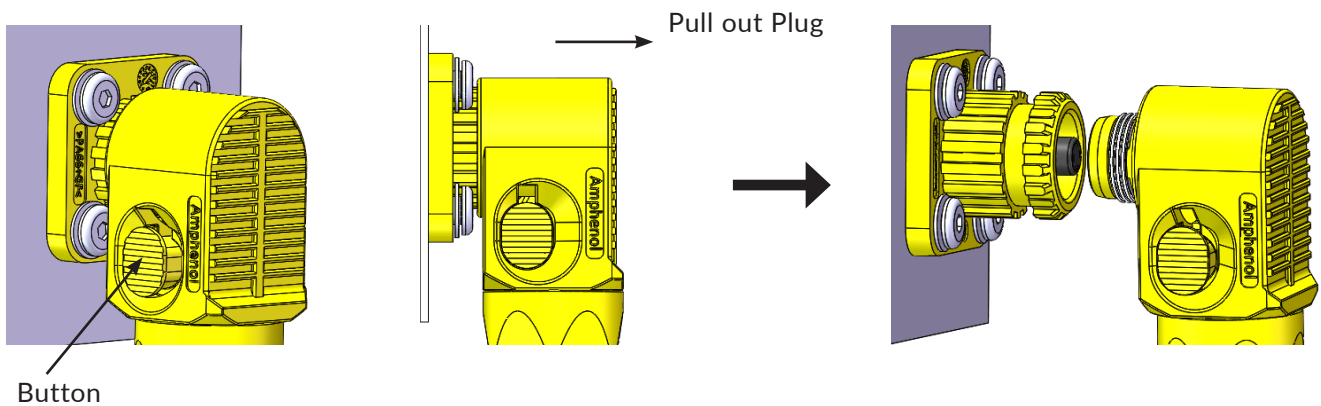
Note:

Pull the plug body slightly by hand to reconfirm if they mated well

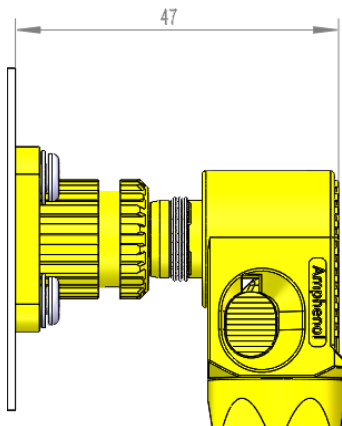


Part 3: Unmating Operation

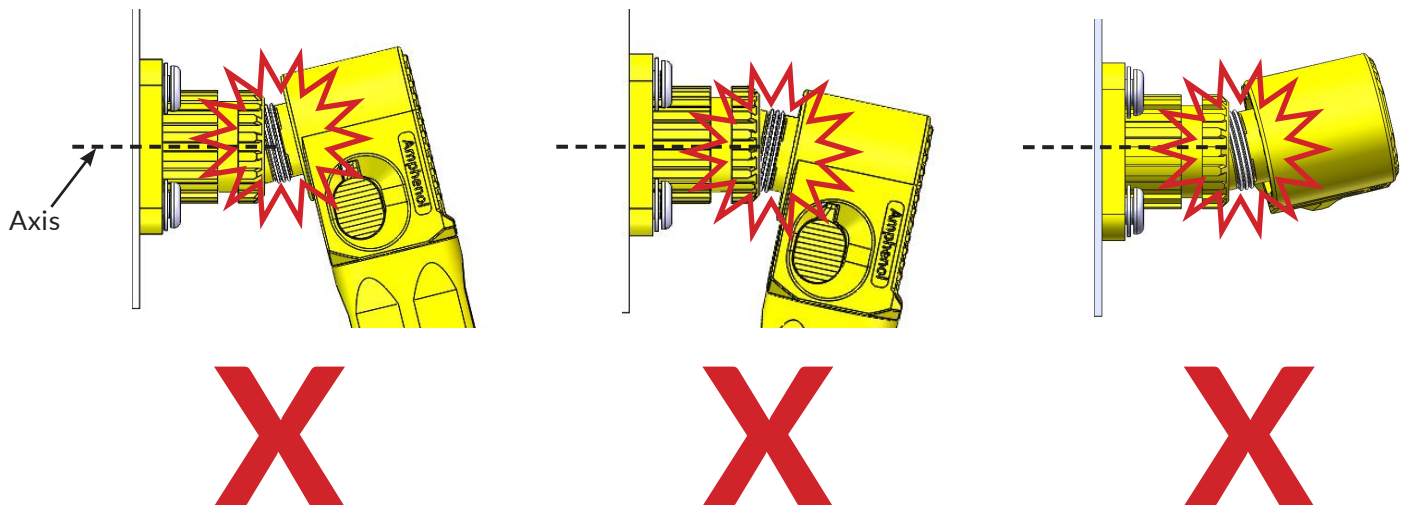
After turn off the power, press the button and then pull out the plug horizontally in the direction shown below.



Step 1: For end use, the separation active space requires is 67.5mm minimum.



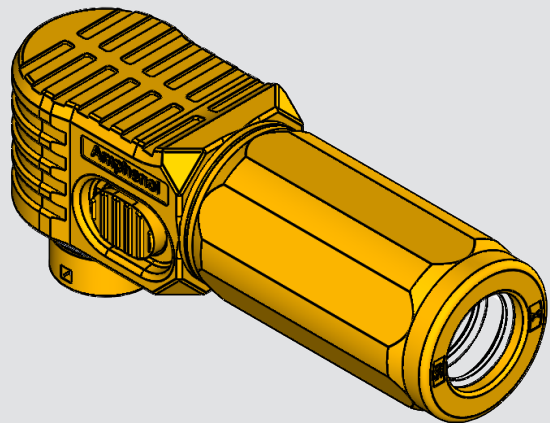
Step 2: Do not deviate from the axis direction of the receptacle until it was separation complete, or it has a risk to damage the connector.



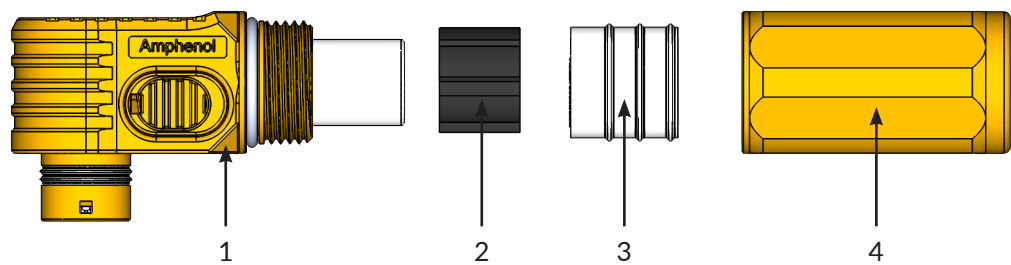
ASSEMBLY WORK INSTRUCTION

SurLok Plus® 8.0mm 1500V
Right Angle Plug

Part Number:
SLPHPB()B()()



Part 1: Plug Components



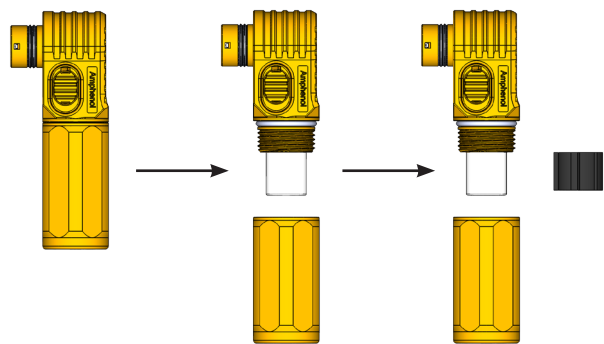
Item	Components Description	Quantity
1	Connector Body	1 set
2	Bracket	1 pcs
3	Grommet	1 pcs
4	Rear Shell	1 pcs

Part 1: Plug Cable Assembly

Step 1: Un-assemble rear attachments

Screw out the rear shell then take out the bracket.

Notes: The grommet should be kept inside of rear shell.



Step 2: Wire stripping

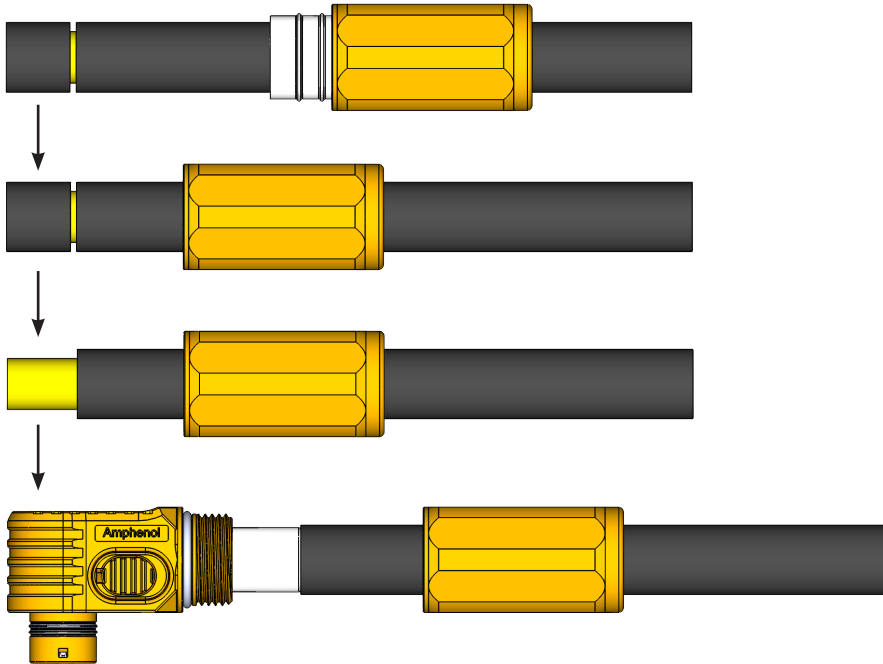
Strip the insulator of 14.0±0.5mm.

Notes: The cut insulator should kept cover on the conductor.



Step 3: Preloaded rear attachments

Wire pass through rear shell and grommet, then take off the cut insulator.
Finally put the conductors of cable into the lug of connector body.



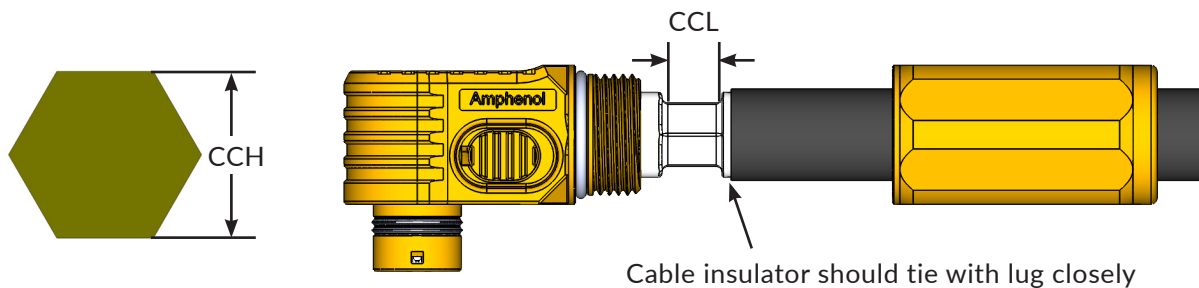
Step 4: Crimping the lug

Crimp lug together with cable conductor according to below table.

