



**Amphenol®**

# Solar Line



ICS-18-2 Release date: May, 2011

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Telephone: 1-432-687-2553 • Fax: 1-432-687-2278

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### **Amphenol SINCERE FLEX CIRCUITS CO. LTD** No.A, WanAn Industrial Park LanHe Town, Panyu District, Guangzhou - China 511480

Telephone: 020-3483-9801 • Fax: 020-3483-9800

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



Manufacturing connectors since 1932, we take pride that Amphenol Industrial is the undisputed leader in interconnect systems for harsh environment applications. Such applications require a high degree of engineering sophistication and precision manufacturing capability. Innovations like our RADSO<sup>K</sup> contact technology can provide roughly 50% more current through the same size pin. Connectors utilizing this RADSO<sup>K</sup> technology will outperform similar products in the market hands down.



AIO Headoffice, Sidney, NY, USA

Amphenol Industrial Operations (AIO), division of Amphenol Corporation, is the leading manufacturer of cylindrical connectors in the world. Amphenol Industrial's product lines consist of rectangular, standard miniature, fiber optic, EMI/EMP filter, and a variety of special application connectors.

The Sidney, NY facility, nestled at the foothills of the Catskill Mountains, is over 675,000 square feet. This complex houses over 1,400 employees, incorporating state-of-the-art manufacturing technologies. The facility is both ISO9001 certified and qualified to MIL-STD-790 requirements.

Our manufacturing capabilities include state-of-the-art CNC machining, die-casting, molding, impact and extruding, plating, screw machining and process controls.

AIO also has a fully equipped material evaluation lab and an engineering support organization utilizing the latest in computer aided design software and analysis tools.

The Amphenol Industrial division is supported by two satellite plants and one of the largest distributor networks in the world.



*Your powerful connection to the sun*

## Table of Contents

	Page No.
H4 PV cable connector	1-2
H4 PV panel connector	3-4
H4 Stamped and formed contact	5
H4 Branch connector	6
H4 Protective cap	7
PowerLink Solar cable	8-9
H4 Over-molded PV cable assemblies	10
PV cable assemblies	11-12
Amphenol PV Junction box ordering inquiry form	13
HelioLink™ PV Junction box	14-15
Hercules™ PV Junction box	16-17
Transformer™ PV Junction box	18-19
Thin-film PV Junction box	20-21
Pencil PV Junction box	22
Amphoton PV Junction box	23-27

## H4 PV cable connector

H4 Female PV cable connector



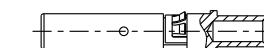
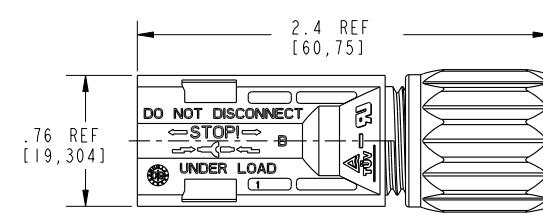
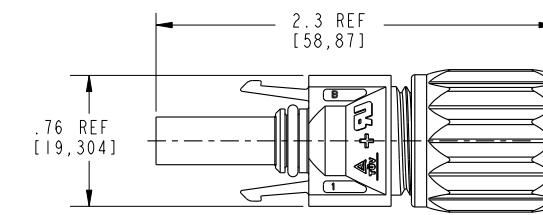
H4 Male PV cable connector



H4 Female socket contact



H4 Male pin contact



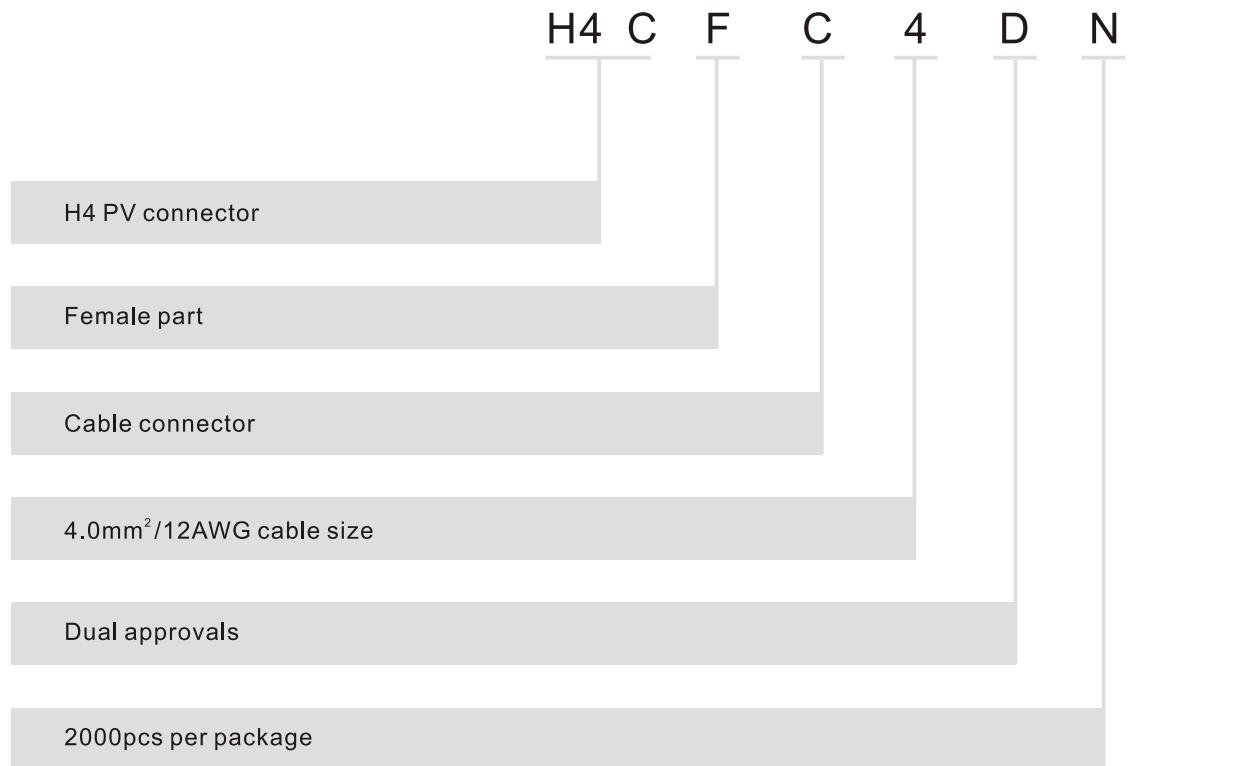
## Technical Data

<b>Rated current</b>	32A(2.5mm <sup>2</sup> ,14AWG),40A(4.0mm <sup>2</sup> ,12AWG), 44A(6.0mm <sup>2</sup> ,10AWG), 65A(10.0mm <sup>2</sup> , 8AWG)
<b>Rated voltage</b>	1000V (IEC/CEI), 600V(UL)
<b>Test voltage</b>	6kV for 1 minute, 10kV impulse (1.2/50 μS)(IEC)
<b>Typical contact resistance</b>	0.25mΩ
<b>Contact material</b>	Copper, tin plated
<b>Contact system</b>	Machined/cold formed contact with RADSOKE® insert
<b>Insulation material</b>	PC
<b>Locking mechanism</b>	Snap-lock, special unlocking tool required to un-mate as required by NEC2008
<b>Cable strain relief</b>	Compression gland with ratcheting gland nut
<b>Degree of protection</b>	IP68 (1 meter, 1 hour) mated
<b>Safety class</b>	II (IEC61140)
<b>Pollution degree</b>	2 (IEC60664)
<b>Overvoltage category</b>	III (IEC60664)
<b>Flame class</b>	UL94 V-0
<b>Ambient temperature range</b>	-40°C--- +90°C

