

# Amphenol Solar Interconnect Solutions



**Amphenol**  
Industrial



## Markets

### **Enabling the Electronics Revolution One Market at a Time**

Amphenol has a diversified presence across eight high-growth segments of the electronics industry: Military, Commercial Aerospace, Industrial, Automotive, IT Datacom, Mobile Networks, Mobile Devices and Broadband. Our goal is simple – to develop leading technologies that enhance the performance of our customers’ products, systems and networks. Our products enable virtually all electronics systems, from sophisticated military communications systems to the latest mobile computing platforms, from next-generation airliners to advanced automotive electronics, from vast data centers to internet-connected devices, and from high-speed trains to the latest wind turbines. We are especially excited by our latest solutions in the many new markets that continue to emerge, including next-generation electric and autonomous vehicles, advanced battery storage systems, alternative energy generation, enterprise data centers and wearable consumer devices.

## Technologies

**Amphenol is a technology leader in the design, manufacture and supply of high-performance interconnect systems, sensors and antennas for a broad range of industrial applications.**

Amphenol’s core competencies include application-specific industrial interconnect solutions utilizing integrated assemblies with both cable and flexible printed circuits, high-power interconnects requiring advanced engineering and system integration. Our innovative solutions facilitate the increasing demands of embedded computing and power distribution.



## **Our Business**

### **One Culture, Connecting Our World**

Each of our Amphenol businesses partner with their customers' across different market segments and regions to connect our world through leading-edge innovation. Our global businesses are as diverse as the customers they serve. All are united by one Amphenol culture – even though there are more than 100 businesses in the Amphenol family. No matter where you go, you're not far from Amphenol.

## **Sustainability**

### **Environmental, Social and Governance**

**Amphenol's high-performance culture of entrepreneurial accountability is uniquely powerful in ensuring a sustainable future. By giving our local management around the world the authority to run their respective businesses, the entire Amphenol organization is empowered to truly "think globally, but act locally."**

## Applications and Benefits

Amphenol Industrial has become the “One Stop Shop” for the Photovoltaic market, with a complete line of products to cover the entire PV system.

We devote ourselves to designing, developing, selling and manufacturing the interconnect systems for the renewable energy market.

Our product line offers a complete package, centered around the H4 connector. Built on our foundation of efficient contact technology, the product is a reliable, cost effective solution. Amphenol’s vast global manufacturing capability has addressed the needs of the solar industry with short lead times and tremendous capacity.



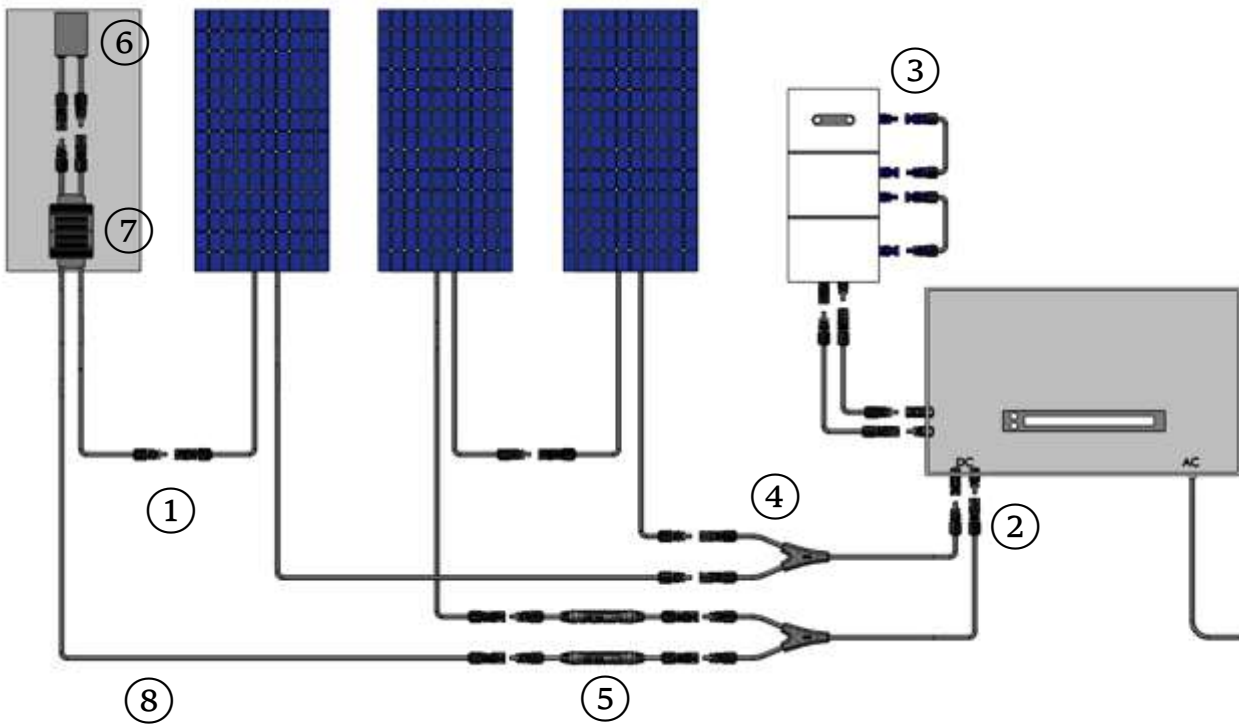


**Our sales and customer service network are positioned all over the world. With localized factories, global market presence and technical support in Asia, North America and Europe, we respond quickly to customers' demands.**

**Amphenol Industrial is committed to leading through innovation in the renewable interconnect marketplace. Amphenol Industrial also collaborates with global best in class PV companies, who have advanced technologies and designs, which lead the industry.**



## Applications of the Amphenol Solar Product Portfolio



1. PV cable connector
2. PV panel mounted connector
3. PV DC connector for ESS
4. Y branch junction harness
5. Inline fuse junction harness
6. PV junction box
7. RSD junction box
8. PV cable

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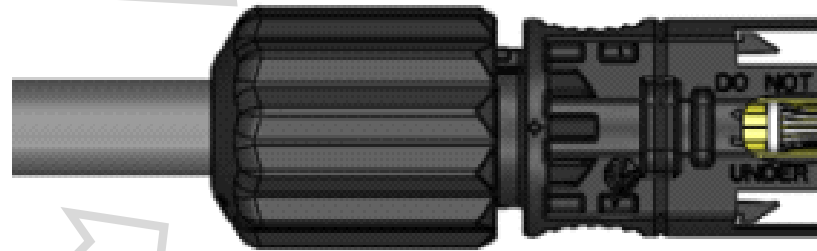
## Advantages of Amphenol



Voltage level:  
UL 1000V/ 1500V DC  
TUV 1000V / 1500V DC

Robust backnut  
gland design

RADSOK® Technology  
with long-term stability



Cable Size Range:

- 2.5mm<sup>2</sup>/14AWG
- 4.0mm<sup>2</sup>/12AWG
- 6.0mm<sup>2</sup>/10AWG
- 10mm<sup>2</sup>/8AWG

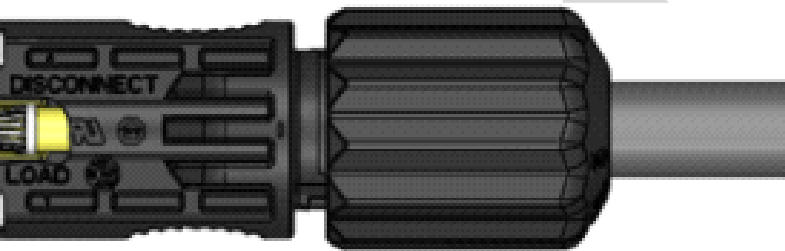
Safety lock mechanism  
NEC2014



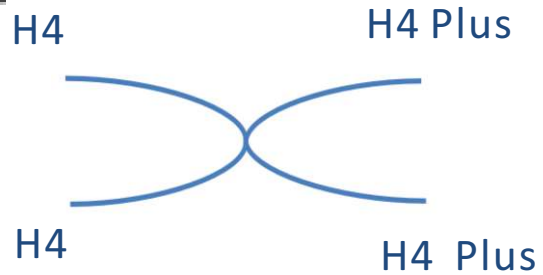
# Solar Connectors

## Protection:

- IP68(1m,24H)
- UV resistance
- Safety class II



## Compatibility



Anti-backspin ratcheting  
backnut gland

## Overview of PV Connectors

Connectors	Rated Current		Rated Voltage		Locking System	Unlock	Degree of Protection		Safety Class	Ambient Temperature	Sealing Cap	Page
	TUV	UL	TUV (V DC)	UL (V DC)			Mated	Unmated				
<b>Cable Connectors</b>												
H4™	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>	15A/14AWG, 20A/12AWG, 30A/10AWG	1000	1500	Locking	Tool	IP65 IP68	IP2X	II	-40°C to +85°C	X	5-6
H4-H	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>		1000		Locking		IP65 IP68	IP2X	II	-40°C to +85°C	X	7-8
Amphe-PV H4 Plus™	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>	15A/14AWG, 20A/12AWG, 30A/10AWG	1500	1500	Locking	Tool	IP65 IP68	IP2X	II	-40°C to +85°C	X	21-22
Amphe-PV H4 Plus™ (manual unlock)	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>		1500		Locking		IP65 IP68	IP2X	II	-40°C to +85°C	X	25-26
H4 Plus™ 8AWG/10mm <sup>2</sup>	65A /10mm <sup>2</sup>	50A/8AWG	1500	1500	Locking	Tool	IP65 IP68	IP2X	II	-40°C to +85°C	X	23-24
H4-B	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>		1000		Locking		IP65 IP68	IP2X	II	-40°C to +85°C	X	15-16
RadCrimp™ Solar Splice		20A/12AWG, 30A/10AWG		1500	/	/	IP68	IP2X	II	-40°C to +85°C	/	34-35

### Panel Mounted Connectors

H4™	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>	15A/14AWG, 20A/12AWG, 30A/10AWG	1100	1500	Locking	Tool	IP65 IP68	IP2X	II	-40°C to +85°C	X	9-10
H4-H	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>		1100		Locking		IP65 IP68	IP2X	II	-40°C to +85°C	X	11-12
Amphe-PV H4 Plus™	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>	15A/14AWG, 20A/12AWG, 30A/10AWG	1500	1500	Locking	Tool	IP65 IP68	IP2X	II	-40°C to +85°C	X	27-28
Amphe-PV H4 Plus™ 8AWG/10mm <sup>2</sup>	65A/10mm <sup>2</sup>	50A/8AWG	1500	1500	Locking	Tool	IP65 IP68	IP2X	II	-40°C to +85°C	X	29-30
Amphe-PV H4 Plus™ (manual unlock)	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>		1500		Locking		IP65 IP68	IP2X	II	-40°C to +85°C	X	31-32
H4-B	25A/2.5mm <sup>2</sup> , 35A/4mm <sup>2</sup> , 45A/6mm <sup>2</sup>		1100		Locking		IP65 IP68	IP2X	II	-40°C to +85°C	X	17-18

## H4™ Connectors



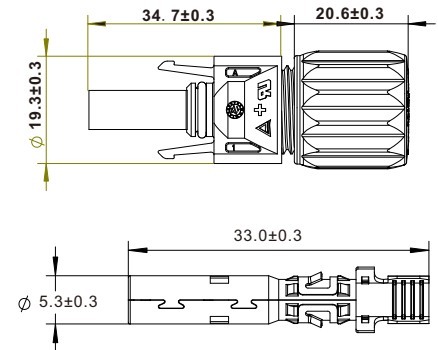
### Features

- Guaranteed to reliably mate with Amphenol's entire PV product line
- NEC code compliant (no locking sleeve required; UL certification only)
- $\leq 0.30\text{m}\Omega$  low resistance RADSOK® contact
- Both stamped and formed (S&F) and machined/cold-formed (CF) contact types available, for ease of field installation
- UV resistance
- RoHS, REACH compliant

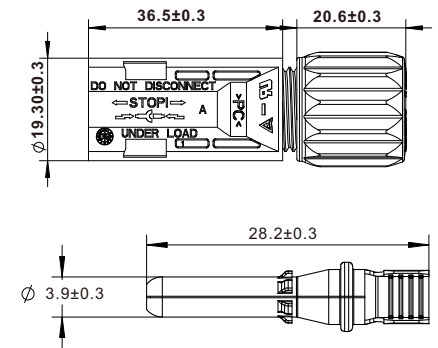
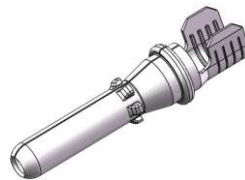
Part number : H4FC.....



**S&F Contact**



Part number : H4CMC.....



