

# 产品规格书

## Product Specification

• 产品名称：QC4.10-cds

Product Name: QC4.10-cds

• 客户名称：

Customer Name:

• 供应商：QC Solar

Vendor: QC Solar

承认签章 (Confirmation)					
快可承认 (QC Solar confirmation)			客户承认 (Customer confirmation)		
批准 Approved by	审核 Audited by	设计 Designed by	采购 Purchased by	品保 Quality Assured by	技术 Technical verified by

苏州快可光伏电子股份有限公司

**QC SOLAR (SUZHOU) CORPORATION**

中国苏州工业园区新发路 31 号

No.31,Xinfa road, SIP, Suzhou, China



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## 1. 产品外观及设计性能参数要求: Product appearance and design



认证 Certificate	UL	TUV
名称 Product Name	Series QC4.10, followed by –a5, may be followed by none, followed by c12, c13, c14 or c15, followed by d1 or d3, followed by e2 or e4, may be followed by f1, <b>and may be followed by g1.</b>	QC4.10 (PLUS)
认证型号 Certified Model	QC4.10-a5CDEf1g1	QC4.10-cds
额定电压 Rated Voltage	UL1500V	IEC1500V
额定电流 Rated Current	30A for 14AWG 35A for 12AWG 50A for 10AWG	36A for 2.5mm <sup>2</sup> 41A for 4.0mm <sup>2</sup> 46A for 6.0mm <sup>2</sup>
线缆规格 Cable Specification	90°C 2000V, Strands of Conductor 41~84/0.25~0.3, OD5.9~7.2mm, 14 AWG, 12 AWG, 10 AWG	IEC 1500V, Strands of Conductor 41~84/0.25~0.3, OD 4.7~7.2mm, 2.5mm <sup>2</sup> , 4.0mm <sup>2</sup> , 6.0mm <sup>2</sup>
防护等级 IP degree	N/A	IP65/IP68(1m, 1h)
安全等级 Protection Class	N/A	Class II
接触电阻 Resistance of Connector	Max 0.2mΩ	Max 0.2mΩ
防火等级 Flammability Class	UL94 V-0	UL94 V-0
温度范围 Temperature Range	-40°C~+85°C	-40°C~+85°C