## How to order

Product line	Product type	Gender	Connector type	Cable size	Approvals	Packaging	Variations
H4	Helios H4	C	Connector	F Female +	C Cable gland	2 2.5 mm <sup>2</sup> /14AWG	T TÜV I Single S S&F contact (single contact)
		M	Male -			4 4.0 mm <sup>2</sup> /12AWG	U UL C 100pcs bags T Screw termination (field installation)
		P	Mated pair			6 6.0 mm <sup>2</sup> /10AWG	D Dual D 500pcs bags
						8 10.0mm <sup>2</sup> /8AWG	M 1000pcs bags
						0 Less contact	N 2000pcs loose

## Ordering example:



## How to order assembly tools

Description	Ordering code
H4 Strip tool	H4TS0000
H4 Crimp Tool	H4TC0000
H4 Crimp Tool(new)	H4TC0001
H4 Wrench Tool(new)	H4TW0001
H4 Universal Unlocking Tool	H4TU0000
H4 Tool-Kit	H4TK0000

### Assembly Tool



Tool-Kit



Universal unlocking tool



Crimp tool for 2.5mm<sup>2</sup>-6.0mm<sup>2</sup> (14AWG-10AWG)



Wrench tool



Strip tool for 2.5mm<sup>2</sup>-6.0mm<sup>2</sup> (14AWG-10AWG)

## H4 PV panel connector

### H4 Female PV panel connector



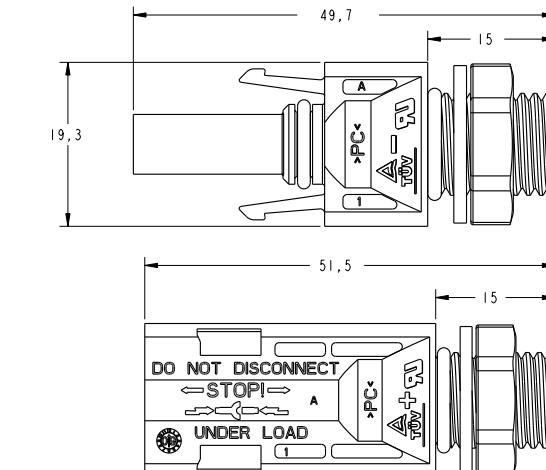
### H4 Female socket contact



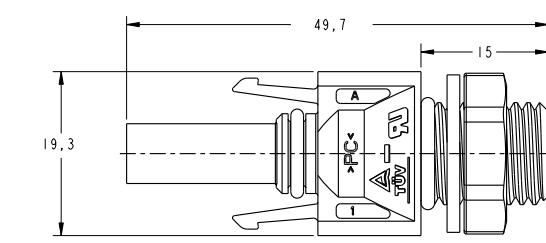
### H4 Male PV panel connector



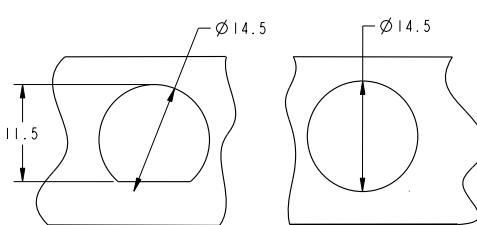
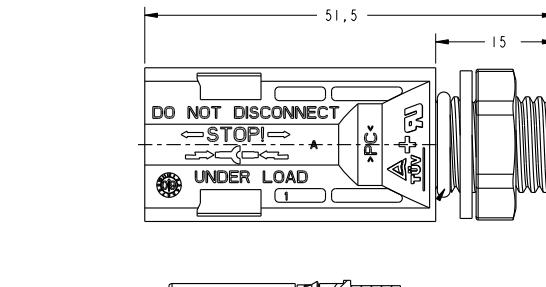
### H4 Male pin contact



M12

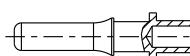


M14



D-HOLE  
ROUND HOLE

MOUNTING HOLE  
D-HOLE OR ROUND HOLE



## Technical Data

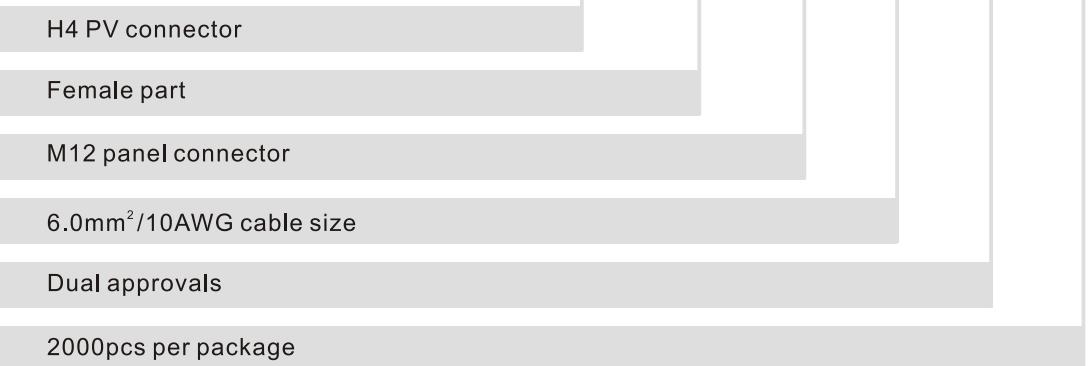
<b>Rated current</b>	32A(2.5mm <sup>2</sup> ,14AWG),40A(4.0mm <sup>2</sup> ,12AWG), 44A(6.0mm <sup>2</sup> ,10AWG), 65A(10.0mm <sup>2</sup> , 8AWG)
<b>Rated voltage</b>	1000V (IEC/CEI), 600V(UL)
<b>Test voltage</b>	6kV for 1 minute, 10kV impulse (1.2/50 μS )(IEC)
<b>Typical contact resistance</b>	0.25mΩ
<b>Contact material</b>	Copper, tin plated
<b>Contact system</b>	Machined/cold formed contact with RADSOKE® insert
<b>Insulation material</b>	PC
<b>Locking mechanism</b>	Snap-lock, special unlocking tool required to un-mate as required by NEC2008
<b>Cable strain relief</b>	Compression gland with ratcheting gland nut
<b>Degree of protection</b>	IP68 (1 meter, 1 hour) mated
<b>Safety class</b>	II (IEC61140)
<b>Pollution degree</b>	2 (IEC60664)
<b>Overvoltage category</b>	III (IEC60664)
<b>Flame class</b>	UL94 V-0
<b>Ambient temperature range</b>	-40°C--- +90°C

## How to order

Product line	Product type	Gender	Connector type	Cable size	Approvals	Packaging	Variations								
H4	Helios H4	C	Connector	F	Female +	M	Panel M12	2	2.5 mm <sup>2</sup> /14AWG	T	TÜV	I	Single	S	S&F contact (single contacts)
				M	Male -	N	Panel M14	4	4.0 mm <sup>2</sup> /12AWG	U	UL	C	100pcs bags	T	Screw termination (field installation)
				P	Mated pair			6	6.0 mm <sup>2</sup> /10AWG	D	Dual	D	500pcs bags		
								8	10.0mm <sup>2</sup> /8AWG			M	1000pcs bags		
								0	Less contact			N	2000pcs loose		