Recommended crimping parameter				
Cable size	Cable O.D.	CCH	CCL	Pullout force
35mm ²	11.5±0.3mm	9.0±0.1mm	10.0±0.3mm	1900N Min.
50mm ²	13.6±0.3mm	10.5±0.1mm	10.0±0.3mm	2700N Min.

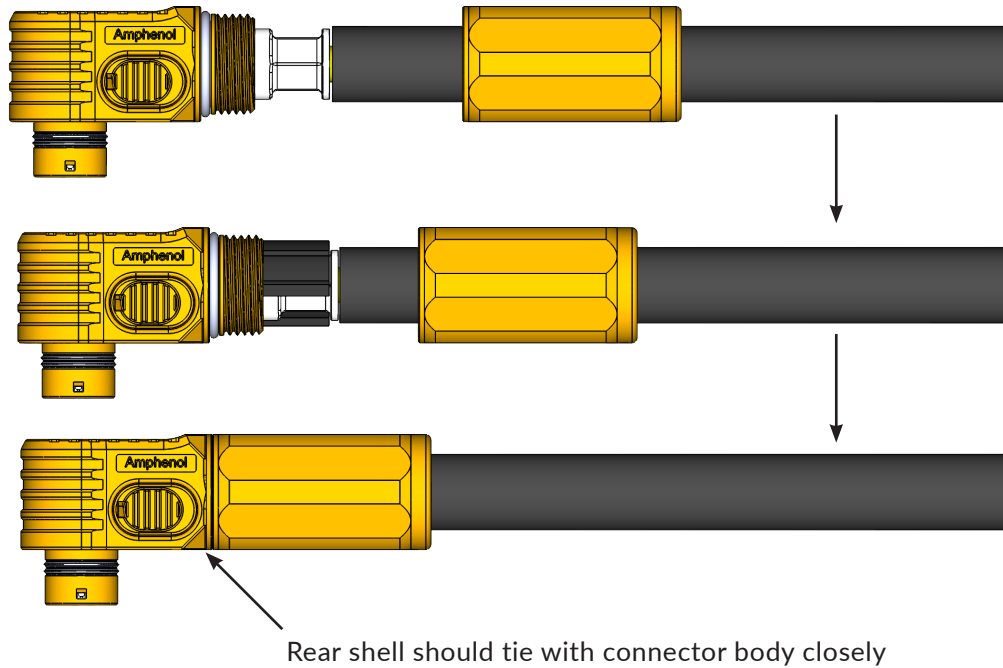
Notes:

The recommended crimp sizes are only for reference. The customer shall adjust them according to cable specification and crimp tool and test results including temperature rise and metallographic analysis and pullout force, etc.



Step 5: Assemble rear attachments

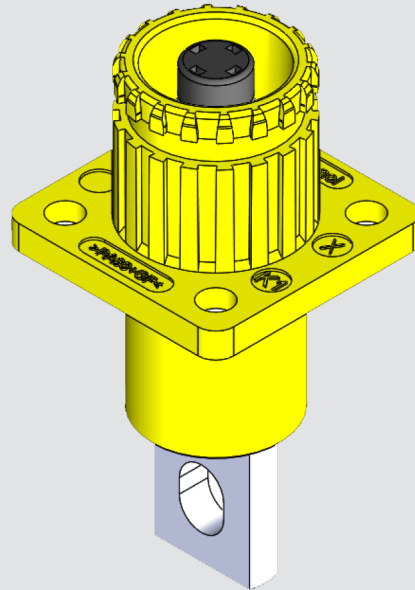
Put the bracket onto the lug of connector body, then tighten rear shell to the indicated location shown as picture by hand or wrench (recommended torque is $1.2 \pm 0.1 \text{ N.m}$).



ASSEMBLY WORK INSTRUCTION

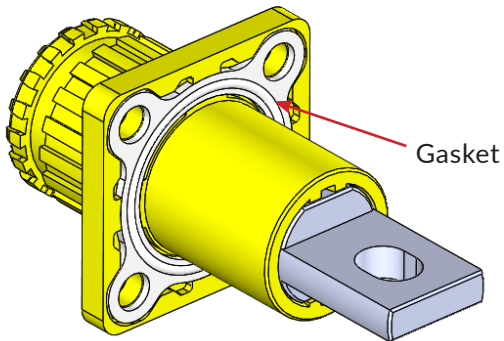
SurLok Plus® 8.0mm 1500V
Receptacle Busbar Termination

Part Number:
SLPHIRBBP()()



Part 1: Package Contents

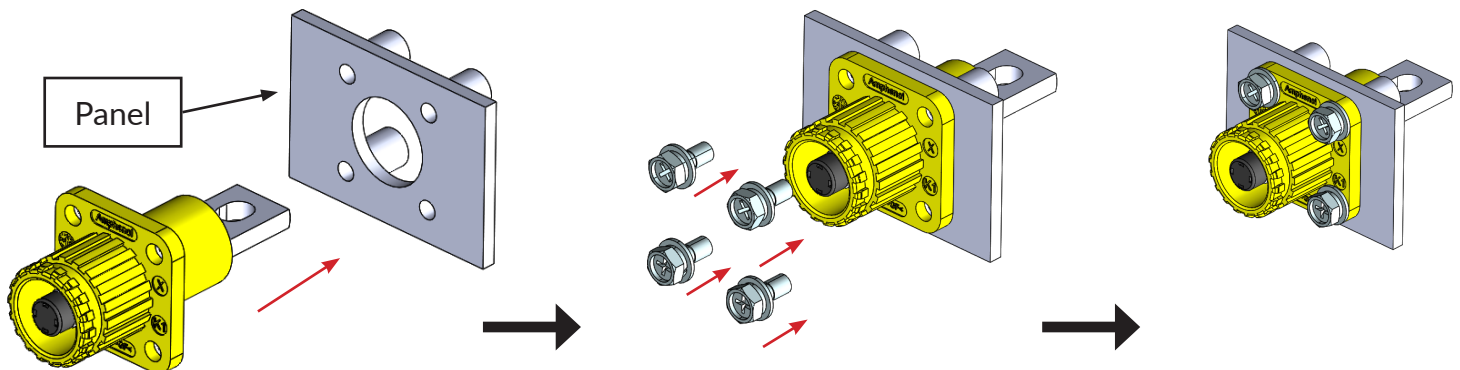
1: Receptacle shell



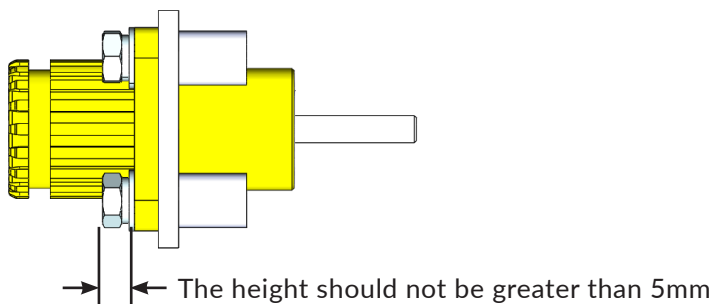
1-1: Gasket (Not included when no sealing requirement)

Part 2: Receptacle Assembly

Step 1: Tighten housing onto the panel with M4 screws (recommended torque as $0.8 \pm 0.1 \text{N.m}$)



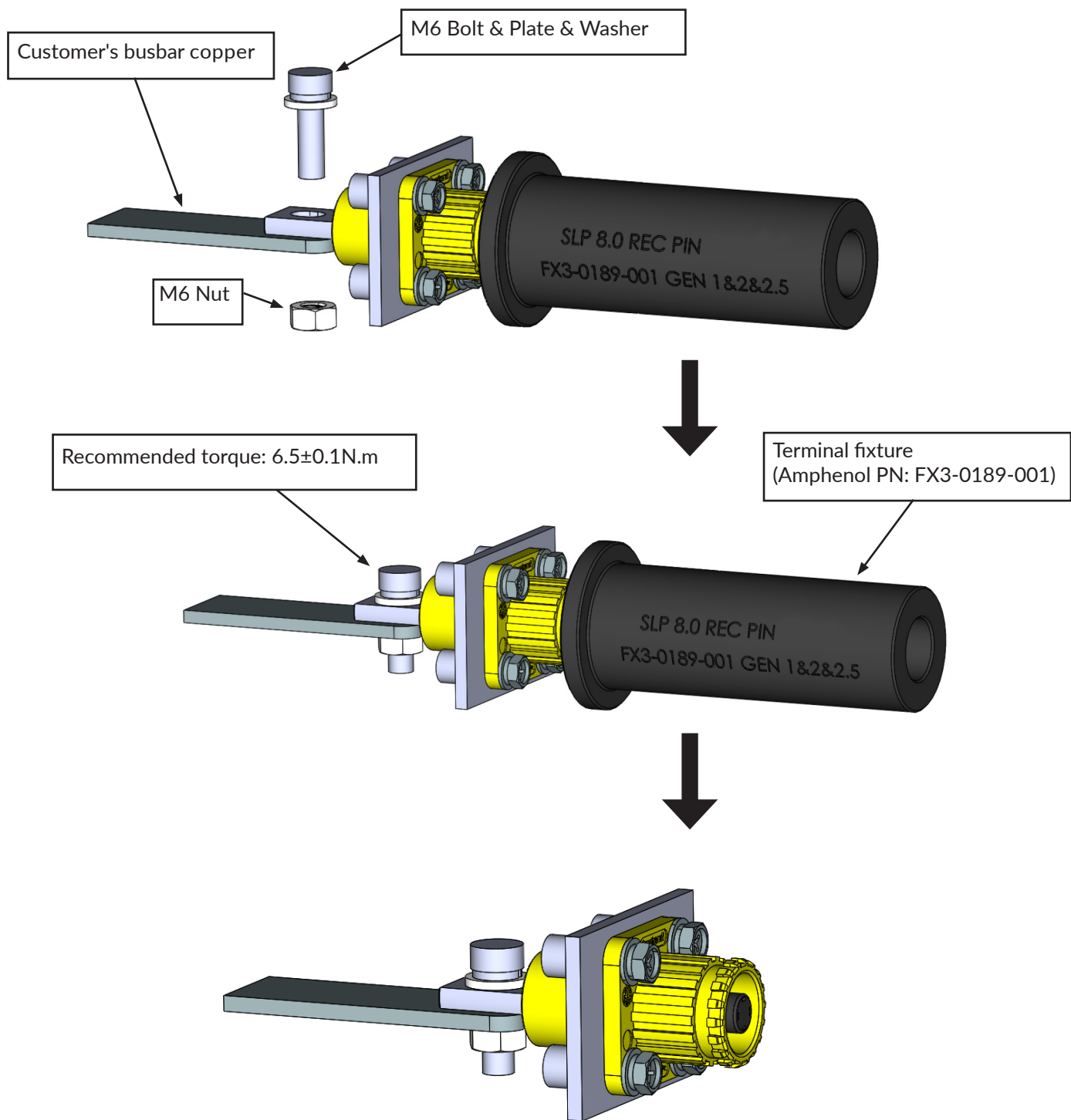
Recommended screw is GB 9074.13 M4.



