Thank you for giving UL the opportunity to partner with you.
Please note, Follow-Up Procedure Revisions or Report Revisions do not include Authorization Pages, Indices, Section General, and/or Appendices unless revisions were required or requested.

Should you have any questions, after reviewing the material, or need to report any inaccuracies, please reach out to your UL representative or find UL contact details for your local Customer Service Department at https://www.ul.com/about/locations.

Please find attached the related material

For your convenience, the below describes the related updates:

E535773-vol1-Index
E535773-20240419-CertificateofCompliance
E535773-20240419-Description
Figure-10-Total
Illustration-21-Total
E535773-20240419-TestRecord

Times change, Trust Remains™

INDEX

Series	Section	USR	CNR
Vehicle Connector, Cat. Nos. WB-SC-AC2.0-80A, WB-SC-AC2.0-70A, WB-SC-AC2.0-64A, WB-SC-AC2.0-60A, WB-SC-AC2.0-50A, WB-SC-AC2.0-48A, **WB-SC-AC2.0-32A**	1	X	X

USR – United States Standard, Recognized
CNR – Canadian Standard, Recognized

Certificate of Compliance

Certificate Number:
UL-US-2414761-1

Report Reference:
E535773-20240419

Issue Date:
2024-06-19

Issued to:

Suzhou Yihang Electronic Science and Technology Co., Ltd
North Side Of 5f, Bldg K, Phase Ii Of Pingqian International (Suxiang) Ip, No. 45, Chunxing Rd, Caohu St Suzhou, Jiangsu 215000
China

This certificate confirms that representative samples of:
FFVI2 - Electric Vehicle Plugs, Receptacles and Couplers - Component

See Addendum Page for Product Designation(s).

Have been evaluated 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.

UL 2251, 4th Ed., Issue Date: 2017-11-20

Additional Information:
See UL Product iQ® at https://iq.ulprospector.com for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance 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.

David Piecuch
UL Mark Certification Program Manager

CERTIFICATE OF COMPLIANCE

Certificate number UL-US-2414761-1
Report reference E535773-20240419
Date 2024-06-19

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

Model	Product Description
WB-SC-AC2.0-32A	Vehicle Connector
WB-SC-AC2.0-48A	Vehicle Connector
WB-SC-AC2.0-50A	Vehicle Connector
WB-SC-AC2.0-60A	Vehicle Connector
WB-SC-AC2.0-64A	Vehicle Connector
WB-SC-AC2.0-70A	Vehicle Connector
WB-SC-AC2.0-80A	Vehicle Connector

David Piecuch
UL Mark Certification Program Manager

Certificate of Compliance

Certificate Number:

UL-CA-2412185-1

Report Reference:

E535773-20240419

Issue Date:

2024-06-19

Issued to:

Suzhou Yihang Electronic Science and Technology Co., Ltd
North Side Of 5f, Bldg K, Phase Ii Of Pingqian International (Suxiang) Ip, No. 45, Chunxing Rd, Caohu St Suzhou, Jiangsu 215000
China

This certificate confirms that representative samples of:

FFVI8 - Electric Vehicle Plugs, Receptacles and Couplers Certified for Canada - Component

See Addendum Page for Product Designation(s).

Have been evaluated 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.

CSA C22.2 NO. 282-17, 2nd Ed., Issue Date: 2017-11-20, Revision Date: 2018-04

Additional Information:
See UL Product iQ® at https://iq.ulprospector.com for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance 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.

David Piecuch
UL Mark Certification Program Manager

UL Solutions

CERTIFICATE OF COMPLIANCE

Certificate number UL-CA-2412185-1
Report reference E535773-20240419
Date 2024-06-19

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

Model	Product Description
WB-SC-AC2.0-32A	Vehicle Connector
WB-SC-AC2.0-48A	Vehicle Connector
WB-SC-AC2.0-50A	Vehicle Connector
WB-SC-AC2.0-60A	Vehicle Connector
WB-SC-AC2.0-64A	Vehicle Connector
WB-SC-AC2.0-70A	Vehicle Connector
WB-SC-AC2.0-80A	Vehicle Connector

