



# Vardhamana Testing Laboratory

(LABORATORY IN ELECTRICAL, ELECTRONICS & PHOTOMETRY TESTING)  
Plot No.-403, Udyog Kendra-II, Ecotech-III, Greater Noida-201306 (U.P.)  
Tel. : 0120-6811256

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## TEST REPORT

|  |                     |   |                 |
|--|---------------------|---|-----------------|
|  |                     | Format No. : VTL/FR/19  |                 |
| Discipline:  | Electronics         | Group:  |                 |
| Location of testing performance of the Laboratory & its Address:   |                     | Vardhamana Testing Laboratory<br>Plot No 403, Udyog Kendra Extn -II Ecotech -3, Greater Noida – 201306 (U.P.)                       |                 |
| Test Specification:  |                     | As per IEC 61851-1, IEC 61851-23  |                 |
| Report No.:  | VTL/TRN/2024/06/142 | Issue Date:   | 20/06/2024      |
|  |                     | Page No.:   | 1 of 14         |
| Name & Address of Manufacturer:  |                     | M/S EFEV Charging Solutions Pvt. Ltd.<br>Plot-1670, Rai Industrial Estate, Sector-38, Sonipat, Haryana, India,<br>Pin Code - 131029 |                 |
| Name & Address of Applicants:  |                     | M/S EFEV Charging Solutions Pvt. Ltd.<br>Plot-1670, Rai Industrial Estate, Sector-38, Sonipat, Haryana, India,<br>Pin Code - 131029 |                 |
| PART A. PARTICULARS OF SAMPLE SUBMITTED BY CUSTOMER  |                     |   |                 |
| a) Sample Name:  |                     | X4 60kW DC charger  |                 |
| b) Sample Description<br>(Rating/ Class/Type etc.)   |                     | Input: 320-480V AC, Output: 200-750V DC/200A  |                 |
| c) Model Number:   |                     | E-FILL_X4_60KWDC/Type: DC Charger 60kW  |                 |
| d) Brand Name:   |                     | E-FILL  |                 |
| e) Quantity of Sample:   |                     | 01  |                 |
| f) Date of Receipt of Sample:  |                     | 11/05/2024  |                 |
| g) Date of performance of testing:   |                     | 11/05/2024 to 15/06/2024  |                 |
| h) Condition of sample received:   |                     | Good  |                 |
| i) Environmental Conditions:   |                     | 25±2°C/60±15% RH  |                 |
| j) Code No./ Sr. No. / Batch No. / Date of Manufacturer/ Seal & IO's sign, if any  |                     | 601000241   |                 |
| k) Any Other Information, If Any:  |                     | Nil   |                 |
| PART B: SUPPLEMENTARY INFORMATIONS   |                     |   |                 |
| a) Reference to sampling procedure, wherever applicable  |                     |   | N/A             |
| b) Supporting documents for the measurements taken and results derived like graphs, tables, sketches and /or photographs, as appropriate to test report, if any (To be attached ): |                     |   | See Attachments |
| c) Deviation from the test methods as prescribed in relevant ISS/ work instructions,   |                     |   | N/A             |



|                                |                                     |                       |
|--------------------------------|-------------------------------------|-----------------------|
| Tested By:                     | Approved By (Authorized Signatory): | Issued By:            |
|                                |                                     |                       |
| Bheem Singh (Testing Engineer) | R.K. Srivastava (Technical Manager) | Pooja Jain (Lab Head) |