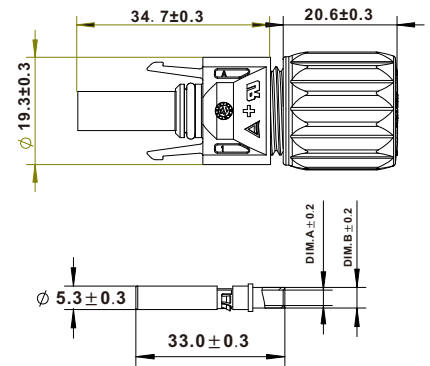
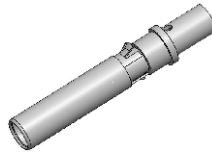
## Technical Data

Rated Voltage & Current	UL	UL6703 1500V DC	15A/14AWG, 20A/12AWG, 30A/10AWG
	TUV	IEC62852 am1 @85°C (Class A) 1000V DC	25A/2.5mm <sup>2</sup> , 35A/4.0mm <sup>2</sup> , 45A/6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.30mΩ (stamped & formed contact), ≤0.25mΩ (cold formed contact)		
Rated Impulse Voltage	12KV (1000V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø4.5mm~7.8mm		
Material Safety	RoHS, REACH compliant		

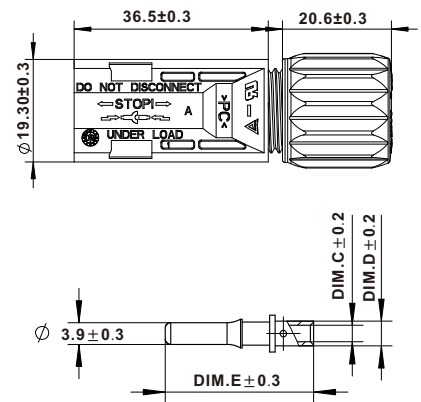




Part number : H4CFC.....

Cold Formed Contact



Part number : H4CMC.....



Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications		 R50388083  E339277
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4CFC2DMS		*	2.5	14	*		*	*	
H4CMC2DMS	*		2.5	14	*		*	*	
H4CFC4DMS		*	4.0,6.0	12,10	*		*	*	
H4CMC4DMS	*		4.0,6.0	12,10	*		*	*	
H4CFC2DM		*	2.5	14		*	*	*	
H4CMC2DM	*		2.5	14		*	*	*	
H4CFC4DM		*	4.0	12		*	*	*	
H4CMC4DM	*		4.0	12		*	*	*	
H4CFC6DM		*	6.0	10		*	*	*	
H4CMC6DM	*		6.0	10		*	*	*	

Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

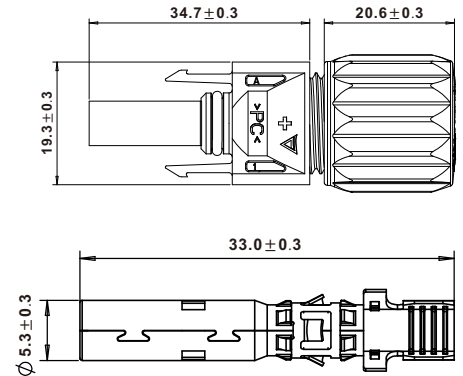
For more information please contact us (Assembly Instructions WI-S037-ENG, Chemical Exposure Checklist WI-S047-ENG).

## H4-H Cable Connectors

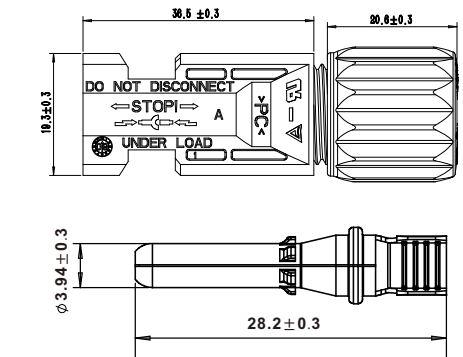
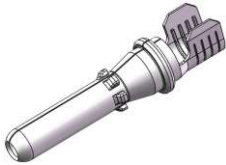
Part number : H4CFD.....



**S&F Contact**



Part number : H4CMD.....

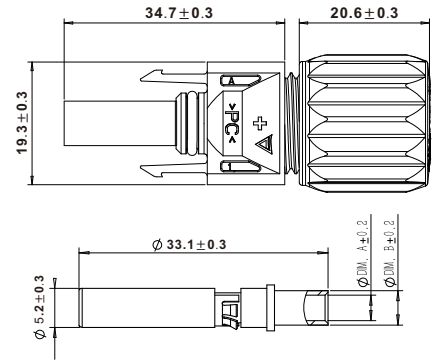
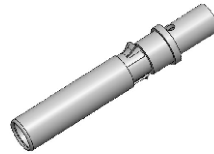


### Technical Data

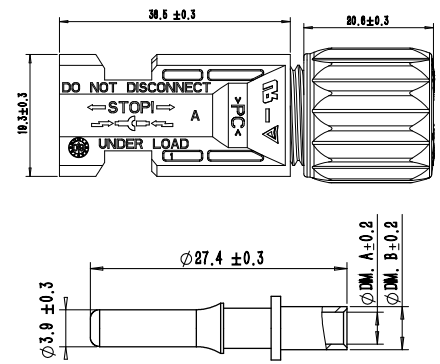
Rated Voltage & Current	TUV	IEC62852 am1 @85°C (Class A) 1000V DC	25A/2.5mm <sup>2</sup> , 35A/ 4.0mm <sup>2</sup> , 45A / 6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.30mΩ (stamped & formed contact), ≤0.25mΩ (cold formed contact)		
Rated Impulse Voltage	12KV (1000V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø4.5mm~7.8mm		
Material Safety	RoHS, REACH compliant		

Part number : H4CFD.....

**Cold Formed Contact**



Part number : H4CMD.....



Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications	
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL
H4CFD2TMS		*	2.5	14	*		*	
H4CMD2TMS	*		2.5	14	*		*	
H4CFD4TMS		*	4.0,6.0	12,10	*		*	
H4CMD4TMS	*		4.0,6.0	12,10	*		*	
H4CFD2TM		*	2.5	14		*	*	
H4CMD2TM	*		2.5	14		*	*	
H4CFD4TM		*	4.0	12		*	*	
H4CMD4TM	*		4.0	12		*	*	
H4CFD6TM		*	6.0	10		*	*	
H4CMD6TM	*		6.0	10		*	*	



R50388083

Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

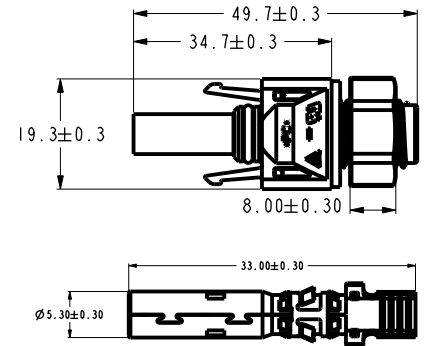
For more information please contact us (Assembly Instructions WI-S037-ENG, Chemical Exposure Checklist WI-S047-ENG).

## H4™ Panel Mounted Connectors

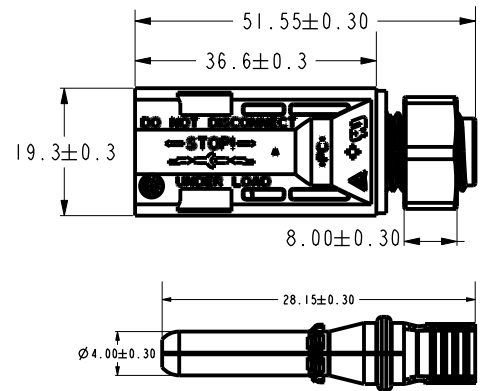
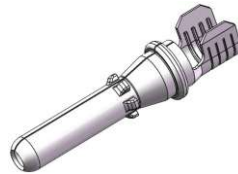
Part number : H4CFC.....



S&F Contact



Part number : H4CMC.....



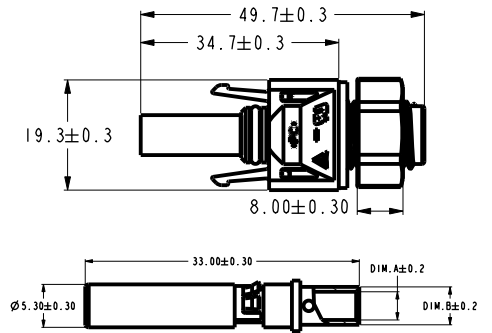
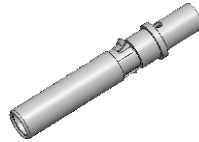
### Technical Data

Rated Voltage & Current	UL	UL6703 1500V DC	15A /14AWG, 20A /12AWG, 30A /10AWG
	TUV	IEC62852 am1 @85°C (Class A) 1100V DC	25A/2.5mm <sup>2</sup> , 35A/4.0mm <sup>2</sup> , 45A / 6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.30mΩ (stamped & formed contact), ≤0.25mΩ (cold formed contact)		
Rated Impulse Voltage	12KV (1000V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL 94V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø4.5mm~7.8mm		
Material Safety	RoHS, REACH compliant		

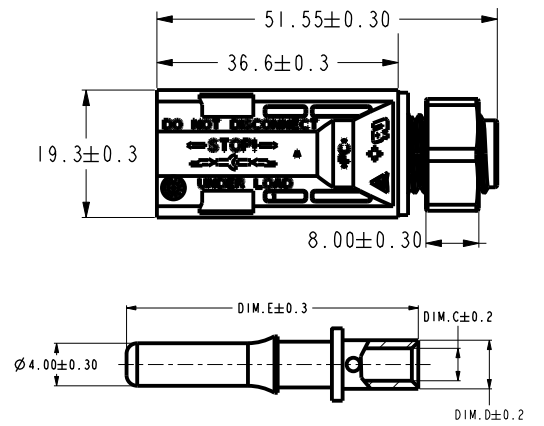


Part number : H4CFC.....


Cold formed Contact




Part number : H4CMC.....



OrderingNo.	Plug	Receptacle	Cable Size		Contact Type		Certifications	
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL
H4CFM2DMS		*	2.5	14	*		*	
H4CMM2DMS	*		2.5	14	*		*	
H4CFM4DMS		*	4.0,6.0	12,10	*		*	
H4CMM4DMS	*		4.0,6.0	12,10	*		*	
H4CFM2DM		*	2.5	14		*	*	
H4CMM2DM	*		2.5	14		*	*	
H4CFM4DM		*	4.0	12		*	*	
H4CMM4DM	*		4.0	12		*	*	
H4CFM6DM		*	6.0	10		*	*	
H4CMM6DM	*		6.0	10		*	*	



R50388083



E339277

Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

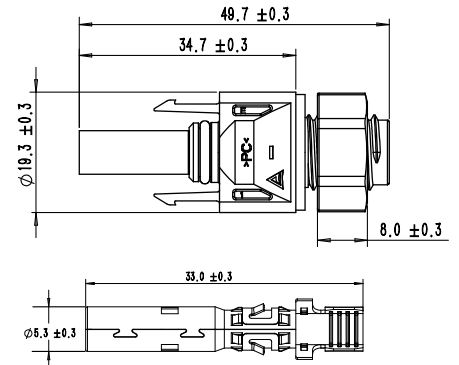
For more information please contact us (Assembly Instructions WI-S060-ENG, Chemical Exposure Checklist WI-S047-ENG).

## H4-H Panel Mounted Connectors

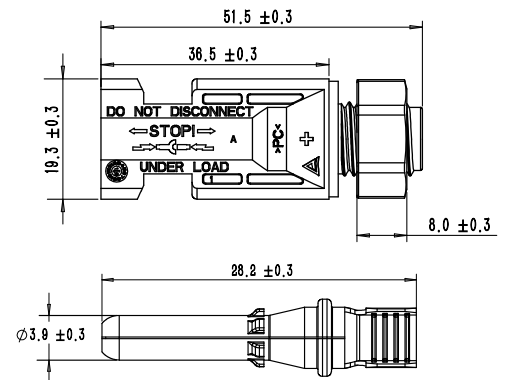
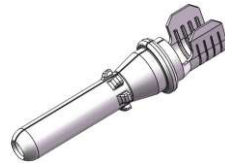
Part number: H4CFB.....



S&F Contact



Part number: H4CMB.....



