



EV FACT SHEET

Tesla Model S

Aust. delivered: 2014-2021

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Image: Tesla

INTRODUCTION

The Tesla Model S is a luxury all-electric, five-door 'liftback' passenger car built by Tesla Inc. with US sales beginning in June 2012. Australian sales began in December 2014 and unofficially ended in 2021. By May 2023 Tesla finally formally announced that RHD production would not recommence and all Australian Model S deposits were returned.

At almost 5 metres long, it fits into the Australian 'large car' segment. With prices starting over AU\$100,000, it was considered a luxury car competing against the likes of BMW, Mercedes and Jaguar.

During the time of Australian Model S sales, the model went through a number of battery, charging and drive options. As a result, there are a variety of potential considerations (and options) when making a second-hand purchase. A typical example of these variations was between late April and mid-July 2019, Tesla again offer a 'Standard Range' version of the Model S with a 75kWh battery. (This 75 kWh option having been offered, and dropped, on several occasions).

DRIVING RANGE

At the time of the original release of the Tesla Model S, only the wildly over optimistic ADR 81/02 (similar to the old European NEDC) and US EPA test cycle driving range numbers were available. Later versions of the Model S were rated in Europe to the WLTP cycle.

Therefore, to avoid disappointment always check which test cycle has been used when assessing an EV for your needs. As a rough guide, NEDC is generally 30% too high, WLTP a good estimate if doing mostly urban and outer suburban driving and US EPA the better guide if doing mostly outer suburban to regional driving.

DRIVING RANGE (CONTINUED)

National testing system range estimates in km				
Battery size	Years available ³	ADR 81/02 (Aust)	WLTP (Euro)	US EPA
60 ¹ kWh	2017	414	NA	338
70 ¹ kWh	2015	420	NA	370
75 ² kWh	2016-2019	480	NA	401
85 kWh	2014-2015	502	NA	426
90 kWh	2015-2017	511	NA	426
100 ² kWh	2017-2021	722	634	647

Table 1: Driving range estimates for the Tesla Model S variants

Notes to table:

1. 60kWh was a 70kWh battery software limited to 60kWh.
2. Naming changed in 2019 to Long Range (75 kWh) and Long Range Plus (100 kWh).
3. Years available are approximate only and relate to Australian delivered versions. You will need to check the specifics of any intended purchase as Tesla regularly alter vehicle specifications without publicising the changes.

BUYING SECOND-HAND

1. Portable EVSE

The Tesla Model S was sold with a portable Mode 2 charger. Check this EVSE is both supplied with the car and is working.

2. General assessment of a second-hand EV

For more information on how to assess the condition of a second-hand EV see Jan – Mar 2022 Renew magazine (edition 158) for article on 'How to make a pre-purchase assessment of a second-hand EV' or go to:

<https://evchoice.com.au/ev-information.html>

CHARGING SPEEDS/REQUIREMENTS

Charging port

The Model S is fitted with a modified Type 2 socket that does (depending on EVSE to vehicle communications) single phase AC charging, three phase AC charging and DC fast-charging.



Pic: Tesla modified Type 2 socket (note notch at top to prevent use of Tesla Superchargers with normal Type 2 sockets). Source: Wikipedia

CHARGING SPEEDS/REQUIREMENTS (CONTINUED)

AC charging:

The Tesla Model S is fitted with the Tesla modified Type 2 AC socket, meaning it can charge at any standard Type 2 AC EVSE plus those Tesla AC wall chargers (termed by Tesla as 'Destination Chargers') that may have been set to 'Tesla Only'. (Tesla AC chargers can charge any Type 2 EV provided it has been set to charge all EV models).

Charging rates for the Model S:

Single phase: maximum of 7.7 kW

Three phase:

2014-2016: standard 11 kW, 22kW optional.

2016-2021: 16 kW standard, 22kW option dropped.

Charging speeds and times vary on the capacity of the EVSE (Electric Vehicle Supply Equipment) it is connected to and the chosen battery size. Charging times for the Model S with the Long-Range Plus (100 kWh) battery are shown in table 2 below.

AC EVSE type:			DC EVSE type:	
15 A socket	16 A 1 phase (3.6 kW)	32 A 1 phase (7.4 kW)	16 A 3 phase (11 kW)	Tesla Supercharger (120kW)
42hr	28hr	14.25hr	9hr	45 min (to 80%)

Table 2: Approximate charging times for a Model S with 100 kWh battery

DC fast charging:

The Tesla Model S can DC fast-charge at up to 120 kW on Tesla proprietary brand DC chargers. (These are named by Tesla as 'Superchargers').

Important note: The Tesla Model S uses a modified Type 2 socket that can switch between AC and DC charging depending on charger communications. This means the Tesla Model S can only DC charge at Tesla specific Superchargers.

HOME CHARGING CONSIDERATIONS

General

To get the shortest home charging time for the Model S, a 3 phase AC EVSE would be needed.

However, depending on your existing power supply and/or charging needs, it may only be practicable to fit a lower rated EVSE. (See notes below). Lower capacity EVSEs will increase charging times, as shown in table 2.

Important notes for any home EVSE installation:

1. High charging rates are generally not needed for overnight charging.
2. Homes do not normally have three phase AC connected.
3. Switchboard and/or electrical supply upgrades may be needed if your home is more than 20 years old. For more information on this item – see information pages at EVchoice.com.au or read articles in:
 - (a) Renew magazine edition 143. (EVSE wiring)
 - (b) Renew magazine edition 156. (EVSE buyer's guide)

SPECIFICATIONS

Seating: 5

Boot volumes in litres (1 litre = 10 x 10 x 10 cm)

- Front boot ('froot'): 150 L
- Rear boot: 745 L
- Rear seat folded: 1,645 L

Dimensions:

- Overall length: 4,979 mm
- Overall width (mirrors folded): 1,964 mm
- Overall width (mirrors out): 2,187 mm
- Overall height: 1,445 mm

Battery:

- Depending on year and option chosen, may be any of 60, 70, 75, 85, 90 or 100 kWh.

Energy consumption: (ADR 81/02 for Long Range Plus).

- Long range: 189 Wh/km
- Performance: 200 Wh/km

Kerb weight:

- Approx. 2,200 kg (depending on options/version)

Charging:

AC:

- Single phase: 7.7 kW
- Three phase: 11, 16 or 22 kW
(Depending on year and/or option chosen)

DC:

- 120 kW

Charge port location:

- Rear left-hand corner (part of tail light cluster).

Drive configuration:

- Front and all-wheel wheel drive options.

Towing:

- Not rated for towing.

Performance: (depending on version and year)

- Maximum power: between 235 and 500 kW.
- 0-100 km/h time: between 5.8 and 3 sec.

IMPORTANT NOTE

Always check all specifications with the manufacturer prior to any purchase. No responsibility accepted by AEVA or Bryce Gatton (EVChoice) for errors factual or due to reproduction in this Fact Sheet. Whilst all efforts are made to ensure the accuracy of the material in this Fact Sheet, manufacturers regularly make changes (often unannounced) to their model ranges and specifications.

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