Zertifikat *Certificate*

TÜVRheinland®

Zertifikat Nr. *Certificate No.*
R 50318850

Blatt *Page*
0006

Ihr Zeichen *Client Reference*	**Unser Zeichen** *Our Reference*	**Ausstellungsdatum**	*Date of Issue* (day/mo/yr)
K.S.	ZJL-MAS- 50032400 004	06.07.2022	

Genehmigungsinhaber *License Holder*
Hirose Electric Co., Ltd.
2-6-3 Nakagawa-Chuo, Tsuzuki-ku
Yokohama-shi, Kanagawa
224-8540 Japan

Fertigungsstätte Manufacturing Plant
Hirose Electric (M) Sdn. Bhd.
Lot 720 Jalan Serendah 26/17
Hicom Industrial Estate Sec 26
40000 Shaha Alam Selangor
Darul Ehsan
Malaysia

Prüfzeichen *Test Mark*

TÜVRheinland® CERTIFIED
Type Approved
Safety
Regular Production
Surveillance
www.tuv.com
ID 2000000000

Geprüft nach *Tested acc. to*
EN 61984:2009
IEC 61984:2008

Zertifiziertes Produkt *Certified Product*	**(Geräteidentifikation)** *(Product Identification)*	**Lizenzentgelte - Einheit** *License Fee - Unit*

Connector Connector without breaking capacity, as page 0001

Change

For Type Designation DF63v-wP-xy(z) (Header)
Value for suffix v: R, C, CR, M, MR or blank

changed to: R, A, C, CA, CR, M, MR or blank

TÜV Rheinland LGA Products GmbH Zertifizierungsstelle

ANLAGE (Appendix): 1.2

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.

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg
Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Zertifizierungsstelle

Dipl.-Ing. (FH) F. Becker

Constructional Data Form for Connector

License holder: Hirose Electric.,Ltd.

2-6-3 Nakagawa Chuoh, Tsuzuki-ku, Yokohama 224-8540 Japan

Factory: HIROSE ELECTRIC(M) SDN BHD.

(Full address) LOT720,JALAN SERENDAH 26/17, HICOM INDUSTRIAL ESTATE,

SECTION 26, 40000 SHAH ALAM, SELANGOR DARUL EHSAN, MALAYSIA

Type or Model Number: DF63#-*P-3.96DSA(zz),DF63#-*P-3.96DS(zz),DF63#-*S-3.96C(zz),DF63#-*EP-3.96C(zz),DF63#-*P-7.92DSA(zz), DF63#-*P-7.92DS(zz),DF63v-1618SCyy(zz),DF63-1618PCyy(zz),DF63-2022SCyy(zz),DF63-2022PCyy(zz),

Kind of device: Connectors

<table>
<tr><td colspan="2">Specifications</td></tr>
<tr><td>Type designation</td><td>DF63#-*P-3.96DSA(zz),DF63#-*P-3.96DS(zz),DF63#-*S-3.96C(zz),DF63#-*EP-3.96C(zz), DF63#-*P-7.92DSA(zz), DF63#-*P-7.92DS(zz),DF63v-1618SCyy(zz),DF63-1618PCyy(zz),DF63-2022SCyy(zz),DF63-2022PCyy(zz),</td></tr>
<tr><td>Contact material</td><td>Male contact:Brass,tin plating or gold plating
Crimp contact:Copper alloy,tin plating or gold plating</td></tr>
<tr><td>Number of poles</td><td>1-6(3.96mm pitch), 2-3(7.92mm pitch)</td></tr>
<tr><td>Rated voltage</td><td>AC/DC 300V</td></tr>
<tr><td>Rated current</td><td>
<table>
<tr><td></td><td colspan="4">定格電流（A）</td></tr>
<tr><td></td><td>AWG16</td><td>AWG18</td><td>AWG20</td><td>AWG22</td></tr>
<tr><td>DF63-1pin</td><td>15</td><td>13</td><td>11</td><td>9</td></tr>
<tr><td>DF63-2pin</td><td>14</td><td>12</td><td>10</td><td>8</td></tr>
<tr><td>DF63-3pin</td><td>12</td><td>10</td><td>8</td><td>7</td></tr>
<tr><td>DF63-4pin</td><td>10</td><td>8</td><td>7</td><td>6</td></tr>
<tr><td>DF63-5pin</td><td>10</td><td>8</td><td>7</td><td>6</td></tr>
<tr><td>DF63-6pin</td><td>10</td><td>8</td><td>7</td><td>6</td></tr>
<tr><td>DF63-2pin (Contact pitch 7.92mm)</td><td>15</td><td>13</td><td>11</td><td>9</td></tr>
<tr><td>DF63-3pin (Contact pitch 7.92mm)</td><td>12</td><td>11</td><td>9</td><td>8</td></tr>
</table>
</td></tr>
<tr><td>Mechanical endurance</td><td>Tin plating:30 times
Gold plating:50 times</td></tr>
<tr><td>Classification</td><td>☐ CBC ☒COC (Non CBC) ☐ other</td></tr>
<tr><td>Number of bendings (non-rewirable terminals only)</td><td>N/A</td></tr>
</table>