David Piecuch
UL Mark Certification Program Manager

File E535773
Project 4790957144

April 19, 2024

REPORT

On

COMPONENT - ELECTRIC VEHICLE PLUGS, RECEPTACLES AND COUPLERS

Suzhou Yihang Electronic Science and Technology Co., Ltd.
Jiangsu, China

DESCRIPTION

PRODUCT COVERED:

USR, CNR – Component, Vehicle Connectors, Cat. Nos. WB-SC-AC2.0-80A, WB-SC-AC2.0-70A, WB-SC-AC2.0-64A, WB-SC-AC2.0-60A, WB-SC-AC2.0-50A, WB-SC-AC2.0-48A, **WB-SC-AC2.0-32A.**

GENERAL

These are SAE J1772 compliant, multi-pole grounding type devices employing crimp-type contacts for power, control pilot and communications circuits. They are intended to supply AC power to an electric vehicle for the purpose of charging the vehicle batteries. The mating inlet, intended to be installed on an electric vehicle and connected to the vehicle wiring harness, was not evaluated as part of this investigation.

The vehicle connectors are provided with enclosures rated Type 4X in the mated position and may be used either indoors or outdoors.

RATINGS:

Connector Cat. No.	Rating	Wire Size
WB-SC-AC2.0-80A	240 Vac, 80 A	Power – 5 AWG (2 provided) GND - 6 AWG (1 Provided) Signal – 18 AWG (4 provided)
WB-SC-AC2.0-70A	240 Vac, 70 A	Power – 6 AWG (2 provided) GND - 6 AWG (1 Provided) Signal – 18 AWG (4 provided)
WB-SC-AC2.0-64A	240 Vac, 64 A	Power – 6 AWG (2 provided) GND - 6 AWG (1 Provided) Signal – 18 AWG (4 provided)
WB-SC-AC2.0-60A	240 Vac, 60 A	Power – 7 AWG (2 provided) GND - 9 AWG (1 Provided) Signal – 18 AWG (4 provided)
WB-SC-AC2.0-50A	240 Vac, 50 A	Power – 8 AWG (2 provided) GND - 10 AWG (1 Provided) Signal – 18 AWG (4 provided)
WB-SC-AC2.0-48A	240 Vac, 48 A	Power – 8 AWG (2 provided) GND - 10 AWG (1 Provided) Signal – 18 AWG (4 provided)
WB-SC-AC2.0-32A	**240 Vac, 32 A**	**Power – 10 AWG (2 provided) GND - 10 AWG (1 Provided) Signal – 18 AWG (1 provided)**

Pilot contacts are rated 2 A, 30 Vdc.

Ambient Temperature Rating: -40°C to +50°C.

MODEL DIFFERNECE:

Models WB-SC-AC2.0-70A, WB-SC-AC2.0-60A, WB-SC-AC2.0-50A are identical to model WB-SC-AC2.0-80A, except for Right Housing, Power/Ground Contact Terminal, EV Cable, Gasket, Bushing and current rating.

Model WB-SC-AC2.0-64A is identical to model WB-SC-AC2.0-70A, except for current rating.

Model WB-SC-AC2.0-48A is identical to model WB-SC-AC2.0-50A, except for current rating.

Model WB-SC-AC2.0-32A is identical to model WB-SC-AC2.0-48A, except for L1/L2 Contact Terminals, EV Cable and current rating.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

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

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

CNR – Products designated CNR have been investigated using Canada requirements as noted in the Test Record.

Conditions of Acceptability - In order to be judged acceptable as a component of electric vehicle charging equipment, the following conditions should be met.

1. Interruption of Current - These devices have not been tested for interrupting the flow of current by connecting or disconnecting the mating connector. If the devices will be routinely connected or disconnected under load in the end-use application, tests to evaluate the devices' ability to withstand the resulting electrical arc should be considered. The number of make-and-break cycles, the supply voltage and power factor, and the current carried by each pole of the device in the test are to be developed based upon the conditions that will be present in the end-use. These devices should be used where the power contacts will not interrupt current.

