

# Amphenol



**Amphenol Industrial Sustainable Technologies**

Photovoltaic Interconnection Systems

# About us

## Solar Connectors and Cable Assemblies

### **DURABLE AND RELIABLE**

Founded in 1932, Amphenol Corporation in America, is a leading manufacturer of connectors and related products and one of top 500 companies in the world. There are 83 divisions with more than 40,000 employees around the world. Amphenol Corporation is divided into 8 Business Units based on product markets.

Amphenol Technology (Shenzhen) co., Ltd. is one of Amphenol's divisions, Located in Shenzhen, China, A leading manufacturer of Stamping & form terminals, Over-molded interconnectors, Connectors for harsh environment, Cable assembly design & development, including Solar connectors and cable assemblies.

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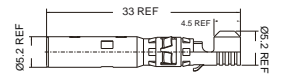
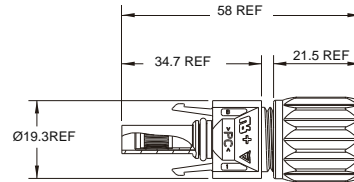
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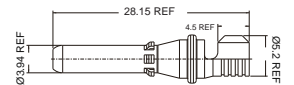
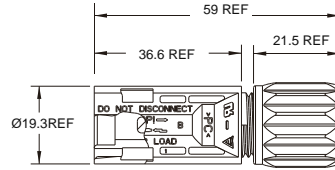
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### H4 series PV Cable Connector



Part Number: H4CF.....



Part Number: H4CM.....



### Technical Data

Rated voltage	1500V DC per UL 6703 1000V DC per TÜV IEC62852	Cable OD range	Ø5.3mm – 7.65mm
Rated current (per IEC 62852, 85°C)	25A (2.5mm <sup>2</sup> /14AWG) 35A (4.0mm <sup>2</sup> / 12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Unlock options	Tool unlock type(TÜV/UL) or Manually unlock type(TÜV only)
Rated current (per UL 6703)	15A (2.5mm <sup>2</sup> /14AWG) 20A (4.0mm <sup>2</sup> / 12AWG) 30A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated impulse voltage	12kV(1000V DC per TÜV)	Ambient temperature range	-40°C to +85°C (TÜV) -40°C to +90°C (UL)
Typical contact resistance	≤0.3mΩ	Upper limiting temperature	+120°C
Contact material	Tin-plated Copper Alloy	Flame class	UL 94 V-0
Contact system options	Cold Formed (CF) or Stamped & Formed (S&F)*1	Overvoltage category/Pollution degree	CAT III/2
Insulation material	PC/PA	Material safety	RoHS, REACH compliant
Type of termination	Crimping	Approvals:	 TÜV certified to IEC 62852  UL certified to UL6703 R50388083 E339277

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

Part Number Coding: **H4 C F C 4 D M S**

Product Line	Product Type	Gender	Connector Type	Cable Size	Certifications	Packaging	Contact Type
H4 (H4 series)	C (Connector)	F Female	C Cable gland Tool unlock	0 Without Contact	D Dual UL/TÜV Certified	I 1 pc/bag	S S&F
				2 2.5mm <sup>2</sup> / 14AWG		C 100 pcs/bag	
			M Male	D Cable gland Manually unlock		4*2 4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10AWG(S&F)	T*3 Only TÜV Certified
		4.0mm <sup>2</sup> /12AWG(CF)					
		6 6.0mm <sup>2</sup> / 10AWG(CF)					

\*2. When ordering a S&F contact, please use cable size order code "4" for both 4.0mm<sup>2</sup>/ 12AWG & 6.0mm<sup>2</sup>/ 10AWG.  
\*3. When ordering cable connectors, please use certifications order code "T" for Manually unlock type cable gland connectors.

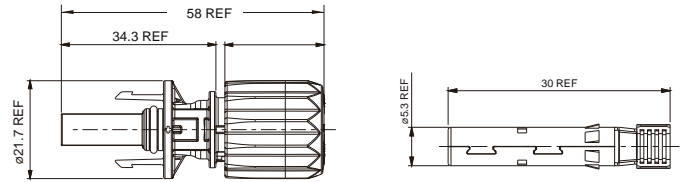
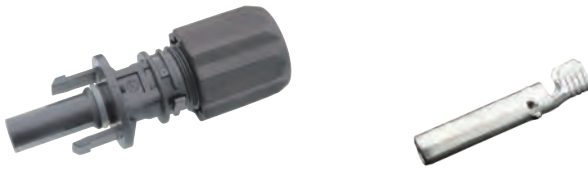
\*1: when ordering S&F contacts in reel vision, page 7

\*Crimping Tool, Page 15  
Sealing caps, Wrench Tools, page 16

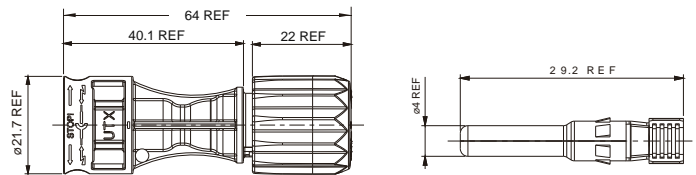


### UTX series PV Cable Connector

Part Number: UTXCF.....



Part Number: UTXCM.....