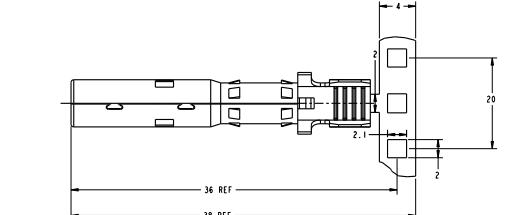
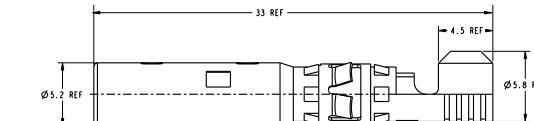
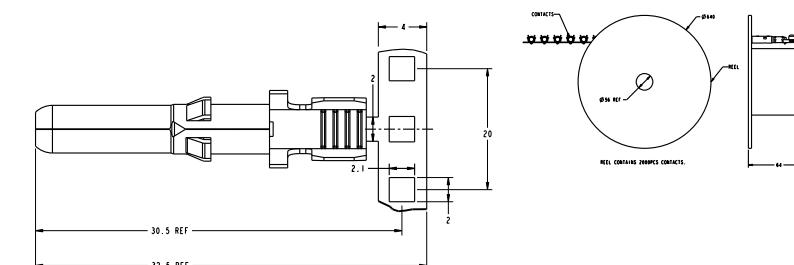
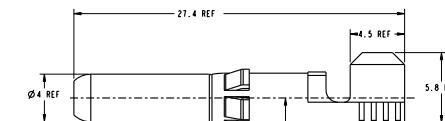
## Ordering example:

H4 C F M 6 D N



## H4 Stamped and formed contact

- Packaged on a reel for automatic assembly



## How to order

Product line	Contact type	Gender	Cable size	Packaging	Variations
H4	Helios H4	F	S&F contact	R	2000pcs reel
		M	Male -	2	2.5 mm <sup>2</sup> /14AWG
			4	4.0 mm <sup>2</sup> /12AWG;6.0mm <sup>2</sup> /10AWG	

\* The above code applies to the H4 cable connector and H4 panel connector with Stamped and Formed contacts.

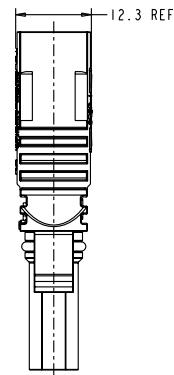
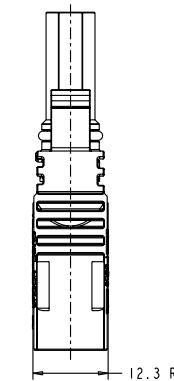
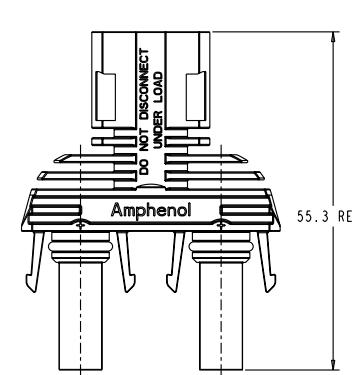
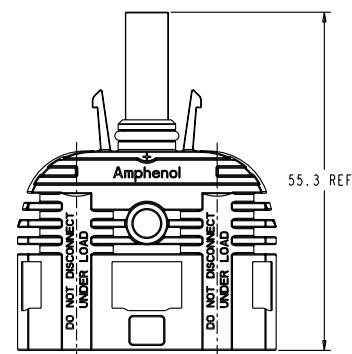
## Ordering example:

H4F F 2 R



## H4 Branch Connector

■ Quick field solar installation



### How to order

Product line		Product type		Gender	
H4	Helios H4	Y	Branch connector	X	FFM (branch 2 female/1 male)
				Y	MMF (branch 2 male/1 female)

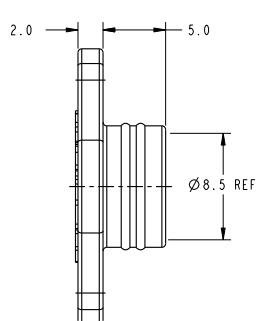
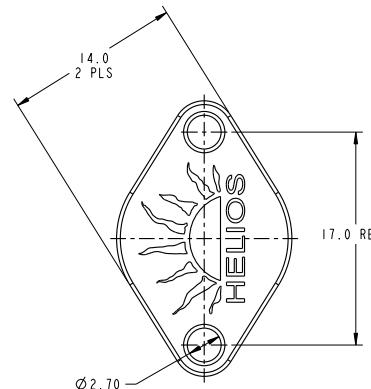
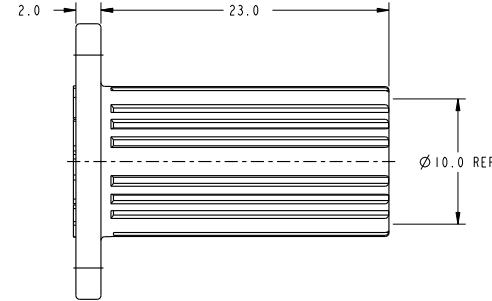
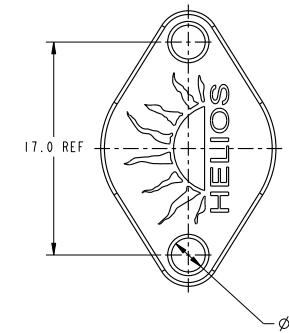
### Ordering example:

H4 Y Y

H4 branch connector

2 males, 1 female

## H4 Protective Cap



### How to order

Product line	Product type	Gender	Variations
H4	Helios H4	P	Protective cap
		F	Female +
		M	Male -

### Ordering example:

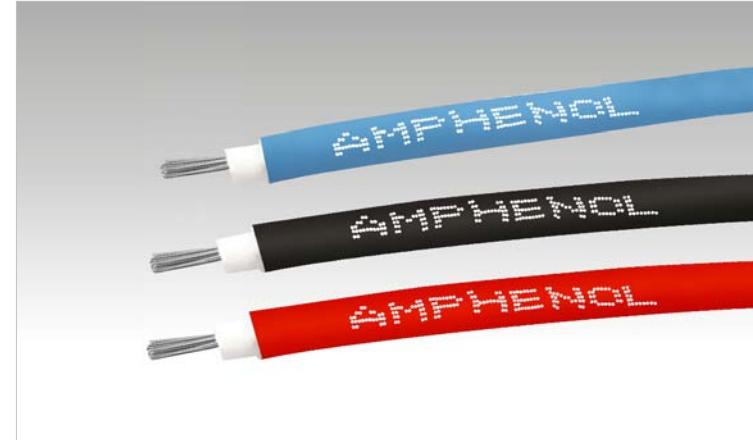
H4 P F

H4 protective cap

Female part

## PowerLink solar cable

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



### Features:

- Flexibility at low temperature
- Thermoset-insulated conductor
- Thermoplastic jacket
- Long-term insulation resistance to moisture
- Range from 1.5mm<sup>2</sup> to 25mm<sup>2</sup>

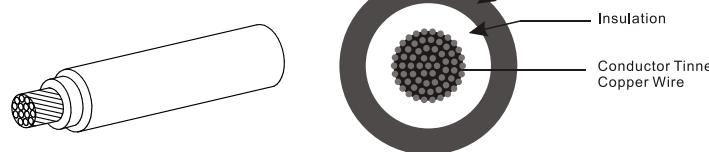


### Certificate:

TÜV and UL certified according to the latest regulations

### 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 +125°C

Environmental influence resistance:  
Acid, alkalinity, UV, ozone and hydrolysis-resistant.

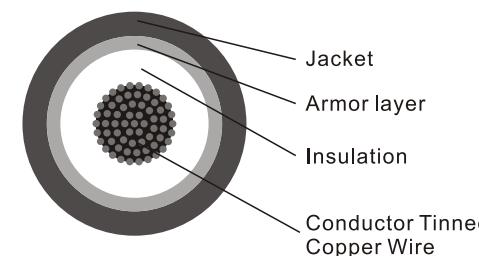
## ArmorLink Solar Cable

### Advantages:

- Rodent resistant
- Extra protection layer



Made using UL4703 and TÜV 2Pfg 1169 as guidelines.



## PowerLink solar cable application:

Used in heavy-duty and harsh environment interconnection wiring, can be easily combined with our Helios H4 PV connector and junction box series for photovoltaic system applications.



