



# INDRA Smart PRO

User Manual

# Indra Smart Pro

## User Manual



Models:

190105A101 Type 1 Tethered

190105A102 Type 2 Tethered

190105A103 Type 2 Socketed















# Contents

Contents	2
Important Safety Notes	3
Introduction	4
Operation	6
Charging Cable Stowage	12
Technical Specifications and Ratings	13
Troubleshooting	14
Servicing, Maintenance & Support	15

## **Warning**

This is a class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

# Important Safety Notes

-  **WARNING:** Smart Pro charger installation must only be performed by a certified electrician who has been trained in dealing with high voltage electricity.
-  **WARNING:** Use the Smart Pro only as directed.
-  **WARNING:** Do not use the Smart Pro if it is defective, appears broken, cracked or fails to operate or is otherwise damaged. In this case, you must report the damage immediately to your original installation partner, quoting the serial number as shown on the product label.
-  **WARNING:** Do not insert any foreign objects into the Smart Pro or its charging cable.
-  **WARNING:** Do not expose the Smart Pro or its components to open flames.
-  **WARNING:** Do not expose the Smart Pro to heating equipment.
-  **WARNING:** Do not immerse the Smart Pro or its components in water or other fluids.
-  **WARNING:** The Smart Pro is not to be used by persons (including children) with reduced physical, sensory or mental capabilities; or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the device by a person responsible for their safety.
-  **WARNING:** This product is classified as Electromagnetic Compatibility (“EMC”) Class A. In a domestic environment this product may cause radio interference, in which case the user may be required to take appropriate measures. If it appears that the Smart Pro charger is causing radio interference, please contact [support@indra.co.uk](mailto:support@indra.co.uk).
-  Users with implanted cardiac pacemakers or implanted cardiac defibrillators should not stand close to the unit during charging.
-  **WARNING:** Install the Smart Pro in a location that mitigates damage from flooding.
-  **WARNING:** Operating or storing the Smart Pro in temperatures outside its specified range may cause damage to the charger.
-  **CAUTION:** Ensure that no water sources are above or near the Smart Pro, such as taps or sprinklers.
-  **CAUTION:** Ensure that the charging cable is correctly and neatly stowed after use, to prevent any inadvertent tripping hazards.

# Introduction

## Welcome

Congratulations on your purchase of a Smart Pro! The Indra team hope you'll be delighted with the features, quality and user experience of the Smart Pro.

This manual covers how to get started with your Smart Pro, explains key features, the troubleshooting tips along with important safety and warranty information.

It is important that you read this manual carefully before using the Smart Pro, so you're completely familiar with all features and safety advice and are able to get the most from your Smart Pro.

## Overview

The Smart Pro is a permanently installed electric vehicle charger providing up to 32 Amps (7.2kW) at 230V, 50Hz. There are 3 Smart Pro variants:

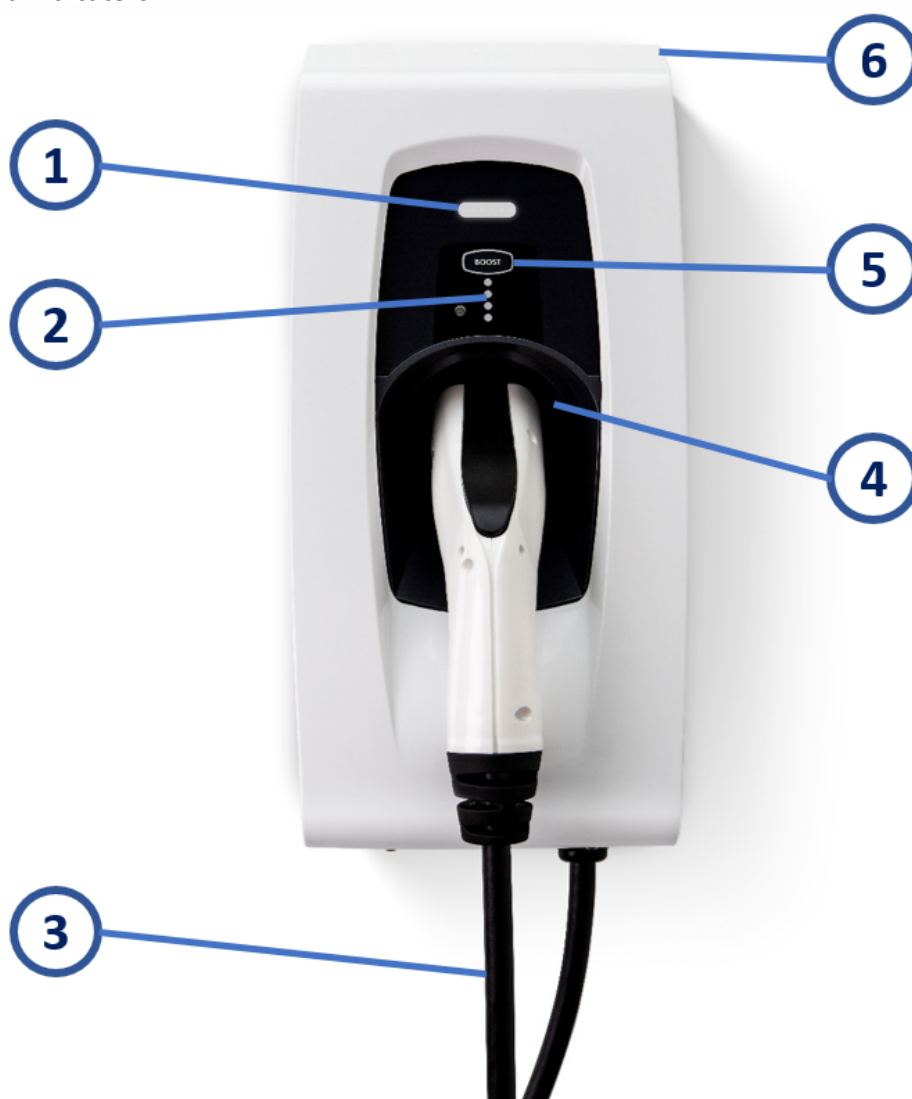
- Smart Pro Type 1 (170915A104) has a SAE J1772 (Type 1) tethered charging connector to be used with Type 1 socket fitted EVs;
- Smart Pro Type 2 (170915A105) has an IEC 62196 (Type 2) tethered charging connector to be used with Type 2 socket fitted EVs;
- Smart Pro Type 2 Socket (170915A106) can be used with multiple types of charging cables, provided at least one end of the cable is fitted with an IEC 62196 male connector.

The Smart Pro works like conventional chargers, but also offers a range of smart charging modes, designed to take advantage of local generation (e.g. solar PV), variable rate tariffs (e.g. Time of Use), as well as schedule charging according to live carbon intensity of grid power. In all modes, the Smart Pro calculates the best charging schedule that gets your EV ready when you need it.

## Features

- Available in Type 1, Type 2 and Untethered versions
- 3 charging modes: Smart, Boost & Home Alone
- Remote control and analytics via the Indra App
- Works with local generation e.g. Solar
- Economy tariff charging
- Minimises the carbon of a charging session
- Manual override on the charger and in the Indra App
- Integral cable storage and charging holster
- Supplied with a current sensor
- Remote software updates
- High weather protection rating (IP65)

## Controls and Indicators



1	Primary Status LED	Multi-coloured, highlighting the operational state and mode
2	Charging Status Indication	Four individual LEDs indicating whether the unit is disconnected from your EV, Connected but Idle or Charging
3	Tethered Charging Cable	For tethered variants, a 5m long charging cable is attached
4	Charging Connector Holster	When not in use, and to prevent water ingress, the charging connector should be pushed into the unit's holster
5	BOOST Button	If you need to over-ride your pre-set schedule, press BOOST on the unit or in the App to charge instantaneously at maximum rate
6	Integrated Cable Storage	When not in use, simply wrap the charging cable around the unit

# Operation

## Getting started

As soon as installation is complete, your Smart Pro will be ready to start charging. All you need to do is plug your EV in and go, it's that simple.