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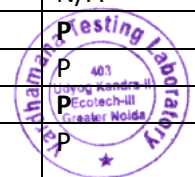
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|            |   |  |          |
|------------|---|--|----------|
| <b>7</b>   | <b>Protection against electric shock</b>  |  | <b>P</b> |
| 7.1        | General Requirements  |  | P        |
|            | Hazardous live parts are not accessible   |  | P        |
|            | Exposed conductive parts not live under normal conditions   |  | P        |
|            | Exposed conductive parts not live under single fault conditions   |  | P        |
| <b>7.2</b> | <b>Protection against direct contact</b>  |  | <b>P</b> |
| 7.2.1      | One or more provisions prevent contact....  | Double isolation used for separation from live parts to accessible parts   | P        |
| 7.2.2      | Accessibility of live parts   |  |          |
|            | Hazardous live parts are not accessible before or after removal of parts not requiring a tool for removal | The equipment is installed by qualified person. After installation of the wall dock hazardous live parts are not accessible, but shall be separated from mains via disconnecter.<br>After mounting of the station in the wall dock the equipment shall be energized. | P        |
|            | Accessibility with finger probe does not allow contact with hazardous live parts                          |  | P        |
| 7.2.3      | Stored energy — discharge of capacitors   |  | P        |
| 7.2.3.1    | Disconnection of EV   | When the EV is disconnected the pilot signal is lost. If the pilot signal is lost the contactor opens immediately. Because   there are no capacitances after the contactors the residual voltage is 0.0 V.   | P        |
|            | Voltage after 1 Second.....   | 0.0V   | P        |
|            | Stored energy available.....  |  | -        |
|            | Warning label provided  |  | N/A      |
| 7.2.3.2    | Disconnection of EVSE   |  | P        |
|            | Voltage after 1 second....  | 0.0V   | -        |
|            | Stored energy available....   | -  | -        |
|            | Warning label provided  |  | N/A      |
| <b>7.3</b> | <b>Fault Protection</b>   |  | <b>P</b> |
|            | One or more provisions prevent contact...   | Supplementary isolation  | P        |
| <b>7.4</b> | <b>Supplementary Measures</b>   |  | <b>P</b> |
|            | RCD shall be provided external to the charging station as part of the building                            | A residual current device is provided  | P        |



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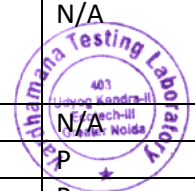
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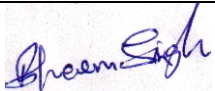

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|            |   |  |          |
|------------|---|--|----------|
|            | installation.   |  |          |
|            | An isolation monitor is provided  |  | P        |
| 7.5        | Provisions for mode 4EVSE   |  | P        |
|            | Complies with IEC 61851-23  |  | P        |
| 7.6        | Additional requirements   |  | P        |
|            | System is designed to limit harmonics, dc, and sinusoidal currents that could affect residual current device or other equipment.  |  | P        |
| <b>8.0</b> | <b>Connection between the power supply and the EV</b>   |  | <b>P</b> |
| 8.1        | General   |  | P        |
|            | Type of interface being used.....   | Basic interface  | P        |
| 8.2        | Contact Sequencing  |  | P        |
|            | During connection-Earth connection is made first and the pilot connection made last During disconnection - pilot connection breaks first and earth connection breaks last | Plug is approved according to the specific standard which ensures compliance with this clause. | P        |
| 8.3        | Functional description of a interface   |  | N/A      |
|            | Standard Earthing type plug, socket outlet and coupler used for mode 1, 2, or 3.  |  | N/A      |
| 8.4        | Functional description of a basic interface   |  | P        |
|            | Standard physical configuration for single phase  |  | N/A      |
|            | Standard physical configuration for three phase.  |  | P        |
|            | Electrical ratings comply with Table 1  |  | P        |
|            | Inlet inter-mate able with the single phase and three- phase connector or both. Not mate able with the universal type   |  | P        |
| 8.5        | Functional description of a universal interface   |  | N/A      |
|            | Universal interface inter mate able with either high power ac or high power dc connector.   |  | N/A      |
|            | Means provided to ensure dc power connect or cannot be mated with ac inlet and vice versa   |  | N/A      |
|            | Electrical ratings comply with level 1  |  | N/A      |
| 9.0        | Specific requirements for inlet; connector, plug and socket outlet  |  | P        |
| 9.1        | General Requirement   |  | P        |