Cold  
Snow  
Low temperature



Sun  
Drought  
High temperature



Rain  
Moisture

### How to order

Product line	Product	Cable color	Cable type	Cable size	Approvals	Packaging	Variations
HC	Helios cable	P PowerLink -Standard	B Black - standard	L VDE 0295 - CLASS 2 7 STRANDS (USE -2)	1 1.5 mm <sup>2</sup> /16AWG	T TÜV	A 24" REEL
		A ArmorLink -Rodent Proof	R Red	M MULTIWIRE 19 STRANDS (UL only)	2 2.5 mm <sup>2</sup> /14AWG	U UL	B 36" REEL
			L Blue	H VDE 0295 - CLASS 5 (UL, TÜV and Dual)	4 4 mm <sup>2</sup> /12AWG	D Dual	C Bag
			G Grey		5 25mm <sup>2</sup> /3AWG	N None	
			O Brown		6 6 mm <sup>2</sup> /10AWG		
					8 10mm <sup>2</sup> /8AWG		
					9 16mm <sup>2</sup> /4AWG		

**Notes:** UL cable comes in AWG only

TÜV cable comes in mm<sup>2</sup> only

Dual cable comes marked with AWG and mm<sup>2</sup>

VDE 2095-CLASS 2 is 7 strands cable

Multi wire stranding is 19 strands cable

VDE 2095-CLASS 5 is high stranded cable with extra flexibility

### Packaging units

Ordering example: 2000m TÜV 2.5mm<sup>2</sup> black cable.

Ordering Number is: HCPBH2TA

Delivery package: 1 pc of 24" reel.



Wire AWG	Meters/ reel	
	24"	36"
14AWG/2.5mm <sup>2</sup>	2000m	4500m
12AWG/4.0mm <sup>2</sup>	1800m	4000m
10AWG/6.0mm <sup>2</sup>	1600m	3800m
8AWG/10mm <sup>2</sup>	1400m	3200m

## H4 Over-molded PV cable assemblies



■ Over-molded H4

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C

R50196698 E339277



■ T-junction

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C

in process in process



■ R-junction

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C

in process in process



■ Over-molded H4 branch

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C

in process in process



■ X-junction

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C

in process in process



■ Inline fuse connector

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C  
Surge rating: 600A max  
Blocking voltage: customer specified

in process in process



■ Over-molded inline fuse cable assembly

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C  
Surge rating: 600A max  
Blocking voltage: customer specified

in process in process



■ Inline diode connector

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C  
Withstand rating: 10kA  
Voltage rating: 1500V max  
Amperage rating: 30A max

in process in process



■ Over-molded inline diode cable assembly

Protection degree: IP68  
Cable range: 2.5mm<sup>2</sup>/14AWG- 10.0mm<sup>2</sup>/8AWG  
Temperature range: -40° C - +90° C  
Withstand rating: 10kA  
Voltage rating: 1500V max  
Amperage rating: 30A max  
Connector options: M-M,M-F,F-F

in process in process

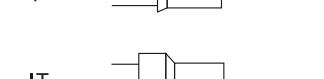
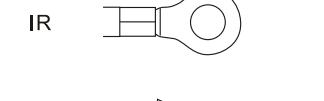
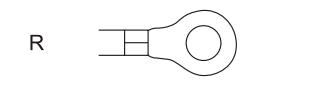
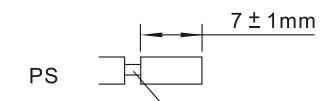
## PV cable assemblies

### How to order

Product line	Product type	Gender	Connector type	Cable size	Approvals
H4	Helios H4	C	Connector	F	Female +
				M	Male -
				P	Mated pair
				O	Over-mold
				2	2.5 mm <sup>2</sup> /14AWG
				4	4.0 mm <sup>2</sup> /12AWG
				6	6.0 mm <sup>2</sup> /10AWG
				8	10.0mm <sup>2</sup> /8AWG
				TÜV	TÜV
				UL	UL
				Dual	Dual

Cable length(mm)	Cable color	Termination		Variations
B	Black	PS	Pre-stripped wire	
R	Red	R	Ring terminal	
L	Blue	IR	Isolated ring terminal	
G	Grey	T	Tube terminal	
O	Brown	IT	Isolated tube terminal	

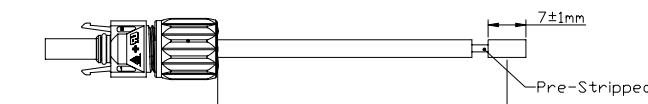
### Examples of cable assemblies and definition of cable length:



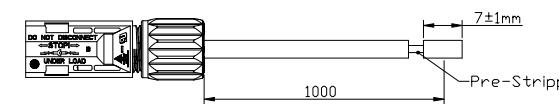
\* Other terminals and customized strip length are available.



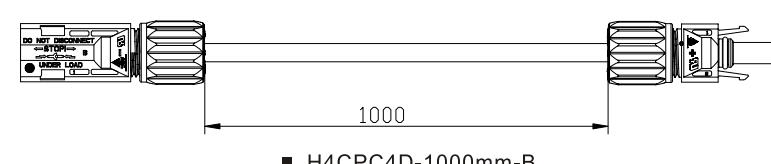
**Ordering examples:**



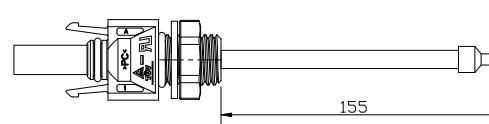
■ H4CFC4D-1000mm-B-PS



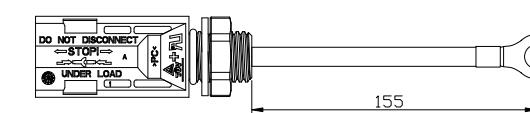
■ H4CMC4D-1000mm-B-PS



■ H4CPC4D-1000mm-B



■ H4CFM6D-155mm-B-T



■ H4CMM4D-155mm-B-IR

## H4 cable assemblies ordering inquiry form

Please fill the below form based on your application:

Customer Name	Country/Area	Reference No.	Quantity
<b>Left side</b>	<b>Cable part</b>	<b>Right side</b>	
	Cable size 2.5mm <sup>2</sup> /14AWG <input type="checkbox"/> 4.0mm <sup>2</sup> /12AWG <input type="checkbox"/> 6.0mm <sup>2</sup> /10AWG <input type="checkbox"/> 10.0mm <sup>2</sup> /8AWG <input type="checkbox"/>		
	Cable approvals TÜV <input type="checkbox"/> UI <input type="checkbox"/> Dual <input type="checkbox"/>		
	Cable color Black <input type="checkbox"/> Blue <input type="checkbox"/> Red <input type="checkbox"/> Grey <input type="checkbox"/> Brown <input type="checkbox"/>		

## Amphenol PV Junction box ordering inquiry form

Please fill in the following form so we can select the right product for your application.