Notes:

The customer shall verify the recommended torque base on your application and modify it if necessary.

Step 2: Connect receptacle terminal with customer's busbar copper



- 1): Pass receptacle tail through the hole of the mounting panel
- 2): Insert the terminal fixture (Amphenol PN: FX3-0189-001) into the receptacle
- 3): M6 bolt is assembled in sequence copper busbar and plate and washer and nut
- 4): Tighten screws by wrench, then take out the terminal fixture

Notes:

- The busbar copper (or others application) needs to be fixed during installation. The customer shall verify the recommended torque base on your application and modify it if necessary. The function of the terminal fixture is to reduce the deflection of the terminal installation process, and the customer can determine whether it is needed according to the actual process. During the process of using the terminal fixture, the handle should be tightly held to prevent it from swinging.

Revision History

Revision	Date	Notes
A	Nov. 11, 2021	First release
B	July 27, 2023	Add terminal fixture

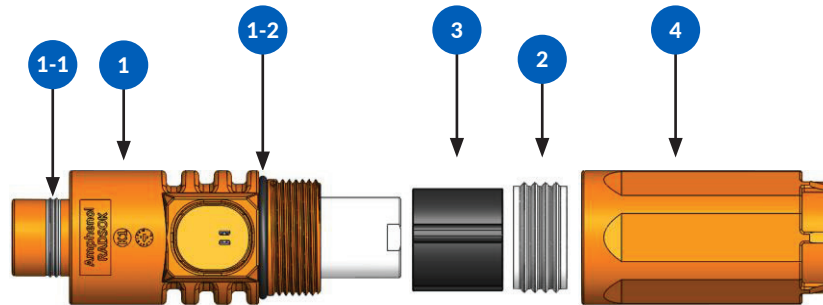
CABLE ASSEMBLY WORK INSTRUCTION

SurLok Plus® 10.3mm 1500V
Straight Plug

Part Number:
SLPHIPC()B()()()



Part 1: Package Contents



1. Connector Body
1-1: Sealing Ring (not included when there is no sealing requirement)
1-2: O-Ring (not included when there is no sealing requirement)
2. Cable Grommet (not included when there is no sealing requirement)
3. Bracket
4. Backshell

Part 2: Plug Assembly

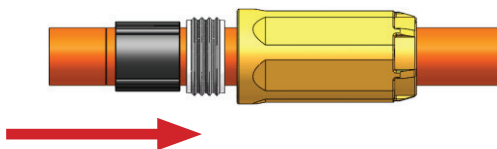
Step 1: Disassemble and set out the bracket, cable grommet, and backshell.



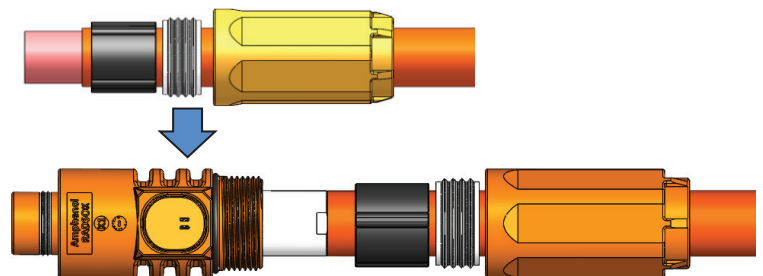
Step 2: Wire stripping: Score and cut the insulation to the specified length of 18.0 ± 0.5 mm, but do not remove it yet. Leave the loosened insulation sleeve in place on the conductor until Step 4.



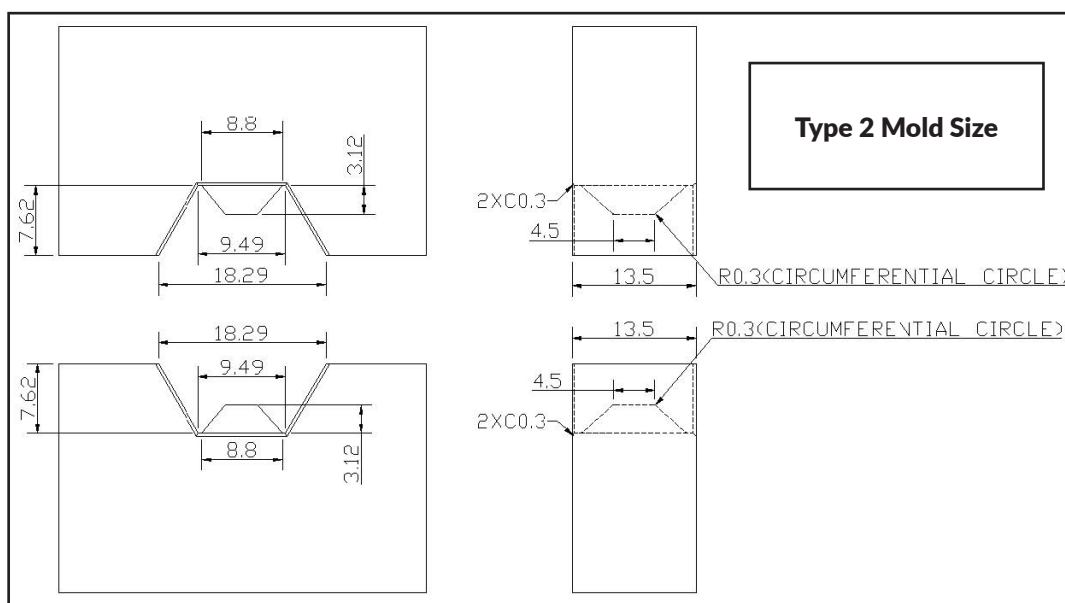
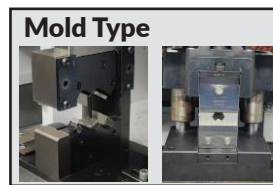
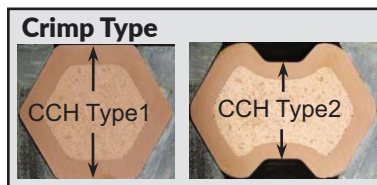
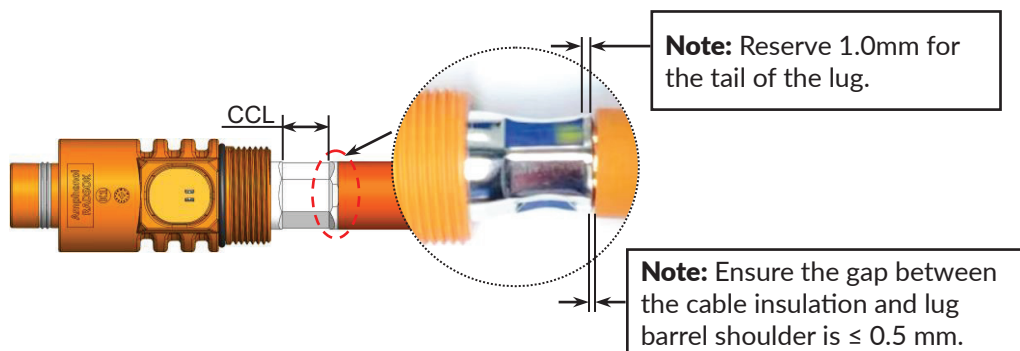
Step 3: Slide onto the cable, in order: backshell → cable grommet → bracket.



Step 4: Remove the loosened insulation sleeve. Insert the conductor fully into the lug.



Step 5: Crimp the lug using the validated tooling and die set for the selected cable size.

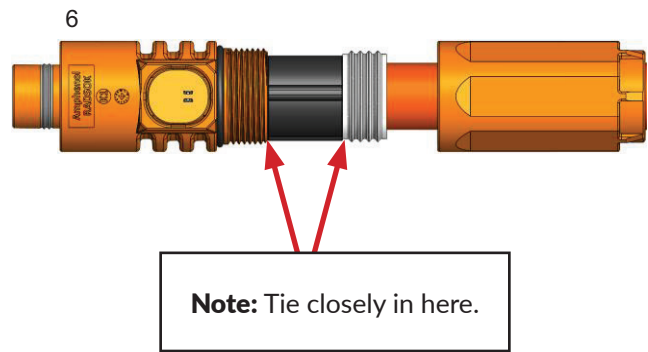


Cable Size	Cable O.D.	Conductor Structure	Reference Standard
3/0 AWG	18.2 $\pm$ 0.3mm	4788/0.16 (Class 6)	UL 3817
2/0 AWG	15.5 $\pm$ 0.3mm	20/93/0.16+17/94/0.16 (Class 6)	UL 3817
1/0 AWG	13.6 $\pm$ 0.3mm	2660/0.16	UL 3817

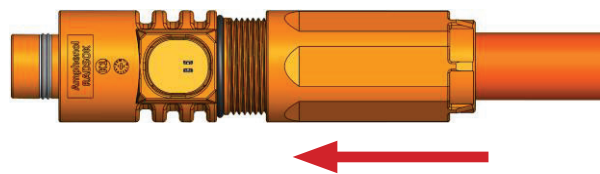
Connector Type	Cable Size	CCH	CCL	T-Rise
C10-792012-X9XX	3/0 AWG	13.2 $\pm$ 0.1mm (Type1) 9.1 $\pm$ 0.05 (Type2)	10.0 $\pm$ 0.5mm 13.0 $\pm$ 0.5mm	4200N Min
C10-792012-X70X	2/0 AWG	12.2 $\pm$ 0.1mm	13.0 $\pm$ 0.5mm	3400N Min.
C10-792012-X50X	1/0 AWG	11.0 $\pm$ 0.1mm	10.0 $\pm$ 0.5mm	2800N Min.

Note: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification, crimp tool, and test results including temperature rise and metallographic analysis and pullout force.

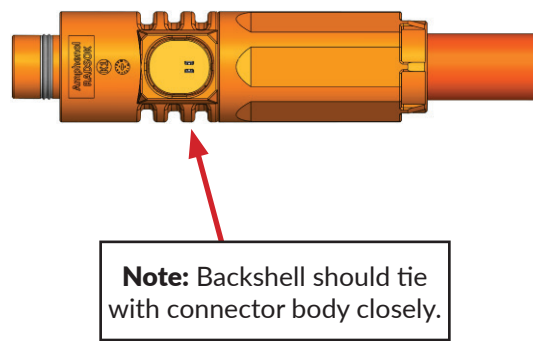
Step 6: Advance the bracket and cable grommet toward the plug and seat them against the connector body as shown. Ensure the grommet seats uniformly.



Step 7: Push the backshell along the cable to the plug threads.



Step 8: Assemble/tighten the backshell to the connector body until fully seated. The backshell must close up firmly to the body with no visible gap.



Note: The harness should be tested to confirm the insulation performance and sealing performance after assembly, the recommended test condition is shown in the table.