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|             |   |                       |          |
|-------------|---|-----------------------|----------|
|             | Standard interface complies with IEC 60309-1, IEC 60309-2, or IEC 60884-1 (Case "A1" and "B1")..... |                       | N/A      |
|             | EVSE complies with IEC 62196-1  |                       | P        |
|             | Basic and universal interface complies with IEC 62196-1   |                       | P        |
| <b>9.2</b>  | <b>Operating temperature</b>  |                       | <b>P</b> |
|             | Operating temperature as defined in the applicable IEC standard from 9.1..                          | According IEC 62196-1 | P        |
| <b>9.3</b>  | <b>Service life of inlet/connector and plug/socket outlet</b>                                       |                       | <b>P</b> |
|             | Requirements are as defined in the applicable IEC standard from 9.1....                             | According IEC 62196-1 | P        |
| <b>9.4</b>  | <b>Breaking Capacity</b>  |                       | <b>P</b> |
|             | Mode 4 charging does not break load   |                       |          |
|             | Test for Modes 2,3,Or 4 in accordance with IEC 62196-1  | Mode 4                | P        |
| <b>9.5</b>  | <b>IP DEGREES</b>   |                       | <b>P</b> |
|             | Complies with 11.3  |                       | P        |
| <b>9.6</b>  | <b>Insertion and Extraction Forces</b>  |                       | <b>P</b> |
|             | Complies with IEC 62196-1   |                       | P        |
|             | For Connection Case "A1" or "B1" complies with the relevant standard                                |                       | N/A      |
| <b>9.7</b>  | <b>Latching of the retaining device</b>   |                       | <b>P</b> |
|             | Latching device provided  |                       | P        |
|             | Separation of connector and inlet while contacts are live is prevented by latching device           |                       | P        |
| <b>10.1</b> | <b>Electrical Rating</b>  | Case C Connection     | P        |
|             | Rated voltage of conductors corresponds to rated voltage of connector.                              |                       | P        |
|             | Rated current of connectors and conductors corresponds to rating of overcurrent protection          |                       | P        |
| <b>10.2</b> | <b>Electrical characteristics</b>   |                       | N/A      |
|             | Voltage and current ratings of the cable are compatible with the ratings of the EVSE....            |                       | N/A      |
|             | Cable insulation is wear resistant and maintains flexibility over the full ambient range            |                       | N/A      |
| <b>10.3</b> | <b>Dielectric With stand Characteristics</b>  |                       | N/A      |



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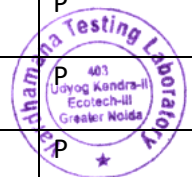
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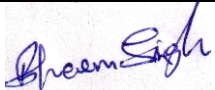


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|      |  |  |     |
|------|--|--|-----|
|      | Complies with 11.4   |  | N/A |
| 10.4 | Mechanical Characteristics                                   |  | N/A |
|      | Meets or exceeds the characteristics specified in IEC60245-6 |  | N/A |
|      | Cable is fire resistant                                      |  | P   |
|      | Cable with stands chemical exposure                          |  | N/A |
|      | Cables rated for UV exposure                                 |  | N/A |

|           |   |      |          |
|-----------|---|------|----------|
| <b>11</b> | <b>EVSE Requirements</b>  |      | <b>P</b> |
| 11.1      | General Test Requirements   |      | P        |
|           | Tests performed in an ambient of 20°C±5°C unless otherwise specified                |      | P        |
|           | AC charging stations comply with IEC61851-22  |      | P        |
| 11.2      | Classification  |      | P        |
|           | EVSE is considered indoor use only  |      | N/A      |
|           | EVSE is considered indoor/outdoor use   |      | P        |
| 11.3      | IP Degrees for basic and universal interfaces                                       |      | P        |
| 11.3.1    | IP Degrees for ingress of objects   |      | P        |
|           | Indoor Use (IP).....  | IP54 | -        |
|           | Vehicle inlet mated with connector is IP21  |      | P        |
|           | Connector for Case "C" when not connected is IP21                                   |      | N/A      |
|           | Outdoor Use (IP).....   | IP54 | -        |
|           | Vehicle inlet mated with connector is IP44  |      | N/A      |
|           | All Cable Assemblies.....   |      | -        |
|           | Inlet in "road" position is IP 55 with or without assistance from vehicle design... |      | N/A      |
|           | Connector when not mated is IP24  |      | N/A      |
| 11.3.2    | Protection against electric shock   |      | P        |
|           | Vehicle inlet mated with connector is IPXXD   |      | P        |
|           | Connector for Mode 1 not connected is IPXXD   |      | P        |
|           | Connector for Mode 2 and Mode 3 not connected is IPXXB                              |      | P        |