### Technical Data

Rated voltage	1500V DC per UL 6703 1500V DC per TÜV IEC62852 1500V DC per JET IEC61730	Cable OD range	Ø5.3mm – 7.65mm
Rated current (per IEC 62852,85°C)	25A ( 2.5mm <sup>2</sup> /14AWG) 35A ( 4.0mm <sup>2</sup> / 12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Unlock options	Tool unlock type(TÜV/UL/JET) or Manually unlock type(TÜV only)
Rated current (per UL6703)	15A ( 2.5mm <sup>2</sup> /14AWG) 20A ( 4.0mm <sup>2</sup> / 12AWG) 30A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated impulse voltage	16kV(1500V DC per TÜV)	Ambient temperature range	-40°C to +85°C (TÜV) -40°C to +90°C (UL)
Typical contact resistance	≤0.3mΩ	Upper limiting temperature	+105°C
Contact material	Tin-plated Copper Alloy	Flame class	UL 94 V-0
Contact system options	Cold Formed (CF) or Stamped & Formed (S&F)*1	Overvoltage category/Pollution degree	CATIII/2
Insulation material	PPE/PA	Material safety	RoHS, REACH compliant
Type of termination	Crimping	Approvals:	TÜV certified to IEC 62852 UL certified to UL6703 JET certified to IEC61730



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

Part Number Coding: UTX C F A 4 A M

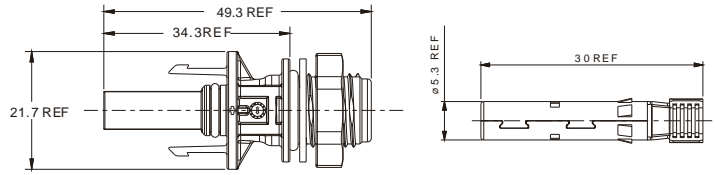
Product Line	Product Type	Gender	Contact type	Cable Size	Certifications	Packaging
UTX (UTX series)	C (Connector)	F Female	A Stamped and Formed contact (S&F)	0 Without Contact	A Triple UL/TÜV/JET Certified	I 1 pc/bag
				2 2.5mm <sup>2</sup> / 14AWG		C 100 pcs/bag
		M Male	B Cold Formed contact (CF)	4*2 4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10AWG(S&F)	B*3 Only TÜV Certified	M 400 pcs/bag
				6 6.0mm <sup>2</sup> / 10AWG(CF)		

\*2, When ordering a S&F contact, please use cable size order code "4" for both 4.0mm<sup>2</sup>/ 12AWG & 6.0mm<sup>2</sup>/ 10AWG.  
\*3, When ordering cable connectors, please use certifications order code "B" for Manually unlock type cable gland connectors.

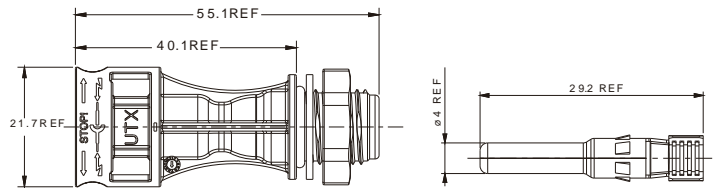
\*1: when ordering S&F contacts in reel vision, page 8  
\*Crimping Tool, Page 15  
Sealing caps, Wrench Tools, page 16

### UTX series PV Panel Connector



Part Number: UTX.....



Part Number: UTX.....



#### Technical Data

Rated voltage	1500V DC per UL 6703 1500V DC per TÜV IEC62852	Type of termination	Crimping
Rated current (per IEC 62852,85°C)	25A (2.5mm <sup>2</sup> /14AWG) 35A (4.0mm <sup>2</sup> /12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Unlock options	Tool unlock type(TÜV/UL) or Manually unlock type(TÜV only)
Rated current (per UL6703)	15A (2.5mm <sup>2</sup> /14AWG) 20A (4.0mm <sup>2</sup> /12AWG) 30A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated impulse voltage	16kV(1500V DC per TÜV)	Ambient temperature range	-40°C to +85°C (TÜV) -40°C to +90°C (UL)
Typical contact resistance	≤0.3mΩ	Upper limiting temperature	+105°C
Contact material	Tin-plated Copper Alloy	Flame class	UL 94 V-0
Contact system options	Cold Formed (CF) or Stamped & Formed (S&F)*1	Overvoltage category/Pollution degree	CATIII/2
Insulation material	PPE/PA	Material safety	RoHS, REACH compliant
		Approvals: TÜV certified to IEC 62852 UL certified to UL6703	 R50340393  E469330

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

Part Number Coding: **UTX** **M** **F** **A** **4** **A** **M**

Product Line	Product Type	Gender	Contact Type	Cable Size		Certifications	Packaging
<b>UTX</b> (UTX series)	<b>M</b> Bulkhead M12	<b>F</b> Female	<b>A</b> Stamped and Formed contact (S&F)	<b>0</b>	Without Contact	<b>A</b> Triple UL/TÜV/JET Certified	<b>I</b> 1 pc/bag
				<b>2</b>	2.5mm <sup>2</sup> / 14AWG		<b>C</b> 100 pcs/bag
	<b>N</b> Bulkhead M14	<b>M</b> Male	<b>B</b> Cold Formed contact (CF)	<b>4</b> *2	4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10AWG(S&F)	<b>B</b> *3 Only TÜV Certified	<b>M</b> 400 pcs/bag
				<b>6</b>	6.0mm <sup>2</sup> / 10AWG(CF)		

\*2. When ordering a S&F contact, please use cable size order code "4" for both 4.0mm<sup>2</sup>/ 12AWG & 6.0mm<sup>2</sup>/ 10AWG.