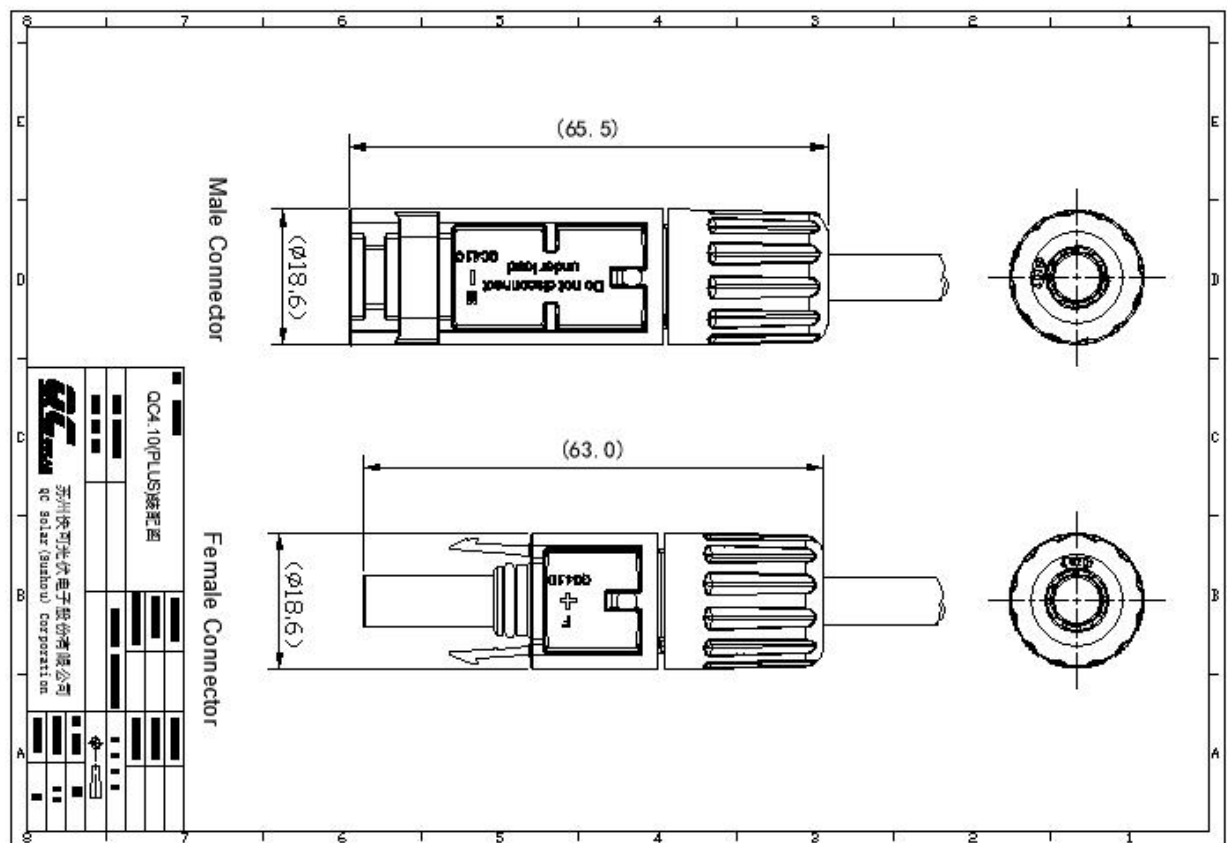
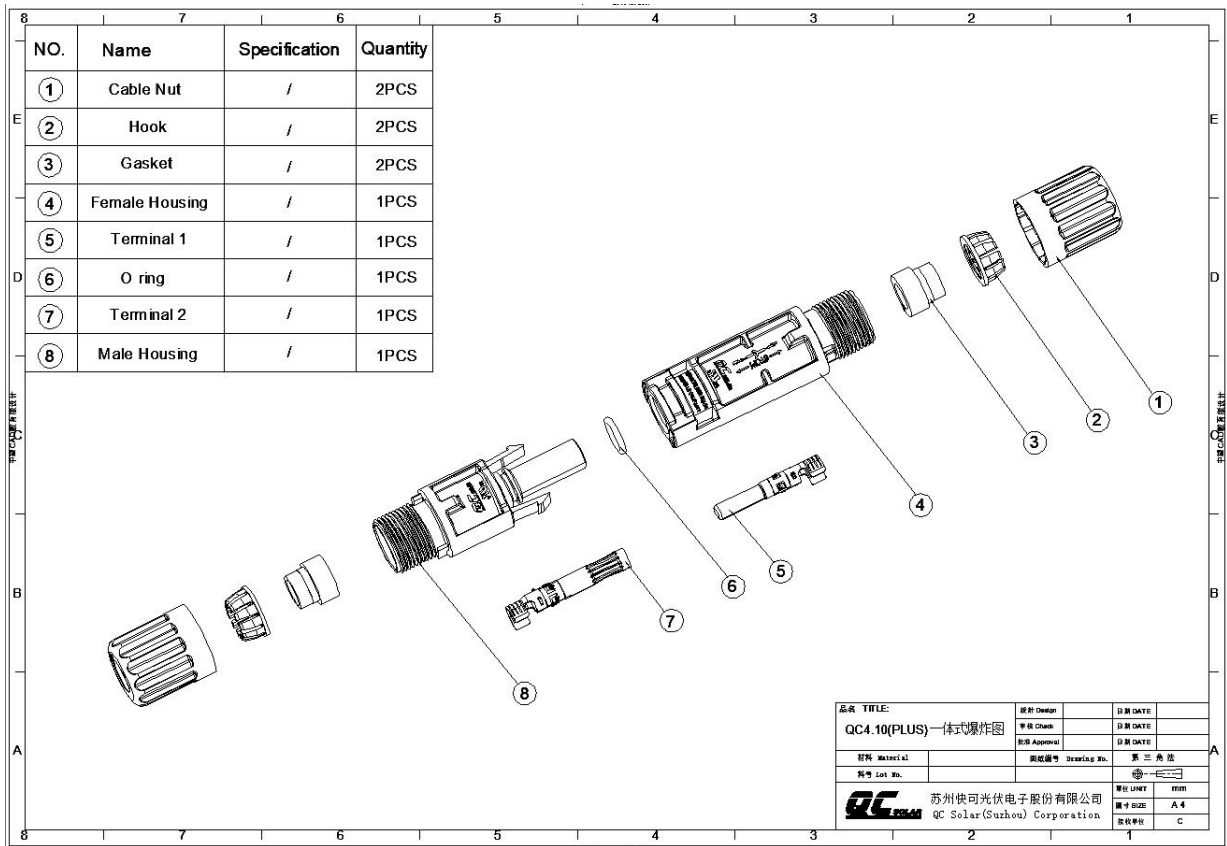
Caution	"Do Not Disconnect Under Load: PV plug connections must not be disconnected while under load. They can be placed in a no load state by switching off the DC/AC converter or breaking the AC circuit".	N/A
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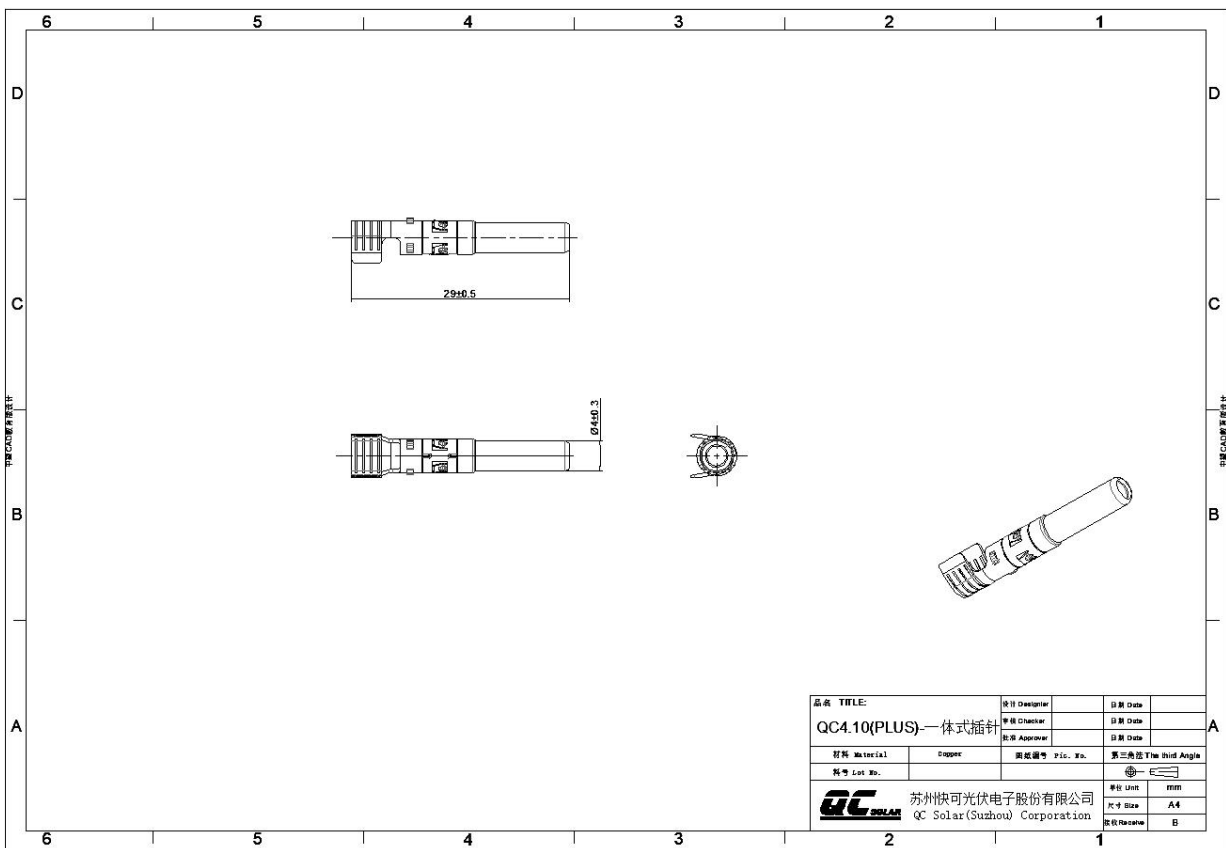
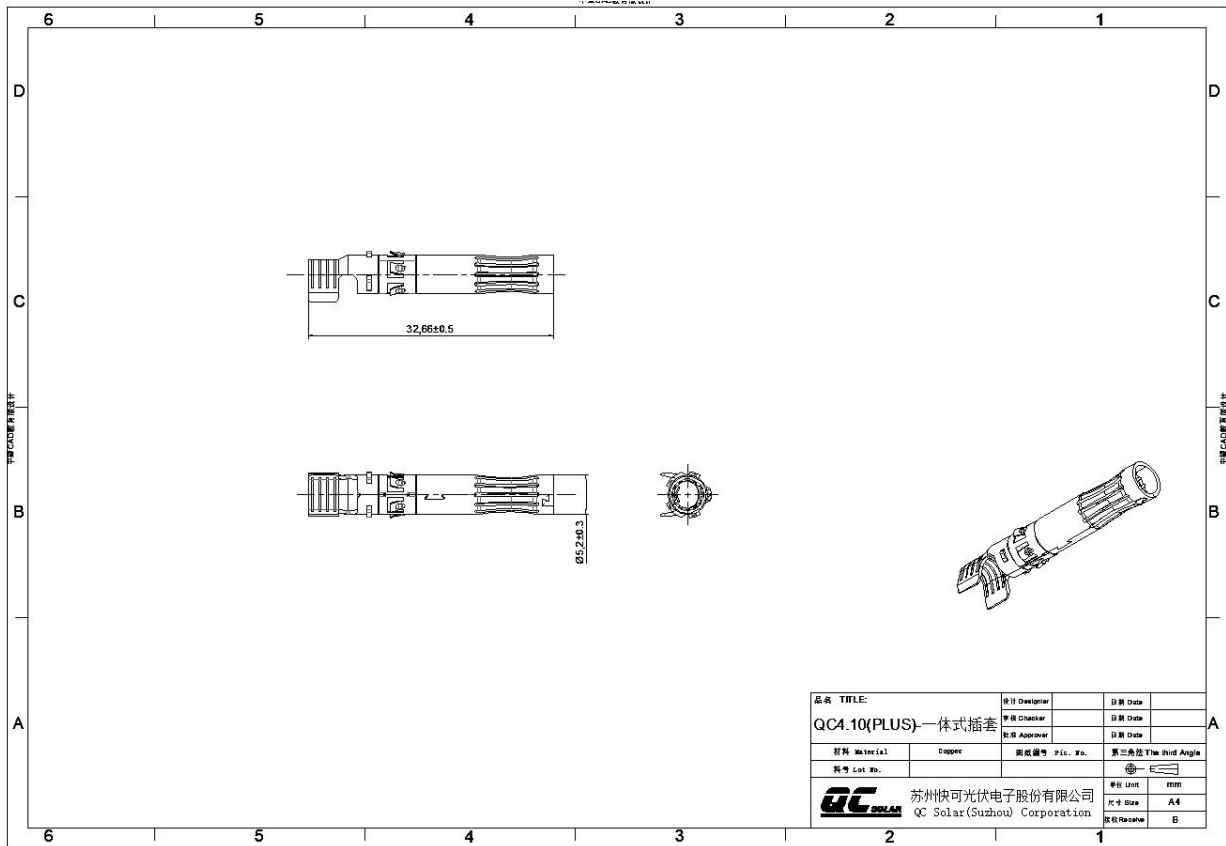
UL 命名 UL NOMENCLATURE	TUV 命名 TUV NOMENCLATURE
<p>NOMENCLATURE:                      QC4.10 – <u>  </u> <u>  </u> <u>  </u> <u>  </u> <u>  </u> <u>  </u> <u>  </u>                                A  B  C  D  E  F  G</p> <p>Where:                      A – Maximum System Voltage                          a5 – 1500V                      B – Connector Type                          none – locking type                      C – PV Wire Type                          c12–2000V, 12AWG, 48/0.30 (str/dia)                          c13–2000V, 12AWG, 56/0.285 (str/dia)                          c14–2000V, 10AWG, 84/0.285 (str/dia)                          