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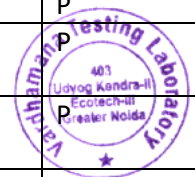
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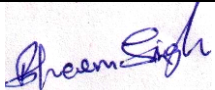


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|        |  |                                      |     |
|--------|--|--------------------------------------|-----|
| 11.4   | Dielectric With stand Characteristics  |                                      | P   |
| 11.4.1 | Dielectric With stand Voltage  |                                      | P   |
|        | No breakdown indicated   | See appended Table 11.4.1            | P   |
| 11.4.2 | Impulse dielectric withstand   |                                      | P   |
|        | No breakdown indicated   | See appended Table11.4.2             | P   |
| 11.5   | Insulation Resistance  |                                      | P   |
|        | Insulation resistance measurement is greater than TMQ  | See appended Table11.5               | P   |
| 11.6   | Clearance and Creepage Distances   |                                      | P   |
|        | Clearance and Creepage Distances meet the minimum values   | See appended Table11.6               | P   |
| 11.7   | Leakage-Touch Current  |                                      | P   |
|        | Leakage current does not exceed 3.5mA  | See appended Table11.7               | P   |
| 11.8   | Environmental Tests  |                                      | P   |
| 11.8.1 | General  |                                      | P   |
|        | Equipment meets the original requirements after each test  |                                      | P   |
| 11.8.2 | Ambient air temperature  |                                      | P   |
|        | Manufacturer's rated ambient temperature range (°C)  | -30°Cto+40°C                         | P   |
|        | Equipment operates as intended within full range of ambient temperatures                                       |                                      | P   |
| 11.8.3 | Ambient Humidity   |                                      | P   |
|        | Test in accordance with IEC60068-2-78, test Ca, at 40C+2C and 93% relative humidity for four days(IEC61851-22) | Normal operation                     | P   |
|        | Testing accordance with EC60068-2-30, test Db, at 40C2C for 6 cycles (IEC 61851-22)....                        |                                      | N/A |
| 11.8.4 | Ambient Air Pressure   |                                      | P   |
|        | Designed for operation between 860h Pa and 1060h Pa  |                                      | P   |
| 11.9   | Permissible Surface Temperature  |                                      | P   |
|        | Temperature limits on surfaces are not exceeded  | See appended Table11.9               | P   |
| 11.10  | Environmental Conditions   |                                      | P   |
|        | EVSE is designed to resist the effects of automotive solvents..  | Accepted based on the material specs | P   |
|        | EVSE is designed to resist the effects of automotive fluids..  | Accepted based on the material specs | P   |
|        | EVSE Is designed to resist the effects of  | Accepted based on the material specs | P   |



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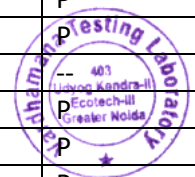
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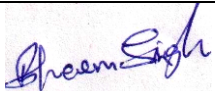