TÜV Rheinland

2022 June 29
(Date) (Signature)

Tokyo, Japan
(Place)

29 June 2022
(Date)

Hirose Electric Co., Ltd. Kenichi SATO
(Stamp and Signature of Applicant)

Constructional Data Form for Connector

Upper limit temperature	105℃
Lower limit temperature	-40℃
Maximum ambient temperature at rated current	75℃

Constructional Data Form for Connector

Classification of Connectors ☒ COC ☐ CBC						
Type of connector	Style	Enclosure		Cable Clamp		Function
Header	☐ Free Connector ☒ Fixed Connector	☒Enclosed ☐ Un-enclosed	☒ Hand Back Safety mated ☐ Hand Back Safety unmated ☒ Finger Safety mated ☐ Finger Safety unmated ☐ IP67 mated ☐ IP00 unmated	☐ with ☐ with additional insulation bushing	Applicable Cable Size Range: N/A	☐ with PE ☒ without PE
		*1) Protection class mated: ☐ Class I ☐ Class II ☒ Built in		☒ without		☐ with interlock ☒ without interlock
Plug Socket Socket	☒ Free Connector ☐ Fixed Connector	☒ Enclosed ☐ Un-enclosed	☐ Hand Back Safety mated ☒ Hand Back Safety unmated ☐Finger Safety mated ☒ Finger Safety unmated ☐ IP67 mated ☐ IP20 unmated	☐ with ☐ with additional insulation bushing	Applicable Cable Size Range: N/A	☐ with PE ☒ without PE
		*1) Protection class mated: ☐ Class I ☐ Class II ☒ Built in		☒ without		☐ with interlock ☒ without interlock
Remark: *1)The protection class of components is dependent upon the equipment in which they are used, these connectors are intended for class I equipment normally.						

TÜV Rheinland

2022 June 29 (Date) (Signature)

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Constructional Data Form for Connector

Insulation Coordination	
Overvoltage category	II
Pollution degree	2
Insulation voltage	AC/DC 300V
Test voltages	1.39kV r.m.s
Minimum creepage distances (mated)	Live Contact – Live Contact(terminals of socket): 4.42 mm
Minimum clearance distances (mated)	Live Contact – Live Contact(terminals of socket): 2.28mm
Insulation system (IEC 60664-1)	Contact – Contact : ☒ basic ☐ reinforced ☐ NA

Specifications of Terminals / Connection _ ☒Rewirable ☐Non-rewirable	
Type of terminals	☒ solder(Header) ☒ crimp(Plug Socket, Socket)
Terminal designation	Marking of the terminals: 1, 2, 3, 4, 5, 6
Spec. Tightening torque	N/A
Rated cross section of conductor	DF63-1618SCF,DF63-1618PCF INSULASION： ϕ 3.2mm-2.1mm CONDUCTOR：0.865mm^2-1.317mm^2 DF63-2022SCF,DF63-2022PCF INSULASION： ϕ 2.6mm-1.7mm CONDUCTOR：0.341mm^2-0.534mm^2
Type of conductor	Flexible
Required preparation of the conductor	N/A
Max. Stripping length	3.6mm
Max. Number of conductors per terminal	1

