





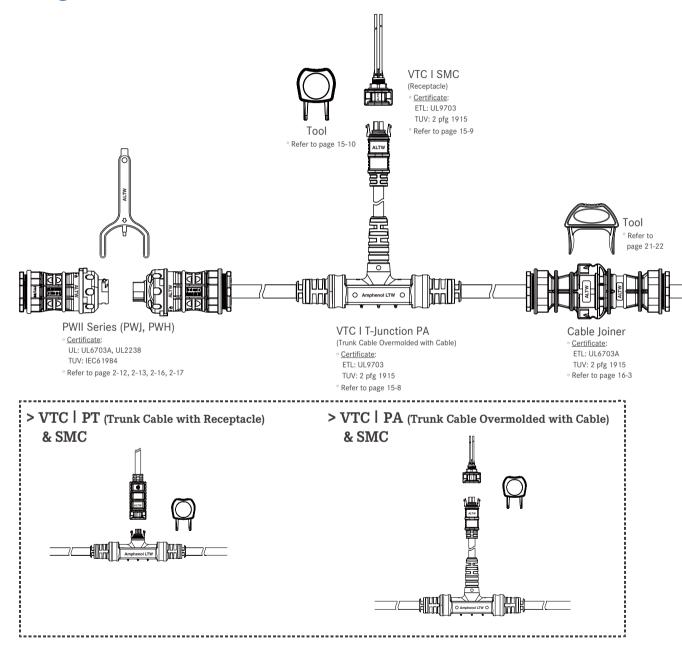
## CATALOGUE

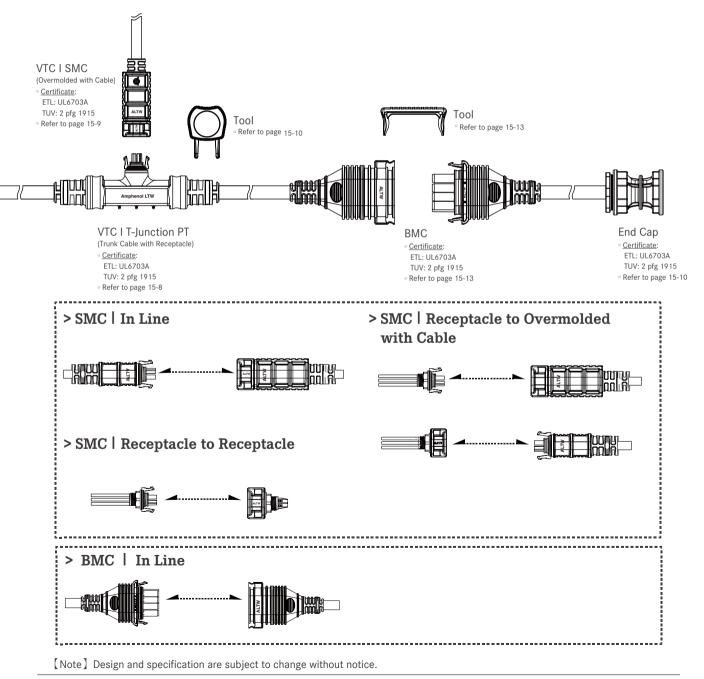
http://www.amphenolltw.com



## PV AC Connectors / T-Junction Connector

## **Range Overview**







# Specification

Identifications	VTC I T Junction: PT & PA (For Trunk Cable) VTC I SMC (For Drop or Receptacle) BMC
Description	Cabling System for Micro-inverter
Current Rating / Data	VTC I T Junction: Trunk Range: UL15A~30A / TUV17-25A / 3~4Pin VTC I SMC: 5A / 3~4Pin BMC: UL17A / TUV19A / 3~4Pin
Material	Contacts: Copper Alloy Connector Body: m-PPE
Waterproof Rating	IP67
Temperature Range	Ambient: -40°C ~ +85°C Upper Limited Temperature:+105°C
Contact Resistance	$\leq$ 10m $\Omega$
Insulation Resistance	$\geq$ 100m  at DC500V
Durability	500 cycles
Breakdown Voltage	$\geq$ DC6000V / 1 minute
Certificate	VTC I T-Juntion: ETL: UL9703, TUV: 2 pfg 1915 VTC I SMC: ETL: UL6703A, TUV: 2 pfg 1915 BMC: ETL: UL6703A, TUV: 2 pfg 1915
Voltage Rating	AC 300V
More to know	Salt Spray Corrosion test: 48H Cable for Trunk: 14~10AWG or 2.5mm <sup>2</sup> ~4mm <sup>2</sup> Cable for Drop: 18AWG or 0.75mm <sup>2</sup> Trunk Cable Pitch: Upon request