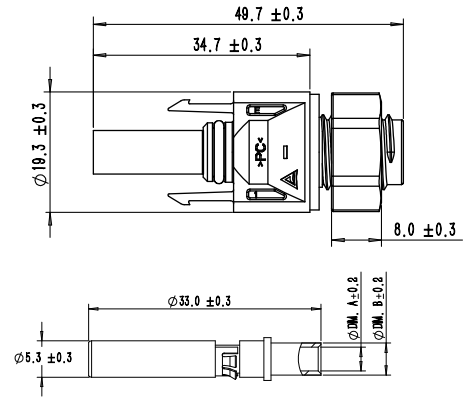
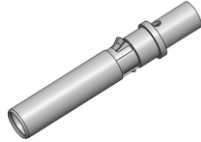
### Technical Data

Rated Voltage & Current	TUV	IEC62852 am1 @85°C (Class A), 1100V DC	25A/2.5mm <sup>2</sup> , 35A/ 4.0mm <sup>2</sup> , 45A / 6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.30mΩ (stamped & formed contact), ≤0.25mΩ (cold formed contact)		
Rated Impulse Voltage	12KV (1000V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø4.5mm~7.8mm		
Material Safety	RoHS, REACH compliant		

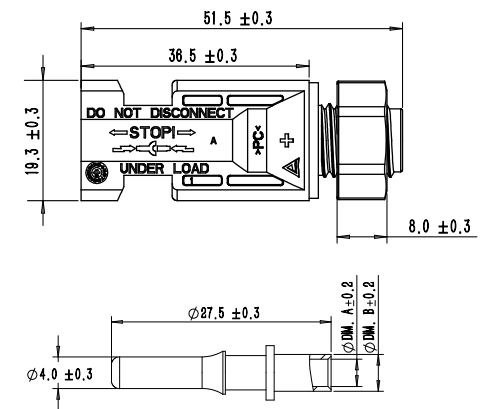
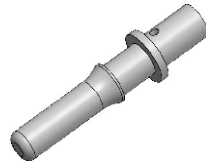
Part number : H4CFB.....



S&F Contact



Part number : H4CMB.....



OrderingNo.	Plug	Receptacle	Cable Size		Contact Type			Certifications	
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4CFB2TMS		*	2.5	14	*		*		
H4CMB2TMS	*		2.5	14	*		*		
H4CFB4TMS		*	4.0,6.0	12,10	*		*		
H4CMB4TMS	*		4.0,6.0	12,10	*		*		
H4CFB2TM		*	2.5	14		*	*		
H4CMB2TM	*		2.5	14		*	*		
H4CFB4TM		*	4.0	12		*	*		
H4CMB4TM	*		4.0	12		*	*		
H4CFB6TM		*	6.0	10		*	*		
H4CMB6TM	*		6.0	10		*	*		



Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

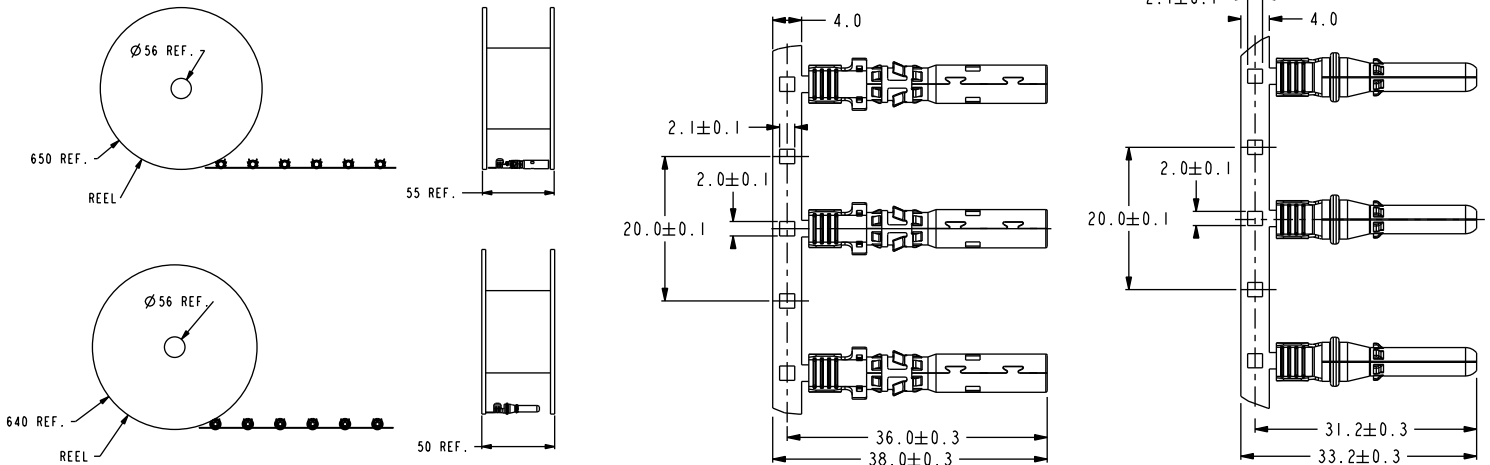
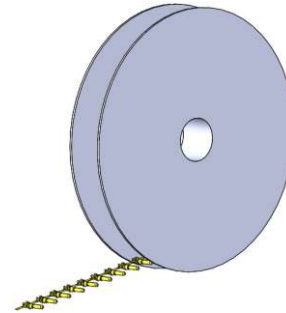
For more information please contact us (Assembly Instructions WI-S060-ENG, Chemical Exposure Checklist WI-S047-ENG).

## H4™ series connectors ordering configurations

How to Order a Connector (Please choose one code per position below)													
1	2	3		4		5		6		7		8	
Product Line	Product Type	Gender		Connector Type		Cable Size		Certifications		Packaging		Contact Type	
H4 (H4 series)	C (PV connector)	F	Female (+)	C	Cable gland (tool unlock)	0*1	Without Contact	D	Dual UL/TUV Certified	I*4	1 pc/bag	S	S&F
				D	Cable gland (H4-H)	2	2.5mm <sup>2</sup> / 14AWG			C*5	100 pcs/bag		
		M	Male (-)	M	M12 Panel mounted (tool unlock)	4*2	4.0mm <sup>2</sup> /12 AWG	T*3	TUV IEC Certification Only (no NEC lock)	M*6	500 pcs/bag	(Blank)	CF
				B	M12 Panel mounted (H4-H)	6	6.0mm <sup>2</sup> / 10AWG						

- \*1 If planning to use S&F contacts on a reel (sold separately), please choose cable size code "0" to order just the connector with no contacts.
- \*2 When ordering a S&F "Contact Type", please choose cable size order code "4" for both 4.0mm<sup>2</sup>/ 12AWG & 6.0mm<sup>2</sup>/ 10AWG
- \*3 When ordering a manual unlock connector (H4-H), please choose "Certifications" code "T" for TUV certification only.
- \*4 Individual packaging, 1pc/PE bag, 800pcs/carton box, for authorized distributors only.
- \*5 100pcs/PE bag, 1000pcs/carton box, for authorized distributors only.
- \*6 500pcs/PE bag, 1000pcs/carton box, standard packaging.

### H4 stamped and formed contacts for automatic assembly use



### How to Order S&F Contacts on a Reel of 2000 pcs (Please choose one code per position below)

1	2	3		4		5
Product Line	Product Type	Gender		Cable Size		Packaging
H4	F (S&F contact)	F	Female (+)	2	2.5mm <sup>2</sup> /14AWG	R (2000 pcs/reel)
		M	Male (-)	4	4.0mm <sup>2</sup> /12AWG & 6.0mm <sup>2</sup> /10AWG	



## H4-B Connectors



### Features

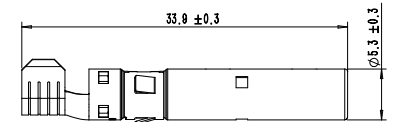
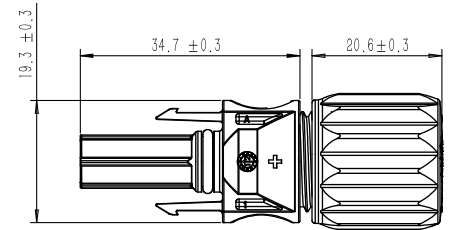
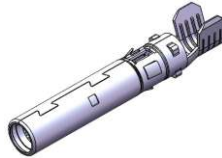
- Cost effective solution for solar battery storage applications
- Fool-proof design by color and insertion interference
- $\leq 0.3\text{m}\Omega$  low resistance RADSOK® contact technology
- Both stamped and formed (S&F) and machined/cold-formed (CF) contact types available, for ease of field installation
- UV resistance
- UL94 V-0 (self-extinguishing)
- RoHS, REACH compliant

## H4-B Cable Connectors

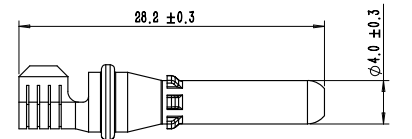
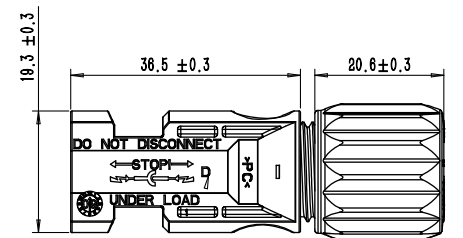
Part number : H4PFC.....



S&F Contact



Part number : H4PMC.....

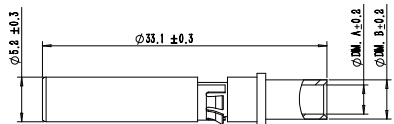
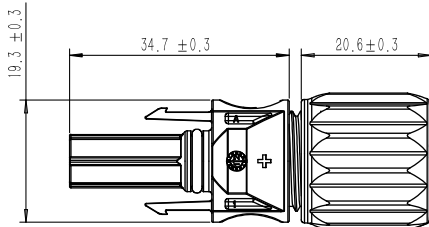


### Technical Data

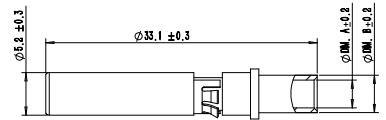
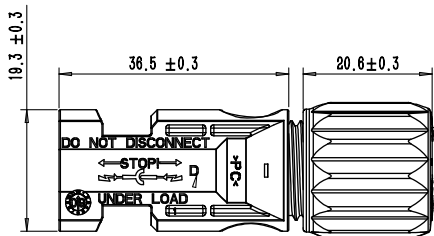
Rated Voltage & Current	TUV	IEC62852 am1 @85°C (Class A) 1000V DC	25A/2.5mm <sup>2</sup> , 35A/ 4.0mm <sup>2</sup> , 45A / 6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.30mΩ (stamped & formed contact), ≤0.25mΩ (cold formed contact)		
Rated Impulse Voltage	12KV (1000V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø4.5mm~7.8mm		
Material Safety	RoHS, REACH compliant		


Part number : H4PFC.....

Cold Formed Contact



Part number : H4PMC.....



Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications		
			mm <sup>2</sup>	AWG	S&F	Coldformed	TUV	UL	
H4PFC2TMS		*	2.5	14	*		*		 R50388083
H4PMC2TMS	*		2.5	14	*		*		
H4PFC4TMS		*	4.0,6.0	12,10	*		*		
H4PMC4TMS	*		4.0,6.0	12,10	*		*		
H4PFC2TM		*	2.5	14		*	*		
H4PMC2TM	*		2.5	14		*	*		
H4PFC4TM		*	4.0	12		*	*		
H4PMC4TM	*		4.0	12		*	*		
H4PFC6TM		*	6.0	10		*	*		
H4PMC6TM	*		6.0	10		*	*		

Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

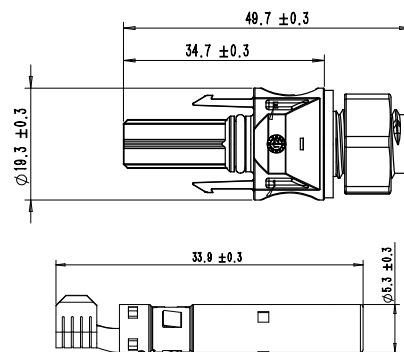
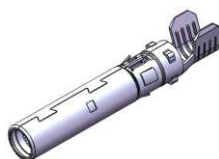
For more information please contact us (Assembly Instructions WI-S037-ENG, Chemical Exposure Checklist WI-S047-ENG).

## H4-B Panel Mounted Connectors

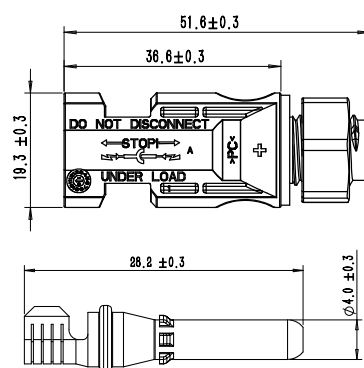
Part number: H4PFM.....



S&F Contact



Part number: H4PMM.....