c15–2000V, 14 AWG, 41/0.25 (str/dia)                      D – Material of Connector Housing                          d1 – EXL9330(GG)(X)(f1)(B1)(IP)                          d3 – PV40Z(f1)                      E – Material of Cover Nut                          e2 - A3XZG5(f1)                          e4 - PA66 T303(XX)GF BK - D(f1)                      F - construction                          f1 - Connectors with 18.6 mm outer diameter (Plus Construction)  <b>G – Type of Pin Crimp Connector (male) and Socket Connector (female)</b>  <b>g1 – With an Electric Lock integrated, only for F=f1</b></p> <p>Caution:</p> <ol style="list-style-type: none"> <li>For Copper Stranded Wire Only.</li> <li>The product installation and use meet the requirements of PV modules.</li> <li>The connector is considered to be in compliance with UL 6703, Connectors for Use in Photovoltaic Systems, Edition 1, Revision Date 06/10/2021 only when assembled in the manner specified by these assembly instructions.</li> </ol> <p>This connector is suitable for use only with Class B and C stranded copper conductors (See NFPA 70, National Electrical Code, Edition 2020, AMD 1 - 17, Revision Date 04/12/2022, Chapter 9, Table 10).</p>	<p>Type Designation: QC4.10-cds</p> <p>Remark: QC4.10-cds is a general designation. The prefix letter “c”、“d”、“s” denotes different technical and design meanings.</p> <ol style="list-style-type: none"> <li>c=3 or 4                          c=3 denotes rated voltage 1500V with baffle plate;                          c=4 denotes rated voltage 1500V without baffle plate</li> <li>d=4 or 5 or 6                          d=4 denotes rated current 36A with stamping;                          d=5 denotes rated current 41A with stamping;                          d=6 denotes rated current 46A with stamping;</li> <li>s= 1 (Plus constructive )</li> </ol> <p>Wire cross section area or cross section range:                      1 x 2,5mm<sup>2</sup> for QC4.10-341; QC4.10-441;                      1 x 4,0mm<sup>2</sup> for QC4.10-351; QC4.10-451;                      1 x 6,0mm<sup>2</sup> for QC4.10-361; QC4.10-461;</p>