### Amphenol

Customer Name:		Country/Area:		Sales:	
Part Name:		Part Name:		Request Date:	
Description:				Demand / Year:	
Target Price:		Sample request:		Sample request date:	

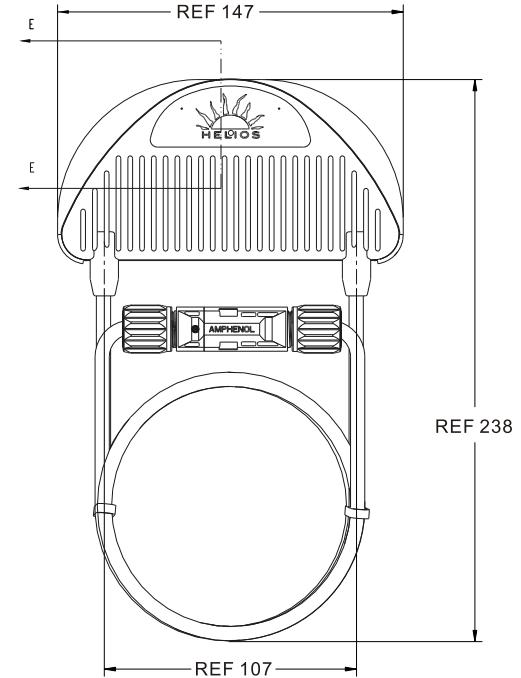
Information 1: (Photovoltaic Cable Standard) : UL4703 and/or UL854, TÜV2Pfg1169/2007 compliant

Information 2: (Photovoltaic Connector Standard) : UL6703(UL1703), TÜV EN50521/2008 compliant

Information 3: (Photovoltaic Junction Box Standard) : UL1703, TÜV DIN V VDE V 0126-5/2008 (&EN50548) compliant

Location:	<input type="checkbox"/> North-America	<input type="checkbox"/> Europe	<input type="checkbox"/> Other			
Certification:	<input type="checkbox"/> TÜV Cert.	<input type="checkbox"/> UL Cert.	<input type="checkbox"/> TÜV&UL Cert.			
Junction Box Type:	<input type="checkbox"/> BIPV	<input type="checkbox"/> Amorphous Silicon	<input type="checkbox"/> Monocrystalline Silicon			
	<input type="checkbox"/> Polycrystalline silicon	<input type="checkbox"/> Other				
Rails Qty:	Doide Qty:	Nominal Power[W]:	Open Circuit Voltage[V]:			
Short Circuit Current[A]:	Max Power Voltage[V]:	Max Power Current[A]:	Max System Voltage[V]:			
Cable length(mm):	<input type="checkbox"/> Includes connector	<input type="checkbox"/> Does not include connector	Copper foil width/thickness:			
Cable Size	TÜV Spec.	<input type="checkbox"/> 2.5mm <sup>2</sup>	<input type="checkbox"/> 4.0mm <sup>2</sup>	<input type="checkbox"/> 6.0mm <sup>2</sup>	Cable color	<input type="checkbox"/> Black( Recommended)
	UL Spec.	<input type="checkbox"/> 14AWG	<input type="checkbox"/> 12AWG	<input type="checkbox"/> 10AWG		<input type="checkbox"/> Black&Red
	TÜV&UL Spec.	<input type="checkbox"/> 2.5mm <sup>2</sup> /14AWG	<input type="checkbox"/> 4.0mm <sup>2</sup> /12AWG	<input type="checkbox"/> 6.0mm <sup>2</sup> /10AWG		
Connector:	<input type="checkbox"/> Amphenol H4	<input type="checkbox"/> Other:				
Attachment:	<input type="checkbox"/> (Attach drawing)	<input type="checkbox"/> (Attach Sample)	<input type="checkbox"/> (Attach remark)			
Comments:						

## HelioLink™ PV Junction Box



### Features:

- Hermetically sealed design; no moisture ingress, no condensation
- Patented, finger-type heat exchanger protects diodes from thermal destruction, even under adverse conditions
- Thermal separation from backsheet prevents formation of hot-spot
- Designed for automatic placement and termination
- Compact design
- Built to last, maintenance free



### Technical Data

<b>Rated current</b>	Up to 30A
<b>Rated operating voltage</b>	1000V DC (TÜV), 600V DC (UL)
<b>Rated max. reverse voltage per diode</b>	45 VDC (standard) 120 VDC (optional)
<b>Protection degree</b>	IP 68 (potted), IP67 (non-potted)
<b>Flame class</b>	UL94-V0
<b>Temperature range</b>	-40° C ~ +90° C
<b>Connection method</b>	welding
<b>Waterproofing structure</b>	Hermetically sealed, over-molded body
<b>Termination seal</b>	Termination area may be potted (no seal on cover) or non-potted (lip seal on cover)

### How to order

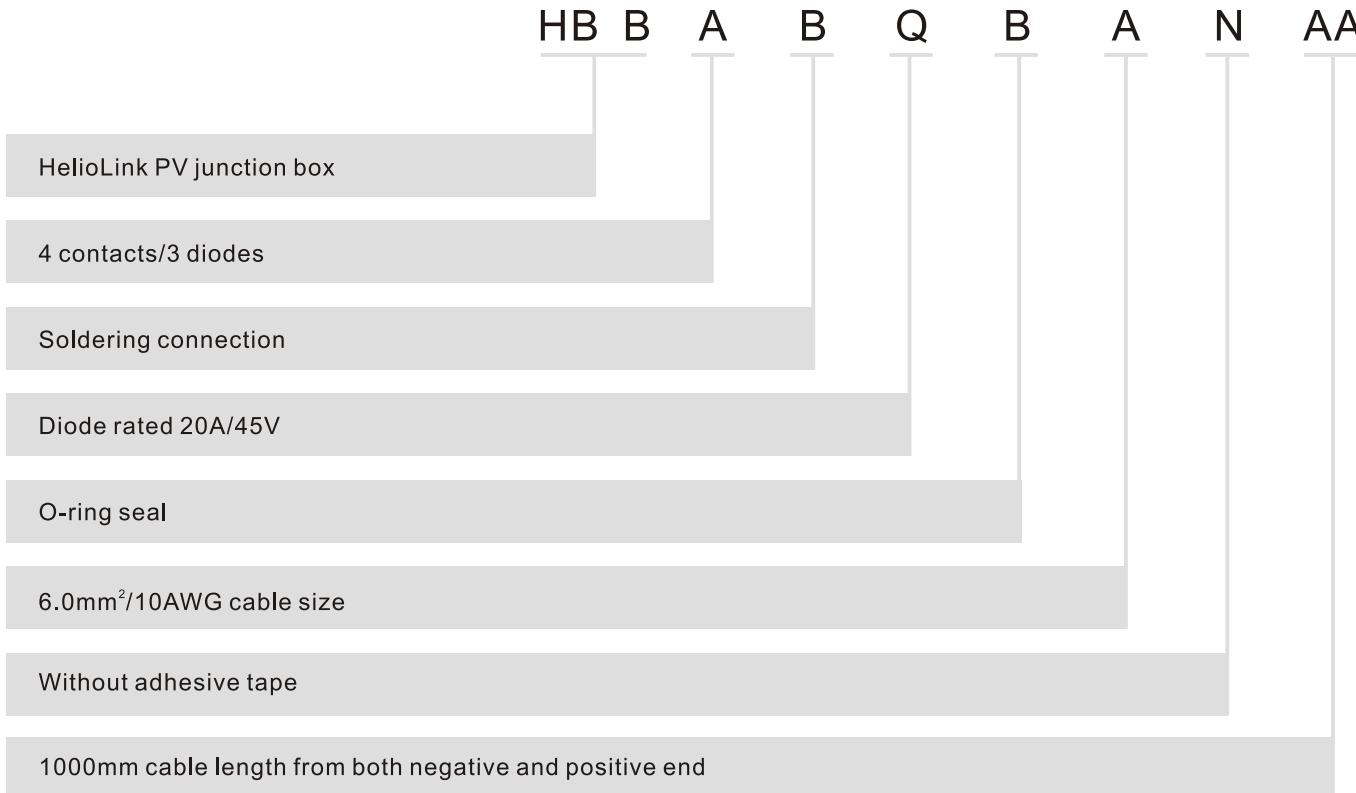
Product line	Product type	Terminals and Diodes		Terminal style		Diode rating	
HB	Helios JB	B	HelioLink junction box	A	4 contacts/3 diodes	A	Clamp contacts P 20A 100V
						B	Solder contacts Q 20A 45V

Sealing type	Cable size	Adhesive	Cable length (Ln)*	Cable length (Lp)*	Variations
A Potting	A 6.0 mm <sup>2</sup> /10AWG	Y Yes	A 1000mm	A 1000mm	
B O-ring	B 4.0mm <sup>2</sup> /12AWG	N No	B 900mm	B 900mm	