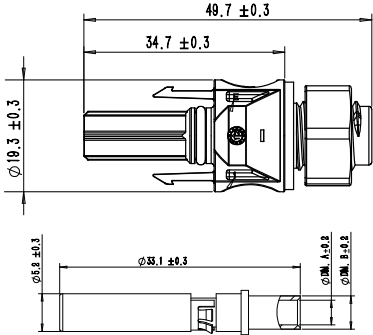
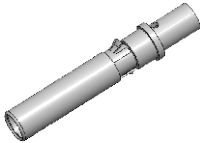
### Technical Data

Rated Voltage & Current	TUV	IEC62852 am1 @85°C (Class A), 1100V DC	25A/2.5mm <sup>2</sup> , 35A/4.0mm <sup>2</sup> , 45A/6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.30mΩ (stamped & formed contact), ≤0.25mΩ (cold formed contact)		
Rated Impulse Voltage	12KV (1000V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø4.5mm~7.8mm		
Material	RoHS, REACH compliant		

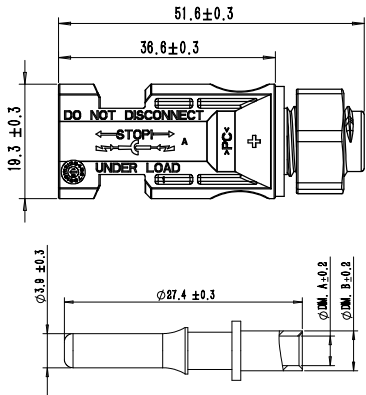
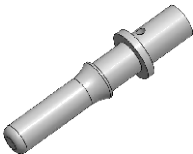
Part number: H4PFM.....



Cold Formed Contact



Part number: H4PMM.....



Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications	
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL
H4PFM2TMS		*	2.5	14	*		*	
H4PMM2TMS	*		2.5	14	*		*	
H4PFM4TMS		*	4.0,6.0	12,10	*		*	
H4PMM4TMS	*		4.0,6.0	12,10	*		*	
H4PFM2TM		*	2.5	14		*	*	
H4PMM2TM	*		2.5	14		*	*	
H4PFM4TM		*	4.0	12		*	*	
H4PMM4TM	*		4.0	12		*	*	
H4PFM6TM		*	6.0	10		*	*	
H4PMM6TM	*		6.0	10		*	*	



R50388083

Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

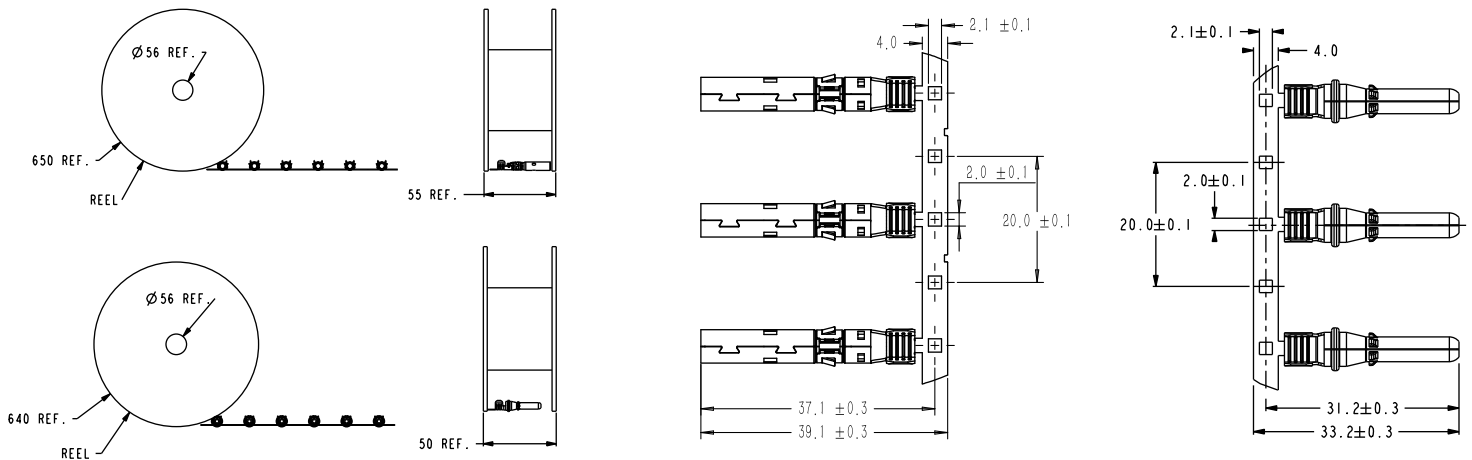
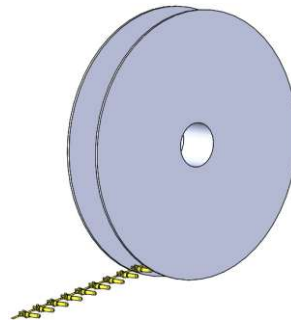
For more information please contact us (Assembly Instructions WI-S060-ENG, Chemical Exposure Checklist WI-S047-ENG).

## H4-B series connectors ordering configurations

How to Order a Connector (please choose one code per position, below)													
1	2	3		4		5		6		7		8	
Product Line	ProductType	Gender		Connector Type		Cable Size		Certifications		Packaging		Contact Type	
H4 (H4 series)	P (H4-B)	F	Female (+)	C	Cable gland	0*1	Without Contact	T*3	TÜV IEC Certification Only (no NEC lock)	M*4	500 pcs/bag	S	S&F
						2	2.5mm <sup>2</sup> / 14AWG						
		M	Male (-)	M	M12 Panel mounted	4*2	4.0mm <sup>2</sup> /12 AWG					(Blank)	CF
						6	6.0mm <sup>2</sup> / 10AWG						

- \*1 When ordering S&F contacts in reel version, please choose cable size code "0", means housing assembly and S&F contact with separate packaging, need to order S&F contacts separately.
- \*2 When ordering a S&F contact, please choose cable size order code "4" for both 4.0mm<sup>2</sup>/ 12AWG & 6.0mm<sup>2</sup>/ 10AWG.
- \*3 When ordering a manually unlock connector, please choose Certification code "T" for TUV certification only.
- \*4 500pcs/PE bag, 1000pcs/carton box, it's standard packaging.

### H4 stamped and formed contacts for automatic assembly use



Ordering No.	Plug	Socket	Cable Size		Packaging
			mm <sup>2</sup>	AWG	
H4SF4R		*	4,6	12,10	2000pcs/reel, 5 reels/box
H4FM4R	*		4,6	12,10	2000pcs/reel, 5 reels/box



## Amphe-PV H4 Plus™ Connectors



### Features

- $\leq 0.25\text{m}\Omega$  low resistance RADSOK® contact which ensures consistently low performance loss throughout the entire service life of the plug connector
- Guaranteed to reliably mate with AIST's entire PV product line
- NEC code compliant (no locking sleeve required; UL certification only)
- A ratcheting gland backnut, which prevents backspin once the nut is tightened
- Both stamped and formed (S&F) and machined/cold-formed (CF) contact types available, for ease of field installation
- Available for assembly with cable sizes from  $2.5\text{mm}^2/14\text{AWG}$  to  $10\text{mm}^2/8\text{AWG}$
- Cable OD range from  $\varnothing 5.0\text{mm}$  to  $\varnothing 8.8\text{mm}$
- IP68 Rating (1m/24hours (mated condition))
- UV Resistance
- UL94 V-0 (self-extinguishing)
- RoHS, REACH compliant

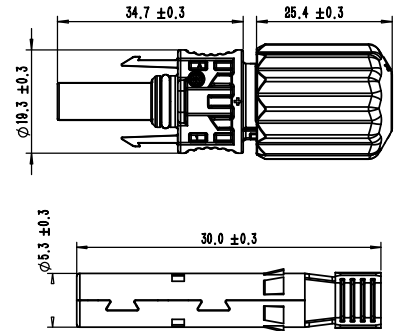
## Amphe-PV H4 Plus™

## Cable Connectors

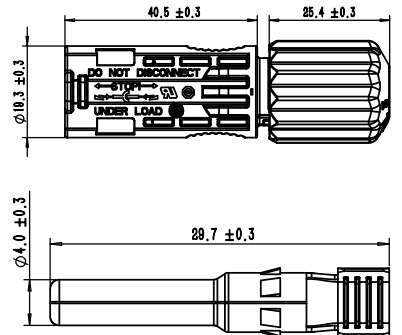
Part number: H4SFC.....



S&F Contact



Part number: H4SMC.....



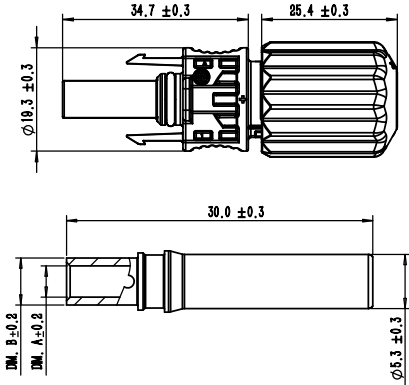
### Technical Data

Rated Voltage & Current	UL	UL6703 1500V DC	15A /14AWG, 20A /12AWG, 30A /10AWG
	TUV	IEC62852 am1 @85°C (Class A) 1500V DC	25A/2.5mm <sup>2</sup> , 35A/4.0mm <sup>2</sup> , 45A / 6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.25mΩ(stamped & formed contact), ≤0.20mΩ (cold formed contact)		
Rated Impulse Voltage	16KV (1500V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper limiting temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 24 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overvoltage Category/Pollution degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø5.0mm~7.8mm		
Material Safety	RoHS, REACH compliant		

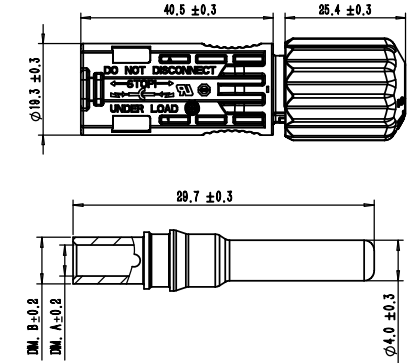
Part number: H4SFC.....





Cold Formed Contact



Part number: H4SMC.....

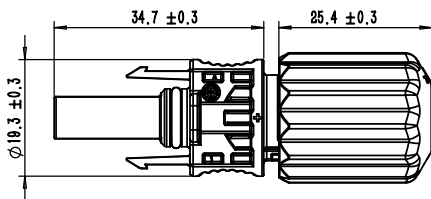


Ordering No.	Plug	Receptacle	Cable Size		Contact type		Certifications		
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4SFC2DMS		*	2.5	14	*		*	*	 B 107201   E339277
H4SMC2DMS	*		2.5	14	*		*	*	
H4SFC4DMS		*	4.0,6.0	12,10	*		*	*	
H4SMC4DMS	*		4.0,6.0	12,10	*		*	*	
H4SFC2DM		*	2.5	14		*	*	*	
H4SMC2DM	*		2.5	14		*	*	*	
H4SFC4DM		*	4.0	12		*	*	*	
H4SMC4DM	*		4.0	12		*	*	*	
H4SFC6DM		*	6.0	10		*	*	*	
H4SMC6DM	*		6.0	10		*	*	*	

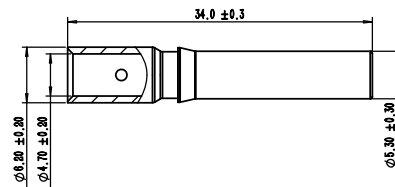
Notes:  
 Sealing caps on page 41.  
 Assembly tools on page 42~44.

For more information please contact us (Assembly Instructions WI-S067-ENG, Chemical Exposure Checklist WI-S047-ENG).

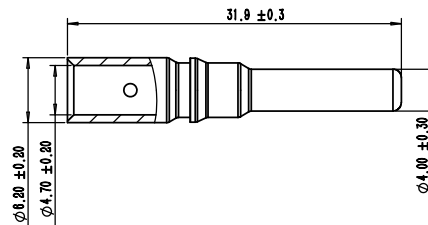
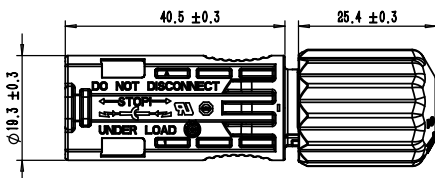
Part number: H4SFC.....



Cold Formed Contact





Part number: H4SMC.....



## Technical Data

Rated Voltage & Current	UL	UL6703 1500V DC	50A /8AWG
	TUV	IEC62852 am1 @85°C (Class A) 1500V DC	65A / 10.0mm <sup>2</sup>
Typical Contact Resistance	≤0.20mΩ (cold formed contact)		
Rated Impulse Voltage	16KV (1500V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 24 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated copper alloy		
Cable OD Range	Ø7.5mm~8.7mm		
Material Safety	RoHS, REACH compliant		

Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications		
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4SFC8DM		*	10	8		*	*	*	 B 107201  E339277
H4SMC8DM	*		10	8		*	*	*	

### Notes:

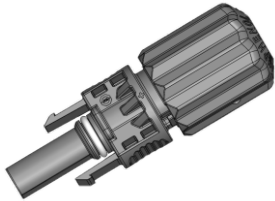
Sealing caps on page 41.  
 Assembly tools on page 42~44.