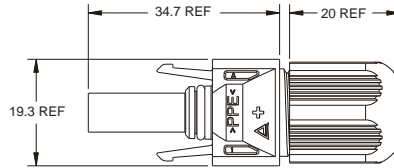
\*3. When ordering panel connectors, please use certifications order code "B" for Manually unlock type bulkhead connectors.

\*1: when ordering S&F contacts in reel vision, page 8

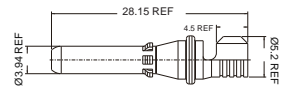
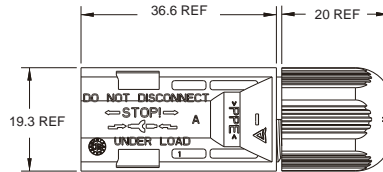
\*Crimping Tool, Page 15  
Sealing caps, Wrench Tools, page 16

### H4-R series PV Cable connector


Part Number: H4LF.....



Part Number: H4LM.....



#### Technical Data

Rated voltage	1100V DC per TÜV IEC62852	Unlock options	Tool unlock type or Manually unlock type
Rated current (per IEC 62852, 85°C)	25A (2.5mm <sup>2</sup> /14AWG) 35A (4.0mm <sup>2</sup> /12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated impulse voltage	12.8kV(1100V DC per TÜV)	Ambient temperature range	-40°C to +85°C (TÜV)
Typical contact resistance	≤0.3mΩ	Upper limiting temperature	+105°C
Contact material	Tin-plated Copper Alloy	Flame class	UL 94 V-0
Contact system	Stamped & Formed (S&F) <sup>1</sup>	Overvoltage category/Pollution degree	CAT III/2
Insulation material	PPE/PA	Material safety	RoHS, REACH compliant
Type of termination	Crimping	Approvals:	 TÜV certified to IEC 62852 R50388083
Cable OD range	Ø4.5mm - 7.8mm	TÜV certified to IEC 62852	

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

Part Number Coding:

**H4 L F C 4 T M S**

Product Line	Product Type	Gender	Connector Type	Cable Size		Certifications	Packaging	Contact Type
<b>H4</b> (H4 series)	<b>L</b> (H4-R series Connectors)	<b>F</b> Female	<b>C</b> Cable gland Tool unlock	<b>0</b>	Without Contact	<b>T</b> TÜV Certified	<b>C</b> 100 pcs/bag	<b>S</b> S&F
				<b>2</b>	2.5mm <sup>2</sup> / 14AWG			
		<b>M</b> Male	<b>D</b> Cable gland Manually unlock	<b>4</b>	4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10 AWG		<b>M</b> 400 pcs/bag	

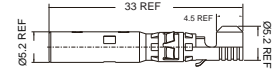
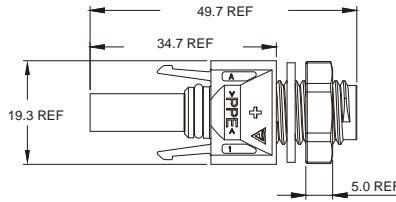
\*1: when ordering S&F contacts in reel vision, page 7

\*Crimping Tool, Page 15  
Sealing caps, Wrench Tools, page 16

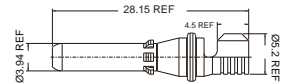
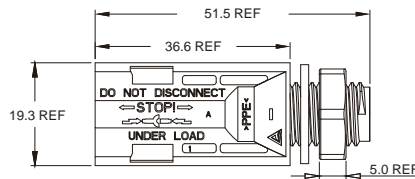


### H4-R series PV Panel Connector


Part Number: H4LF.....



Part Number: H4LM.....



#### Technical Data

Rated voltage	1100V DC per TÜV IEC62852	Unlock options	Tool unlock type or Manually unlock type
Rated current (per IEC 62852, 85°C)	25A ( 2.5mm <sup>2</sup> /14AWG) 35A ( 4.0mm <sup>2</sup> / 12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated impulse voltage	12.8kV(1000V DC per TÜV)	Ambient temperature range	-40°C to +85°C (TÜV)
Typical contact resistance	≤0.3mΩ	Upper limiting temperature	+105°C
Contact material	Tin-plated Copper Alloy	Flame class	UL 94 V-0
Contact system options	Stamped & Formed (S&F)* <sup>1</sup>	Overvoltage category/Pollution degree	CAT III/2
Insulation material	PPE/PC	Material safety	RoHS, REACH compliant
Type of termination	Crimping	Approvals: TÜV certified to IEC 62852	 R50388083

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

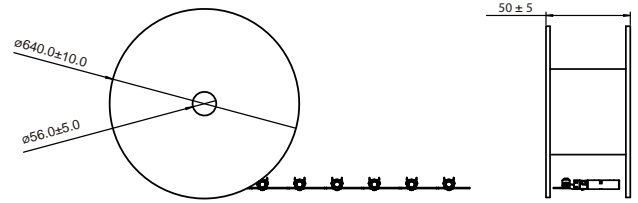
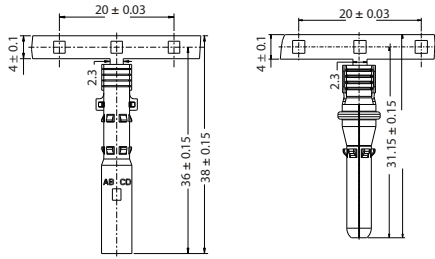
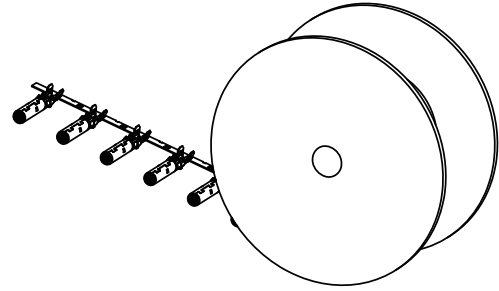
Part Number Coding: **H4** **L** **F** **M** **4** **T** **M** **S**