## 2. 连接器 BOM 清单 Connector BOM List:

 <b>QC Solar (Suzhou) Corporation</b>					
产品名称 Product name	Connector	材料清单 Bill Of Materials		版本 Version	A/0
产品型号 Product	QC4.10-cds			张数 Paper	1
客户 Customer				发行日期 Issue date	2022.08.11
序号 No.	名称	材质	生产厂商	数量	备注
1	正极本体 Female housing	PPE	QC Solar	1 pcs	
2	负极本体 Male housing	PPE	QC Solar	1 pcs	
3	后罩 Screw cap	PA	QC Solar	2 pcs	
4	内爪 Cable clamp	PA	QC Solar	2 pcs	
5	堵头 Sealing gasket	硅橡胶 Silicon rubber	QC Solar	2 pcs	规格一:4.7-6.0 规格二:5.6-6.8 规格三:6.0-7.2
6	红色 O 型圈 O sealing ring	硅橡胶 Silicon rubber	QC Solar	1 pcs	
7	插针 Metal plug	铜镀锡 Tin-plated copper	QC Solar	1 pcs	
8	插套 Metal socket	铜镀锡 Tin-plated copper	QC Solar	1 pcs	
以上原料符合欧盟 ROHS 要求					
制表:		审核:		批准:	