Test Item	Specification	Reference Standard
Dielectric withstanding voltage	6800V AC, 5mA Max	UL 4128
Insulation resistance	1500VDC, 100MΩ Min	UL 4128
IPX7 (only for sealing option and mated with C10-765128-XX0X)	1M, 30Min	IEC 60529

ASSEMBLY WORK INSTRUCTION

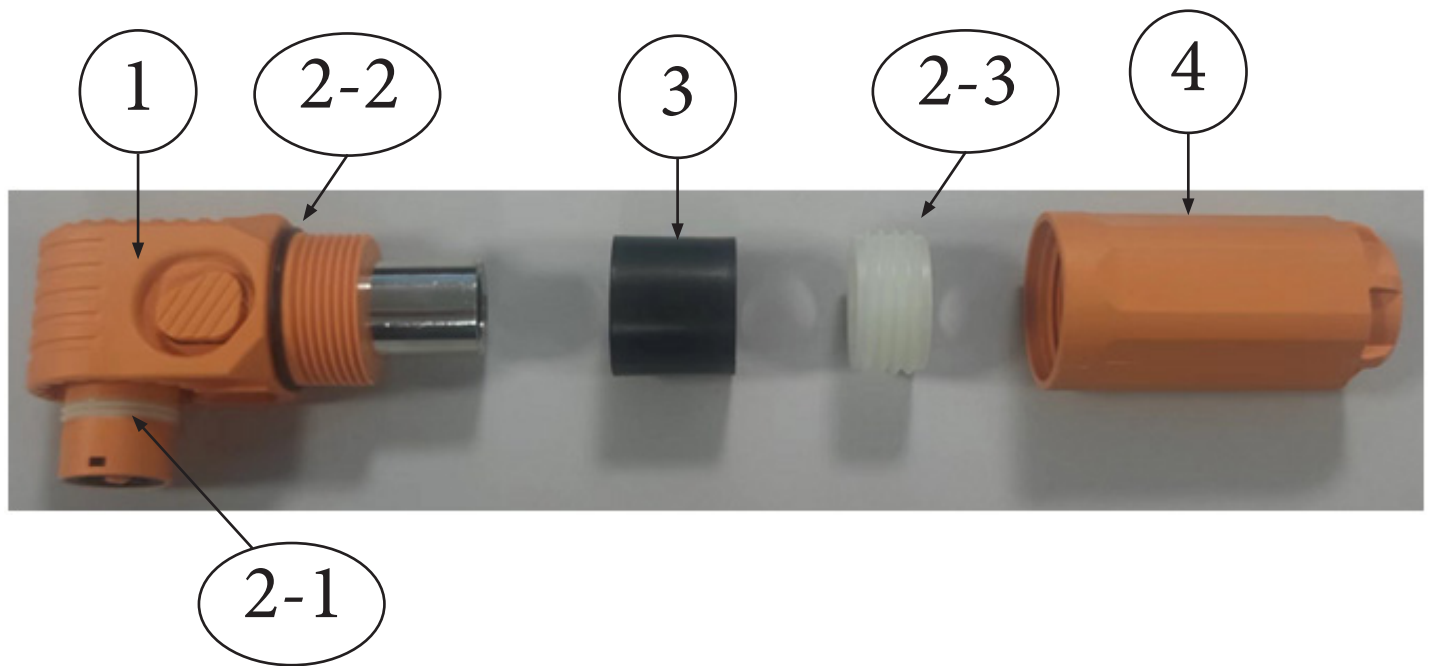
SurLok Plus® 10.3mm 1500V

Right Angle Plug

Part Number:
SLPHPC()B()()



Part 1: Package Contents



① : Connector Body

② : Sealing Parts

2-1: Barrel sealing (Not included when there's no sealing requirement)

2-2: O-Ring (Not included when there's no sealing requirement)

2-3: Rubber Grommet (Not included when there's no sealing requirement)

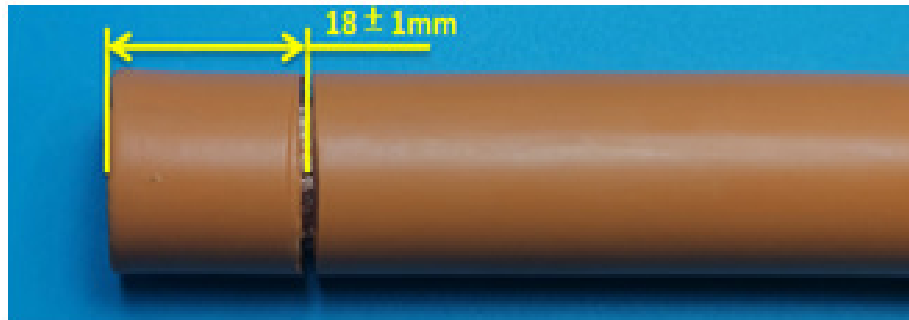
③ : Inside Spider (Not included when there's no sealing requirement)

④ : Rear Cap

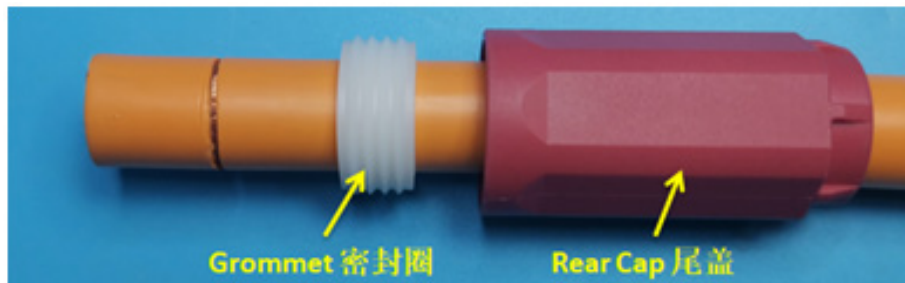
Part 2: Plug Assembly

Step 1: Wire cutting and stripping (Apply for 2/0 AWG or 70mm² & 3/0 AWG or 95mm² Cable)

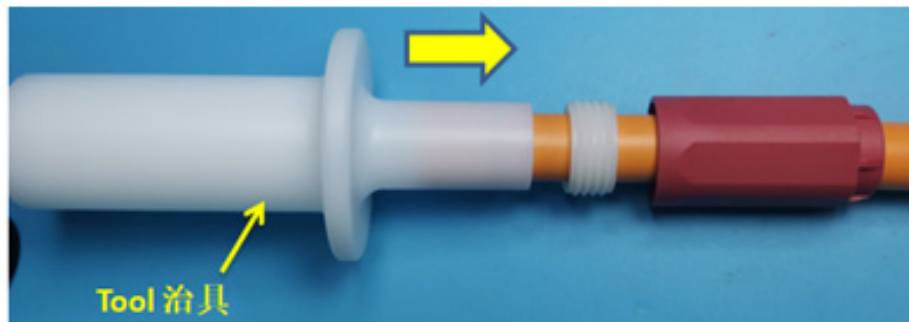
Stripping conductor: 18±1mm



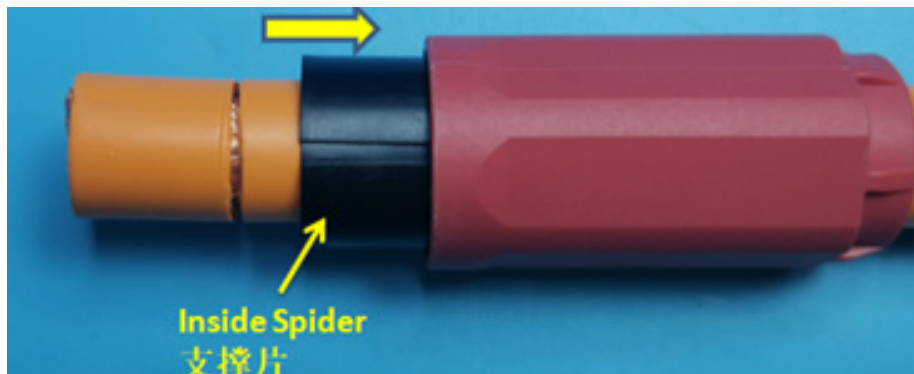
Step 2: Un-assemble Grommet and rear cap over the cable as shown.



Step 3: Use the tool (FX3-067-001) to fit the grommet to the bottom of rear cap



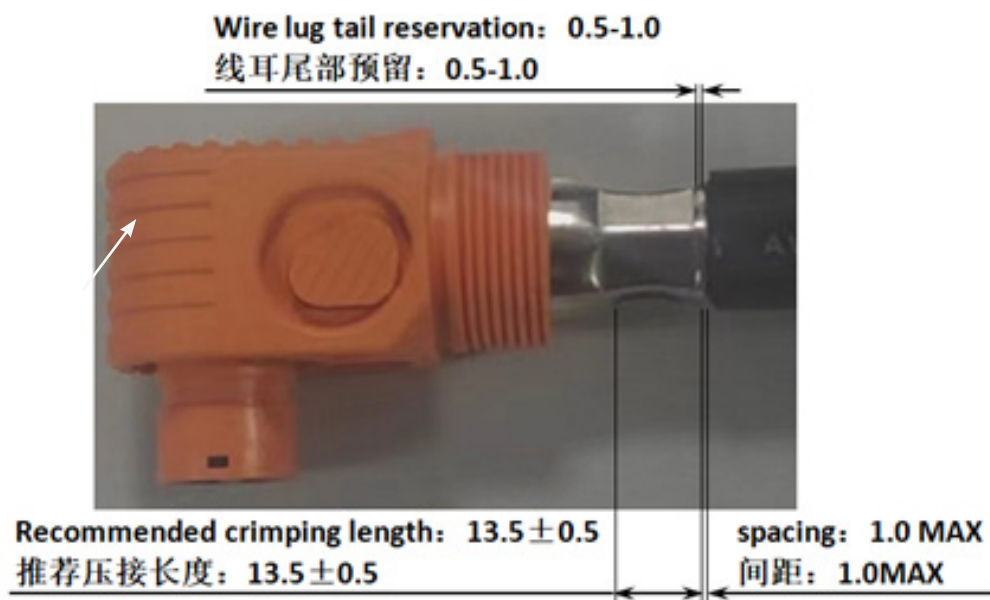
Step 4: Assemble the insider spider into the rear cap



Step 5: Put the cable conductor into the lug

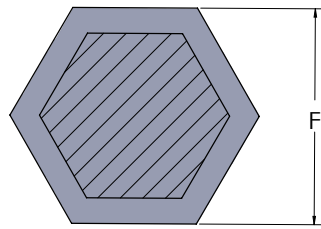


Step 6: As shown in the figure, crimp the part where the lug contacts the cable conductor
(Note: The cable crimping methods of 70SQMM and 95SQMM are different)



Cable Size	Recommended Cable Range	Cable Pullout Force
2/0 AWG or 70mm ²	15.5±0.3 mm	3400N Min.
3/0 AWG or 95mm ²	18.2±0.3 mm	4200N Min.