Product Line	Product Type	Gender	Connector Type	Cable Size		Certifications	Packaging	Contact Type
<b>H4</b> (H4 series)	<b>L</b> (H4-R series Connectors)	<b>F</b> Female	<b>M</b> Bulkhead Tool unlock	<b>0</b>	Without Contact	<b>T</b>  TÜV Certified	<b>C</b> 100 pcs/bag	<b>S</b> S&F
		<b>M</b> Male	<b>B</b> Bulkhead Manually unlock	<b>2</b>	2.5mm <sup>2</sup> / 14AWG		<b>M</b> 400 pcs/bag	
				<b>4</b>	4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10AWG			

\*1: when ordering S&F contacts in reel vision, page 7

\*Crimping Tool, Page 15  
Sealing caps, Wrench Tools, page 16

**H4 Stamped and Formed Contacts for automatic assembly use**



**Technical Data**

Rated voltage	1500V DC per UL 6703 1000V DC per TÜV IEC62852	Cable OD range	Ø4.5mm - 7.8mm
Rated current (per IEC 62852, 85°C)	25A ( 2.5mm <sup>2</sup> /14AWG) 35A ( 4.0mm <sup>2</sup> / 12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated current (per UL 6703)	15A ( 2.5mm <sup>2</sup> /14AWG) 20A ( 4.0mm <sup>2</sup> / 12AWG) 30A (6.0mm <sup>2</sup> /10AWG)	Ambient temperature range	-40°C to +85°C (TÜV) -40°C to +90°C (UL)
Rated impulse voltage	12kV(1000V DC per TÜV)	Upper limiting temperature	+120°C
Typical contact resistance	≤0.3mΩ	Flame class	UL 94 V-0
Contact material	Tin-plated Copper Alloy	Oversvoltage category/Pollution degree	CAT III/2
Type of termination	Crimping	Material safety	RoHS, REACH compliant

Approvals:  
**TÜV** certified to IEC 62852  
**UL** certified to UL6703

R50388083

E339277

**How to Order S&F contacts on Reels (please choose one code per position, below)**

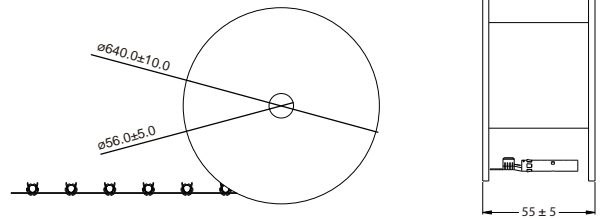
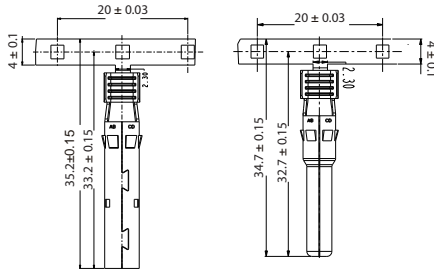
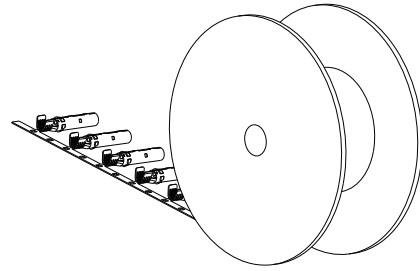
Part Number Coding: H4 F F 4 R

Product Line	Product Type	Gender	Cable Size	Packaging	
<b>H4</b> (H4 series)	<b>F</b> (S&F contact)	<b>F</b> Female	2	1.5mm <sup>2</sup> / 16AWG & 2.5mm <sup>2</sup> / 14AWG	<b>R</b> 2000pcs/reel
		<b>M</b> Male	4	4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10AWG	

Note: if ordering contacts in 2000pcs/reel version, need to order contact and plastic housing separately. Contact's ordering code refers to this table, plastic housing should be chosen as H4CF0DM for female housing and H4CMC0DM for male housing.

\*H4 S&F contacts in Reel vision is designed for fully automatic assembly.  
 \*Crimping Tool, Page 15

**UTX Stamped and Formed Contacts for automatic assembly use**



**Technical Data**

Rated voltage	1500V DC per UL 6703 1500V DC per TÜV IEC62852 1500V DC per JET IEC61730	Cable OD range	Ø5.3mm – 7.65mm
Rated current (per IEC 62852, 85°C)	25A (2.5mm <sup>2</sup> /14AWG) 35A (4.0mm <sup>2</sup> /12AWG) 45A (6.0mm <sup>2</sup> /10AWG)	Ingress protection rating	IP68, mated (1 m, 1 h) & IP2X touch-proof, unmated
Rated current (per UL6703)	15A (2.5mm <sup>2</sup> /14AWG) 20A (4.0mm <sup>2</sup> /12AWG) 30A (6.0mm <sup>2</sup> /10AWG)	Ambient temperature range	-40°C to +85°C (TÜV) -40°C to +90°C (UL)
Rated impulse voltage	16kV(1500V DC per TÜV)	Upper limiting temperature	+105°C
Typical contact resistance	≤0.3mΩ	Flame class	UL 94 V-0
Contact material	Tin-plated Copper Alloy	overvoltage category/Pollution degree	CATIII/2
Type of termination	Crimping	Material safety	RoHS, REACH compliant