For more information please contact us (Assembly Instructions WI-S067-ENG, Chemical Exposure Checklist WI-S047-ENG).

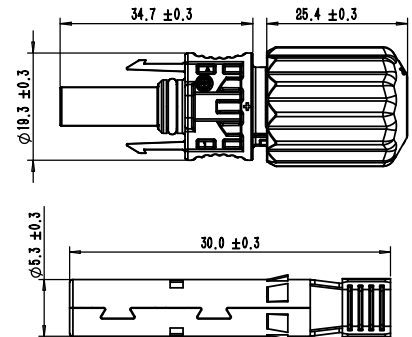
## Amphe-PV H4 Plus™

## Cable Connectors (Manual Unlock)

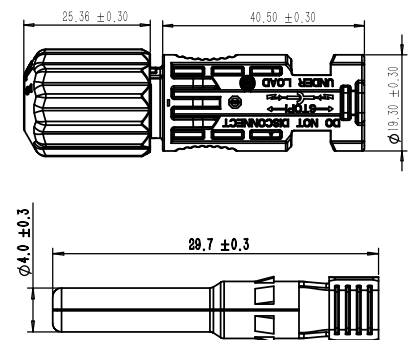
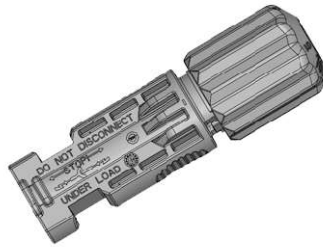
Part number: H4SFD.....



S&F Contact



Part number: H4SMD.....



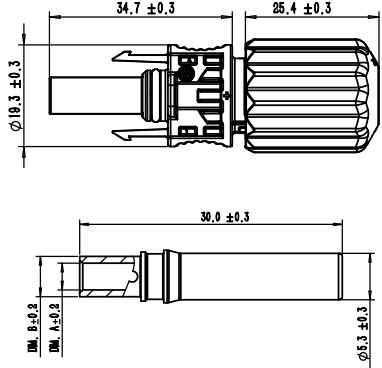
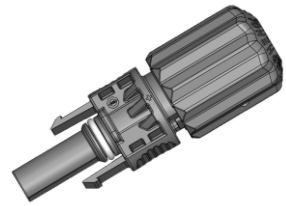
### Technical Data

Rated Voltage & Current	TUV	IEC62852 am1 @85°C (Class A) 1500V DC	25A/2.5mm <sup>2</sup> , 35A/4.0mm <sup>2</sup> , 45A /6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.25mΩ (stamped & formed contact), ≤0.20mΩ (cold formed contact)		
Rated Impulse Voltage	16KV (1500V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 24 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overtoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø5.0mm~7.8mm		
Material Safety	RoHS, REACH compliant		

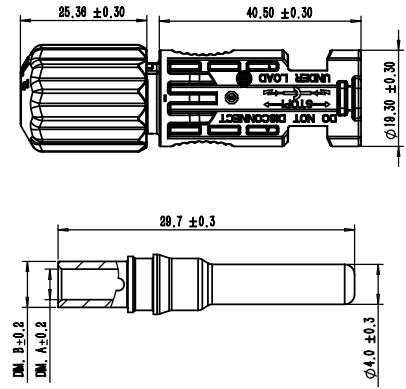
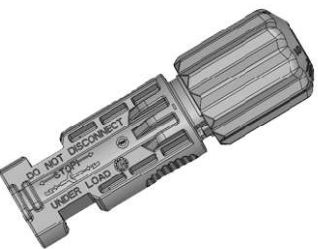


Part number: H4SFD.....

Cold Formed Contact



Part number: H4SMD.....



OrderingNo.	Plug	Receptacle	Cable Size		Contact Type		Certifications	
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL
H4SFD2TMS		*	2.5	14	*		*	*
H4SMD2TMS	*		2.5	14	*		*	*
H4SFD4TMS		*	4.0,6.0	12,10	*		*	*
H4SMD4TMS	*		4.0,6.0	12,10	*		*	*
H4SFD2TM		*	2.5	14		*	*	*
H4SMD2TM	*		2.5	14		*	*	*
H4SFD4TM		*	4.0	12		*	*	*
H4SMD4TM	*		4.0	12		*	*	*
H4SFD6TM		*	6.0	10		*	*	*
H4SMD6TM	*		6.0	10		*	*	*



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Notes:  
 Sealing caps on page 41.  
 Assembly tools on page 42~44.

For more information please contact us (Assembly Instructions WI-S067-ENG, Chemical Exposure Checklist WI-S047-ENG).

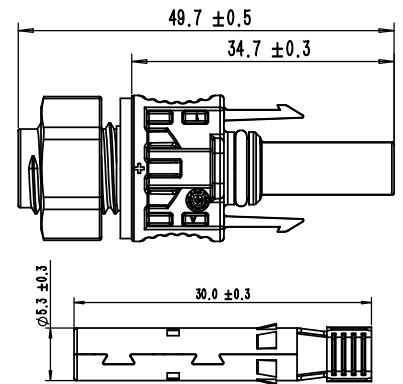
## Amphe-PV H4 Plus™

## Panel Mounted Connectors

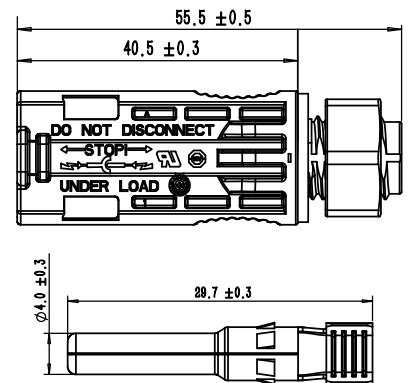
Part number : H4SFM.....



S&F Contact



Part number : H4SMM.....



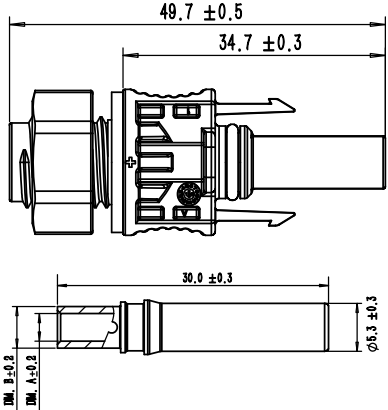
### Technical Data

Rated Voltage & Current	UL	UL6703 1500VDC	15A /14AWG, 20A /12AWG, 30A /10AWG
	TUV	IEC62852 am1 @85°C (Class A) 1500V DC	25A/2.5mm <sup>2</sup> , 35A/ 4.0mm <sup>2</sup> , 45A /6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.25mΩ(stamped& formed contact), ≤0.20mΩ(cold formed contact)		
Rated Impulse Voltage	16KV (1500V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 24 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated Copper Alloy		
Cable OD Range	Ø5.0mm~7.8mm		
Material Safety	RoHS, REACH compliant		

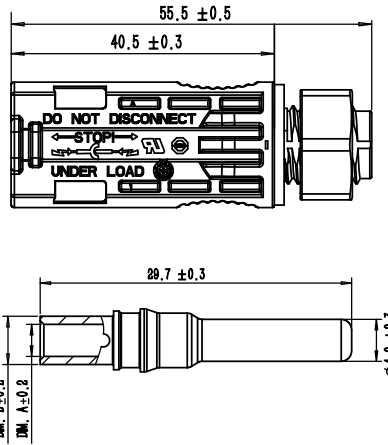
Part number : H4SFM.....





Cold Formed Contact



Part number : H4SMM.....



Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications		
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4SFM2DMS		*	2.5	14	*		*	*	 B 107201   E339277
H4SMM2DMS	*		2.5	14	*		*	*	
H4SFM4DMS		*	4.0,6.0	12,10	*		*	*	
H4SMM4DMS	*		4.0,6.0	12,10	*		*	*	
H4SFM2DM		*	2.5	14		*	*	*	
H4SMM2DM	*		2.5	14		*	*	*	
H4SFM4DM		*	4.0	12		*	*	*	
H4SMM4DM	*		4.0	12		*	*	*	
H4SFM6DM		*	6.0	10		*	*	*	
H4SMM6DM	*		6.0	10		*	*	*	

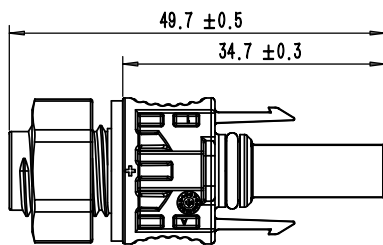
Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

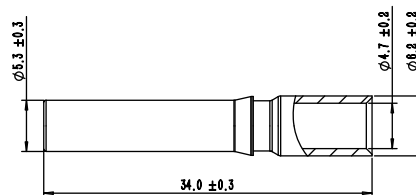
For more information please contact us (Assembly Instructions WI-S067-ENG, Chemical Exposure Checklist WI-S047-ENG).

## Amphe-PV H4 Plus™ 8AWG/10mm<sup>2</sup> Panel Mounted Connectors

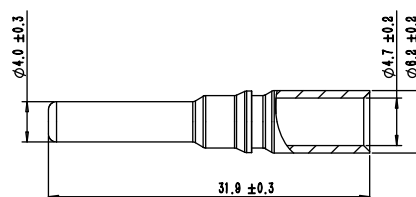
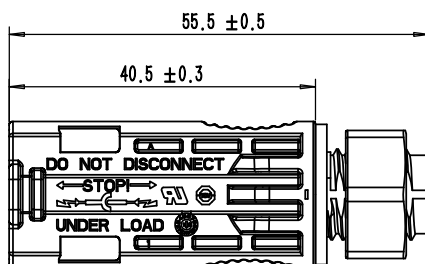
Part number : H4SFM.....





Cold Formed Contact



Part number : H4SMM.....



Technical Data			
Rated Voltage & Current	UL	UL6703 1500VDC	50A /8AWG
	TUV	IEC62852 am1 @85°C (Class A) 1500V DC	65A /10.0mm <sup>2</sup>
Typical Contact Resistance	≤0.20mΩ (cold formed contact)		
Rated Impulse Voltage	16KV (1500V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 24 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overtoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated copper alloy		
Cable OD Range	∅7.5mm~8.8mm		
Material Safety	RoHS, REACH compliant		

Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications		
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4SFM8DM		*	10	8		*	*	*	 B 107201
H4SMM8DM	*		10	8		*	*	*	 E339277

## Notes:

Sealing caps on page 41.  
 Assembly tools on page 42~44.

For more information please contact us (Assembly Instructions WI-S067-ENG, Chemical Exposure Checklist WI-S047-ENG).

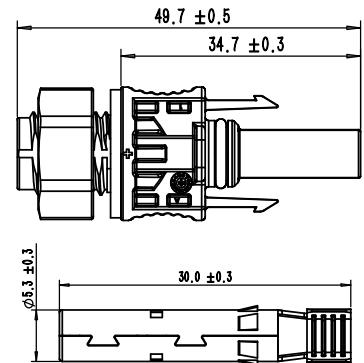
## Amphe-PV H4 Plus™

## Panel Mounted Connectors (Manual Unlock)

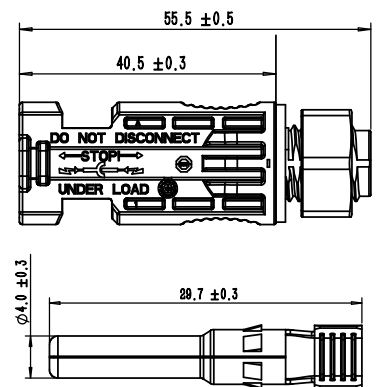
Part number : H4SFB.....



S&F Contact



Part number : H4SMB.....



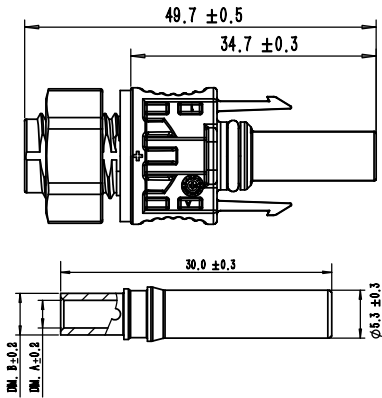
### Technical Data

Rated Voltage & Current	TUV	IEC62852 am1 @85°C (Class A) 1500V DC	25A/2.5mm <sup>2</sup> , 35A/4.0mm <sup>2</sup> , 45A/6.0mm <sup>2</sup>
Typical Contact Resistance	≤0.25mΩ (stamped& formed contact), ≤0.20mΩ (cold formed contact)		
Rated Impulse Voltage	16KV (1500V per TUV)		
Ambient Temperature Range	-40°C to +85°C		
Upper Limiting Temperature	+120°C		
Ingress Protection Rating	IP68, mated (1 m, 24 h) & IP2X touch-proof, unmated		
Type of Termination	Crimp		
Flame Class	UL94 V-0		
Overvoltage Category/Pollution Degree	CAT III/2		
Insulation Material	PC/PA		
Contact Material	Tin-plated copper alloy		
Cable OD Range	Ø5.0mm~7.8mm		
Material Safety	RoHS, REACH compliant		

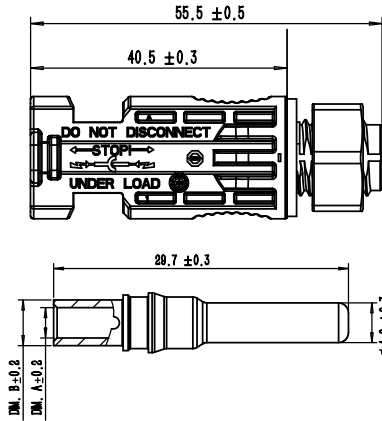



Part number : H4SFB.....