\* Ln:cable length on negative end; Lp:cable length on positive end

-Please contact us for additional variations

### Ordering example:



## Hercules™ PV Junction Box



### Features:

Same dimensions, multi variations  
IP67 rated  
Breathing hole for air exchange



### Technical data

Terminal quantity	3 rails or 4 rails
Rated current	30A
Rated voltage	UL: 600V DC IEC/TÜV: 1000V DC
Number of bypass diodes	2 or 3 or 4 or 6
Connection cross-section	12AWG/4.0mm <sup>2</sup> or 10AWG/6.0mm <sup>2</sup>
Temperature range	-40°C to +90°C
Protection degree	IP67
Dimensions	117x107x22mm
Flame class	UL94 V-0; 5VA
Ribbon connection	Clamping, soldering or spot welding
Breathing hole	With or Without
Connector type	Amphenol H4

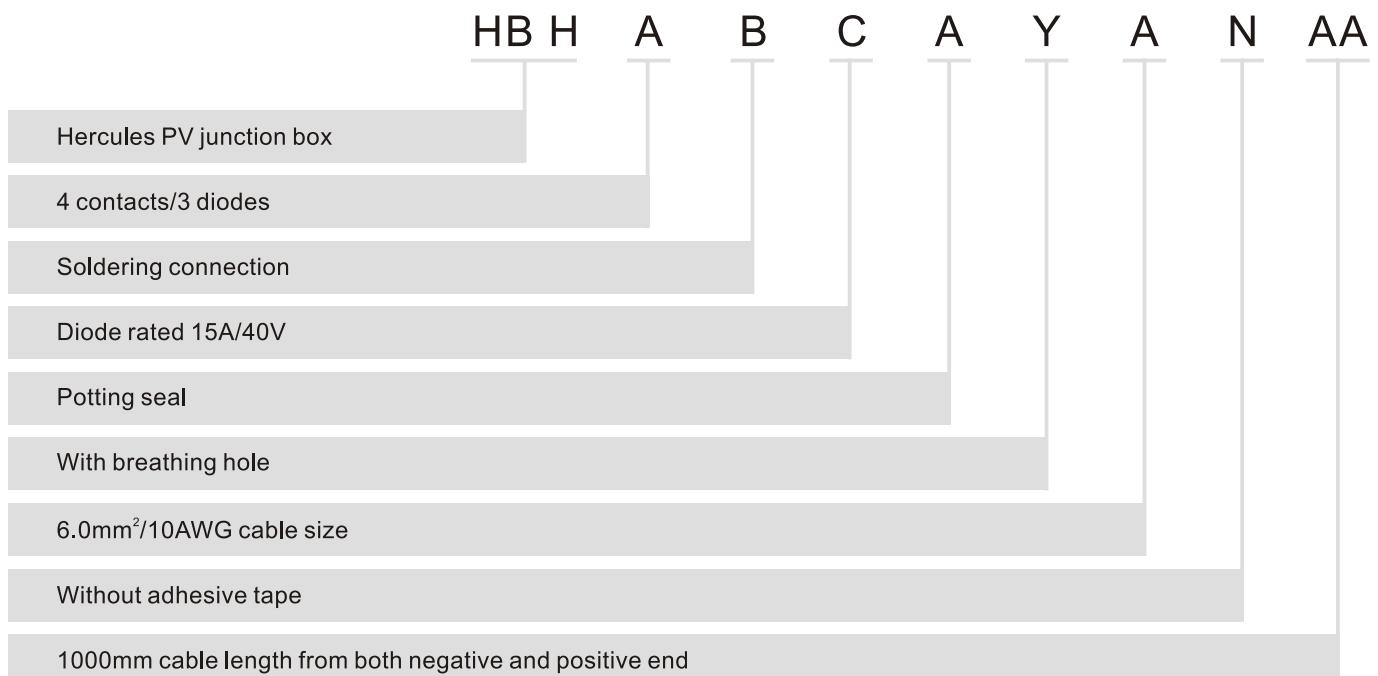
### How to order

Product line	Product type	Terminals and Diodes				Terminal style				Diode rating	
HB	Helios JB	H	Hercules Junction box	A	4 contacts/3 diodes	A	Clamp contacts		A	12A 200V	
				B	3 contacts(2 left/1 right)/2 diodes	B	Solder contacts		B	12A 40V	
				C	3 contacts(1 left/2 right)/2 diodes	C	Solder contacts left&right opening		C	15A 40V	
				D	4 contacts/6 diodes	D	Solder contacts left opening		D	30A 40V	
				E	3 contacts(2 left/1 right)/4 diodes	E	Solder contacts right opening		E	20A 40V	
				F	3 contacts(1 left/2 right)/4 diodes	F	Spot weld contacts		F	15A 45V	
Sealing type	Breathing hole	Cable size		Adhesive	Cable length (Ln)*	Cable length (Lp)*	Variations				
A	Potting	Y	Yes	A	6.0 mm <sup>2</sup> /10AWG	Y	Yes	A	1000mm	A	1000mm
B	O-ring	N	No	B	4.0mm <sup>2</sup> /12AWG	N	No	B	900mm	B	900mm

\* Ln:cable length on negative end; Lp:cable length on positive end

- Please contact us for additional variations

### Ordering example:

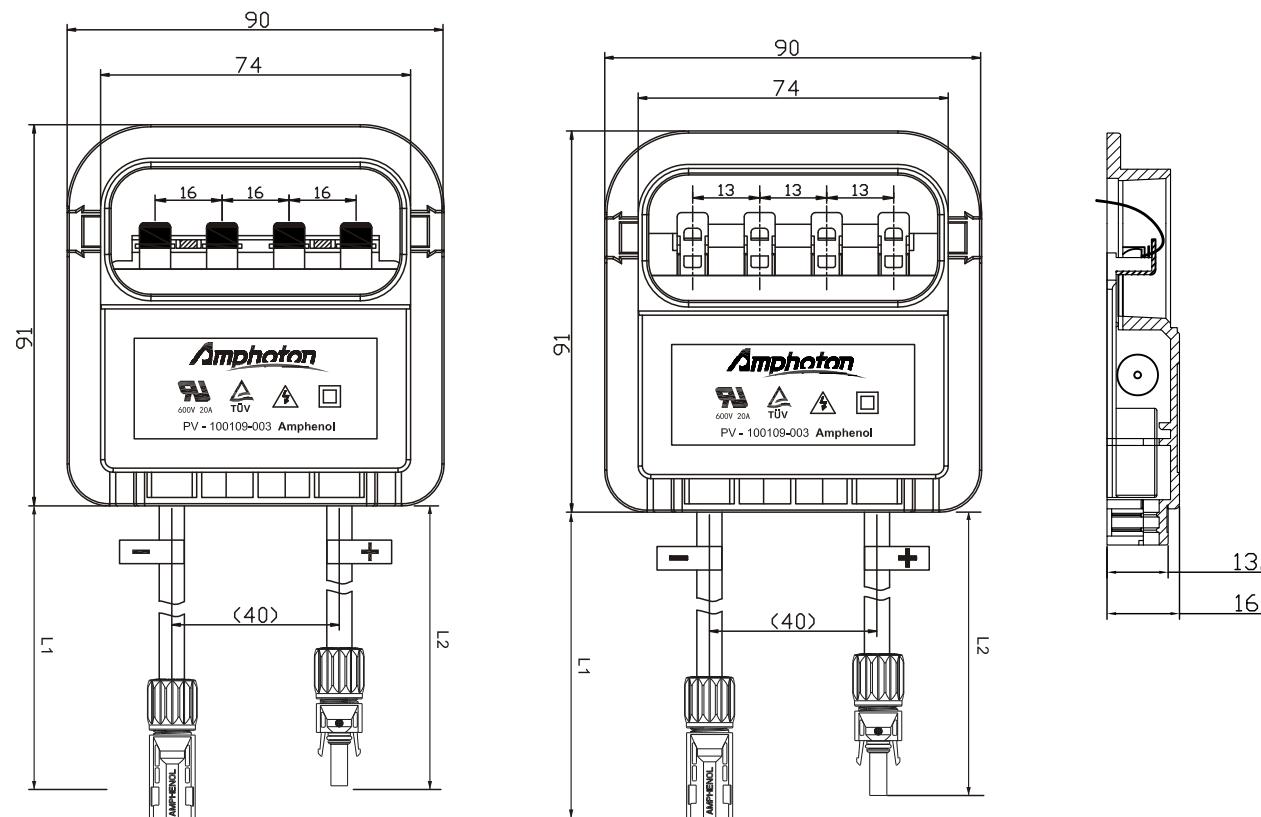


## Transformer™ PV Junction Box



### Features:

Same dimensions, multi variations  
Per-potted for high reliability  
Low profile