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|         |  |   |   |
|---------|--|---|---|
|         | vibration:   |   |   |
|         | EVSE is designed to resist the effects of shock.   | Accepted based on the material specs  | P |
|         | EVSE is designed to meet material flammability standards...                                      | Accepted based on the material specs  | P |
| 11.11   | Mechanical Environmental Tests   |   | P |
| 11.11.2 | Mechanical Impact  |   | P |
|         | No damage to the enclosure, and no access to internal live parts after impact                    |   | P |
| 11.13   | Latching of the retaining device   |   | P |
|         | Latching device used to prevented is connection under load                                       |   | P |
| 11.14   | Service  |   | P |
|         | Parts are designed such that they can be, removed, serviced and replaced when necessary          | After removal of the cover the outlet cable is replaceable by service personnel | P |
| 11.15   | Marking and Instructions.  |   | P |
| 11.15.1 | Connection Instructions  |   | P |
|         | Instructions for proper connection of the vehicle to the EVSE shall appear in the vehicle manual |   | P |
|         | Instructions for proper connection of the vehicle to the EVSE shall appear in the owner's manual |   | P |
|         | Instructions for proper connection of the vehicle to the EVSE shall appear on the EVSE product   |   | P |
| 11.15.2 | All marking comply with the legibility requirements after the rub tests                          |   | P |
| 11.15.3 | Marking of Electric Vehicle Charging Station   |   | P |
|         | The EVSE product is marked with all relevant information   |   | P |
|         | Name of manufacturer....   | EFEV Charging Solutions Pvt  Ltd. (E-FILL)                                      | P |
|         | Model Number   | E-FILL_X4_60KWDC  | P |
|         | Serial Number...   | 601000241   | P |
|         | Date of manufacturer..   | --  | P |
|         | Rated voltage (V).....   | 320V-480V AC  | P |
|         | Rated frequency (Hz)   | 50/60Hz   | P |
|         | Rated current (A)....  | 15A   | P |



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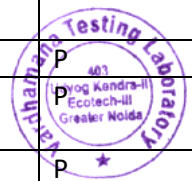
|          |  |             |     |
|----------|--|-------------|-----|
|          | Number of phases.....  | 3Phase+N+PE | P   |
|          | IP Degree.....   | IP54        | P   |
|          | "Indoor use only" If the product is intended For indoor use only                             |             | N/A |
|          | Class II stations marked with Class II symbol  |             | N/A |
| 11.16    | Telecommunication Network  |             | P   |
|          | Telecommunication networks comply with IEC60950-1  |             | P   |
| Annex -A | Pilot Function Through a Control Pilot Circuit Using PWM Modulation and a Control Pilot Wire |             | P   |
|          | EVSE communication protocol used pulse width modulation on the control pilot.                |             | P   |
|          | Communication protocol aligns with the parameters in Annex-A                                 |             | P   |

|   |   |  |   |
|---|---|--|---|
| 5 | Standard Conditions for Operation in Service and for Installation |  | P |
|   | Operating ambient is between -30°C and +50°C(IEC61851-22)         |  | P |
|   | Relative humidity is between 6% and 95% (IEC61851-22)             |  | P |

|   |  |          |   |
|---|--|----------|---|
| 6 | Rating of the A.C. input and output                                |          | P |
|   | Output rating Option A, B or C applies to the Product(IEC65851-22) | Option-B | P |

|   |                                    |         |   |
|---|------------------------------------|---------|---|
| 7 | General Test Requirements          |         | P |
|   | Clause 11.1 of part 1 applied..... | Applied | P |

|     |   |  |   |
|-----|---|--|---|
| 8   | Functional and Constructional Requirements  |  | P |
| 8.1 | For mode 3 charging, the charge station provides part of the control functions listed in 6.4 of Part 1(IEC61851-22) |  | P |
| 8.2 | Emergency Service   |  | P |
|     | Disconnect device provided (IEC61851-22)  | To be provided external to the equipment | P |
|     | Provided with a means to prevent  |  | P |



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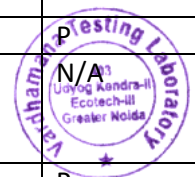
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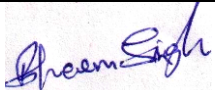