# **Ordering Information | VTC | T-Junction**

		1-2	3 4	5-6	> VTC   PT (Trunk Cable with
Specification					Receptacle) & SMC
<u>&gt;PT Type</u>					Ń
(PT) Trunk Cable with Recept	acle				
<u>&gt;PA Type</u>					
(PA) Trunk Cable Overmoled	with Cable				
Number of Contacts					<u>به</u> ال
(3) 3 Contacts	(4) 4 Contact	ts			
Cable Style					
>UL : TCER Cable Style	<u>&gt;TUV : EU Cat</u>				
(10) 10#	(4A) 4mm <sup>2</sup> 1				·
(12) 12#	(4B) 4mm <sup>2</sup> H				> VTC   PA (Trunk Cable Overmolded
<b>(14)</b> 14#	(2A) 2.5mm <sup>2</sup>	1940Cable			with Cable) & SMC
Cable pitch					
(105) 1.05m pitch					i 👗 i
(170) 1.7m pitch (205) 2.05m pitch					
	* More options a	vailable			🚆 🕅
> For Trunk Cable with Recept (00) SMC connector	tacie (PT)				
· /	ore options availab	ale (Lloon request)			
> For Trunk Cable Overmoled		,			
(□)+(■): (Drop Cable Length		-	tor)		
EX. (07B) = 0.7m length + 18# witho					
( ) : Drop Cable Length					
( <b>07</b> ) 0.7m length					
(10) 1.0m length					
(15) 1.5m length * More optic	ons available				
( <b>(</b> ) : Cable type with or with	out connector				
>UL : TCER Cable Style		>TUV : EU Cable Style			
(A) 18# With SMC connector		(E) 0.75mm <sup>2</sup> HAR Cab	le With SMC		
(B) 18# Without Connector (C		(F) 0.75mm <sup>2</sup> HAR Cab		ЛС	
(C) 16# Without Connector (C	• /	(G) 1.0mm <sup>2</sup> HAR Cable			
(D) 14# Without Connector (C	Open ended)	(H) 0.75mm <sup>2</sup> 1940 Ca	ble With SMC	C	
		(I) 0.75mm <sup>2</sup> 1940 Cab	ole Without S	MC	
		(J) 1.0mm <sup>2</sup> 1940 Cable	e Without SM	IC	

#### Number of T-Junctions

008, 011, 017, ...., 999 EX. (008) = 8 T-Junctions



#### **Ordering Information | VTC | SMC** Specification (SPS) Solar Power AC (Small size) Number of Contacts (03) 3 Contacts (04) 4 Contacts **Connector Body (Style)** > Receptacle > Overmolded with Cable (R) ALTW Rear Fastened (A) With Strain Relief **Connector Housing Gender** (M) Male (Plug) (F) Female (Socket) **Contact Gender** (M) Male (F) Female **Assemble Style** > Receptacle > Overmolded with Cable (C) Crimp Type (With Wire) (M) Overmolded with Cable Mating Style (L) 2 Points Lock (Push & Pull) (With Unlocking Tool) Backshell > Overmolded with Cable > Receptacle (C) Circular (L) Straight Waterproof Rating (7) IP 67

More Information
For Receptacle
001, 002, 003.....