2. Pilot Contacts - These devices have been tested for 110 percent make and break cycles of interrupting a current by connecting and disconnecting the mating connector in accordance with the Electromagnetic test. The devices should be used with equipment employing a control pilot circuit, having a current interrupting rating not less than the vehicle inlet or vehicle connector rating. The control pilot circuit shall function to ensure that the interrupting device opens the power circuit before the power contacts break.

3. Insulating Materials — The insulating materials used in these devices have been investigated for their Relative Thermal Index (Electrical and Mechanical with Impact), Flame Rating, Hot Wire Ignition, High Current Arc Resistance to Ignition and Comparative Tracking Index, and comply with the requirements for stated in Section 8 of the standard stated in the Test Record. The maximum operating temperature for any connector shall not exceed the rated operating temperature. Materials used for the enclosure of a device comply with the requirements for exposure to outdoor weather conditions (ultraviolet light exposure, water exposure and immersion) as stated in Section 10 of the standard stated in the Test Record.

4. Terminations - The wiring terminations of the vehicle connector employ crimp-type terminations that have been subjected to the Conductor Secureness and Pullout tests.

5. Outdoor Use - The connector and mating inlet have been evaluated for an enclosure rating of Type 4X in accordance with Section 54 of the standard stated in the Test Record.

6. This device has been conducted Short Circuit Test under following condition. Final acceptance shall be judged in end-product evaluation by considering expected fault current.

Connector Cat. No.	Test Circuit	Protective Fuse
WB-SC-AC2.0-80A	240 Vac, 5 kA	100 A
WB-SC-AC2.0-32A	**240 Vac, 5 kA**	**40 A**

7. Compliance to National Electrical Code for Cable length of EV cable should be evaluated at the end use application.

CONSTRUCTION DETAILS:

Refer to the following photo and descriptive indices for construction details.

Spacings - Minimum clearances of 1.5 mm provided through air between live parts of opposite polarity and between live metal parts and exposed dead metal parts and a minimum spacing (creepages) of 3.2 mm provided over surface between live parts of opposite polarity and between live metal parts and exposed dead metal parts for devices rated 240 V or less. Per Section 12 of the standard stated in the Test Record, Overvoltage Category II, Pollution Degree 3, Material Group I.

Marking – The device shall be legibly marked, where visible after installation, laser printed on the device.

a) Recognized Company name, trade name, trademark, or other descriptive marking by which the organization responsible for the product may be identified.

b) The catalog numbers.

c) The electrical rating in both volts and amperes.

d) ac or dc or both as applicable.

e) A device enclosure type designation, “Type 4X”.

f) UL/cUL recognition mark.

g) Ambient temperature rating.

The following shall be provided on the device or on the smallest unit container or carton or on a stuffer sheet in the smallest unit container or carton:

a) “CAUTION - Risk of Electric Shock, Do Not Disconnect Under Load”, or “CAUTION - Not for current interrupting” or “CAUTION - For disconnecting use only”, or an equivalent statement following the word "CAUTION".

When the product is intended for use in Canada, cautionary markings shall be provided in both English and French.

Index to Figures:

Index to Illustrations:

VEHICLE CONNECTOR, Cat. No. WB-SC-AC2.0-80A

General – FIGs. 1 thru 4 and ILL. 1 depict the overall view of Cat. No. WB-SC-AC2.0-80A. The general design, shape and arrangement shall be as illustrated. Also represents WB-SC-AC2.0-70A, WB-SC-AC2.0-64A, WB-SC-AC2.0-60A, WB-SC-AC2.0-50A, WB-SC-AC2.0-48A, **WB-SC-AC2.0-32A** unless otherwise specified.

1. Housing – R/C (QMFZ2/8), LG Chem (Guangzhou) Engineering Plastics Co Ltd (E248280), PC, Type LUPOY EF-1006F(m)(f1), color NC, WT, minimum 3.0 mm thick, rated V-0, HWI=1, HAI=0, CTI=3, RTI=120˚C. Left and Right Housing are secured together by thirteen rivets. See ILL. 2 for overall dimensions of Left Housing and ILL. 3 for overall dimensions of Right Housing for different models.