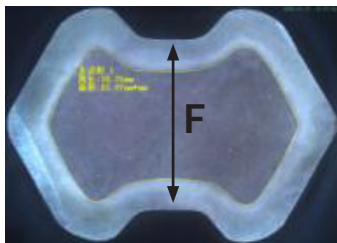
(a). 70SQmm cable crimping method is as follows:



Recommended Dist across Flats F
$12.2 \pm 0.1 \text{ mm}$

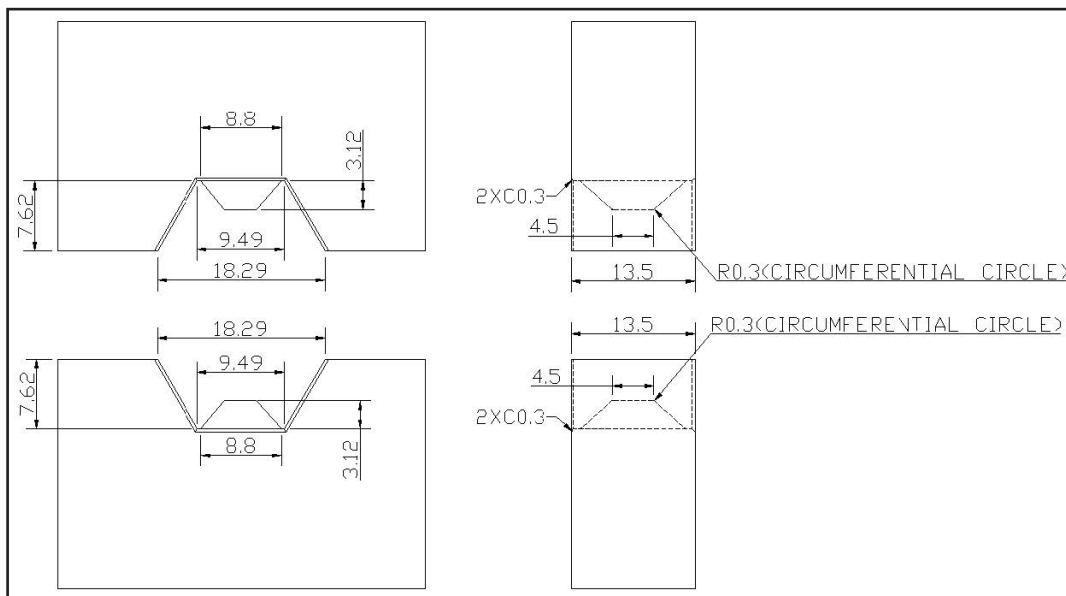
(70SQ crimping equipment is recommended to use a 6-sided endless knife die)

(b). 95SQmm cable crimping method is as follows:



Recommended Dist across Flats F
$9.1 \pm 0.05 \text{ mm}$

(The recommended dimensions of special crimping tool die are as follows)



Notes: The recommended crimp sizes are only for reference. The customer should adjust them according to cable specification and crimp tool and test results including temperature rise and metallographic analysis and pullout force.

Step 7: Assemble rear shell



Tighten rear shell to the indicated location shown as picture above by hand or tool.

The recommended torque is below:

1.5~2.0 Nm

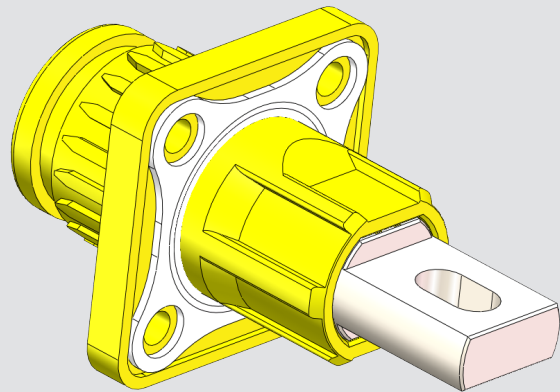
Revision History

Revision	Date	Notes
E	June 20, 2022	Updated crimping dimensions of step 6 detail and recommended die specifications

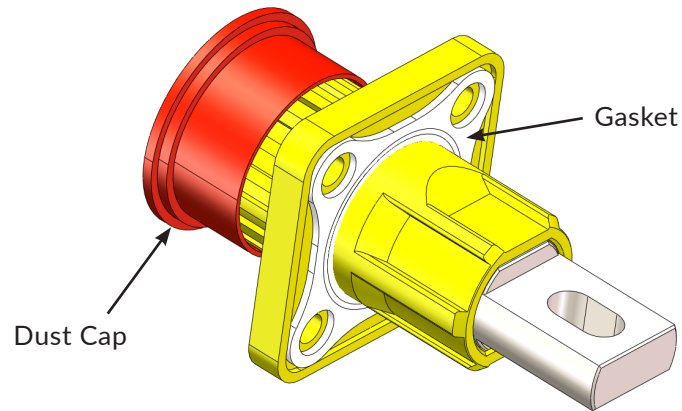
ASSEMBLY WORK INSTRUCTION

SurLok Plus® 10.3mm 1500V
Receptacle Busbar Termination

Part Number:
SLPHIRCBP()()



Part 1: Package Contents



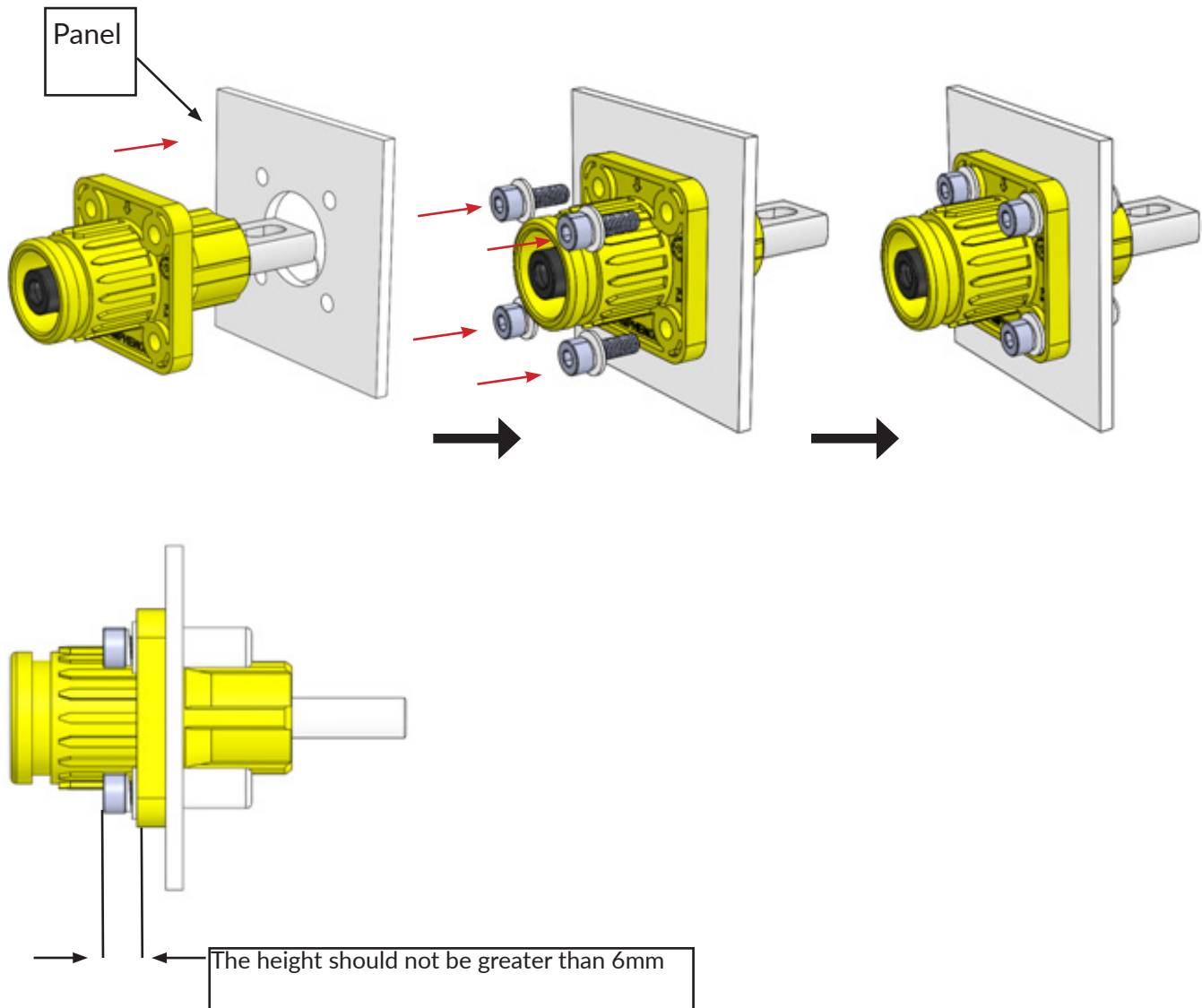
Receptacle connector

Notes: There will be no gasket when no sealing requirement.

Part 2: Receptacle Assembly

Step 1: Tighten housing onto the panel with M4 screws (recommended torque is 0.8~1.0 N.m)

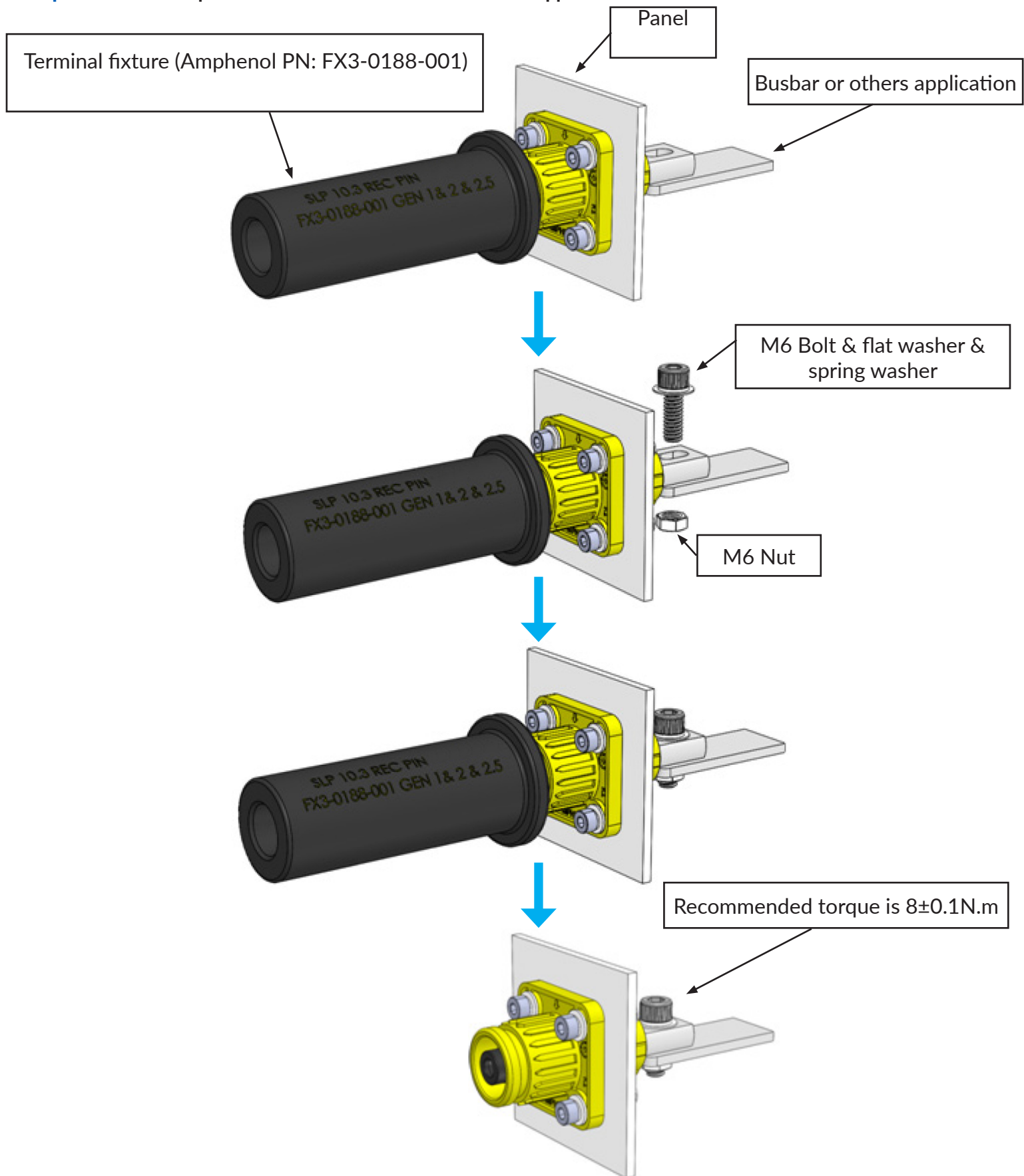
- (1) Recommended M4 bolts refer to GB/T 70.1-2000 (eqv ISO 4762:1997)
- (2) Recommended M4 spring lock washer refer to GB 93-87
- (3) Recommended M4 plain washer refer to GB 97.1-2002



Notes:

The customer shall verify the recommended torque base on your application and modify it if necessary.