### 3. 连接器图纸 Drawing of connector:







## 4. 连接器 TUV 证书 TUV certification of connector:

## (1) 莱茵

<b>Zertifikat</b>		<b>Certificate</b>			
Zertifikat Nr.	Certificate No.	Blatt	Sheet		
R 50505605		0001			
Ihr Zeichen	Client Reference	Unser Zeichen	Our Reference	Ausstellungsdatum	Date of Issue
F.G.Y.		01-ZQI-CN21LJLT	001	02.06.2021	(day/mo/yr)
Genehmigungsinhaber			Fertigungsstätte		
<b>License Holder</b> QC Solar (Suzhou) Corporation No. 31, Xinfa Road, SIP Suzhou 215123 Jiangsu P.R. China			<b>Manufacturing Plant</b> Refer to latest revision of the annex list of factories		
Prüfzeichen		Geprüft nach			
 Bauart geprüft Sicherheit Regelmäßige Produktions- überwachung www.tuv.com ID 111240433		<b>Tested acc. to</b> IEC 62852:2014+A1 EN 62852:2015+A1			
Zertifiziertes Produkt (Geräteidentifikation)				Lizenzentgelte - Einheit	
<b>Certified Product (Product Identification)</b>				<b>License Fee - Unit</b>	
PV Komponente (elektrisch) für BOS (PV Components for BOS - electrical)					
Type Designation	: QC4.10-cds(c=3 or 4; d=4, 5, 6); (7 or 8; s=blank or 1) (QC)			25	
Rated Voltage	: 1500VDC				
Rated Current	: 36A for QC4.10-34; QC4.10-44; 41A for QC4.10-35; QC4.10-45; 46A for QC4.10-36; QC4.10-46; 46A for QC4.10-37; QC4.10-47; 55A for QC4.10-38; QC4.10-48; 36A for QC4.10-341; QC4.10-441; 41A for QC4.10-351; QC4.10-451; 46A for QC4.10-361; QC4.10-461				
Ambient Temperature	: -40°C to +85°C				
Upper Limit Temperature:	100°C				
Continued on page 0002					
25					
ANLAGE (Appendix): 1.0					
Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht. This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.					
<b>TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg</b> Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com Fax: +49 221 806-3935 http://www.tuv.com/safety					
 Paulus Hou					

## (2) 南德

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT



Product Service

# CERTIFICATE

No. B 077362 0004 Rev. 05

**Holder of Certificate:** **QC Solar (Suzhou) Corporation**  
No.31, Xinfu Road, SIP.  
215123 Suzhou  
PEOPLE'S REPUBLIC OF CHINA

**Certification Mark:**



**Product:**

**Connector**

**Connectors for Photovoltaic Systems**

**Model(s):**

**QC4.10-ab, QC4.3, QC4.Y, QC4.D, QC4.10-cds**

**Parameters:**

**Rated Voltage:** Up to 1500VDC for QC4.3, QC4.Y, QC4.D  
Up to 1100VDC for QC4.10-ab,  
1500VDC for QC4.10-cds

**Rated Current:** 30A or 35A or 40A for QC4.10-ab  
36A or 41A or 46A or 42A or 55A  
or 60A for QC4.10-cds  
30A for QC4.3  
50A for QC4.Y  
3A for QC4.D

**Application Class:** A

**Protection Class:** II

**Degree of Protection:** IP65/IP68(1m,1h) for QC4.10-ab,  
QC4.10-cds  
IP65/IP68(1m,1h) for QC4.Y  
IP65/IP68(1m,24h) for QC4.D  
IP65/IP67 for QC4.3

