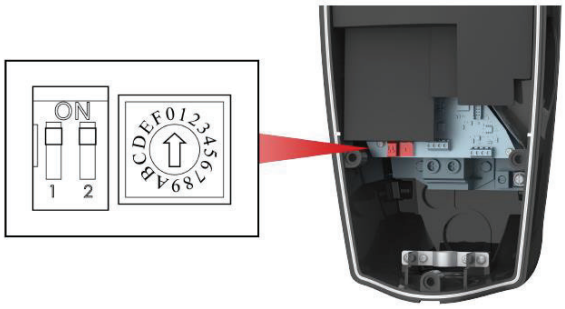
Topic: Wall Connector Ratings

To whom it may concern,

This letter is to clarify the maximum allowable load and rating of the Tesla Wall Connector for home charging.

The Wall Connector has been designed to have a field-configurable maximum output setting which can be changed to match the home's available electrical current and distribution equipment. As noted on the device data sheet this output ranges from 12A up to 80A continuous. Setting this operating current is performed only by qualified Tesla technicians in accordance with the approved plans for each customer. These settings can only be changed via coded rotary and dip switches located inside the Wall Connector and are not user-serviceable.



Article 625.40 of the 2014 National Electrical Code (NEC) and 625.41 of the 2017 NEC provides guidance on how to appropriately size overcurrent protection for feeders and branch circuits supplying electrical vehicle supply equipment:

> **625.41 Overcurrent Protection.** Overcurrent protection for feeders and branch circuits supplying equipment shall be sized for continuous duty and shall have a rating of not less than 125 percent of the maximum load of the equipment. Where noncontinuous loads are supplied from the same feeder, the overcurrent device shall have a rating of not less than the sum of the noncontinuous loads plus 125 percent of the continuous loads.

Note that this sizing is based on the maximum load of the equipment, not the maximum nameplate rating as is often applied elsewhere in the NEC.

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The Wall Connector is rated to sufficiently to accommodate a maximum of 80A. However, the output is automatically limited to the site-specific setting and therefore complies with the letter and intent of Article 625.41 in the 2014 NEC and 625.42 in the 2017 NEC:

> **625.42 Rating.** The equipment shall have sufficient rating to supply the load served. Electric vehicle charging loads shall be considered to be continuous loads for the purposes of this article. Where an automatic load management system is used, the maximum equipment load on a service and feeder shall be the maximum load permitted by the automatic load management system.

Therefore, overcurrent protection selection, conductor sizing, and applicable load calculations would be in accordance with the site-specific load and corresponding Wall Connector setting.

Compliance with the overcurrent protection requirement of 625.40 and 625.41 (or 625.41 and 625.42) can be field-verified at the time of inspection by referring to the table on page 21 of the installation manual and included here.

Rotary Switch Position	Maximum Output Current	Circuit Breaker
0	Test mode	N/A
1	12A	15A
2	16A	20A
3	20A	25A
4	24A	30A
5	28A	35A
6	32A	40A
7	36A	45A
8	40A	50A
9	48A	60A
A	56A	70A
B	64A	80A
C	72A	90A
D	80A	100A
E	Not a valid selection	N/A
F	Slave mode	N/A

Sincerely,

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