Step 2: Connect receptacle terminal with customer's busbar copper



(1): Align the installation holes of the copper bar with the installation holes at the tail of the socket.

(2): Insert the terminal fixture (Amphenol PN : FX3-0188-001) into the receptacle.

(3): Thread the M6 studs through the anti loosening pad, washer, copper bar, and nut in sequence.

(4): Tighten screws by tool, then remove the terminal fixture.

Notes: The Busbar (or others application) needs to be fixed during installation. During the process of using terminal fixture, the handle should be tightly held to prevent it from swinging. The customer shall verify the recommended torque base on your application and modify it if necessary. The function of the terminal fixture is to reduce the deflection of the terminal installation process, and the customer can determine whether it is needed according to the actual process.

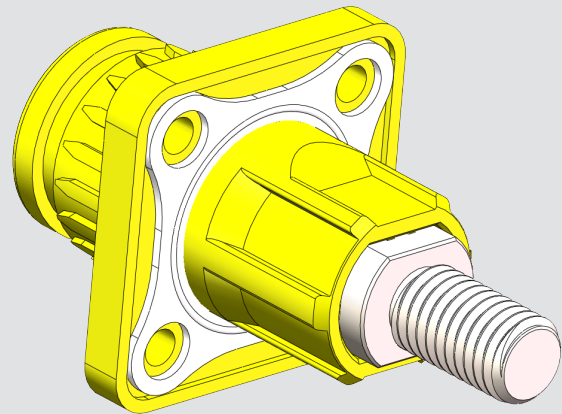
Revision History

Revision	Date	Notes
A	Jan. 5, 2020	First Release
B	July 24, 2020	Update Package Contents

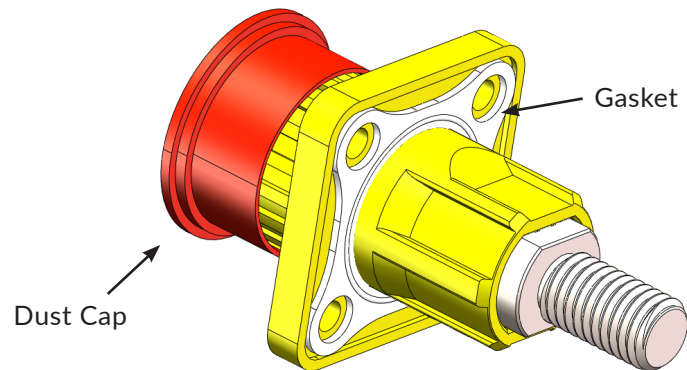
ASSEMBLY WORK INSTRUCTION

SurLok Plus® 10.3mm 1500V
Receptacle Threaded Termination

Part Number:
SLPHIRCTP()()



Part 1: Package Contents



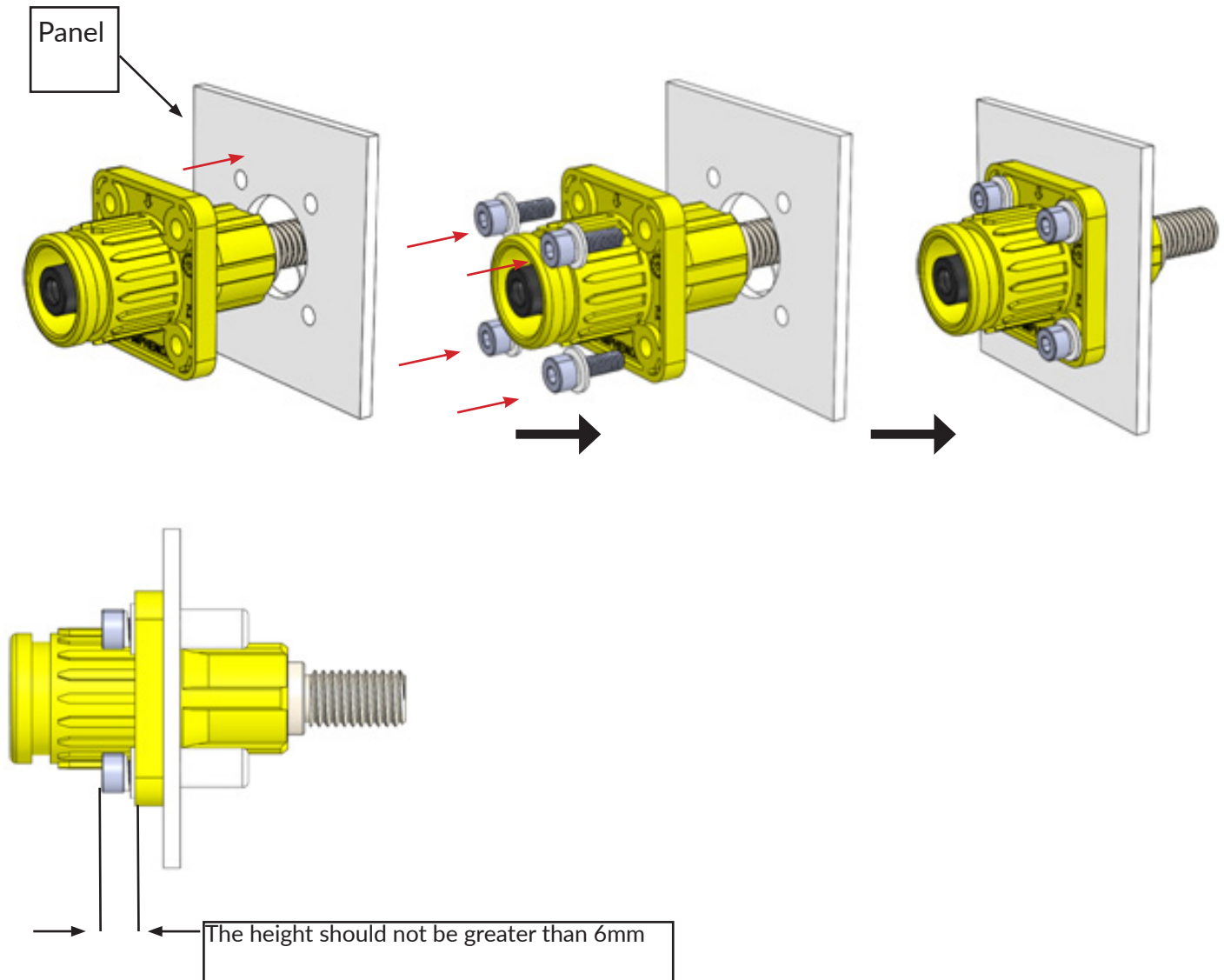
Receptacle connector

Notes: There will be no gasket when no sealing requirement.

Part 2: Receptacle Assembly

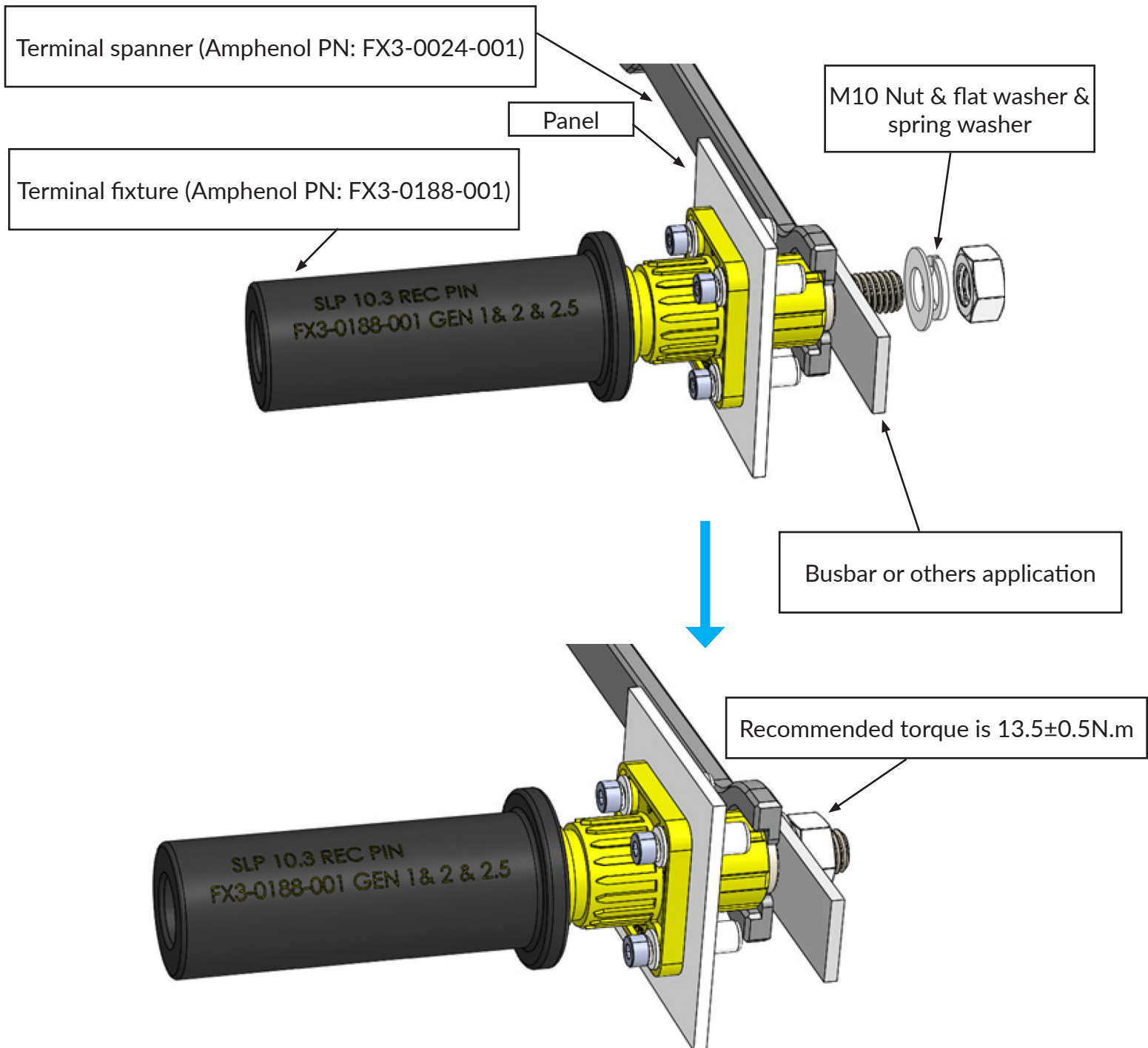
Step 1: Tighten housing onto the panel with M4 screws (recommended torque is 0.8~1.0 N.m)

- (1) Recommended M4 bolts refer to GB/T 70.1-2000 (eqv ISO 4762:1997)
- (2) Recommended M4 spring lock washer refer to GB 93-87
- (3) Recommended M4 plain washer refer to GB 97.1-2002



Notes:

The customer shall verify the recommended torque base on your application and modify it if necessary.