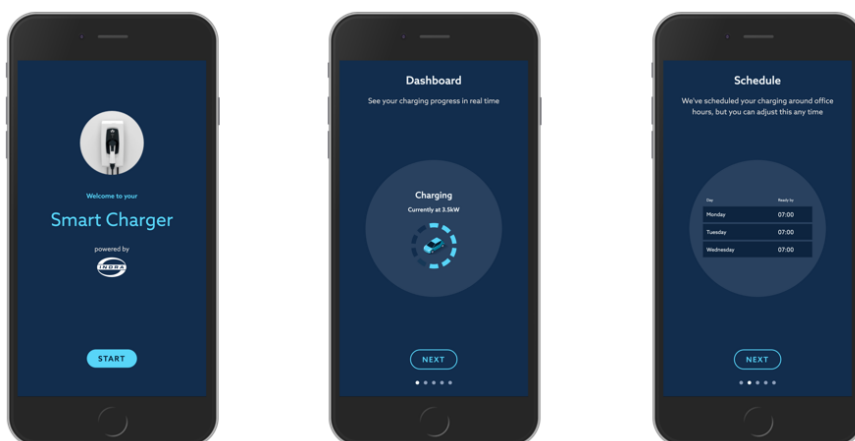
## Indra App

At the end of the install process, you will also automatically receive a welcome email from Indra with details of how to register for the Indra App.

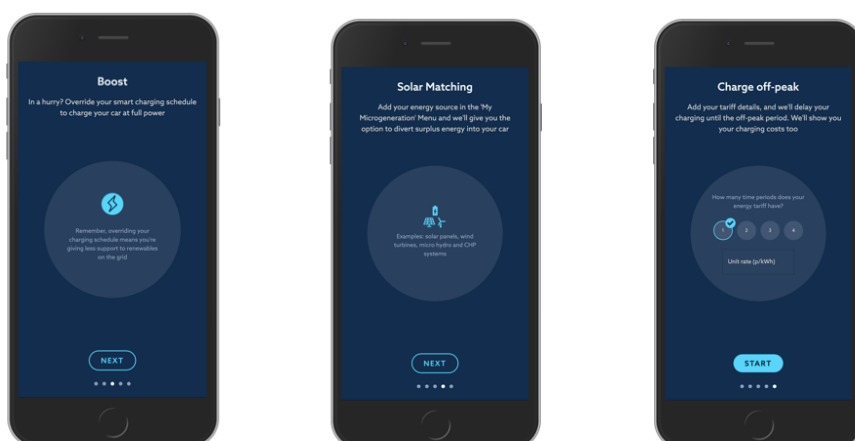
The Indra App is designed to get the most out of your Smart Pro, from seeing the charger status, setting the charging mode, updating preferences, viewing charging history, get support and much more.

The Indra App is available through your phone's web browser and works on all major platforms (including Android, iOS & Windows).

Once you create an account and sign-in for the first time, you will be guided through the initial set-up and details of the key smart features how to use them:

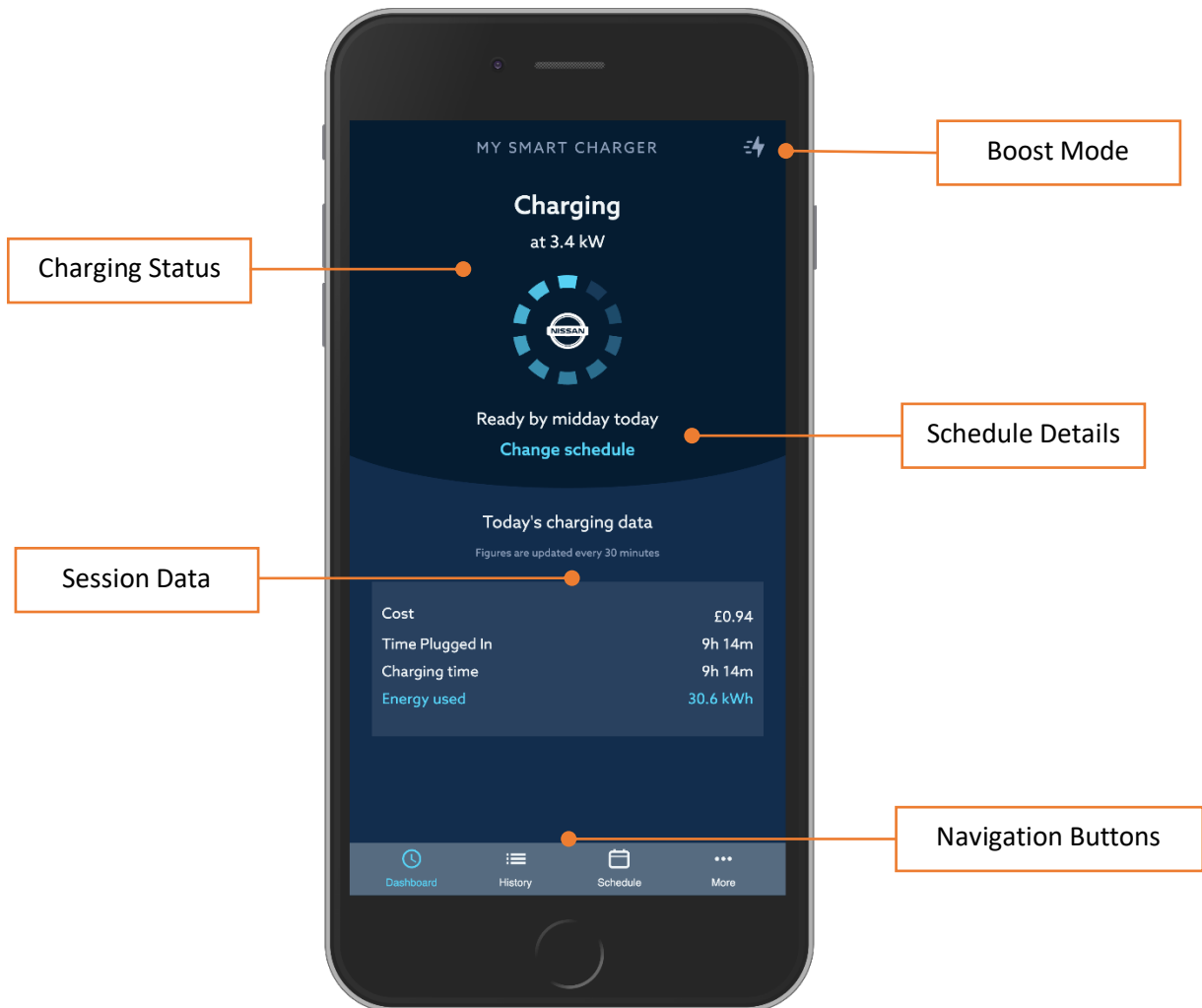


1. Welcome screen
2. Dashboard and how you see your current charger and session details
3. Scheduling feature (with default ready by set for 7am weekdays and 9am at weekends) and how to customise this later.



4. Where to find Boost mode to override the Smart Pro smart schedules and charge your EV immediately
5. How to add local generation, like solar, and we will give you the option to divert surplus energy into your EV
6. Where to add your energy tariff details to ensure the cheapest charging session (and show you charging costs)