### Technical Data

Rated current	20A
Rated voltage	1000V DC (IEC/CEI), 600V DC (UL)
Terminal ribbon	2/3/4pcs
Contact material	Copper, Tin plated
Insulation material	PPE
Bypass diode	1/2/3pcs
Bypass current	10,12,15A
Dimension	91x90x17mm
Protection degree	IP65(Gasket), IP67(Potting)
Temperature range	-40° C - +90° C
Certificate	TÜV/UL

### How to order

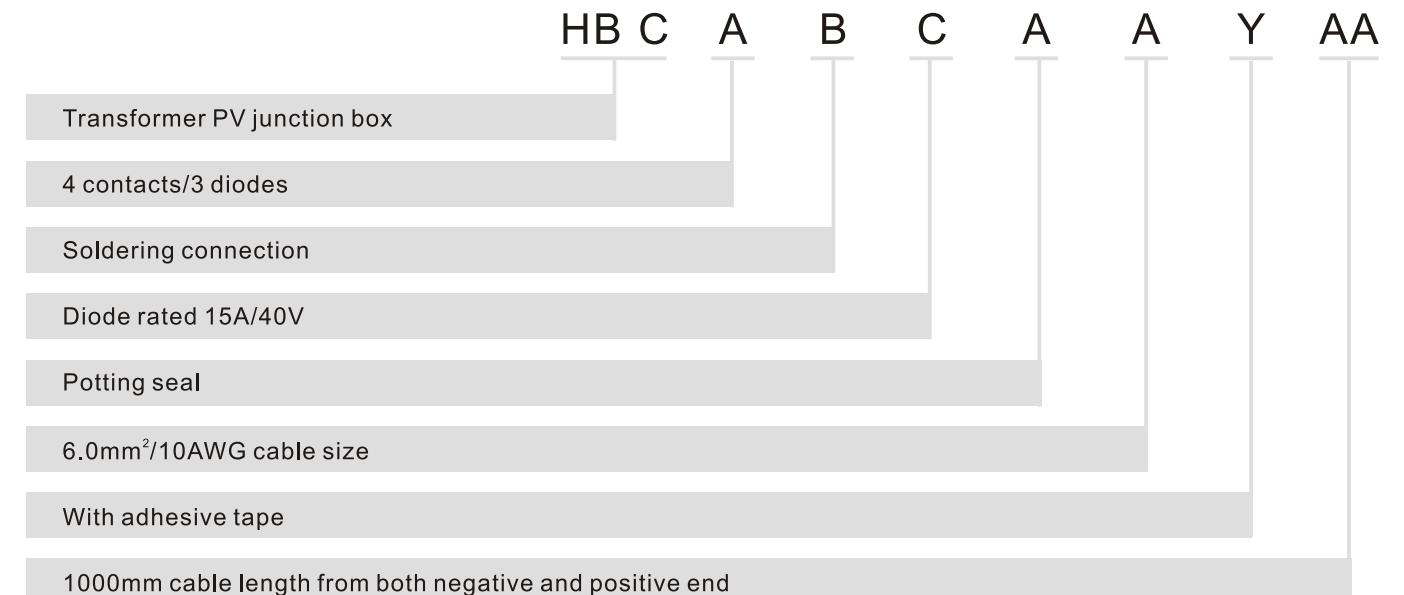
Product line	Product type	Terminals and Diodes		Terminal style		Diode rating	
HB	Helios JB	C	Transformer junction box	A	4 contacts/3 diodes	A	Clamp contacts
				B	3 contacts(2 left/1 right)/2 diodes	B	Solder contacts
				C	3 contacts(1 left/2 right)/2 diodes	Z	10A 50V

Sealing type	Cable size		Adhesive	Cable length (Ln)*		Cable length (Lp)*	Variations
A	Potting	A	6.0 mm²/10AWG	Y	Yes	A	1000mm each
B	O-ring	B	4.0mm²/12AWG	N	No	B	900mm each

\* Ln:cable length on negative end; Lp:cable length on positive end

- Please contact us for additional variations

### Ordering example:



## Thin-film PV junction box

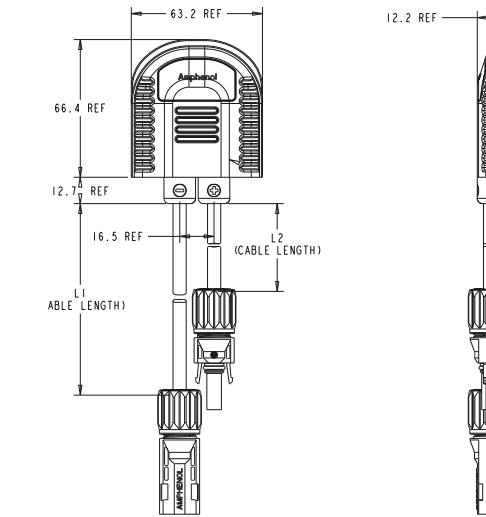

**Features:**

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



### Technical Data

Rated current	Up to 20A
Rated voltage	1000V DC (TÜV), 600V(UL)
Protection degree	IP 67
Flame class	UL94 V-0
Temperature range	-40° C ~ +90° C
Termination style	Solder
Sealing of cover	Potting



### How to order

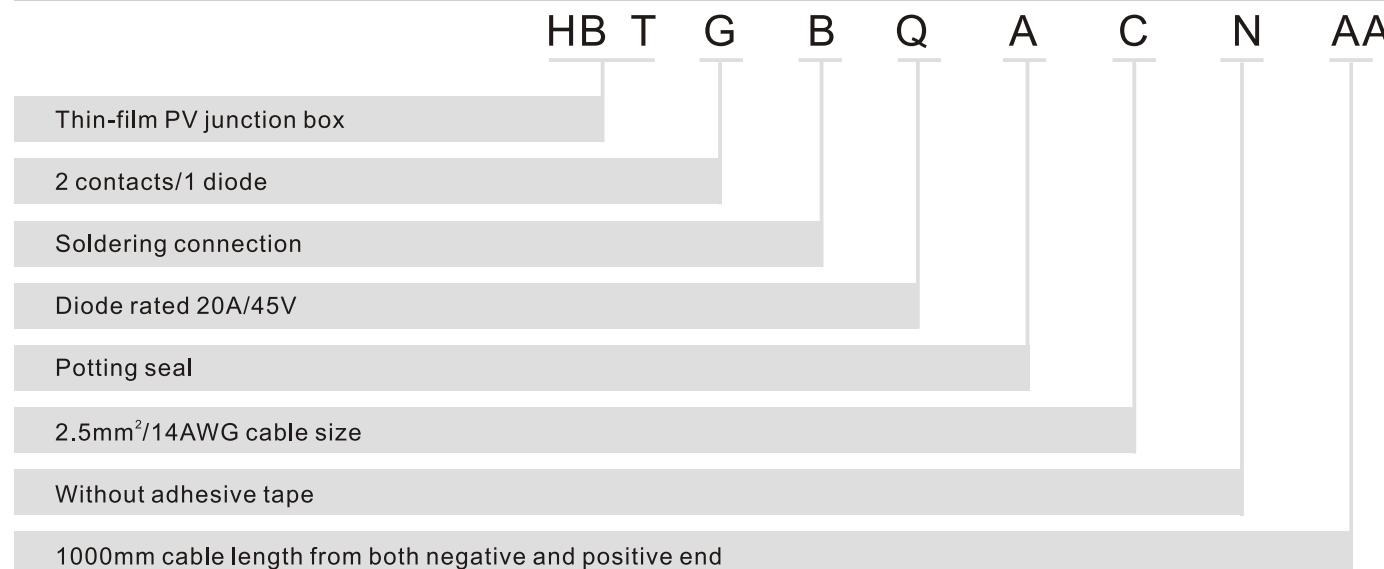
Product line	Product type	Terminals and Diodes		Terminal style		Diode rating
HB	Helios JB	T	Thin flim junction box	G	2 contacts/1 diode	G
				H	2 contacts W/O diode	H
						J
						K
						P
						Q
						N