Approvals:  
TÜV certified to IEC 62852  
UL certified to UL6703  
JET certified to IEC61730



R50340393

E469330

B14T0080

**How to Order S&F contacts on Reels (please choose one code per position, below)**

Part Number Coding: **UTX** **F** **F** **4** **R**

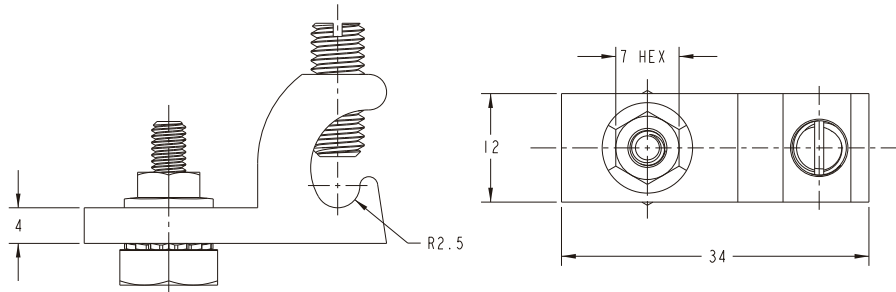
Product Line	Product Type	Gender	Cable Size	Packaging
<b>UTX</b> (UTX series)	<b>F</b> (S&F contact)	<b>F</b> Female	<b>2</b> 2.5mm <sup>2</sup> / 14AWG	<b>R</b> 2000pcs/reel
		<b>M</b> Male	<b>4</b> 4.0mm <sup>2</sup> /12 AWG & 6.0mm <sup>2</sup> /10AWG	

Note: if ordering contacts in 2000pcs/reel version, need to order contact and plastic housing separately. Contact's ordering code refers to this table, plastic housing should be chosen as UTXCF0AM for female housing and UTXCMA0AM for male housing.

\* UTX S&F contacts in Reel vision is designed for fully automatic assembly.

\* Crimping Tool, Page 15

## HelioLug



Certified to UL 2703 and cUL QIMS7 for Photovoltaic Bonding.



### How to Order a Helios grounding lug:

Part Number Coding:



## Installation instructions:

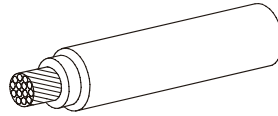
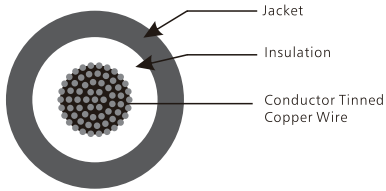
Place the lug to the designated module grounding hole with the star washer between the grounding lug and the module frame in order to break through the anodizing and establish electrical contact with the aluminum, Torque the bolt and nut to 30 in-lbs. Note: these instructions provide guidelines for general use, if available, the specific module manufacturer's instructions for the location of the star washer is to be followed.

For the attachment to the racking, slide the bolt into the mounting channel of the extrusion or into a hole drilled through the extrusion, Place the star washer between the racking and lug and secure the nut and bolt to 30 in-lbs.

Note: insert a 4 to 12 AWG copper wire into the lug and tighten the lug set screw to the copper wire to the torque based on the wire size. (4-6AWG at 35 in lbs and 8-12AWG at 30 in-lbs).

Do not exceed the maximum rate overcurrent protection, 20A/12AWG, 40A/10AWG, 90A/8AWG, 150A/6AWG, 200A/4AWG.

## PowerLink Solar Cable



**Structure:**

- Conductor: stranded bare or tinned copper
- Insulation: XLPE material ( white and black)
- Jacket: XLPE material (black, red and blue)
- Temperature range: -40°C to +85°C
- Environmental influence resistance: acid, alkalinity, UV, hydrolysis resistant.

### How to Order Cables (please choose one code per position, below)

Part Number Coding: **HC P B L 4 T0 0 0**

Product Line	Product Type	Cable color	Cable type	Cable size	Approvals	Spec	Jacket type
<b>HC</b> (Helios cable)	<b>P</b> Powerlink-standard	<b>B</b> Black	<b>L</b> VDE0295-CLASS 27 strands(USE-2)	<b>1</b> 1.5mm <sup>2</sup> /16AWG	<b>T0</b> TÜV 1000V DC <b>D0</b> Dual UL 600V DC, TÜV 1000V DC <b>D1</b> Dual UL 1000V DC, TÜV 1000V DC <b>U0</b> UL 600V DC <b>U1</b> UL 1000V DC <b>U2</b> UL 2000V DC <b>E1</b> EN 1500V DC <b>E2</b> Dual EN 1500V DC, UL 2000V DC	<b>0</b> Normal	<b>0</b> Normal type
		<b>R</b> Red		<b>2</b> 2.5mm <sup>2</sup> /14AWG			
	<b>A</b> Armorlin-rodent proof	<b>L</b> Blue	<b>M</b> VDE0295-CLASS 27 strands(USE-2)	<b>4</b> 4.0mm <sup>2</sup> /12AWG		<b>1</b> New extra thin	
		<b>G</b> Grey		<b>6</b> 6.0mm <sup>2</sup> /10AWG			
		<b>U</b> Powerlink-USE-2		<b>H</b> H VDE 0295-CLASS 5(UL, TUV and Dual)			<b>8</b> 10.0mm <sup>2</sup> /8AWG <b>9</b> 16.0mm <sup>2</sup> /4AWG <b>5</b> 25.0mm <sup>2</sup> /3AWG

## Features and Certificates:

Halogen free photovoltaic cables are used as the interconnection wiring for photovoltaic power systems.