2. Plug – R/C (QMFZ2/8), LATI INDUSTRIA TERMOPLASTICI SPA (E54080), PA66, Type LATAMID 66 H2 G/25-V0KB3 (q) (r) (f1), black or grey, minimum 1.5 mm thick, rated V-0, HWI=HAI=CTI=0, RTI=100˚C. Secured to Housing by physical fit and a ST2.9*8 screw inside. See ILL. 4 for overall dimensions.

3. Plug Rear Cover – R/C (QMFZ2/8), LATI INDUSTRIA TERMOPLASTICI SPA (E54080), PA66, Type LATAMID 66 H2 G/25-V0KB3 (q) (r) (f1), black or grey, minimum 1.4 mm thick, rated V-0, HWI=HAI=CTI=0, RTI=100˚C. Physically fit into Plug. See ILL. 5 for overall dimensions.

4. Terminal Holder – R/C (QMFZ2/8), LATI INDUSTRIA TERMOPLASTICI SPA (E54080), PA66, Type LATAMID 66 H2 G/25-V0KB3 (q) (r) (f1), black or grey, minimum 1.0 mm thick, rated V-0, HWI=HAI=CTI=0, RTI=100˚C. Secured to Plug by a ST2.9*8 screw inside. See ILL. 6 for overall dimensions.

5. Dust Cap – Optional. Made of rubber.

6. Latch – Made of aluminum alloy. See ILL. 7 for overall dimensions.

7. Spring – Made of spring steel. See ILL. 8 for overall dimensions.

8. Contact Terminals – Crimp type **or ultra welding type**, silver plated copper alloy, fitted into Terminal Holder. See ILLs. 9 thru 12 for overall dimensions, and ILL. 13 for crimp tool and die information.

Cat. No.	Contact Terminals	**Terminal Type**	Number of Terminal	Wire Size	ILL. No.
WB-SC-AC2.0-80A	L1/L2	**Crimp**	2	5 AWG	9
	PE	**Crimp**	1	6 AWG + 20 AWG	10
	CP	**Crimp**	1	18 AWG	11
	CS	**Crimp**	1	20 AWG	12
WB-SC-AC2.0-70A, WB-SC-AC2.0-64A	L1/L2	**Crimp**	2	6 AWG	9
	PE	**Crimp**	1	6 AWG + 20 AWG	10
	CP	**Crimp**	1	18 AWG	11
	CS	**Crimp**	1	20 AWG	12
WB-SC-AC2.0-60A	L1/L2	**Crimp**	2	7 AWG	9
	PE	**Crimp**	1	9 AWG + 20 AWG	10
	CP	**Crimp**	1	18 AWG	11
	CS	**Crimp**	1	20 AWG	12
WB-SC-AC2.0-50A, WB-SC-AC2.0-48A	L1/L2	**Crimp**	2	8 AWG	9
	PE	**Crimp**	1	10 AWG + 20 AWG	10
	CP	**Crimp**	1	18 AWG	11
	CS	**Crimp**	1	20 AWG	12
WB-SC-AC2.0-32A	**L1/L2**	**Ultra welding**	**2**	**10 AWG**	**9A**
	PE	**Crimp**	**1**	**10 AWG + 20 AWG**	**10**
	CP	**Crimp**	**1**	**18 AWG**	**11**
	CS	**Crimp**	**1**	**20 AWG**	**12**

9. EV Cable – Listed (FFSO/7), type EVE, rated 600 V, 105°C. Connected to Terminals by crimping.

Model	Power Conductor	Ground Conductor	Signal Conductor	Nominal Cable Diameter
WB-SC-AC2.0-80A	2*5 AWG	1*6 AWG	4*18 AWG	25.0 mm
WB-SC-AC2.0-70A, WB-SC-AC2.0-64A	2*6 AWG	1*6 AWG	4*18 AWG	24.5 mm
WB-SC-AC2.0-60A	2*7 AWG	1*9 AWG	4*18 AWG	21.7 mm
WB-SC-AC2.0-50A, WB-SC-AC2.0-48A	2*8 AWG	1*10 AWG	4*18 AWG	20.5 mm
WB-SC-AC2.0-32A	**2*10 AWG**	**1*10 AWG**	**1*18 AWG**	**16.0 mm**

10. Cable Pressing Plate – Made of steel. Secured EV Cable to Right Housing by two M3.5*13 stainless steel screws. See ILL. 14 for overall dimensions.

