

CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-L52653-311-71702102-2
Report Reference E52653-20120717
Date 28-Aug-2020

Issued to: HIROSE ELECTRIC CO., LTD.
2-6-3 NAKAGAWA CHUOH
TSUZUKI-KU YOKOHAMA-SHI , KANAGAWA,
Japan 224-8540

This is to certify that representative samples of ECBT8 - Connectors for Use in Data, Signal, Control and Power Applications Certified for Canada - Component
See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: CAN/CSA C22.2 No. 182.3-16

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
DF62B-*EP-2.2C** (&)	Component Connectors
DF62B-*S-2.2C** (&)	Component Connectors
DF62C-*S-2.2C** (&)	Component Connectors
DF62P-*EP-2.2C** (&)	Component Connectors



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This is to certify that representative samples of ECBT2 - Connectors for Use in Data, Signal, Control and Power Applications - Component
See Addendum Page for Product Designation(s).

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

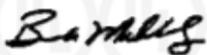
Standard(s) for Safety: UL 1977

Additional Information: See the UL Online Certifications Directory at <https://iq.ulprospector.com> for additional information

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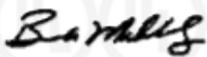


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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
DF62 , DF62-13P-2.2DS**, ** is any number from (01) thru (99) or blank.	Connectors
DF62 , DF62-13P-2.2DSA**, ** is any number from (01) thru (99) or blank.	Connectors
DF62 , DF62-24P-2.2DS**, ** is any number from (01) thru (99) or blank.	Connectors
DF62 , DF62-24P-2.2DSA**, ** is any number from (01) thru (99) or blank.	Connectors
DF62B-*EP-2.2C** (&)	Component Connectors
DF62B-*S-2.2C** (&)	Component Connectors
DF62C-*S-2.2C** (&)	Component Connectors
DF62P-*EP-2.2C** (&)	Component Connectors



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File E52653
Project 12CA03873

July 17, 2012

REPORT

on

COMPONENT - Connectors for Use in Data, Signal, Control and Power
Applications

Hirose Electric Co Ltd
YOKOHAMA-SHI, KANAWAGAWA, Japan

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DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connectors, Series DF62:

Cat. No. DF62B-*S-2.2C**, DF62C-*S-2.2C** DF62B-*EP-2.2C**, and DF62P-*EP-2.2C** where * designated the number of pole from 2 to 24 and ** is any number from (01) thru (99) or blank.

Cat. No. DF62-*P-2.2DS**, DF62-*P-2.2DSA** where * designated the number of pole from 13 or 24 and ** is any number from (01) thru (99) or blank.

GENERAL:

These devices are multi-pole connectors intended for factory assembly on copper wire sizes as indicated in Ratings table below where the acceptability of combinations is determined by UL LLC. The devices are identified as follows:

USR - Products designated USR have been investigated using US requirements as noted in the Test Record.

CNR - Products designated CNR have been investigated using Canadian requirements as noted in the Test Record.

RATINGS:

Connector Type	Terminal Type	Conductor Sizes, AWG (Str)	Ampere (A)	Voltage (Vac/Vdc)
*Female Socket; DF62B-*S-2.2C** DF62C-*S-2.2C**	DF62-22SC***	22	3	250
	DF62-2428SC***	24	2	
		26-28	1	
	DF62-30SC***	30	1	
*Male Plug; DF62B-*EP-2.2C** DF62P-*EP-2.2C**	DF62-EP22PC***	22	3	250
	DF62-EP2428PC***	24	2	
		26-28	1	
	DF62-EP30PC***	30	1	
*Pin Header; DF62-13P-2.2DS** DF62-13P-2.2DSA** DF62-24P-2.2DS** DF62-24P-2.2DSA**	Header Pin, Solder Type	(+)	3	250
Note: *** may be additional F (reel packing) and A (gold plating) (+) Mounted on printed wiring boards.				

Disconnecting Use - see Sec Gen for required marking

NOMENCLATURE:

1. Socket connector

Example:

DF62B-	12	S	-	2.2	C	(01)
i	ii	iii		iv	v	vi

- (i) Product Shape
B - Normative Shape
C - Enhanced lock-protection type
- (ii) Number of contacts
2 to 24
- (iii) Contact type
S - female contact
- (iv) Contact pitch in mm
2.2
- (v) Mounting or cable assembly
C - crimp contact
- (vi) Customer specification (**color or** packaging)
Blank or two digits 01 thru 99.

2. Plug connector

Example:

DF62B-	13	EP	-	2.2	C	(01)
*i	ii	iii		iv	v	vi

- (i) Product Shape
B - Normative style
P - Panel Mount type
- (ii) Number of contacts
2 to 24
- (iii) Contact type
EP - Male contact for junction plug
- *(iv) Contact pitch in mm
2.2
- (v) Mounting or cable assembly
C - crimp contact
- (vi) Customer specification (**color or** packaging)
Blank or two digits 01 thru 99.

3. Pin-Header**Example:**

DF62-	13	P	-	2.2	DS	(01)
i	ii	iii		iv	v	vi

(i) Product Shape

DF62 - Normative Shape

(ii) Number of contacts

13 or 24

(iii) Contact type

P - male contact

(iv) Contact pitch in mm

2.2

(v) Mounting

DS - straight

DSA - right angle

(vi) Customer specification (packaging)

Blank or two digits 01 thru 99.

4. Crimp contact*Example:**

DF62-	EP	2428	PCF	A	(01)
	i	ii	iii	iv	v

(i) intended purpose

EP - for junction plug

(ii) applicable wire size

22 - 22 AWG

2428 - 24 AWG to 28 AWG

30 - 30 AWG

(iii) contact type and package presentation

PCF - male contact, reel pack

PC - male contact, jumble pack

SCF - female contact, reel pack

SC - female contact, jumble pack

(iv) contact plating

A - gold plating

None - tin plating

(v) Customer specification (body color, contact plating or packaging)

Blank or two digits 01 thru 99.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC.

Conditions of Acceptability - The following are among the considerations to be made when evaluating the device in the end-use product.

Interruption of Current

1. These devices are not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

Current-Carrying Capability and Current Ratings

2. These devices have been subjected to the Temperature test with the rated currents and maximum temperature rise values tabulated below.

Cat Nos.	Wire AWG	Current, A	Maximum Temperature Rise, °C
DF62B-24S-2.2C**	22	3	26
DF62C-24S-2.2C**	24	2	27.9
DF62B-24EP-2.2C**	28	1	16.6
DF62P-24EP-2.2C**	30	1	25.8
DF62-24P-2.2DS** mating with DF62B-24S-2.2C**	22	3	7.0