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|     |  |   |     |
|-----|--|---|-----|
|     | accidental operation of the disconnect device(IEC61851-22)   |   |     |
| 8.3 | Permissible Surface Temperatures   |   | P   |
|     | Clause 11.9 of part 1 applied  |   | P   |
| 8.4 | Charging Station Protection Degree (IP)  |   | P   |
|     | Clause 11.3 of part 1 applied  |   | P   |
| 8.5 | Storage Means for the Cable Assembly   |   | P   |
|     | Storage means for cable assembly (IEC61851-22)   | Equipment is provided with connector suspension system      | P   |
|     | Storage means for vehicle connector (IEC61851-22)  | Vehicle is not part of this investigation                   | N/A |
|     | Indication means for proper storage (IEC61851-22)  |   | N/A |
| 8.6 | Location of the Socket-Outlet and Storage Means for the Connector  |   | P   |
|     | Lowest part of socket outlet (Case A or Case B [Connections) or the lowest part of storage means for the vehicle connector(Case C Connection) between 0.4m and 1.5m above ground level (IEC61851-22) |   | P   |
|     | Height of socket-outlet (mm)   | 50 to 150 cm, part of installation manual                   | -   |
|     | Height of storage means (mm)...  | -   | -   |
| 8.7 | Extension Cord, Clause 6.3.2 of part 1 applied   | No extension cord   | N/A |
| 8.8 | Metering equipment complies with IEC61036,IEC62052-11,Or IEC62053-21 (IEC61851-22)   | Complies with IEC62052-11 and IEC62053-21                   | P   |
| 9   | Electrical Safety  |   | P   |
| 9.1 | Protection Against Indirect Contact  |   | P   |
|     | Protection required by 7.3 of Part is not automatically reset(IEC61851-22)   | Double isolation used for protection against electric shock | P   |
|     | Manual reset is easily accessible (IEC61851-22)  |   | N/A |
|     | Optional protection specified in 7.4 of Part1 may be automatically reset, if in accordance with National Regulations(IEC61851-22)  |   | N/A |
| 9.2 | Earthing Electrode and Continuity  |   | P   |
|     | All dead metal parts connected together, referenced to the main earth connection(IEC61851- 22)   | Thermo plastic enclosure                                    | N/A |
|     | Resistance of earth path less than 0.1 ohms  | 0.050hm@32A   | P   |



| Tested By:  | Approved By (Authorized Signatory):   | Issued By:  |
|---|---|---|
|  |  |  |
| Bheem Singh(Testing Engineer)   | R.K Srivastava(Technical Manager)   | Pooja Jain (Lab Head)   |



# Vardhamana Testing Laboratory

(LABORATORY IN ELECTRICAL, ELECTRONICS & PHOTOMETRY TESTING)

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## TEST REPORT

Test Report No: VTL/TRN/2024/06/142

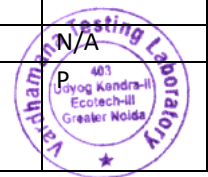
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|     |   |  |   |
|-----|---|--|---|
|     | (IEC61851-22)   |  |   |
|     | Resistance measured   |  | - |
| 9.3 | Detection of the Electrical Continuity of the Protective Conductor          |  | P |
|     | Ground monitor / Interrupter provided for all Mode 3 charging (IEC61851-22) |  | P |

|        |   |   |     |
|--------|---|---|-----|
| 10     | Dielectric Test Requirements  |   | P   |
| 10.1.1 | Dielectric With stand Voltage, Clause 11.4.1 of part 1 applied  |   | P   |
| 10.1.2 | Impulse Dielectric With stand Clause 11.4.2 of Part 1 applied   |   | P   |
| 10.1.3 | Insulation Resistance, Clause 11.5 of Part 1 applied  |   | P   |
| 10.2   | Touch Current Clause 11.7 of part 1 applied   |   | P   |
| 10.3   | Protection Measures   |   | P   |
|        | Protection against overcurrent and overvoltage in accordance with IEC60364-4-43 and IEC60364-4-43 respectively (IEC61851-22)      | Protection measures shall be realized outside of the EUT. See conditions of acceptability | P   |
|        | Protection against over currents or short circuits within the device are coordinated with the   external protection (IEC61851-22) |   | P   |
| 10.4   | Creepage and Clearance Distances, Clause 11.6 of Part 1 applied   |   | P   |
| 11     | Environmental Tests   |   | P   |
| 11.1.2 | Ambient Temperature, Cl. 11.8.2 of part 1 applied   |   | P   |
| 11.1.3 | Dry Heat  |   | P   |
|        | Optional-Test in accordance with IEC60068-2-2, test Bd (IEC61851-22)  | Test under consideration  | N/A |
|        | Test temperature (°C)...  |   | -   |
|        | Test Duration (hours)....   |   | -   |
| 11.1.4 | Ambient Humidity, Clause 11.8.3 of Part 1 applied   | Damp heat continuous test   | P   |
| 11.5   | Cold Test   |   | P   |
|        | Test in accordance with IEC60068-2-1, test Ab, at -30°C for 16 hours (IEC61851-22)  | Tested at -30 °C during 16hr non-operational. After start-up normal operation.            | P   |
| 11.1.6 | Ambient Air Pressure, Cl. 11.8.4 of Part 1 applied  |   | P   |
| 11.1.7 | Solar Radiation   |   | N/A |
|        | Optional-Test in accordance with IEC60068-2-5, test Sa, procedure B for one cycle (IEC61851-22)                                   | Enclosure material accepted based on separate approval                                    |     |