001 is US Spec, 002 is EU Spec

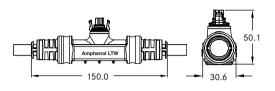
> For Overmolded with Cable

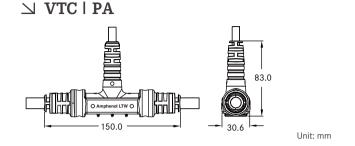
(□)+(■) : Cable Type + Cable Length EX. (T01) = US Cable For TCER 18# Cable + 1M

(<u>)</u> : <u>Cable Type</u> (T) US Cable For TCER 18# Cable (D) EU Cable For HAR 0.75mm<sup>2</sup> Cable (E) EU Cable For 1940 0.75mm<sup>2</sup> Cable (
) : Cable Length From 1M to 99M EX. (01) = 1M

# **Physical Dimension**

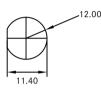
### └ VTC | PT



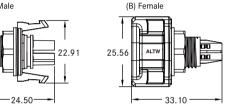


### **SMC** | Receptacle

Panel Cut-Out



Connector Dimension

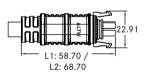


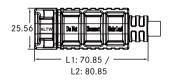
\* Maximum Panel Thickness: 4.0mm

Unit: mm

### $rightarrow SMC \mid$ Overolded with Cable

(A) Male





(B) Female

Unit: mm



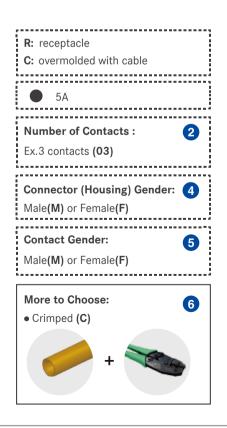
# **Contact Configuration**

### **→ VTC | T-Junction**

$\square$	VTC (Output)						
	3	Pin	4F	Pin			
	US	EU	US	EU			
10#			•				
12#	•		•				
14#	•		•				
4.0mm		•					
2.5mm							

### → VTC I SMC

$\square$	SPS (Input)					
	5A					
	MM or FF MF or FM					
3 Contacts		RC				
4 Contacts		R C				

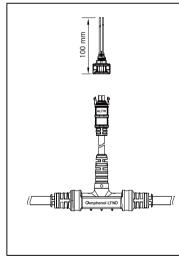


## **Find Our Standard Products**

### → VTC (PT) and SMC (Overmolded with Cable)

	SMC : Overmold	led with cable					
~		Cable type 10 AMP (Code)		Contacts	2	Female Connector (F) Male Contacts (M)	
	US (UL TC-ER cable)	TCER 18# cable ( <b>T)</b>		03,04	SF	PS- 2 AFMM-LL7T*	
	EU	HAR 0.75 mm <sup>2</sup> cable ( <b>D)</b>	5A(SPS)	03	SP	SPS-03AFMM-LL7	
ALTW	(TUV 2pfg1940 cable)	1940 0.75 mm <sup>2</sup> cable ( <b>E)</b>					
1. <b></b> (	(PT) Trunk Cable with Receptacle						
		Wire Size 3	Contacts 2	T-Junction Pitch	Number of T-Junction		
	US (UL TCER cable)	10# (30A) <b>(10)</b> 12# (20A) <b>(12)</b> 14# (15A) <b>(14)</b>	03,04	1.05M (105)		PT- 2 3 4 -00- 6	
	EU (TUV 2pfg1940 cable)	4mm² <b>(4A /4B)</b> (25A)	03	1.7M ( <b>170</b> ) 2.05M ( <b>205</b> )	075		
		2.5mm² <b>(2A)</b> (17A)			075	PT-3- <b>34</b> -00- <b>6</b>	
					*Refe	er to page 15-5 for ordering	

### → VTC (PA) and SMC (Receptacle)



Male Co	onnector (F) ontacts (M)							
SPS- 2 RF								
_	FMC-LC7001							
SPS- 2 RF	RFMC-LC7002							
(PA) Trunk Cable Overmolded With Cable								
Cable Length ble type 5	P/N							
18#with SMC Conr 18#without Conn. 16#without Conn. 14#without Conn.	PA- <b>234</b> 56							
0.75mm <sup>2</sup> with SMC Conn. 0.75mm <sup>2</sup> without Cor	PA-3 3 4							
	Cable Length ble type 5 18#with SMC Conr 18#without Conn. 14#without Conn. 0.75mr²with SMC Conn.							