Cold Formed Contact



Part number : H4SMB.....



Ordering No.	Plug	Receptacle	Cable Size		Contact Type		Certifications		 B 107201
			mm <sup>2</sup>	AWG	S&F	Cold formed	TUV	UL	
H4SFB2TMS		*	2.5	14	*		*		
H4SMB2TMS	*		2.5	14	*		*		
H4SFB4TMS		*	4.0, 6.0	12,10	*		*		
H4SMB4TMS	*		4.0, 6.0	12,10	*		*		
H4SFB2TM		*	2.5	14		*	*		
H4SMB2TM	*		2.5	14		*	*		
H4SFB4TM		*	4.0	12		*	*		
H4SMB4TM	*		4.0	12		*	*		
H4SFB6TM		*	6.0	10		*	*		
H4SMB6TM	*		6.0	10		*	*		

Notes:  
 Sealing caps on page 41.  
 Assembly tools on page 42~44.

For more information please contact us (Assembly Instructions WI-S067-ENG, Chemical Exposure Checklist WI-S047-ENG).

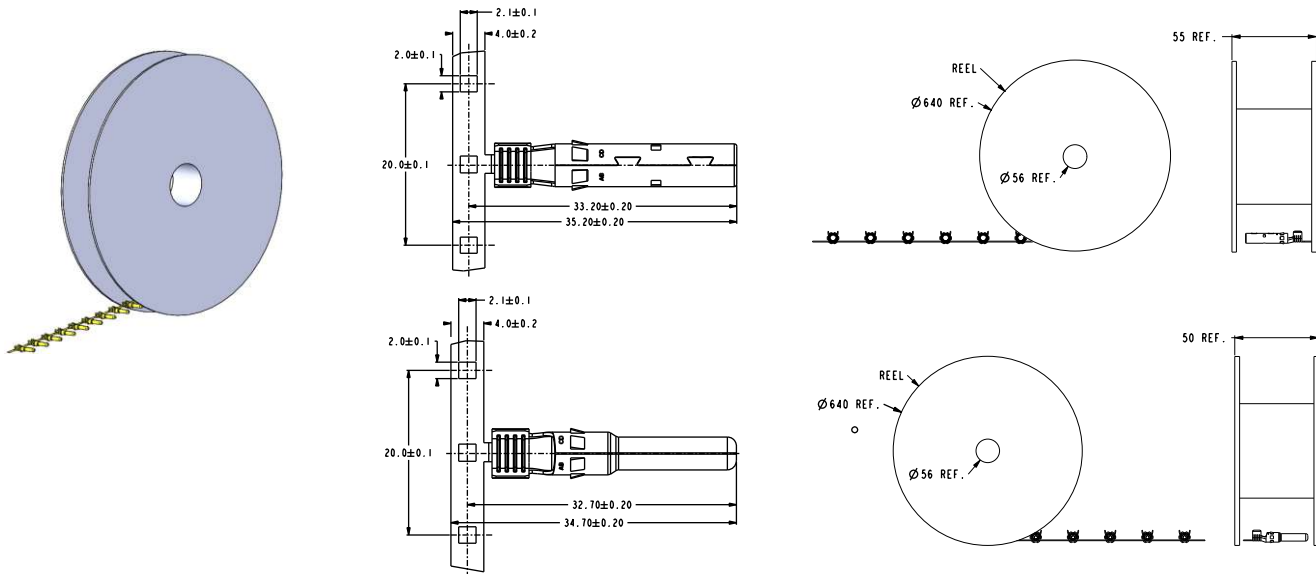
## Amphe-PV H4 Plus™ series connectors ordering configurations

How to Order a Connector (please choose one code per position below)

1	2	3		4		5		6		7		8	
Product Line	ProductType	Gender		Connector Type		Cable Size		Certifications		Packaging		Contact Type	
H4 (H4 series)	S (H4 Plus)	F	Female (+)	C	Cable gland (tool unlock)	0*1	Without Contact	D	Dual UL/TUV Certified	I*4	1 pc/bag	S	S&F
				D	Cable gland (manual unlock)	2	2.5mm <sup>2</sup> / 14AWG			C*5	100 pcs/bag		
		M	Male (-)	M	M12 Panel mounted (tool unlock)	4*2	4.0mm <sup>2</sup> /12 AWG	T*3	TUV IEC Certification Only (no NEC lock)	M*6	400 pcs/bag	(Blank)	CF
				B	M12 Panel mounted (manual unlock)	6	6.0mm <sup>2</sup> / 10AWG						

- \*1 If planning to use S&F contacts on a reel (sold separately), please choose cable size code "0" to order just the connector with no contacts.
- \*2 When ordering a S&F "Contact Type", please choose cable size order code "4" for both 4.0mm<sup>2</sup>/ 12AWG & 6.0mm<sup>2</sup>/ 10AWG
- \*3 When ordering a manual unlock connector, please choose "Certifications" code "T" for TUV certification only.
- \*4 Individual packaging, 1pc/PE bag, 800pcs/carton box, for authorized distributors only.
- \*5 100pcs/PE bag, 800pcs/carton box, for authorized distributors only.
- \*6 When ordering a manual unlock connector, please choose "Certifications" code "T" for TUV certification only.

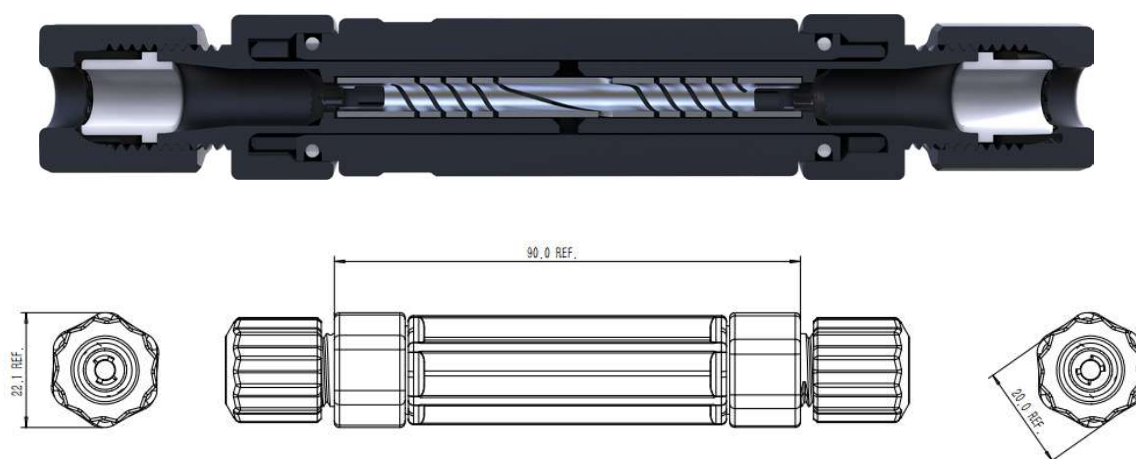
## Amphe-PV H4 Plus™ stamped and formed contacts for automatic assembly use



How to Order S&F Contacts on a Reel of 2000 pcs (Please choose one code per position below)

1	2	3		4		5
Product Line	ProductType	Gender		Cable Size		Packaging
UTX	F (S&F CONTACT)	F	Female (+)	2	2.5mm <sup>2</sup> /14AWG	R (2000 pcs/reel)
		M	Male (-)	4	4.0mm <sup>2</sup> /12AWG & 6.0mm <sup>2</sup> /10AWG	

## RadCrimp™ Solar Splice



## Features

- Features Melni Spiral Termination Technology
- Simple and fast termination
- Field termination and sealing without any special crimp tools
- Low resistance wire termination and sealing in one action
- IP68 sealing protection
- Innovative Melni Spiral Termination Technology is low resistance and reliable
- UL certified

## RadCrimp™ Solar Splice with Melni Spiral Termination Technology

Technical Data		
Rated Voltage & Current	UL6703 1500V DC	20A(4.0mm <sup>2</sup> /12AWG), 30A(6.0mm <sup>2</sup> /10AWG)
Typical Contact Resistance	≤ 0.10mΩ, TYP	
Insulation Material	Thermoplastic (PC/PA)	
Contact Material	Tin over nickel plated copper alloy	
Cable Strain Relief	Compression sealing gland featuring cable insulation gripping collet and torque specified sealing cap	
Application Class	Class A	
Over Voltage Category	III	
Degree Protection	IP68 (1 meter, 1 hour) mated	
Flame Class	UL94-V0	
Cable OD Range	∅ 6.0mm ~ ∅7.4mm	
Cable Strands Range	2	
Safety Class	Class II	
Ambient Temperature Range	-40°C ~ +85°C	
Upper Limiting Temperature	120°C	
UV Resistance	Outdoor suitable (f1) rated materials, per UL746C	



### How to Order (Please choose one code per position below)

1		2		3		4	
Product Line		Product Type		Contact Size		Terminal Type	
AMPV	Amphenol Solar Connector (Amphe-PV)	STS	Melni Spiral Termination	4*	4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG	M	Machined Terminal

\* Contact size "4" works for 4.0mm<sup>2</sup>/12 AWG & 6.0mm<sup>2</sup>/10AWG PV wire



Tools and Accessories	Ordering Code
Strip Tool	H4TS0000
Wrench Tool	AMPVTW0001

Notes:

For more information please contact us (Assembly Instructions WI-13, Chemical Exposure Checklist WI-S047-ENG).

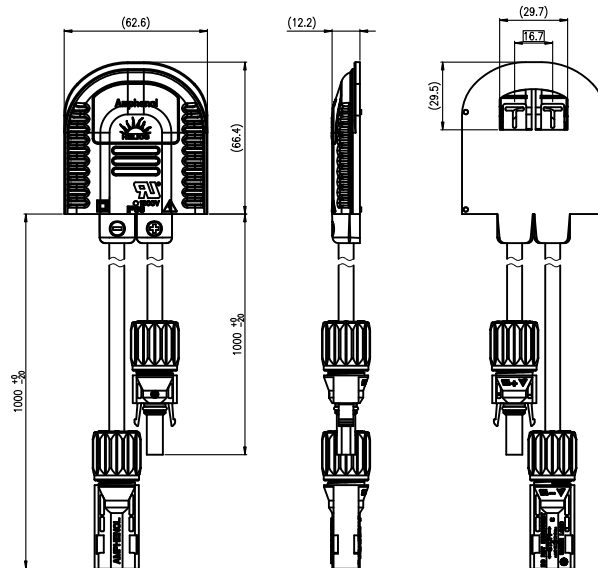
# Thin Film PV Junction Box



## Features

- Low profile
- Over-molded design for a better sealing SMD and efficient heat dissipation

Technical Data	
Rated Voltage	1000V DC (UL/IEC 62790)
Rated Current	Up to 20A (without Diode), 4A (with Diode)
Termination Type	Solder
Protection Degree	IP68
Operation Temperature	-40°C to +90°C
Sealing Type	Potting
Flame class	UL94 5V
Diode quantity option	None/1



## How to Order

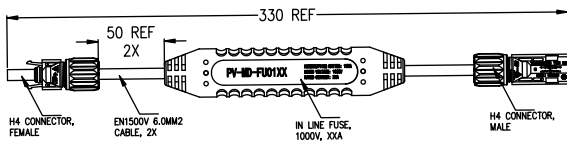
Product Family	Product Type	Terminals	Terminal Type	Diode Rating	Sealing Type	Breathing Hole
HB Junction box	T Thin film J-box	G 2 contacts	B Solder Contacts	G 5A, 1000V H 10A, 1000V J 8A, 1000V K 20A, 1200V N Without Diode	A Potting	N No
Cable Size	Adhesive	Cable Length (Ln)*	Cable Length (Lp)*	Variations		
C 2.5mm <sup>2</sup> /14AWG	Y Yes N No	A 1000mm B 900mm	A 1000mm B 900mm	H H4 connector N No connector		

