

Checklist of Documentation

to be supplied with a request for Approval of an integrated Grid Connection

Connection requirements for 3x25 A – 3x80 A charging stations

For installing a standardised grid connection in a charging station



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1. Introduction

ElaadNL, together with the joint Grid Operators, inspects integrated grid connections for charging stations in the public domain.

When a request for inspection is submitted by a charging station manufacturer, it needs to be accompanied by documentation of the charging station. The charging station will not be physically inspected unless the documentation is complete and in accordance with the requirements.

The checklist below contains the documentation required. This documentation must be made available to the grid operators (via ElaadNL) prior to inspection of the grid connection in the charging object. If the documentation is incomplete or incorrect, the physical inspection will not be scheduled. The numbers of requirements shown in the checklist refer to the requirements in the "Connection requirements for 3x25 A – 3x80 A charging objects".

If a test report is mentioned, then it must contain at least the following:

- *Description of the object*
- *Detailed definition of the object, including drawings*
- *Test criteria*
- *Description of circumstances and performance of the test*
- *Description of test results*
- *Assessment of test results in respect of test criteria*
- *Testers*
- *Approvals*

Finally, a list with Points for attention relating to the installation manual are included in this document.

The documentation must be sent to ElaadNL (info@elaad.nl) by e-mail **at least 2 weeks** prior to inspection.

2. Checklist

The information, documentation and photographs requested below must be sent to ElaadNL by e-mail.

#	Description	Documentation
1	Name of the product	<i>To be specified in inspection request.</i>
2	Connection category	<i>To be specified in inspection request.</i>
3	The charging station complies with IEC-61851.	Manufacturer's declaration that product complies with this standard.
4	Requirement 7: The housing of the charging object has IP44 protection (in accordance with NEN/EN/IEC 61439-7 and NEN/EN/IEC 61851-1).	Test report in accordance with NEN-EN-IEC 60529.
5	Requirement 8: The housing of the charging object has IK10 impact resistance (in accordance with NEN/EN/IEC 61439-7).	Test report in accordance with NEN-EN-IEC 62262.
6	Requirement 9: The mechanical strength of the charging object shall comply with the requirements for installation in public spaces in accordance with subsection 10.2.102 of NEN/EN/IEC 61439-7.	Test report in accordance with NEN-EN-IEC 61439-7.
7	Requirement 10: The average air temperature in the charging station at the connection box and the smart meter must not be higher than 55 degrees Celsius over a period of one hour. It is assumed that the ambient temperature (*) outside the charging station is 40 degrees.	Test/measurement report in accordance with NEN-EN-IEC 61439-7.
8	Requirement 16: An installation manual in accordance with the agreed format is provided with the charging station.	Manual in accordance with Format, see Chapter 5.
9	Requirement 23: There is selectivity between the protection device in the charging station (and any slaves connected) and the protection device in the grid connection. The protection device used in the grid connection is in accordance with the overview of protection devices used by each grid operator (see Appendix 1).	Provision of proof by the supplier in the form of a selectivity calculation/graphs.
10	Requirement 27: The damping of the station is lower than 8 dB for all current frequencies, namely the current 450, 800, 900, 1800 and 2100 MHz frequencies.	Test report which shows that the radio damping at the mounting position of the smart meter is lower than 8 dB for all current frequencies.

3. Photographs of the product

Clear photographs of the charging object and the place where the grid operator's components must be installed

4. Preparation of the charging object for inspection

At the time of the physical inspection, the charging object along with the associated foundation and other required accessories must be available to ElaadNL.

The place where the grid connection is to be installed in the charging object must be clear accessible and suitable for the installation of the connection and associated components. During the physical inspection, a trial installation of the connection shall be carried out.

5. Guidelines on the installation manual

A clear installation manual is to be provided on installing the (grid) connection components in the charging station. This manual shall contain at least the following parts:

- General information on the product in accordance with 61439 – chapter 6 product information:
 - The nominal voltage U_e . In the case of a multi-phase distribution system, this is the nominal mesh voltage.
 - Nominal insulation voltage U_i
 - The pulse voltage U_{imp}
 - The nominal current I_{nA} of the distribution system
 - The nominal current of each circuit (group) I_{nc}
 - The nominal peak limit current I_{pk}
 - Maximum short-time current (I_{cw}) and the associated duration
 - The conditional short-circuit current I_{cc}
 - DC or AC current and frequency in the case of AC
 - The simultaneity factor
 - Trip curves of the protection devices used
 - IP rating
 - Earthing systems for which the distribution system is suitable
 - Ambient conditions for the use of the distribution system
 - If applicable, requirements relating to operating personnel (use or maintenance)
 - Casing: personal protection measures (class 1 or class 2)
 - Dimensions of the distribution system
 - Weight of the distribution system
- Contact details of the manufacturer + remote assistance (telephone number)
- Safety regulations
- The opening of the charging station if the grid operator's cylinder has not been installed yet
- The installation of the grid operator's cylinder
- The preparation of the surface area and installing of the foundations if applicable
- The mounting of the charging station on the foundations
- The installation of the main terminal box in the charging station
- The feeding in and installation of the connection cable
- The installation/replacement of the grid operator's kWh meter
- The installation of the wiring for an external antenna if applicable