(1): Insert the terminal fixture (Amphenol PN : FX3-0188-001) into the receptacle.

(2): Thread the installation holes of copper bars or other applications through the studs at the end of the receptacle.

(3): Insert the washer, anti loosening spring washer, and M10 nut into the bolt at the tail of the receptacle in sequence.

(4): Fix the terminal with a terminal fixing wrench (Amphenol part number: FX3-0024-001), and then tighten the M10 nut with a tool.

(5): Finally, remove the terminal fixture and terminal wrench.

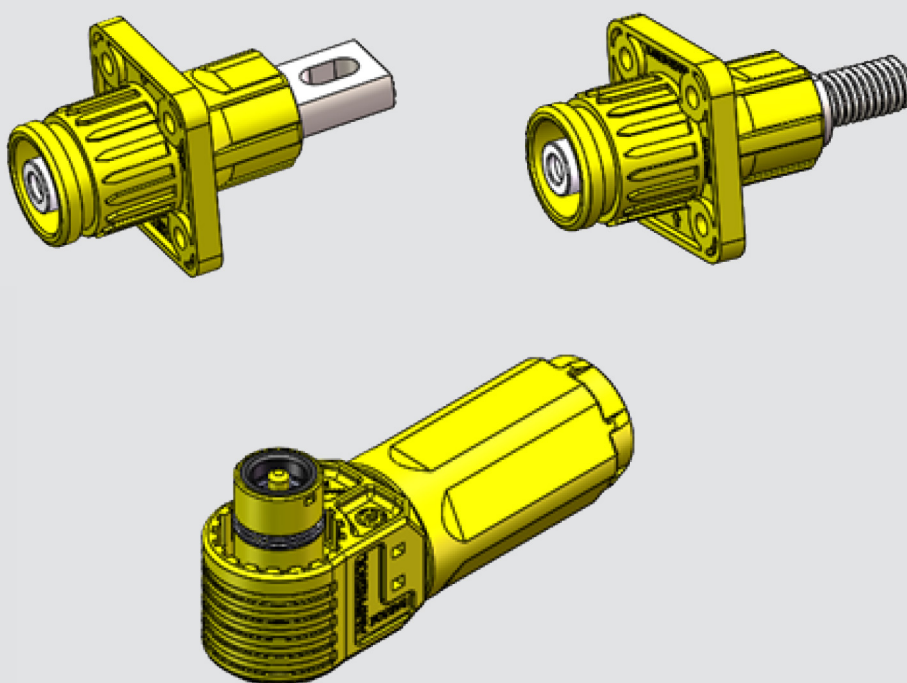
Notes: The Busbar (or others application) needs to be fixed during installation. During the process of using terminal fixture, the handle should be tightly held to prevent it from swinging. The customer shall verify the recommended torque base on your application and modify it if necessary. The function of the terminal fixture is to reduce the deflection of the terminal installation process, and the customer can determine whether it is needed according to the actual process.

Revision History

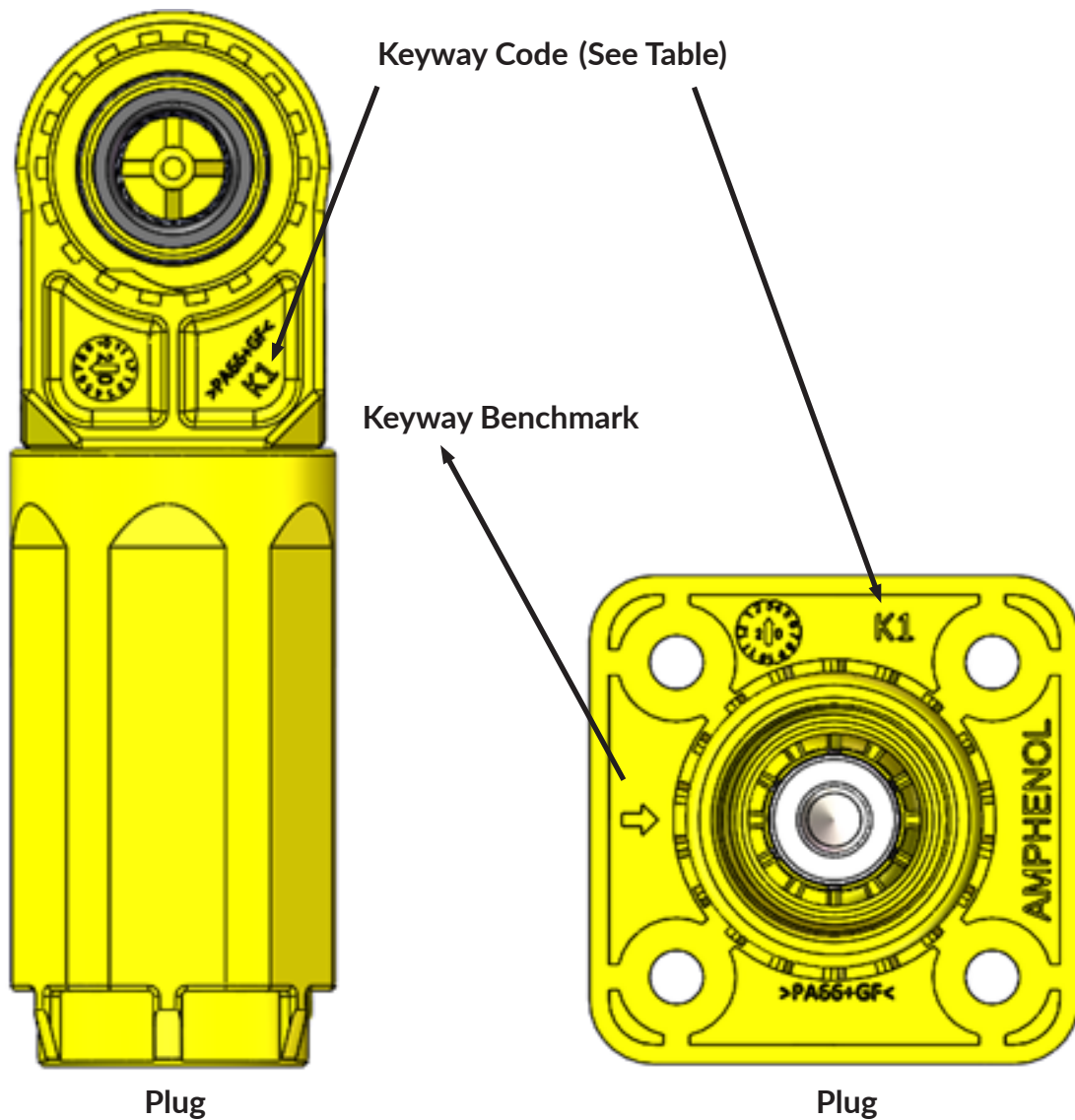
Revision	Date	Notes
A	Jan. 20, 2020	First Release
B	July 25, 2020	Update Package Contents

ASSEMBLY WORK INSTRUCTION

SurLok Plus® 10.3mm 1500V
Right Angle Mating and Unmating Guide



Part 1: Keyway Description



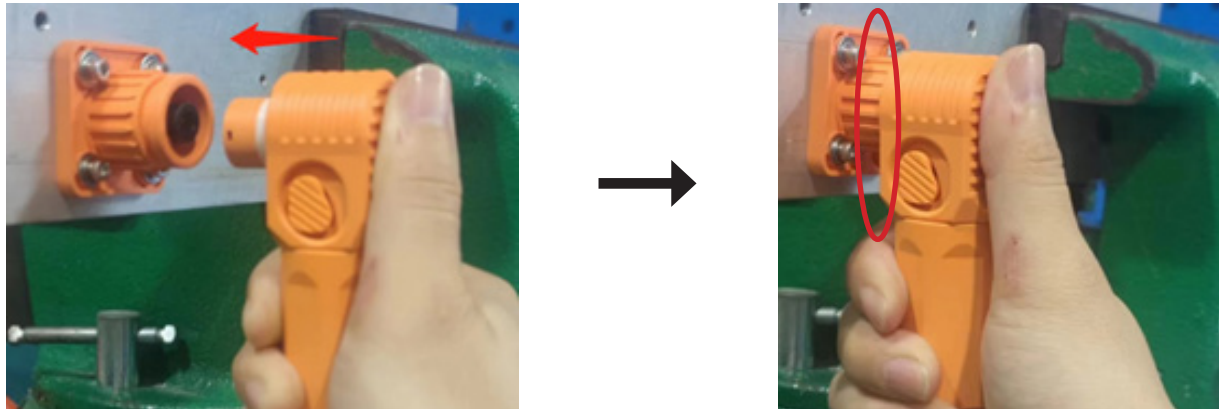
Keyway Code Table	
Y°	Keyway Code
20°	K1
30°	K2
45°	K3

Notes:

- This product is not suitable for live plugging and unplugging
- To prevent the plug from being pulled out by mistake, it is recommended to add a protection mechanism to the device.

Part 2: Mating Operation

Step 1: Preliminary mating: Insert the plug and receptacle into the following positions shown in the figure.



Step 2: Rotate the Plug and adjust the outgoing direction of the cable to the desired position.



Step 3: Align the key with the keyway and push the plug vertically into the receptacle, until you hear a "click" to indicate that plug and receptacle mated well.