Suitable in heavy-duty and harsh environment interconnections.

Flexibility at low temperature.

Thermoset-insulated conductor.

Thermoplastic jacket.

Long-term insulation resistance to moisture.

Anti-Termite

Range from 1.5mm<sup>2</sup> to 16.0mm<sup>2</sup>.

**Certificated to:**

EN 50618, 1500V DC

TÜV 2 pfG 1169/08.2007 PV1-F

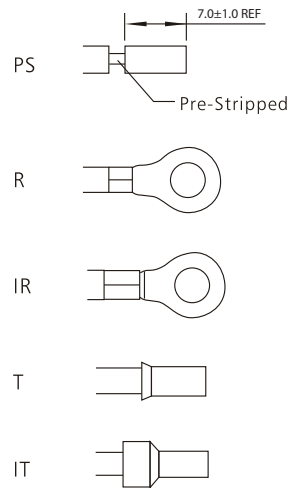
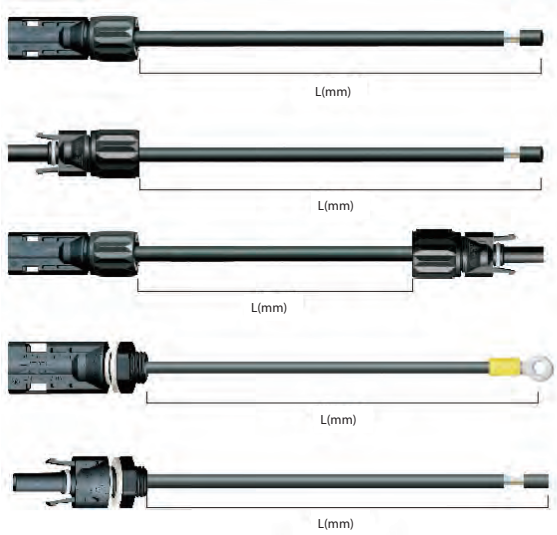
TÜV 2 pfG 1990/05.2012 PV 1500 DC-F

UL 4703 PV wire, cTÜVus

UL 4703 PV wire, 600V DC, 1000V DC, 2000V DC

\* Customized options available, for more information, please contact Amphenol Industrial Sustainable Technology sales department.

**PV Cable Assemblies**



**How to Order PV Cable Assemblies (please choose one code per position, below)**

Part Number Coding: **HC** **P** **F** **C** **4** **T0** **B** **PS**

Product Line	Product Type	Gender	Cable type	Cable size	Approvals	Cable Length	Cable color	End type	Variations*
<b>HC</b> (Helios cable)	<b>P</b> H4	<b>F</b> Female	<b>C</b> Cable gland	<b>2</b> 2.5mm <sup>2</sup> /14AWG	<b>T0</b> TÜV 1000V DC <b>D0</b> Dual UL 600V DC, TÜV 1000V DC <b>D1</b> Dual UL 1000V DC, TÜV 1000V DC <b>U0</b> UL 600V DC <b>U1</b> UL 1000V DC <b>U2</b> UL 2000V DC <b>E1</b> EN 1500V DC <b>E2</b> Dual EN 1500V DC, UL 2000V DC	5000mm	<b>B</b> Black	<b>PS</b> Pre-stripped wire <b>R</b> Ring terminal <b>IR</b> Isolated ring terminal <b>T</b> Tube terminal <b>IT</b> Isolated tube terminal	Customized options
	<b>A</b> UTX			<b>M</b> Male		<b>4</b> 4.0mm <sup>2</sup> /12AWG	10000mm		
	<b>U</b> H4-R	<b>N</b> Panel M14	<b>6</b> 6.0mm <sup>2</sup> /10AWG			12000mm	<b>L</b> Blue		
		<b>P</b> Mated pair	<b>O</b> Over-mold			<b>8</b> 10.0mm <sup>2</sup> /8AWG	• •		

**Features and Certificates:**

Halogen free photovoltaic cables are used as the interconnection wiring for photovoltaic power systems.

Suitable in heavy-duty and harsh environment interconnections.

Flexibility at low temperature.

Thermoset-insulated conductor.

Thermoplastic jacket.

Long-term insulation resistance to moisture.

Anti-Termite

Range from 1.5mm<sup>2</sup> to 16.0mm<sup>2</sup>.

**Certificated to:**

EN 50618, 1500V DC

TÜV 2 pfG 1169/08.2007 PV1-F

TÜV 2 pfG 1990/05.2012 PV 1500 DC-F

UL 4703 PV wire, cTÜVus


UL 4703 PV wire, 600V DC, 1000V DC, 2000V DC

\* Customized options available, for more information, please contact Amphenol Industrial Sustainable Technology sales department.

