

**Class 1**



**Product Specification**  
**Vehicle Charge Inlet**  
**Type 2**

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## **1. SCOPE**

### **1.1. Introduction**

The TE Type 2 charging inlet was designed to power electric and hybrid vehicles that comply with IEC-standard 62196. The maximum rated current for AC is 32A at the maximum voltage of 480V for AC.

The content of this specification covers the technical characteristics, performance and test requirements for the EV CHARGE INLET Type 2.

When tests are performed the following specifications and standards shall be used. All inspections shall be performed using the applicable inspection plan and customer drawing.

## 2. APPLICABLE DOCUMENTS

The following mentioned documents are part of this specification. Unless otherwise specified, the latest edition of the documents applies. In the event of conflict between the requirements of this specification and the information contained in the referenced documents, this specification shall take precedence.

### 2.1. TE Connectivity Documents

#### General Requirements

Requirement	Description
109-1 Rev. J	General Requirements for Testing

#### Drawings

Drawing	Description
CD-2368472	CHARGE INLET, ASSY, CSS2 KIT

#### Specifications

Specification	Description
114-94653	Application Spec. Vehicle Charge Inlet Type 2
114-13000	Micro MATE-N-LOK Connectors
108-94519	Actuator-Specification

### 2.2. Other Documents

Specification	Description
IEC 62196-1: 2014/06	General requirements
IEC 62196-2: 2016/02	Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories
IEC 62196-3: 2014/06	Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers

### 3. REQUIREMENTS

#### 3.1. Design and Construction

The product has been designed to withstand its environment and the effects it has on it.

#### 3.2. Material

The Material data is available in the IMDS (International Material Data System of the Automotive Industry).

#### 3.3. Product Ratings

##### Dimensions

Mating-Face Geometry  
Screw Points

compatible with IEC 62196-2 Sheet 2-IIIf  
see Drawing

##### Environmental conditions

Ambient temperature (active, during charging)  
Ambient temperature (passive, no charging)  
Max. altitude  
Protection degree

-30 °C .... +50 °C  
-40 °C .... +85 °C  
5000m above sea-level  
IP55 Mating face when mated with Type2  
vehicle connector acc. IEC62196-2  
IP 67 (Rear Cover)

##### Electrical Properties

Max. charging performance  
Type of charging current  
Number of AC-phases  
Number of Terminals  
  
Rated current  
Rated voltage  
Signal pin rated current  
Signal pin rated voltage  
Type of signal transmission  
Insulation resistance of adjacent contacts  
Resistor coding

8KW / 22KW  
AC  
1 / 3  
5 (PE, L1, L2/N, CP, PP)  
7 (PE, L1, L2, L3, N, CP, PP)  
32A AC  
250V AC / 480V AC  
2A  
30V  
Analog  
200MΩ  
acc. IEC 61851-1

##### Mechanical Properties

Mating / un-mating endurance  
Insertion force  
Retention force  
Mechanical Stability of charging socket  
  
Vibration Level

10000 cycles  
typical <100N (depending on connector)  
typical <100N (depending on connector)  
400N in all directions  
(Lever-Length 100mm)  
LV214 PG17 Severity 2 (Body mount)

##### Temperature Sensoring

Temperature Sensor Type  
Recommended measuring current  
Proposed Shut down

NTC  
nominal 0.1mA / max. 1mA (1V at 0°C)  
78°C measured temperature at Sensor  
(Equivalent to max. contact temperature 90°)