Sealing type	Cable size	Adhesive	Cable length (Ln)*	Cable length (Lp)*	Variations
A Potting	B 4.0mm <sup>2</sup> /12AWG	Y Yes	A 1000mm	A 1000mm	
	C 2.5 mm <sup>2</sup> /14AWG	N No	B 900mm	B 900mm	

\* Ln:cable length on negative end; Lp:cable length on positive end

- Please contact us for additional variations

### Ordering example:

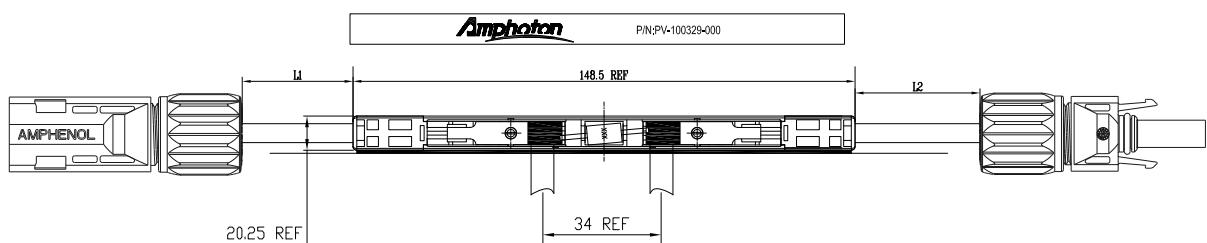


## Pencil PV junction box for BIPV



### Features:

Low-profile, stable performance and easy to install  
Provides the user with a practical and economical solution  
Tin-solder termination



## Technical Data

<b>Max. voltage</b>	1000V
<b>Rated current</b>	20A
<b>Bypass current</b>	3A/10A
<b>Scope of power</b>	40 ~ 120W
<b>Ambient temperature</b>	-40. ~+85.C
<b>Protection degree</b>	IP65
<b>Cable cross-section</b>	2.5mm <sup>2</sup>
<b>Dimension L*W*H</b>	130 * 8 * 9mm
<b>Part number</b>	PV-100329-000

## Amphoton PV-090729 series

### Features:

- Sealed design with high heat dissipation
- TÜV/UL approval



## Amphoton PV-090730 series

### Features:

- Sealed design with high heat dissipation
- TÜV/UL dual approval



## Amphoton PV-090809 series

### Features:

- Sealed design with high heat dissipation
- TÜV approval





D3	25	PV-090729-003
D2	130	PV-090729-006
D1	150	



## Technical Data

Order No.	1	2
Part Number	PV-090729-003	PV-090729-006
Version	4 poles	4 poles
Rated current	20A	20A
Rated voltage	DC1000V(TÜV), DC600V(UL)	DC1000V(TÜV), DC600V(UL)
Number of bypass diodes	3	6
Connection cross-section	4mm <sup>2</sup> , 12AWG	4mm <sup>2</sup> , 12AWG
Temperature range	-40°C up to +85°C	-40°C up to +85
Protection degree	IP 65	IP 65
Dimensions	150 x 130 x 26mm	150 x 130 x 26mm
Flame class	UL94-V0	UL94-V0
Certificate	TÜV/UL	TÜV/UL

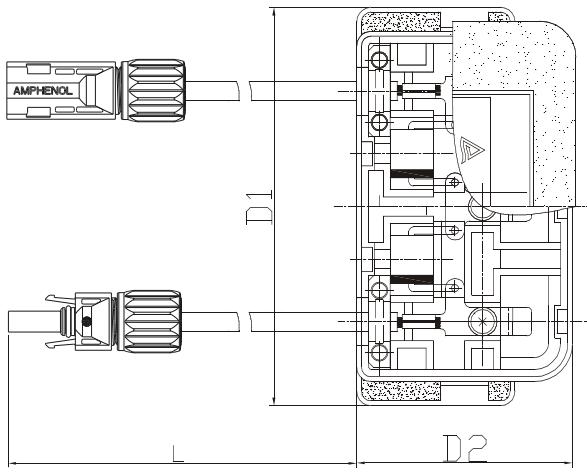


D3	16	PV-090730-002
D2	58	PV-090730-003
D1	103	PV-090730-006



## Technical Data

Order No.	6	7	8
Part Number	PV-090730-002	PV-090730-003	PV-090730-006
Version	3 poles	4 poles	4 poles
Rated current	20A	20A	20A
Rated voltage	DC1000V(TÜV), DC600V(UL)	DC1000V(TÜV), DC600V(UL)	DC1000V(TÜV), DC600V(UL)
Number of bypass diodes	2	3	6
Connection cross-section	4mm <sup>2</sup> , AWG12	4mm <sup>2</sup> , AWG12	4mm <sup>2</sup> , AWG12
Temperature range	-40°C up to +85°C	-40°C up to +85°C	-40°C up to +85°C
Protection degree	IP 65	IP 65	IP 65
Dimensions	103 x 58 x 16mm	103 x 58 x 16mm	103 x 58 x 16mm
Flame class	UL94-V0	UL94-V0	UL94-V0
Certificate	TÜV/UL	TÜV/UL	TÜV/UL



D3	16	PV-090809-001
D2	48	
D1	72	

D3	16.5	PV-090809-002
D2	45	
D1	83	



## Technical Data

Order No.	12	13
Part Number	PV-090809-001	PV-090809-002
Version	2 poles	3 poles
Rated current	20A	20A
Rated voltage	DC1000V(TÜV )	DC1000V(TÜV )
Number of bypass diodes	1	2
Connection cross-section	4mm <sup>2</sup> , 12AWG	4mm <sup>2</sup> , 12AWG
Temperature range	-40°C up to +85°C	-40°C up to +85°C
Protetion degree	IP 65	IP 65
Dimensions	72 x 48 x 16mm	83 x 45 x 16.5mm
Flame class	UL94-V0	UL94-V0
Certificate	TÜV	TÜV

## How to order

Amphoto junction box P/N	Cable size	Cable length (Ln)*	Cable length (Lp)*	Variations
PV -090729-003	A	6.0mm <sup>2</sup> /10AWG	A	1000mm
	B	4.0mm <sup>2</sup> /12AWG	B	900mm

\* Ln:cable length on negative end; Lp:cable length on positive end  
- Please contact us for additional variations

## Amphoton PV junction box series ordering example:

**PV -090729-003 B AA**

Amphoton PV junction box P/N

4.0mm<sup>2</sup>/12AWG cable size

1000mm cable length from both negative and positive end

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