**Overmolded Junction Cable Assemblies**



**Technical Data**

Rated voltage	1500V DC per UL 9703	Protection rating	IP68
Rated current options (per UL6703)	1A to 15A current ratings available	Ambient temperature range	-40°C to +75°C (UL9703)
Rated impulse voltage	16kV(1500V DC per TÜV)	Upper limiting temperature	+105°C
Contact material	Tin-plated Copper Alloy	Flame class	UL 94 V-0
Insulation material	Thermoplastic	Overvoltage category/Pollution degree	CATIII/2
Unlock type	Tool unlock type	Material safety	RoHS, REACH compliant
Approvals: Intertek to UL 9703			

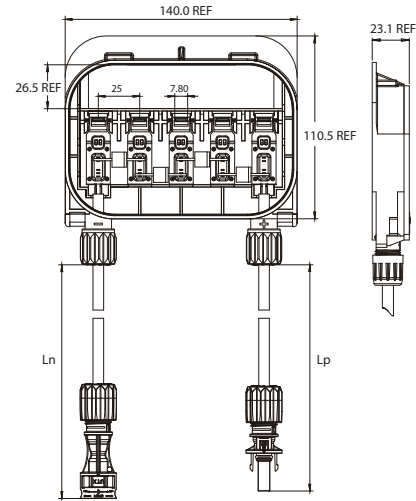
**How to Order a Overmolded junction (please choose one code per position, below)**

Part Number Coding: MD FU 20 4 8   15 U P 50



Product Line	Product Type	Voltage	Input cable size	Output cable size	Junction type	Fuse current	Input connector	Gender	Cable length
<b>MD</b> (Overmolded junction)	<b>H</b> Cable harness	<b>10</b> 1000V DC	<b>2</b> 14AWG	<b>2</b> 14AWG	<b>X</b> X overmolded junction	<b>1</b> 1A	<b>H</b> H4	<b>P</b> Positive	<b>50</b> 50mm
			<b>4</b> 12AWG	<b>4</b> 12AWG		<b>2</b> 2A			<b>100</b> 100mm
	<b>FU</b> Fuse jumper	<b>20</b> 1500V DC	<b>6</b> 10AWG	<b>6</b> 10AWG	<b>Y</b> Y overmolded junction	⋮	<b>U</b> UTX	<b>N</b> Negative	<b>1200</b> 1200mm
			<b>8</b> 8AWG	<b>8</b> 8AWG		<b>T</b> T overmolded junction			<b>15</b> 15A
					<b>Blank</b> Single jumper	without fuse			⋮

\* For customized X/Y/Z Overmolded junction cable assemblies, please contact Amphenol Industrial Sustainable Technology sales department.

**Hercules III 5T4D PV Junction Box**



**Technical Data**

Rated voltage	1000V DC per TÜV IEC62790 1000V DC per UL 3730	Pitch distance	25mm
Rated current	11A	Protection rating	IP68
Ribbon connection	Clamping	Ambient temperature range	-40°C to +85°C
Terminal quantity	5 rails	Flame class	UL 94 V-0, 5VA
Number of diodes	4	Overvoltage category/Pollution degree	CATIII/2
Sealing type	O-ring	Material safety	RoHS, REACH compliant
Ribbon connection	Clamping	Approvals:	 
Connector type	Amphenol UTX	UL certified to UL 3730	
Ribbon width	6.5mm Max	TÜV certified to TÜV IEC62790	

**How to Order a Junction Box (please choose one code per position, below)**

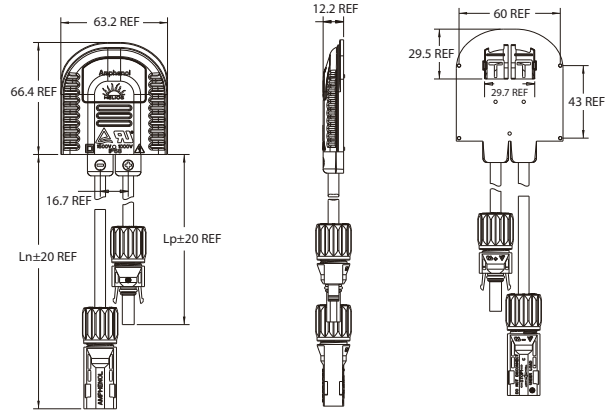
Part Number Coding: **HB** **D** **C** **C** **A** **C**

Product Line	Product Type	Rated voltage	Rated current & Diode	Cable Length	Variations*
<b>HB</b> (Helios JB)	<b>D</b> (Hercules III Junction box)	<b>C</b> TÜV 1000V/ UL 1000V(5T4D type)	<b>C</b> 11A (25PV045)	<b>A</b> Ln:1000mm, Lp: 1000mm <b>B</b> Ln: 12000mm, Lp: 1200mm • • •	<b>C</b> old version body and lid <b>D</b> new version body and lid • • •


\* Customized options available, for more information, please contact Amphenol Industrial Sustainable Technology sales department.



**Thin-film PV Junction Box**



**Technical Data**

Rated voltage	1000V DC per UL 3730	Ambient temperature range	-40°C to +90°C
Rated current options	1A ~ 20A (without diode),4A(with diode)	Flame class	UL 94 V-0, 5VA
Sealing type	Potting	Overvoltage category/Pollution degree	CATIII/2
Termination type	Soldering	Material safety	RoHS, REACH compliant
Connector type	Amphenol H4	Approvals:	 E346053
Protection rating	IP68	UL certified to UL 3730	

**How to Order a Junction Box (please choose one code per position, below)**

Part Number Coding: **HB T G B G A N C . . .**

Product Line	Product Type	Terminals and diodes	Terminal style	Diode rating	Sealing type	Breathing hole	Cable size
<b>HB</b> (Helios JB)	<b>T</b> (Thin film Junction box)	<b>G</b> 2 contacts & 1 diodes	<b>B</b> Soldering contacts	<b>G</b> 5A, 1000V	<b>A</b> potting	<b>N</b> No	<b>C</b> 2.5mm <sup>2</sup> / 14AWG
				<b>H</b> 10A, 1000V			
				<b>J</b> 8A, 1000V			
				<b>K</b> 20A, 1200V			
				<b>N</b> Without diode			

. . . **Y Y Y U**

Adhesive	Cable Length Positive(Ln)	Cable Length Negative(Lp)	Variations*
<b>Y</b> Yes	<b>Y</b> 1000mm	<b>Y</b> 1000mm	<b>H</b> H4 connectors . . .
<b>N</b> No	<b>B</b> 900mm	<b>B</b> 900mm	

\* Customized options available, for more information, Please contact Amphenol Industrial Sustainable Technology sales department.