### Using the Indra App



### Smart Mode

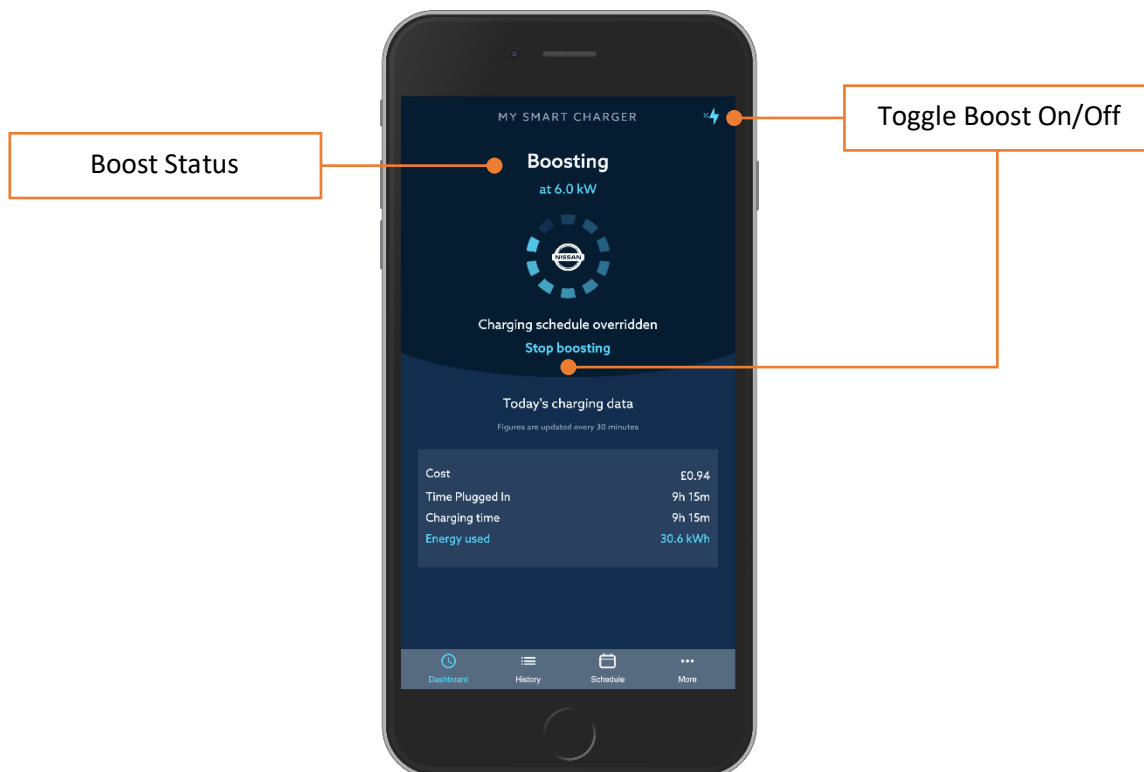
The Smart Pro will operate in **Smart Mode** by default, automatically calculating your personalised charging schedule, every time you plug in. To do this the Smart Pro will use the information you provide in the Indra App - for example your energy tariff and when you need your EV – to make sure your EV is ready when you need it and at the lowest cost.

Indra Tip: don't worry if your EV doesn't start charging immediately when plugged in, **Smart Mode** is waiting for the best time to start charging. You can check when the charging session is due to start on the home page of the App.

### Boost Mode

**Boost Mode** allows you to override **Smart Mode** to charge at full power, immediately. This might not be the cheapest option on your tariff or use the most solar, but it will be the fastest!

Indra Tip: you can switch **Boost Mode** on and off either in the App or on the front panel of the Smart Pro itself.



### Analytics

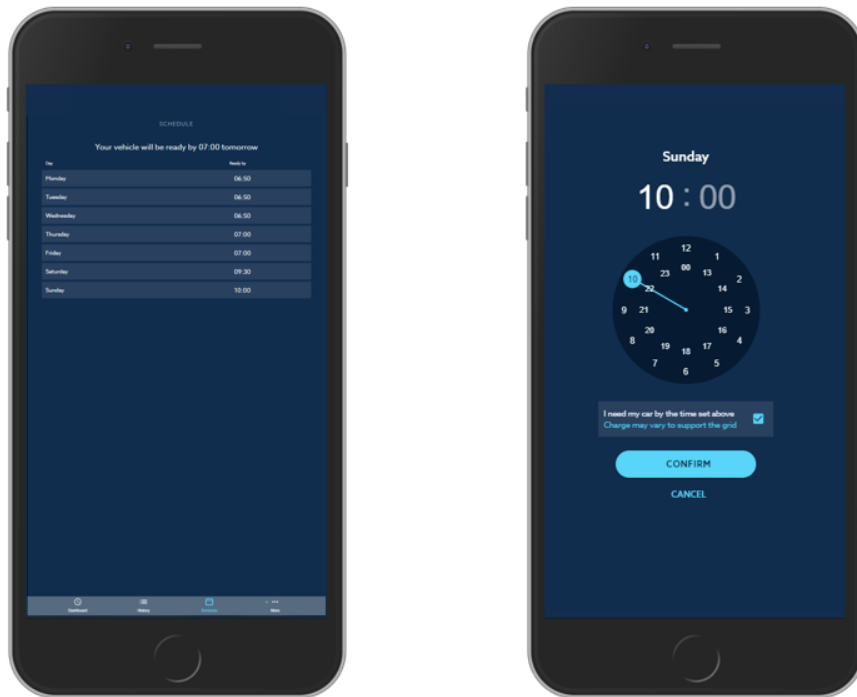
See a complete history of your charging – things like how much you've spent charging, or how much energy you've used throughout the month.