## Over-Molded Junction Harnesses


### Features

- Short cable to distribute heat
- Long term reliability which ensures consistently low performance loss throughout the entire service life
- IP67 (1m/0.5H)
- 1000V/1500V optional
- Cable/ connector optional
- Fuse rating and brand optional
- Approved by IEC/EN62093 and UI9703

### In-Line Fuse ,1000V

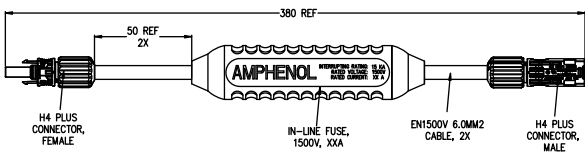


Description	Specification
Cable Size	6.0mm <sup>2</sup> /10AWG
Rated Voltage	1000V DC
Rated Current	Same as fuse rating
Ingress Protection	Ip67 (mated)
Ambient Temperature Range	-40°C to +50°C
Over-Molding Material	TPV, UL94 V-0
Cable Bending Radius	30mm


Order No.	Safety (A/V)	Type of Connector	Cable Size	Cable Length (mm)	Certifications
MDFU-10-66-04-H4	4/1000	H4	6.0mm <sup>2</sup> /10AWG	50	 IEC/EN 62093 UL9703
MDFU-10-66-10-H4	10/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDFU-10-66-15-H4	15/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDFU-10-66-20-H4	20/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDFU-10-66-25-H4	25/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDFU-10-66-30-H4	30/1000	H4	6.0mm <sup>2</sup> /10AWG	50	

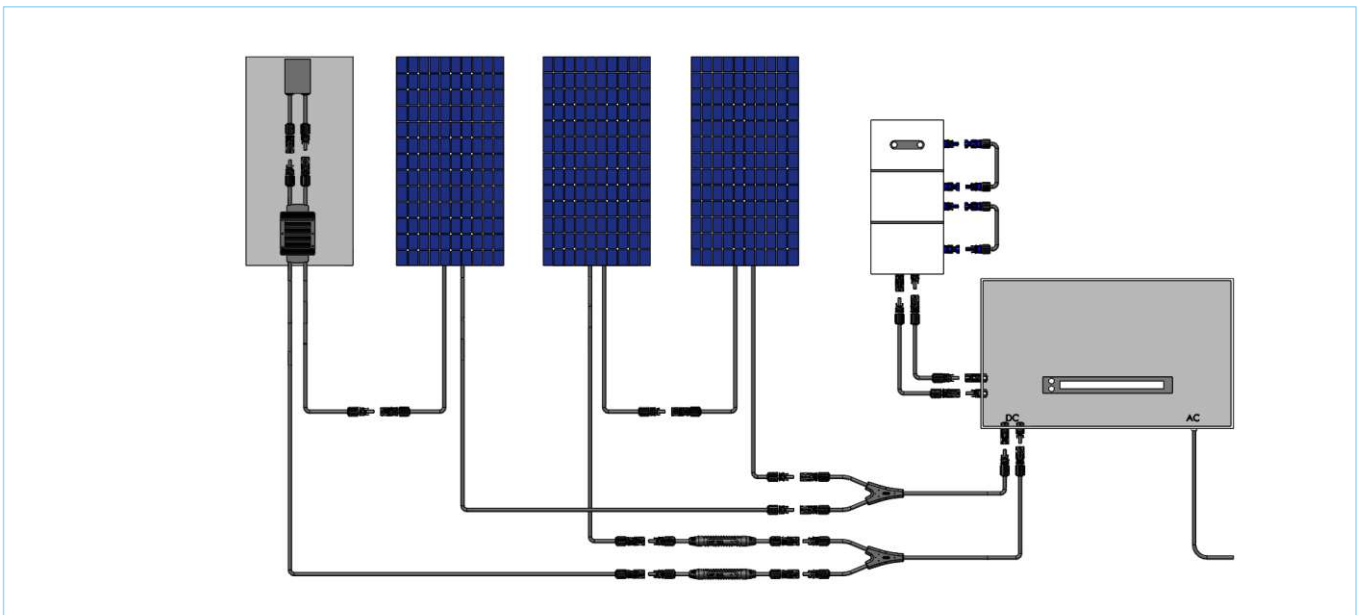


## In-Line Fuse, 1500V



Technical Data	
Cable Size	6.0mm <sup>2</sup> /10AWG
Rated Voltage	1500VDC
Rated Current	Same as fuse rating
Ingress Protection	IP67(mated)
Ambient Temperature Range	-40°C to +50°C
Over-Molding Material	TPV, UL 94 V-0
Cable Bending Radius	30mm

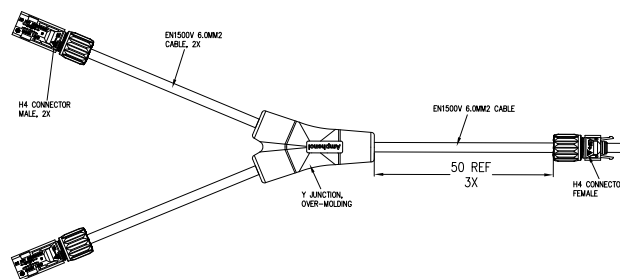
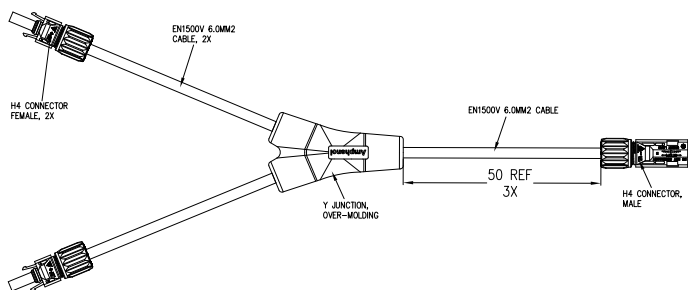
Order No.	Safety (A/V)	Type of Connector	Cable Size	Cable Length (mm)	Certifications
MDFU-20-66-04-H4S	4/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	 IEC/EN 62093 UL9703
MDFU-20-66-10-H4S	10/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDFU-20-66-15-H4S	15/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDFU-20-66-20-H4	20/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDFU-20-66-25-H4	25/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDFU-20-66-30-H4	30/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	



## Y Branch Harness



Description	Specification
Cable Size	6.0mm <sup>2</sup> /10AWG
Rated Voltage	1000VDC/1500V DC
Rated Current	Input 15A, output 30A
Ingress Protection	IP67(mated)
Ambient Temperature Range	-40°C to +85°C
Over-Molding Material	TPV, UL 94 V-0
Cable Bending Radius	30mm

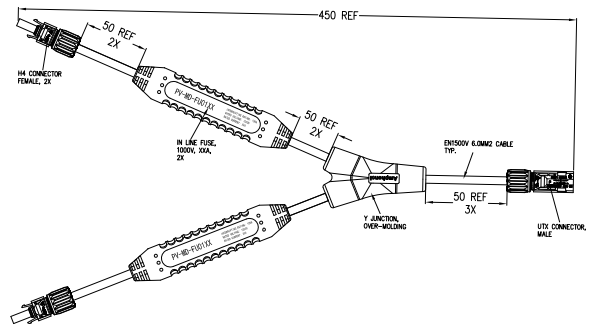
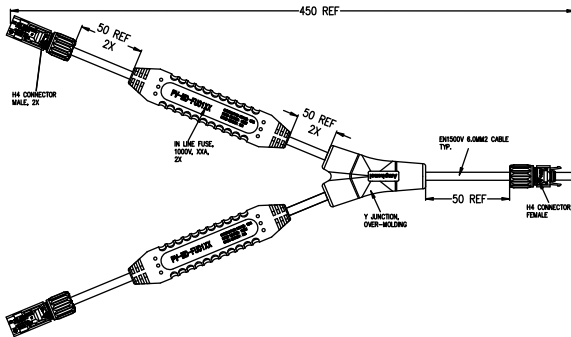



Order No.	Safety (V)	Type of Connector	Cable Size	Cable Length (mm)	Certifications
MDH-10-66-1Y-H4-P	1000	H4	6.0mm <sup>2</sup> /10AWG	50	 IEC/EN 62093 UL9703
MDH-10-66-1Y-H4-N	1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y-H4S-P	1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y-H4S-N	1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	

## Y Branch Harness with In-line Fuse, 1000V



Description	Specification
Cable Conductor	6.0mm <sup>2</sup> /10AWG
Rated Voltage	1000VDC
Rated Current	Same to fuse rating
Degree of Protection	IP67(mated)
Ambient Temperature Range	-40°C to +50°C
Over-molding Material	TPV, UL 94 V-0
Cable Bending Radius	30mm

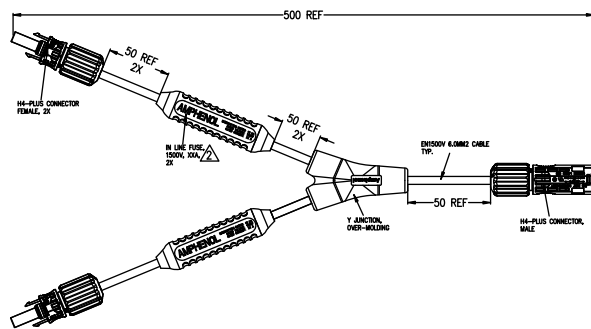
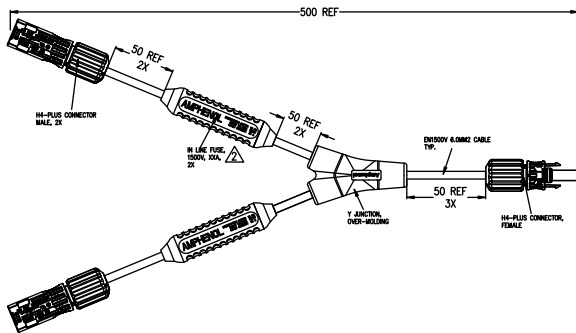


Order No.	Safety (A/V)	Type of Connector	Cable Size	Cable Length (mm)	Certifications
MDH-10-66-1Y04-H4-P	04/1000	H4	6.0mm <sup>2</sup> /10AWG	50	 Total Quality. Assured. IEC/EN 62093 UL9703
MDH-10-66-1Y04-H4-N	04/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-10-66-1Y10-H4-P	10/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-10-66-1Y10-H4-N	10/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-10-66-1Y15-H4-P	15/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-10-66-1Y15-H4-N	15/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-10-66-1Y20-H4-P	20/1000	H4	6.0mm <sup>2</sup> /10AWG	50	
MDH-10-66-1Y20-H4-N	20/1000	H4	6.0mm <sup>2</sup> /10AWG	50	

## Y Branch Harness with In-Line Fuse, 1500V



Description	Specification
Cable Conductor	6.0mm <sup>2</sup> /10AWG
Rated Voltage	1500V DC
Rated Current	Same as fuse rating
Degree of Protection	IP67(mated)
Ambient Temperature Range	-40°C to +50°C
Over-Molding Material	TPV, UL 94 V-0
Cable Bending Radius	30mm

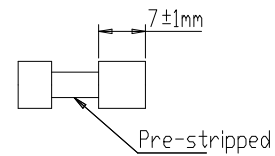


Order No.	Safety (A/V)	Type of Connector	Cable Size	Cable Length (mm)	Certifications
MDH-20-66-1Y04-H4S-P	04/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	 IEC/EN 62093 UL9703
MDH-20-66-1Y04-H4S-N	04/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y10-H4S-P	10/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y10-H4S-N	10/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y15-H4S-P	15/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y15-H4S-N	15/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y20-H4S-P	20/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	
MDH-20-66-1Y20-H4S-N	20/1500	H4 Plus	6.0mm <sup>2</sup> /10AWG	50	

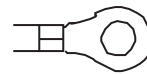
# PV Cable Assemblies

## End Types:

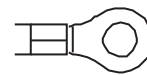
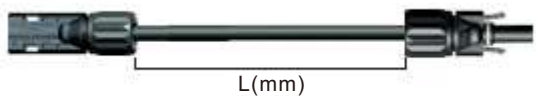
PS : Pre-Stripped



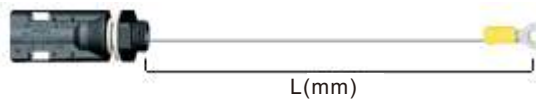
R : Ring Terminal



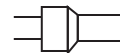
IR : Isolated Ring Terminal



T : Tube Terminal



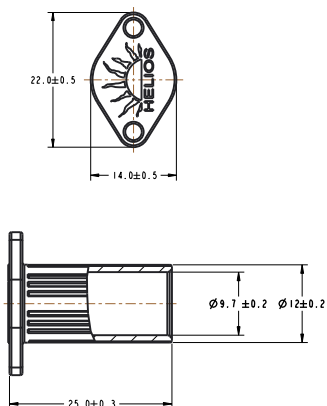
IT : Isolated Ring Terminal



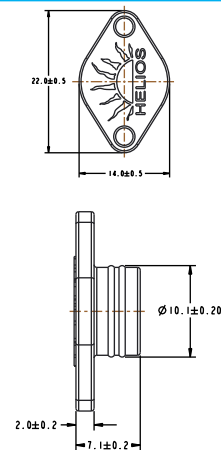
Other terminals and customized strip lengths are available.  
Please contact us for details and additional variations.