## Crimping Tool

- \* Both machined contacts, stamped and formed contacts can be crimped.
- \* Suited for cable sizes of 2.5mm<sup>2</sup>/ 14AWG, 4.0mm<sup>2</sup>/12 AWG, 6.0mm<sup>2</sup>/10AWG.
- \* The die set and locator can be ordered separately.
- \* For flexible cable use only.



### Crimping Tool

Appearance	Order number <sup>*1</sup>	Cable Range	Suitable for type of contacts			
			H4 S&F	H4 CF	UTX S&F	UTX C&F
	H4TC0003	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG	x			
	UTXTC0003	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG			x	
	UTXTC0004	4.0mm <sup>2</sup> / 12AWG ;6.0mm <sup>2</sup> /10 AWG 10.0mm <sup>2</sup> /8AWG		x		x
	UTXTC0005 <sup>*2</sup>	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG		x		x

\*1 Die set and locator are included in the crimping tool.

\*2 UTXTC0005 is specifically used for cable size of 4.0mm<sup>2</sup>/12 AWG&6.0mm<sup>2</sup>/10AWG with Amphenol's H4 and UTX special version of 4&6 mm<sup>2</sup> Cold Formed contacts.

### Individual Parts to be ordered separately

Appearance Locators & Crimping dies	Order number	Designation	Cable Range	Suitable for type of contacts			
				H4 S&F	H4 CF	UTX S&F	UTX C&F
	H4TP0002	Locator	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG	x			
	UTXTP0002	Locator	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG			x	
	UTXTP0004	Double-Locator	4.0mm <sup>2</sup> / 12AWG ;6.0mm <sup>2</sup> /10 AWG 10.0mm <sup>2</sup> /8AWG		x		x
	UTXTP0003 <sup>*3</sup>	Double-Locator	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12AWG 6.0mm <sup>2</sup> /10AWG		x		x
	UTXTD0003	Crimping Die	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG	x		x	
	UTXTD0005	Crimping Die	4.0mm <sup>2</sup> / 12AWG ;6.0mm <sup>2</sup> /10 AWG 10.0mm <sup>2</sup> /8AWG		x		x
	UTXTD0004 <sup>*3</sup>	Crimping Die	2.5mm <sup>2</sup> / 14AWG ;4.0mm <sup>2</sup> /12 AWG 6.0mm <sup>2</sup> /10AWG		x		x

\*3 Locator UTXTP0003 and crimping die UTXTD0004 is specifically used for cable size of 4.0mm<sup>2</sup>/12 AWG&6.0mm<sup>2</sup>/10AWG with Amphenol's H4 and UTX special version of 4&6 mm<sup>2</sup> Cold Formed contacts.

**Tools and Accessories**

**Tools and Accessories**



Strip Tool

**Order number:** H4TS0000

**Description**

Designed with a locator to set a certain striped 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's assembly.



Wrench Tool for H4 Connectors

**Order number:** H4TW0001

**Description**

H4 Wrench Tool is used to tighten the caps of H4 Cable connectors and to unlock the locked H4 series connectors.



Wrench Tool for H4-R connectors

**Order number:** H4TW0003

**Description**

H4-R Wrench Tool is used to tighten the caps of H4-R series Cable connectors and to unlock the locked H4 series connectors.



Wrench Tool for UTX connectors

**Order number:** UTXTW0001

**Description**

UTX Wrench Tool is used to tighten the caps of UTX Cable connectors and to unlock the locked UTX series connectors.



Sealing caps for connectors

**Order number:** UTXPF      UTXPM

**Description**

Sealing caps for tight sealing of the unplugged connectors, suitable for Amphenol's H4 and UTX series connectors, preventing moisture and dust from getting into the unplugged connectors.



Universal Unlock Tool

**Order number:** H4TU0000

**Description**

This universal unlock tool is used to unlock mated connectors, compatible with all Amphenol's H4 series and UTX series connectors, also suited for MC4 connectors.



Inspection Tool for UTX connectors

**Order number:** UTXTT0001

**Description**

This inspection tool is for testing the UTX contact's insertion depth, to control the correct and proper engagement of the UTX contact in the insulation.



Inspection Tool for H4 connectors

**Order number:** H4TT0001

**Description**

This inspection tool is for testing the H4 contact's insertion depth, to control the correct and proper engagement of the H4 contact in the insulation.

# Amphenol Industrial Sustainable Technologies

## Contact us

Amphenol Technology (Shenzhen) Co., Ltd.

Email: [info@amphenol-industrial.com](mailto:info@amphenol-industrial.com)

Tel: +86-755-29918389

Web: [www.amphenol-solar.com](http://www.amphenol-solar.com)

Building C, 2nd Industrial Zone of Xia Shi Jia, Guangming New District,  
Shenzhen, China. 518106

**2018**

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