#### **SMC > In-line SMC →**

• Female Cont • Safety Lock	<ul> <li>Male Connector (Housing)</li> <li>Female Contacts</li> <li>Safety Lock (Unlock tool needed)</li> <li>Unlock tool ULT-SSMC-01</li> </ul>		Overmolded with Cable				
	Contacts 2	Cable type 10	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)			
	03,04	(T) TCEK 18# Cable (US)	SPS- 2 AMFM-LL7T <u>XX</u> *	SPS-2 AFMM-LL7T <u>XX</u> *			
5A(SPS)		(D) HAR 0.75mm <sup>2</sup> Cable (EU)					
	03	(E)1940 0.75mm² Cable (EU)	SPS-03AMFM-LL7 10 XX*	SPS-03AFMM-LL7 10 XX*			
				*XX: Choose the cable length from $01 \sim 99m$			

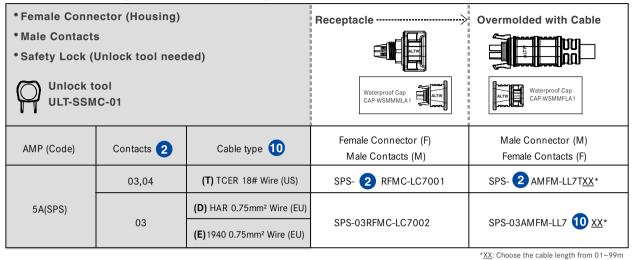
### rightarrow SMC > Receptacle and Mating Pair

<ul> <li>Male Connector (Housing)</li> <li>Female Contacts</li> <li>Safety Lock (Unlock tool needed)</li> <li>Unlock tool</li> <li>ULT-SSMC-01</li> </ul>			Receptacle	Overmolded with Cable
AMP (Code)	Contacts 2	Cable type 1	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)
	03,04	(T) TCER 18# Wire (US)	SPS- 2 RMFC-LC7001	SPS- 2 AFMM-LL7T <u>XX</u> *
5A(SPS)		(D) HAR 0.75mm <sup>2</sup> Wire (EU)	000 0001/50 / 07000	
	03	(E) 940 0.75mm² Wire (EU)	SPS-03RMFC-LC7002	SPS-03AFMM-LL7 10 XX*

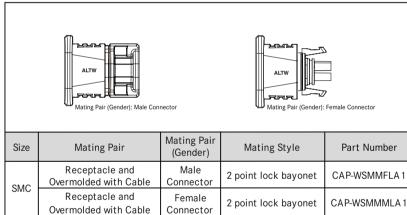
\*XX: Choose the cable length from  $01 \sim 99m$ 

**Unmated or Mated** 

### **SMC** > Receptacle and Mating Pair



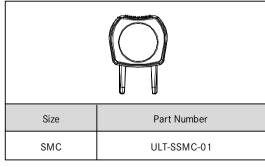
### ↘ Accessories > Waterproof Cap



#### $\square$ Accessories > End-Cap

	· · · · · · · · · · · · · · · · · · ·					
Cable OD.	Part Number					
16~12mm / 0.62~0.47 inch	CAP-WTCASMA1					
12~10mm / 0.47~0.39 inch	CAP-WTCASMA2					
10~08mm 039~0.31 inch	CAP-WTCASMA3					

### ∆ Accessories > Tool



[Note] Design and specification are subject to change without notice.