## Sealing Caps

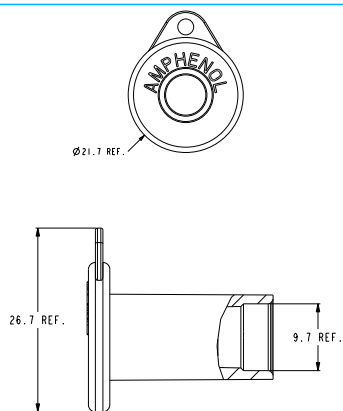
### H4PF



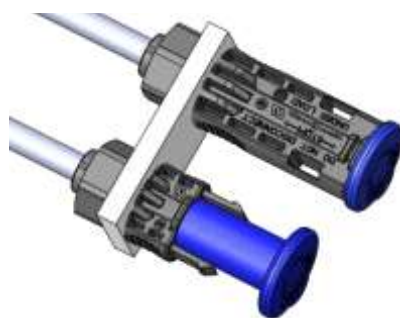
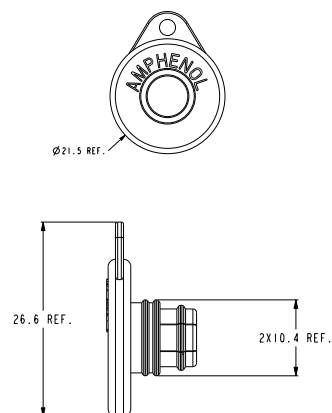
### H4PM



### UTXPF



### UTXPM



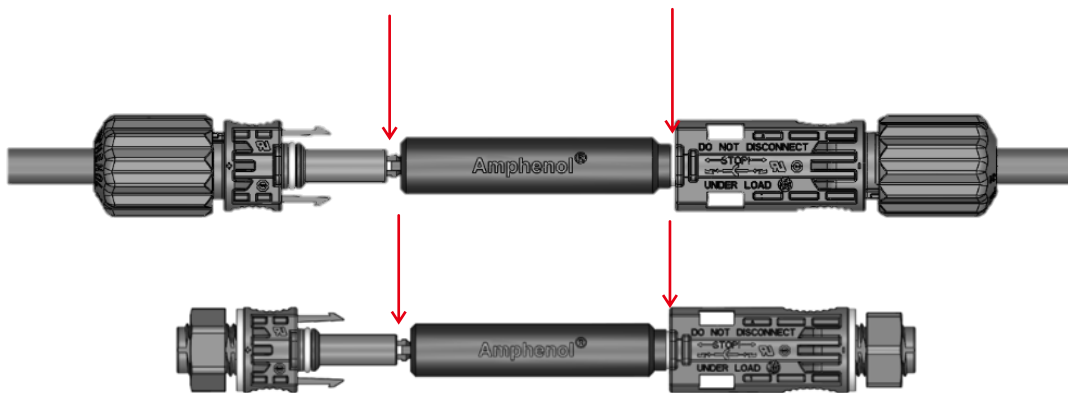
Ordering Code	Suitable for Plug Side	Suitable for Socket Side	Material	Suitable for
H4PF		*	Plastic	H4, H4 Plus
H4PM	*		Plastic	H4, H4 Plus
UTXPF		*	Silicon rubber	H4, H4 Plus
UTXPM	*		Silicon rubber	H4, H4 Plus

## Inspection Tools



Order No.	Suitable for
H4TT0001	H4
H4TT0002	H4 Plus
H4TT0003	H4 Plus 8AWG

- This inspection tool is for testing the H4 and H4 Plus contacts' insertion depth, to control the correct and proper engagement of the contacts in the insulation.
- Use the contact depth inspection tool to check if the contact is in the right position. The edge of the connector housing should be located within the white area of the contact depth inspection tool.





## Crimp Tools



- Customized design by Rennsteig for H4/H4 Plus connectors.
- High quality and long -term reliability, suitable for processing a high number of crimps.
- Applicable to cable sizes of 2.5mm<sup>2</sup>/ 14AWG, 4.0mm<sup>2</sup>/12 AWG, 6.0mm<sup>2</sup>/10AWG, 10.0mm<sup>2</sup>/8AWG.
- The die sets and locators are interchangeable.
- For flexible cables use only.

Ordering Code	Crimp Range		Suitable for Type of Terminals			
	mm <sup>2</sup>	AWG	H4 S&F	H4 CF	H4+ S&F	H4+ CF
H4TC0003	2.5, 4,6	14,12,10	*			
UTXTC0003	2.5,4,6	14,12,10			*	
UTXTC0004	4,6,10	12,10,8		*		*
UTXTC0005	2.5,4,6	14,12,10		*		*

## Individual Parts for Crimp Tools

### ► Die Sets



UTXTD0003



UTXTD0004



UTXTD0005

Ordering Code	Crimp Range		Suitable for Type of Terminals			
	mm <sup>2</sup>	AWG	H4 S&F	H4 CF	H4+ S&F	H4+ CF
UTXTD0003	2.5, 4,6	14,12,10	*		*	
UTXTD0004	2.5,4,6	14,12,10		*		*
UTXTD0005	4,6,10	12,10,8		*		*

### ► Locators



H4TP0002



UTXTP0002



UTXTP0003



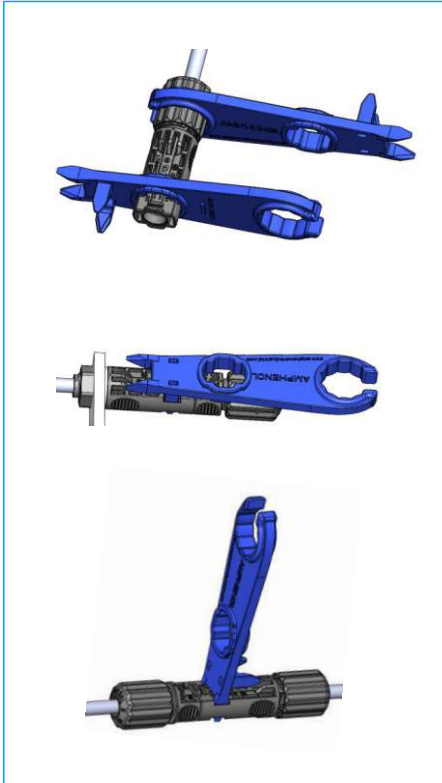
UTXTP0004

Ordering Code	Crimp Range		Suitable for Type of Terminals			
	mm <sup>2</sup>	AWG	H4 S&F	H4 CF	H4+ S&F	H4+ CF
H4TP0002	2.5, 4,6	14,12,10	*			
UTXTP0002	2.5,4,6	14,12,10			*	
UTXTP0003	2.5,4,6	14,12,10		*		*
UTXTP0004	4,6,10	12,10,8		*		*

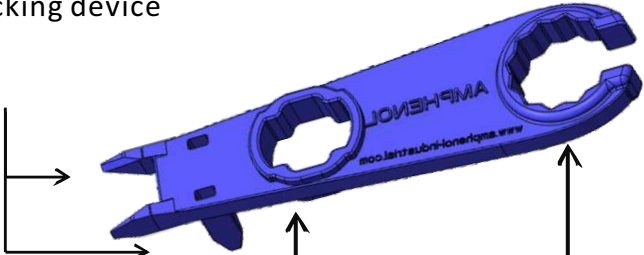
# Tools and Accessories

## Open-Ended Spanner and Unlocking Tool

To tighten and unscrew the cable gland and to open the locking device of the connection.



To open the locking device



To tighten the cable gland

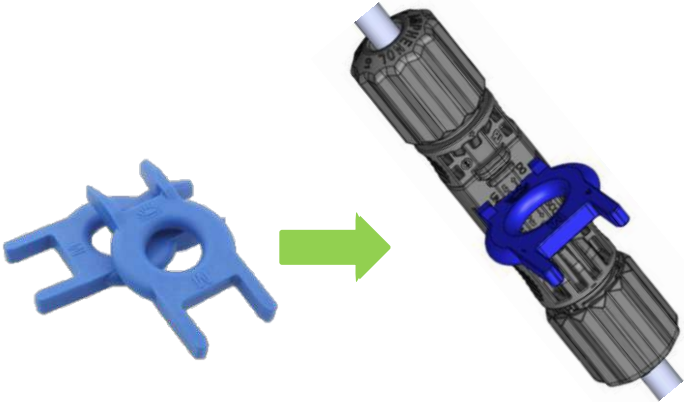
To secure

Ordering Code: H4TW0001, for H4, H4 Plus



Order number: H4TS0000

Designed with a locator to set a certain stripped cable length, guarantees a consistent strip of PV cable, this strip tool is suitable for Cable OD range of 14AWG to 10AWG, properly suited for solar connector assembly.



Order number: H4TU0000

This universal unlocking tool is used to unlock mated connectors, compatible with all Amphenol H4 series and H4 Plus series connectors.



## Appendix

### ■ General Information

Users wishing to employ products listed in the catalog for applications we have not considered are themselves responsible for making certain that the products comply. This means assuring the products conform with the needed standards of the customer application.

#### Changes/Provisos

All data, illustrations and drawings in the catalog have been carefully checked. They are in accordance with our experience to date, but no responsibility can be accepted for errors. We also reserve the right to make modifications for design and safety reasons. When designing equipment incorporating our components, it is therefore advisable not to rely solely on the data in this catalog but to consult us to make sure this information is up to date. We would be pleased to advise you.

#### Copyright

The use of this catalog for any other purpose, in whatever form, without our prior written consent is not permitted.

### ■ Technology Information

#### Crimped Terminations

For termination of the conductors to the crimping sleeves of the PV plug connectors we recommend using the stated crimping tools. For certified products only the tools mentioned can be used for self-assembly according to the assembly instructions. The crimping sleeves are designed for highly flexible conductors of the stated cable size ranges. The use of flexible conductors is possible. It is advantageous to use tinned conductors.

#### Laying Conditions

When laying the PV leads, avoid having the connecting cable resting on a sharp edge at the exit from the PV connector. We recommend observing the minimum bending radius of the connecting cables.



### Cables

Suitable for PV cable with copper conductor. Tin coated wire of conductors is recommended. Cables should be EN 50618, IEC62930, UL 4703 and USE-2 certified.

### Max. system voltage

Is the maximum voltage for which the components of the PV plug connector system may be used and are rated in accordance with IEC 60664-1.

### Contact resistance

Is the resistance at the point of contact between two contact surfaces.

### Test voltage

is the voltage at which the new components of the PV plug connector system are tested under defined conditions without breakdown or arcing.

## ■ Safety Precaution

### Unplugging under load

PV plug connections must not be unplugged while under load. Plugging and unplugging while under tension is permitted.

### Protection against weather

Sealing caps must be used to protect unplugged PV-connectors from moisture and dirt.

The mated Amphenol PV connectors are IP68 (under water 1 meter 1 hour ) compliant in the function of sealing. However please prevent connectors from being immersed in water.

The product may be assembled and installed only by qualified and trained specialists who observe the applicable safety regulations.



## Appendix

### ■ Safety Precaution

Connectors not made by Amphenol which can be mated with Amphenol elements and in some cases are also described as “Amphenol-compatible” do not conform to the requirements for safe electrical connection with long-term stability, and for safety reasons must not be plugged together with Amphenol elements. Amphenol can therefore accept no liability for damage which occurs as a result of mating these connectors that lack Amphenol approval with Amphenol elements.

Please be aware that this 3rd Party laboratory test is just a reference for application. It is the customer’s responsibility to validate connector durability in system function at specific and extreme environment conditions, we recommend customers to consider a margin in actual applications with high current situations that can lead to overheating.

### Avoid exposure of chemical substances

Amphenol warns customers and users to avoid exposure of chemical substances in the connector application environment. Chemical compatibility of thermoplastics e.g. Lexan polycarbonate is dependent on contact time, temperature concentration and stress (external stress to which the application is subjected to). Chemicals exposure can result in discoloration, softening, swelling, cracking or loss of properties of the thermoplastics. See file: WI -S047-ENG Chemicals exposure check list.

The list of chemicals provided by Amphenol does not include all chemicals that may appear in the production and subsequent use of customers. Customers are requested to verify their impact on products and take corresponding risk management measures for chemical contamination. Amphenol does not accept any return requests for products contaminated with chemicals.