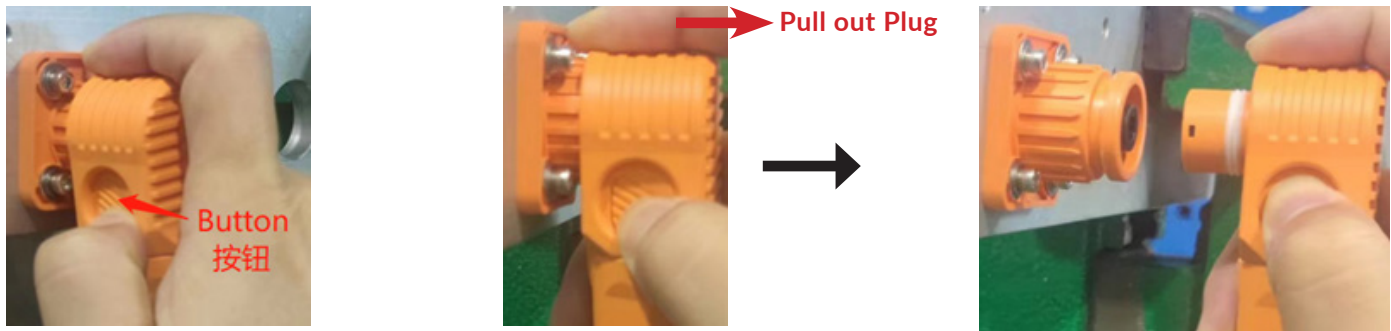


Note:

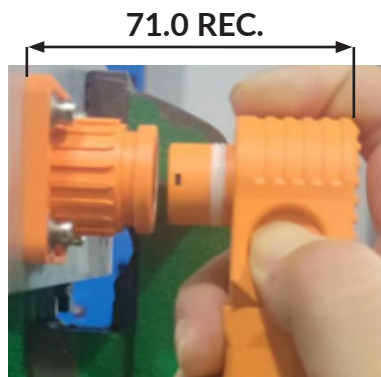
Pull the plug body slightly by hand to reconfirm if they mated well

Part 3: Unmating Operation

After turning off the power, press the button and then pull out the plug horizontally in the direction shown below.



Note 1: For end use, the separation active space required is 71.0 mm minimum.



Step 2: Do not deviate from the axis direction of the receptacle until it was separation complete, or it has a risk to damage the connector.



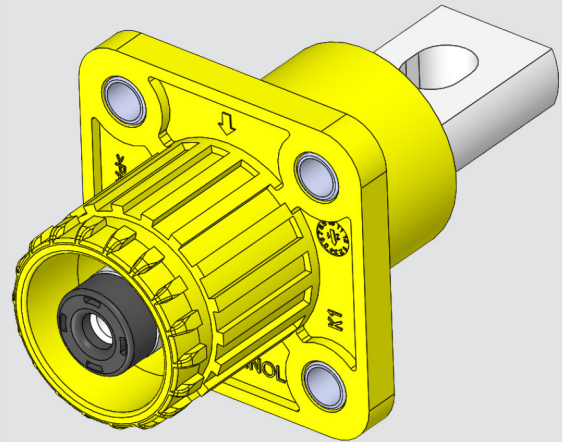
Revision History

Revision	Date	Notes
A	Jan. 1, 2020	First Release
B	Nov. 1, 2022	Update the minimum operating space: 67.5-71.0
C	May 16, 2023	Update actual homework photos

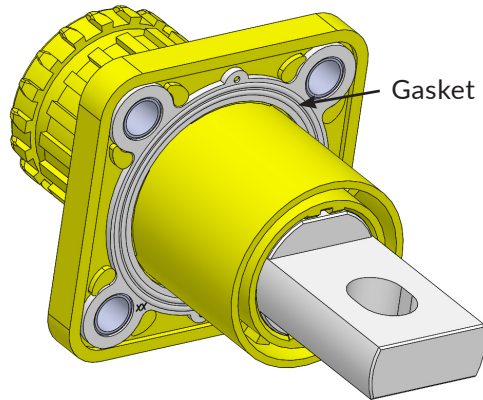
ASSEMBLY WORK INSTRUCTION

SurLok Plus® 12.0mm 1500V
Receptacle Busbar Termination

Part Number:
SLPHIRDBP()()



Part 1: Package Contents



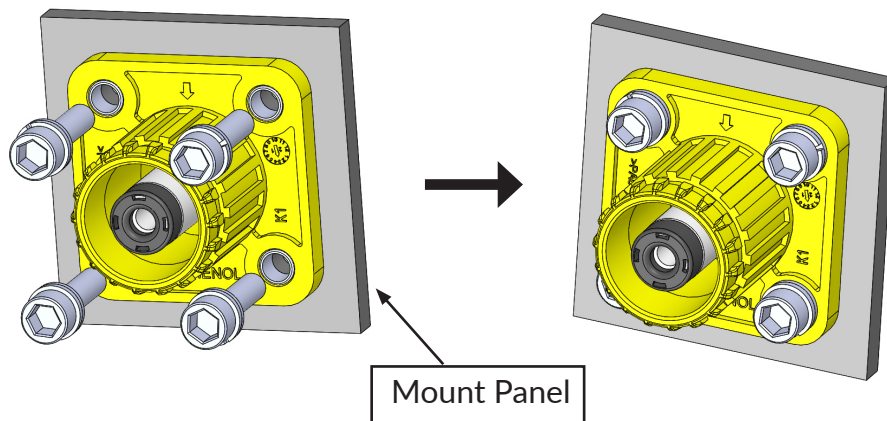
1) Receptacle connector

Notes: There will be no gasket when choosing unsealing type..

Part 2: Receptacle Assembly

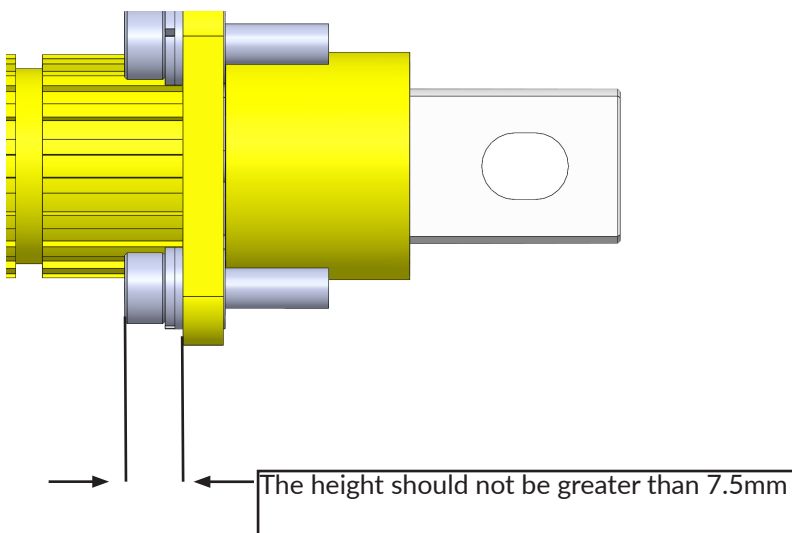
Step 1: Tighten housing onto the panel with M5 screws (recommended torque is 1.4-1.6 N.m)

- (1) Recommended M5 bolts refer to GB/T 70.1-2008.
- (2) Recommended M5 spring washer refer to GB 93-87.
- (3) Recommended M5 flat washer refer to GB 97.1-2002.

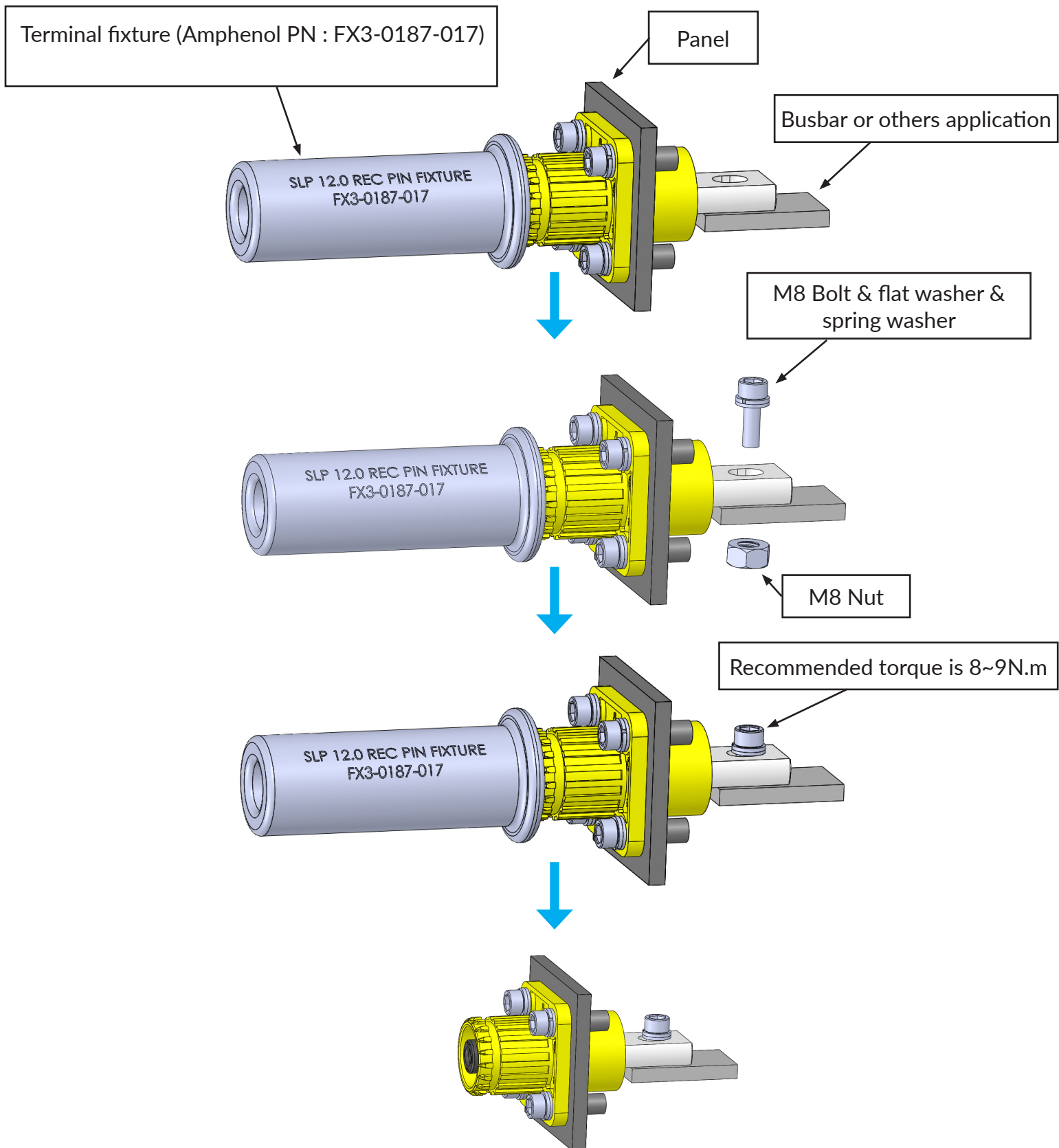


Notes:

The customer shall verify the recommended torque base on your application and modify it if necessary.



Step 2: Connect receptacle terminal with customer's busbar



(1): Pass receptacle tail through the hole of mounting panel

(2): Insert the terminal fixture (Amphenol PN : FX3-0187-017) into the receptacle

(3): Studs pass through washer and copper busbar and nut in proper order

(4): Tighten screws by tool, then remove the terminal fixture.

Notes: The Busbar (or others application) needs to be fixed during installation. The customer shall verify the recommended torque base on your application and modify it if necessary. The function of the terminal fixture is to reduce the deflection of the terminal installation process, and the customer can determine whether it is needed according to the actual process. During the process of using terminal fixture, the handle should be tightly held to prevent it from swinging.

Revision History

Revision	Date	Notes
A	Nov. 15, 2021	First Release
B	Oct. 19, 2022	Update Picture
C	Jan. 29, 2023	Optimize the assembly sequence
D	July 24, 2023	Add terminal fixture