# **Ordering Information | BMC**

•										
		1-2	3	4	5	6-	-7	8	9	
Specification (SPB) Solar Power For Big MC (17A: UL US Market ; 19A: TUV EU N	Market ; 20A: Upon re	quest)								
Number of Contacts (3) 3 Contacts	(4) 4 Contacts									
Connector Body (Style) > Overmolded with Cable (A) With Strain Relief										
Connector Housing Gender (M) Male (Plug)	(F) Female (Sock	et)								
Contact Gender (M) Male	(F) Female									
Assemble Style Overmolded with Cable (M) Overmolded with Cable										
Mating Style (L) 2 Points Lock (Push & Pull) (With Unlocking Tool)										
Backshell <u>&gt; Overmolded with Cable</u> (L) Straight										
Waterproof Rating (7) IP 67										
More Information ≥ For Overmolded with Cable (□)+(■) : Cable Type + Cable Leng EX. (C01) = EU Cable For HAR 4mm	,									1
		h								

 (□): Cable Type
 (□): Cable Length

 (R) UL Cable For TCER 12# Cable
 From 1M to 99M

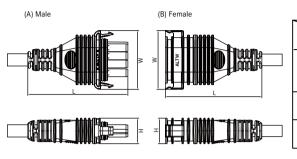
 (C) EU Cable For HAR 4mm² Cable
 EX. (01) = 1M

 (L) EU Cable For 1940 4mm² Cable
 EX. (01) = 1M

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# **Physical Dimension**

### $\square$ BMC | Overolded with Cable



	L		V	V	Н		
Connector Gender	(B)	(A)	(B)	(A)	(B)	(A)	
17A (SPB)	94.95	98.5	58.0	58.0	25.0	25.0	
19A (SPB)	94.95	98.5	58.0	58.0	25.0	25.0	
[Note] 17A: Comp	lv to UL sta	ndard fo	or USA			Unit: mm	

[Note] 17A: Comply to UL standard for USA

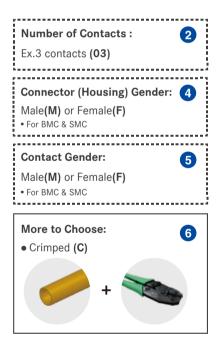
19A: Comply to TUV standard for Europe 20A: Upon request

# **Contact Configuration**

**→** BMC

$\square$	SPB (Oytput)					
	1	7A	19	PA		
	MM or FF	MM or FF	MM or FF	MM or FF		
3 Contacts	·••			(*, *)		
4 Contacts	·•••					

[Note] 17A: Comply to UL standard for USA 19A: Comply to TUV standard for Europe 20A: Upon request



[Note] Design and specification are subject to change without notice.

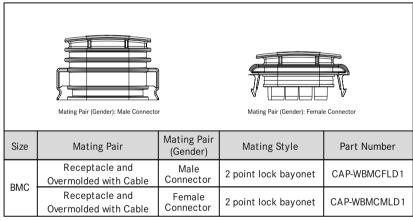
IP 67.68 9 Unmated or Mated

# **Find Our Standard Products**

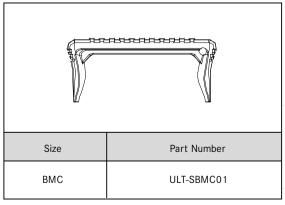
## rightarrow BMC > Receptacle and Mating Pair

<ul> <li>Male Connector (Housing)</li> <li>Female Contacts</li> <li>Safety Lock (Unlock tool needed)</li> <li>Unlock tool ULT-SBMC01</li> </ul>			Receptacle	Overmolded with Cable
AMP (Code)	Contacts 2	Cable type 1	Male Connector (M) Female Contacts (F)	Female Connector (F) Male Contacts (M)
17A(SPB)	03,04	R-TCER 12# cable (US)	SPB- 2 AMFM-LL7R <u>XX</u> *	SPB- 2 AFMM-LL7R <u>XX</u> *
19A(SPB)	03	C-HAR 4.0 mm <sup>2</sup> cable (EU)	SPB-03AMFM-LL7 10 XX*	SPB-03AFMM-LL7 10 XX*
17A(SFD)	03	L-1940 4.0 mm² cable (EU)		

### ↘ Accessories > Waterproof Cap



### ∆ Accessories > Tool



[Note] Design and specification are subject to change without notice.

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\*XX: Choose the cable length from 01~99m

## Memo

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- 1. AAI
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