**Ambient Temperature:** -40°C ~ +85°C

**Tested according to:**

IEC 62852:2014  
IEC 62852:2014/AMD1:2020  
EN 62852:2015/A1:2020

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: [www.tuvsud.com/ps-cert](http://www.tuvsud.com/ps-cert)

**Test report no.:** 704071715901-05  
**Valid until:** 2026-08-08

**Date,** 2021-08-09

( Yaquun Alex Liu )

## 5. 连接器 UL 证书 ULcertification of connector:

2022/8/16

QIJQ2.E340004 - Connectors for Use in Photovoltaic Systems - Component | UL Product iQ

UL Product iQ®



### QIJQ2.E340004 - Connectors for Use in Photovoltaic Systems - Component

#### Connectors for Use in Photovoltaic Systems - Component

**QC SOLAR (SUZHOU) CORP**  
31 XINFU RD  
SIP  
SUZHOU, JIANGSU 215123 China

E340004

Cat. No.	Electrical Rating
<b>Photovoltaic wiring-system connector</b>	
QC4 series	600 V dc, with 10-14 AWG PV cable, 30A dc maximum
Series QC4.10, followed by -a3, followed by c1, followed by d1, d2 or d3, may be followed by e1 or e2. QC4.6-6.0	600 V dc, with 10 AWG PV cable, 30 A dc
Series QC4.10, followed by -a3, followed by c2 or c3, followed by d1, d2 or d3, may be followed by e1 or e2. QC4.6-4.0	600 V dc, with 12 AWG PV cable, 20 A dc
Series QC4.10, followed by -a3, followed by c4, followed by d1, d2 or d3, may be followed by e1 or e2. QC4.6-2.5	600 V dc, with 14 AWG PV cable, 15 A dc
Series QC4.10, followed by -a4, may be followed by b1, followed by c6, followed by d1, d2 or d3, may be followed by e1 or e2.	1000 V dc, with 10 AWG PV cable, 30 A dc
Series QC4.10, followed by -a4, may be followed by b1, followed by c7, c8 or c10, followed by d1, d2 or d3, may be followed by e1 or e2.	1000 V dc, with 12 AWG PV cable, 20 A dc
Series QC4.10, followed by -a4, may be followed by b1, followed by c9, followed by d1, d2 or d3, may be followed by e1 or e2.	1000 V dc, with 14 AWG PV cable, 15 A dc
Models QC4.10-a5BCDEFG series, where B can be b1 or none, C can be c15, D can be d1, d3 or d4, E can be e2, e3 or e4, and F can be none or f1, G can be none or g1.	1500 V dc, with 14 AWG PV cable, 30 A dc
Models QC4.10-a5BCDEFG series, where B can be b1 or none, C can be c12, D can be d1, d3 or d4, E can be e2, e3 or e4, and F can be none or f1, G can be none or g1.	1500 V dc, with 12 AWG PV cable, 35 A dc
Models QC4.10-a5BCDEFG series, where B can be b1 or none, C can be c13, D can be d1, d3 or d4, E can be e2, e3 or e4, and F can be none or f1, G can be none or g1.	1500 V dc, with 12 AWG PV cable, 35 A dc
Models QC4.10-a5BCDEFG series, where B can be b1 or none, C can be c14, D can be d1, d3 or d4, E can be e2, e3 or e4, and F can be none or f1, G can be none or g1.	1500 V dc, with 10 AWG PV cable, 50 A dc
QC4.3-ab1	1000 V dc, with 10 AWG PV cable, 30 A dc
QC4.3-ab2	1000 V dc, with 12 AWG PV cable, 20 A dc
QC4.3-ab3	1000 V dc, with 14 AWG PV cable, 15 A dc

Marking: Company name or trademark "QC", catalog designation and the Recognized Component Mark on the device or carton.

Last Updated on 2022-08-02

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