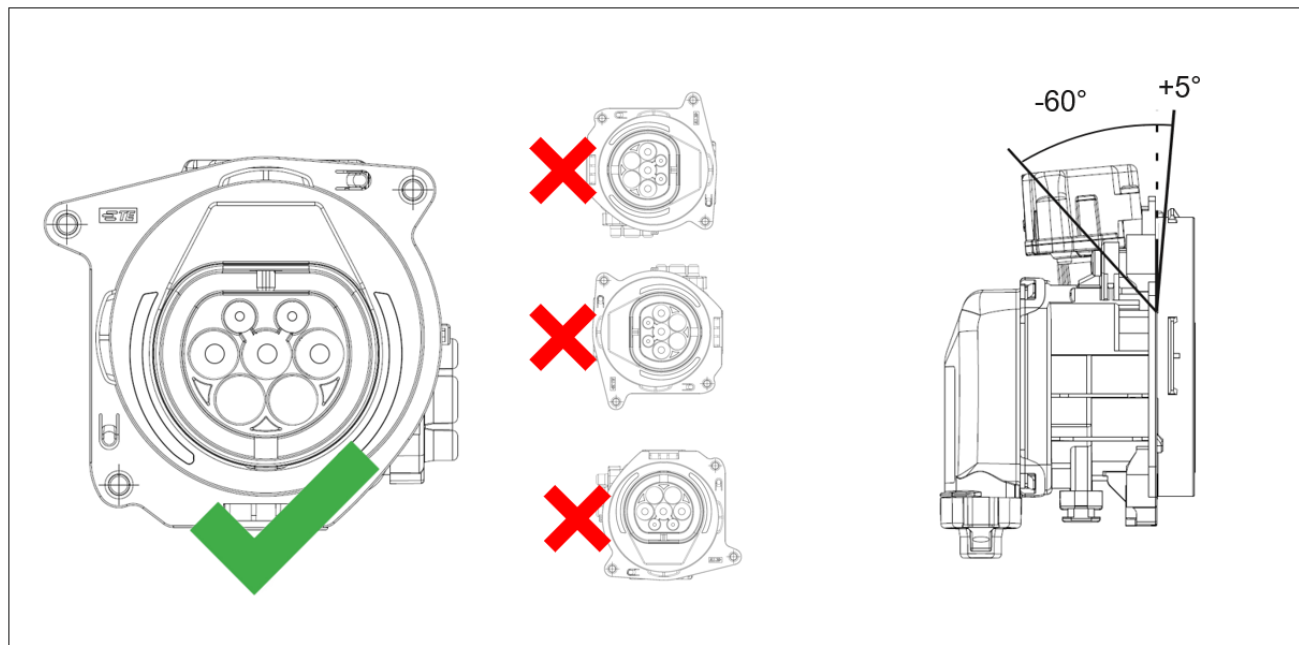
## Actuator

see TE Actuator-Specification TE-108-94519

## Installation

Orientation  
Max. Angle

see picture below  
180° -60°/+5°



### 3.4. Performance and Test Description

Specification	Description
ISO20653	IP67 – Fixed cable side (Rear Cover) IP55 – Water and Dust Protection (vehicle inlet mated)
IEC 62196-1:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Part 1: General requirements
IEC 62196-2:2016	Plugs, socket-outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Part 2: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories
Additional: selected tests of automotive standards LV124, LV214, LV215-2	

LTR	REVISION RECORD	DWN	APP	DATE
A	INITIAL DOCUMENT	M. MAENCHE	S. KUMAR	09 June 2020
A1	FORMAL CORRECTION	M. MAENCHE	S. KUMAR	11 June 2020
A2	PRODUCT RATINGS UPDATED	M. MAENCHE	S. KUMAR	11 Nov 2020
A3	PRODUCT RATINGS UPDATED	M. MAENCHE	S. KUMAR	29 Mar 2021
A4	INSTALLATION ANGLE UPDATED	M. MAENCHE	S. KUMAR	07 June 2021
A5	AMBIENT TEMPERATURE SPECIFIED	M. MAENCHE	S. KUMAR	14 SEPT 2021
A6	TEMPERATURE SENSING UPDATED IN PAGE 6	PRADEEP KUMAR	PHILIPP KOWARSCH	09 MAY 2023
A7	TEMPERATURE SENSING, ELECTRICAL PROPERTIES, ENVIRONMENTAL CONDITIONS AND MECHANICAL PROPERTIES UPDATED IN PAGE 4	PRADEEP KUMAR K	FRANK WITTROCK	19 SEP 2023

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