|                                |                                     |                       |
|--------------------------------|-------------------------------------|-----------------------|
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|                                |                                     |                       |
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|        |   |                         |     |
|--------|---|-------------------------|-----|
| 11.1.8 | Saline Mist   |                         | N/A |
|        | Optional-Test in accordance with IEC60068-2- 52 test Kb, severity one(IEC61851-22)                            | Thermoplastic enclosure | N/A |
| 11.2   | Mechanical Environmental Tests  |                         | P   |
| 11.2.2 | Mechanical Impact, Clause 11.11.2 of part 1 applied   |                         | P   |
| 11.2.3 | Stability   |                         | N/A |
|        | Test-500N applied for 5 minutes a top of device, in all four directions or worst case direction (IEC61851-22) | Wall mounted equipment  | N/A |
|        | Deformation during load (mm)....  |                         | -   |
|        | Deformation after load (mm).....  |                         | -   |
| 11.3   | Electromagnetic Environmental Tests, Clause 11.12 of part 1 applied   |                         | P   |

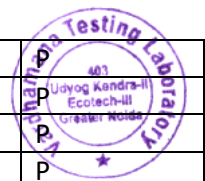
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|----|---|--|---|
| 12 | Specific Socket-Outlet/Connector Requirements |  | P |
|    | Clause 9 Part 1 applied                       |  | P |

|    |                                      |  |   |
|----|--------------------------------------|--|---|
| 13 | Classification                       |  | P |
|    | Class1 or Class2 (IEC 61851-22)..... | Class   equipment with class II construction | P |

|    |                                |  |   |
|----|--------------------------------|--|---|
| 14 | Marking and Instructions       |  | P |
|    | Clause 11.15 of Part 1 applied |  | P |

|                               |                            |                                |   |
|-------------------------------|----------------------------|--------------------------------|---|
| Table 11.4.1                  | TABLE: Dielectric Strength |                                | P |
| Test voltage applied between: | Test potential applied(V)  | Breakdown / flashover (Yes/No) |   |
| Live parts and PE             | 2000                       | NO                             |   |
| Live parts and SELV           | 4000                       | NO                             |   |
| Supplementary information:    |                            |                                |   |

|            |                       |       |   |   |   |   |   |   |
|------------|-----------------------|-------|---|---|---|---|---|---|
| Table 11.9 | TABLE: Heating Test   |       |   |   |   |   |   |   |
|            | Supply voltage (V)... | 3x240 | - | - | - | - | - | P |
|            | Ambient T min (°C)... | -     | - | - | - | - | - | P |
|            | Ambient T max (°C)... | 40    | - | - | - | - | - | P |