TÜV Rheinland

2022 June 29 (Date) (Signature)

Tokyo, Japan (Place)

29 June 2022 (Date)

Hirose Electric Co., Ltd. Kenichi SATO

(Stamp and Signature of Applicant)

Constructional Data Form for Connector

Materials			
Type designation		See Nomenclature	
Contact material		Male contact:Brass,tin plating Crimp contact:Copper alloy,tin plating	
Contact block (housing)		Plug	Receptacle
	Insulator (Front)	PBT: Chang Chung Plastics Co., LTD Black：4130-104K White：4130-200K	
	Insulator (Rear)		
Connector body	Shell		
	Barrel	N/A	Aluminum Alloy with Zinc Plating
*2) Cord Anchorage	Insulation Bushing		
	Backshell and clamping units		

*2) **Parts for Secure Cord Anchorage:**

TÜV Rheinland

2022 June 29 In Masuda

(Date) (Signature)

Tokyo, Japan

(Place)

29 June 2022

(Date)

Hirose Electric Co., Ltd. Kenichi SATO

(Stamp and Signature of Applicant)

Constructional Data Form for Connector

TYPE NOMENCLATURE:

1. Header

Example: DF63 v – w P – x y (z)
(i) (ii) (iii) (iv) (v)(vi)

(i) Shape

None : Standard type

R : Different guide key and guide post position

M : Low insertion

C : High click feeling

A : Without guide post

The combination is as follows: None, R, A, C, CA, CR, M or MR

(ii) Number of contacts: 1 to 6 (iv) =3.96
2 to 3 (iv) =7.92

(iii) Contact type

P: male contact

(iv) Contact pitch :

3.96: 3.96mm
7.92: 7.92mm

(v) Connector type

DSA: straight header
DS : right-angle header

(vi)Customer specifications

none or (01) to (99)

2 Plug Socket

Example: DF63v – w EP - 3.96 C (z)
(i) (ii) (iii) (iv) (v) (vi)

(i) Shape

None : Panel lock type
A: Standard type
R : Different guide key(Panel lock type)
M : Low insertion force
C : High click feeling

The combination is as follows: None, R, A, AR, C, CR, CA, CAR, M, MR, MA or MAR

(ii) Number of contacts: 1 to 6

(iii) Contact type

EP: in-line plug

(iv) Contact pitch :3.96mm

(v) Connector type

C: Crimp housing

(vi)Customer specifications

none or (01) to (99)

3. Socket

Example: DF63 v – w S - 3.96 C (z)
(i) (ii) (iii) (iv) (v)(vi)

(i) Shape

None : Standard type

R : Different guide key

(ii) Number of contacts: 1 to 6

(iii) Contact type

S: female contact

(iv) Contact pitch :3.96mm

(v) Connector type

C : Crimp housing

(vi)Customer specifications

none or (01) to (99)

Constructional Data Form for Connector

4. Crimp contact

Example: DF63 v – x y (z)
(i) (ii) (iii) (iv)

(i) Form type

Blank: Standard

A: Low insertion and withdrawal ((ii)=1618, (iii)=SCF, SCFA, SC, SCA)

(ii) Applicable conductor

1618: AWG16-18
2022: AWG20-22

(iii) Packaging

SCF : socket contact , reel,tin plating

SCFA : socket contact , reel,gold plating

SC : socket contact , bag, tin plating

SCA : socket contact , bag, gold plating

PCF : plug contact , reel, tin plating

PCFA : plug contact , reel,gold plating

PC : plug contact , bag, tin plating

PCA : plug contact , bag,gold plating

(iv) none or (01) to (99)