11. O-Rings - R/C (QMFZ2/8), SHIN-ETSU SILICONE INTERNATIONAL TRADING (SHANGHAI) CO LTD (E360537), SIR, Type CHN-6(Y)00@(f1), 150°C. One provided for each contact terminal. See ILL. 15 (for L/N/PE) and 15A (for CP/CS) for overall dimensions.

12. Gasket - R/C (QMFZ2/8), SHIN-ETSU SILICONE INTERNATIONAL TRADING (SHANGHAI) CO LTD (E360537), SIR, Type KE-5612GU, BK color, rated V-0, 150°C. Located between Terminal Holder and Plug Rear Cover. See ILL. 16 for overall dimensions for different models.

13. Bushing - R/C (QMFZ2/8), SHIN-ETSU SILICONE INTERNATIONAL TRADING (SHANGHAI) CO LTD (E360537), SIR, Type CHN-6(Y)00@(f1), BK color, 150°C. See ILL. 17 for overall dimensions for different models.

14. Micro Switch Assembly - See ILL. 18 for dimensions.

    14A. Micro Switch - R/C (WOYR2/8), ZING EAR ENTERPRISE CO LTD (E89885), Cat. No. G3, rated 12 Vdc, 3 A, 85°C.

    14B. PWB Housing - R/C (QMFZ2/8), KINGFA SCI & TECH CO LTD (E171666), Type PA66-ROW (##)(r4)(f1), all color, rated V-0, 110°C.

    14C. PWB - R/C (ZPMV2/8), rated V-0, 130°C. One provided, micro switch, resistors and wires are connected to PWB by soldering. See FIG. 9 for details.

    14D. Resistors – Two provided. Mounted on PWB.

        a) R6 - Rated 150 ohm, 1/2 W.

        b) R7 - Rated 330 ohm, 1/2 W.

    14E. Leads - R/C (AVLV2/8), rated Min. Horizontal flame, 300 Vac, 80 °C, 20 AWG. Connect terminals, resistors, and micro switch. See ILL. 19 for wire connection.

    14F. Glue - Manufactured by DONG GUAN QIANGLI INDUSTRIAL CO., LTD., Type 910AB.

15. Temperature Sensor (NTC) – R/C (XGPU2/8), Shenzhen Topos Sensor Technology Co. Ltd (E508008), Model TPSNM-103, Tmoa = 200° C, 18 AWG leads. One provided, located on L1 insulated conductor, wrapped with Heat Shrinkable Tube. See FIG. 10 for Location and ILL. 20 for specification.

16. Heat Shrinkable Tube – R/C (YDPU2/8), rated 600 V, 105°C.

Figure-1 Page-1

Figure-2 Page-1

Figure-3 Page-1

Figure-4 Page-1

TEST RECORD NO. 1

SAMPLES:

Samples of Vehicle Connector, Cat. Nos. WB-SC-AC2.0-80A, WB-SC-AC2.0-70A, WB-SC-AC2.0-64A, WB-SC-AC2.0-60A, WB-SC-AC2.0-50A, WB-SC-AC2.0-48A, were submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

The following tests conducted in accordance with UL 2251 were considered representative of the same tests required by Canadian Standard, CAN/CSA C22.2 No. 282:

Test Item	Standard/Section	DS No.
Accelerated Aging Test	UL 2251, Sec. 25	DS1
Mold Stress Relief Test	UL 2251, Sec. 26	DS1
Moisture Absorption Resistance	UL 2251, Sec. 27	DS1
Humidity Conditioning	UL 2251, Sec. 28	DS1
Insulation Resistance Test	UL 2251, Sec. 29	DS1
Dielectric Withstand Test	UL 2251, Sec. 30	DS1
Dew Point Test	UL 2251, Sec. 31	DS1
Conductor Secureness and Pullout Test	UL 2251, Sec. 32	DS1, DS8
Cable Secureness Test	UL 2251, Sec. 33	DS1
Impact Test (Plugs, Vehicle Connectors And Breakaway Couplings)	UL 2251, Sec. 34	DS1
Crush Test	UL 2251, Sec. 35	DS1
Vehicle Driveover Test	UL 2251, Sec. 36	DS2
Withdrawal Force Test	UL 2251, Sec. 37	DS1
Grounding Path Current Test	UL 2251, Sec. 38	DS3
Short Circuit Test	UL 2251, Sec. 39	DS3
No Load Endurance Test	UL 2251, Sec. 41	DS1
Overload Test	UL 2251, Sec. 43	DS1
Electromagnetic Test (Pilot Contacts)	UL 2251, Sec. 44	DS1
Temperature Rise And Surface Temperature Test	UL 2251, Sec. 45 and 47	DS1, DS6
Polarization Integrity Test	UL 2251, Sec. 49	DS1
Resistance to Corrosion Test	UL 2251, Sec. 50	DS4
Accelerated Aging Gasket Test	UL 2251, Sec. 52	DS1, DS7
Enclosure Tests for Environmental Protection (4X) - External Icing Test	UL 2251, Sec. 54 UL 50E, Sec. 8.5	DS5
Enclosure Tests for Environmental Protection (4X) - Hosedown Test	UL 2251, Sec. 54 UL 50E, Sec. 8.6	DS5

Unless otherwise noted, all tests were conducted with the sample connected to a 240 Vac, 60 Hz source of supply.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Latest Revision Date
UL 2251	Plugs, Receptacles, and Couplers for Electric Vehicles	Fourth Edition	November 20, 2017
CSA C22.2 No. 282-17	Plugs, Receptacles, and Couplers for Electric Vehicles	Second Edition	April 2018

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

TEST RECORD NO. 2

SAMPLES:

Samples of Vehicle Connector, Cat. No. WB-SC-AC2.0-32A were submitted by the manufacturer for examination and test.

Cat. No. WB-SC-AC2.0-32A was identical to Cat. No. WB-SC-AC2.0-48A, except for L1/L2 Contact Terminals, EV Cable, and current rating.

GENERAL:

Test results relate only to the items tested.

Only the following tests were considered necessary due to the similarity to previous tested construction.

The following tests conducted in accordance with UL 2251 were considered representative of the same tests required by Canadian Standard, CAN/CSA C22.2 No. 282:

Test Item	Standard/Section	DS No.
Conductor Secureness and Pullout Test	UL 2251, Sec. 32	DS1
Cable Secureness Test	UL 2251, Sec. 33	DS1
Crush Test	UL 2251, Sec. 35	DS1
Vehicle Driveover Test	UL 2251, Sec. 36	DS2
Short Circuit Test	UL 2251, Sec. 39	DS3
No Load Endurance Test	UL 2251, Sec. 41	DS1
Overload Test	UL 2251, Sec. 43	DS1
Temperature Rise And Surface Temperature Test	UL 2251, Sec. 45 and 47	DS1

Unless otherwise noted, all tests were conducted with the sample connected to a 240 Vac, 60 Hz source of supply.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Standard	Title	Edition or Publication Date	Latest Revision Date
UL 2251	Plugs, Receptacles, and Couplers for Electric Vehicles	Fourth Edition	November 20, 2017
CSA C22.2 No. 282-17	Plugs, Receptacles, and Couplers for Electric Vehicles	Second Edition	April 2018

Report by:

Emilie Zheng
Project Engineer

Reviewed by:

Tsutomu Takahashi
Engineering Leader

CONCLUSION

Samples of the components covered by this Report have been found to comply with the requirements covering the category and the components are found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the sample(s) investigated by UL and does not signify the product(s) described as being covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the Recognized Marking on such products which comply with UL's Follow-Up Service Procedure and any other applicable requirements of UL LLC. The Recognized Component Mark of UL LLC on the product, or the Recognized Marking symbol on the product and the Recognized Component Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Recognition and Follow-Up Service.

Report by:

Emilie Zheng
Project Engineer

Reviewed by:

Tsutomu Takahashi
Engineering Leader