|   |   |   |
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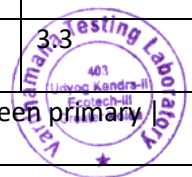
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| Maximum measured temperature To f part/at...                        | T(°C) |   |   |   | Allowed T max(°C) |
|---|-------|---|---|---|-------------------|
| Relay main ambient  | 83.8  | - | - | - | 85                |
| Enclosure bottom  | 42.4  | - | - | - | 70                |
| Wiring to output  | 104.8 | - | - | - | 105               |
| Ambient relay small (top)   | 96.5  | - | - | - | -                 |
| PWB near terminal L3  | 112.4 | - | - | - | 130               |
| Ambient lower part of cabinet                                       | 51.5  | - | - | - | 70                |
| Connector to output   | 82.8  | - | - | - | -                 |
| Ambient power meter   | 71.1  | - | - | - | -                 |
| Pre wiring base station   | 82.5  | - | - | - | -                 |
| Plastic part loop through connector                                 | 100.6 | - | - | - | 105               |
| Enclosure front   | 67.7  | - | - | - | 70                |
| Ambient   | 40.2  | - | - | - | 40                |
| Loop through terminals loaded with 32A cont. Measured on the bench. | 85.5  | - | - | - | 130               |

| Table1 17.6                           | TABLE: Clearance And Creepage Distance Measurements |           |                 |        |                  | P       |
|---------------------------------------|---|-----------|-----------------|--------|------------------|---------|
| Clearance and Creepage distance at/of | Up(V)   | Urms. (V) | Required cl(mm) | Cl(mm) | Required Der(mm) | Der(mm) |
| 3 Phase/Neutral to PE (not on PWB)    | 230   | 325       | 3.2             | >5.0   | 5.0              | >10     |
| Phase to phase (not on PWB)           | 564   | 400       | 3.0             | >5.0   | 3.0              | 3.3     |
| L1, L2, L3 to SELV (not on PWB)       | 230   | 325       | 4.0             | >5.0   | 5.0              | >5.0    |
| 3 Phase/Neutral to PE on PWB          | 230   | 325       | 2.0             | 3.3    | 2.3              | 3.3     |
| Phase to phase on PWB                 | 564   | 400       | 1.5             | 3.3    | 2.0              | 3.3     |
| Hazardous live to SELV on PWB         | 230   | 325       | 3.0*            | 3.3    | 2.5              | 3.3     |
| 3 Phase/Neutral to PE between layers  | 230   | 325       | 2.0             | 3.3    | 0.6              | 2.4     |
| Phase to phase between layers         | 564   | 400       | 2.0             | 3.3    | 0.6              | 2.4     |
| Hazardous live to SELV between layers | 230   | 325       | 3.0             | 3.3    | 1.2              | 3.3     |

\*Routine test in accordance annex-R.2 incompliance with clause 5.2.2 shall be performed between primary and secondary circuit



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|                               |                                     |                                |
|-------------------------------|-------------------------------------|--------------------------------|
| Table 11.5                    | TABLE: Insulation Resistance        | P                              |
| Test voltage applied between: | Test potential applied(V)           | Insulation Resistance (M Ω)    |
| Primary to secondary          | 500                                 | >10                            |
| Primary to accessible parts   | 500                                 | >10                            |
| Supplementary information:    |                                     |                                |
| Tablet 11.4.2                 | TABLE: Impulse Dielectric Withstand | P                              |
| Test voltage applied between: | Test potential applied(V)           | Breakdown / flashover (Yes/No) |
| Primary to secondary          | 4000                                | No                             |
| Primary to accessible parts   | 4000                                | No                             |
| Supplementary information:    |                                     |                                |

operating Condition: <55°C/< 95% RH & Sample was also working ok after the stress of -30°C.

Attachment 1  
Sample Photo

|               |                                 |
|---------------|---------------------------------|
| Make:         | EFEV Charging Solutions Pvt Ltd |
| Type:         | DC Charger 60KW                 |
| Product Name: | X4 60kw DC Charger              |
| Model No.     | E-FILL_X4_60KWDC                |
| Serial No.    | 60750020                        |
| Input Phase:  | 3P+N+PE                         |
| Rated Power.  | 60KW                            |
| Rated Input   | 380V ± 15% AC                   |
| Rated Output  | 200A, 200-750VDC; 60kW          |
| Connector:    | Dual CCS2 Gun                   |
| location      | Indoor/outdoor                  |
| IP Code:      | IP54                            |



|   |   |   |
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4. VTL is not giving any decision rule . Only statement of conformity is given as per standard if applicable and required by customer.

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