Indra Tip: Your EV may not always accept the full 32A (7.2kW), despite the Smart Pro offering this to the vehicle. You may notice times when this is the case in the charging history.



## Charging Schedule

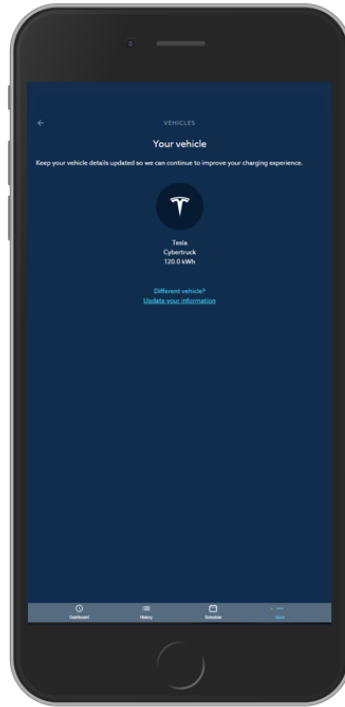
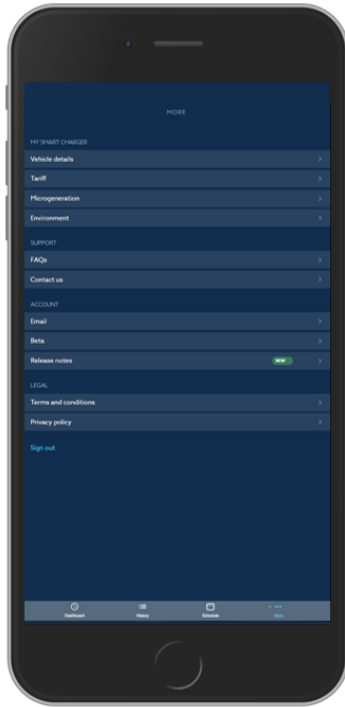
To set up your charging schedule, simply select the time you'd like your car to be charged by each day. When the charger is in Smart Mode, it'll make sure your car is ready to drive by these times.



## Vehicle Details

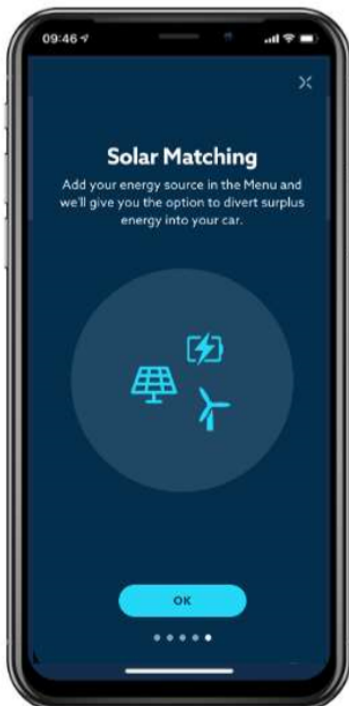
To ensure scheduling is met, the associated battery capacity of your EV must be added. From the App dashboard, click on "More" where you will find "Vehicle Details". Within this page select the appropriate vehicle manufacturer and then the specific model of your EV.

Indra Tip: Ensure the correct battery capacity is showing in the App, this is one of the most important things Smart Mode will use to calculate your personal schedule.



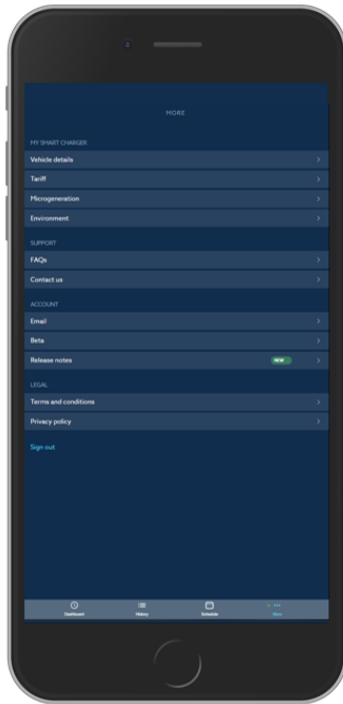
### Solar Matching

Where solar PV (or other forms of local generation) has been installed, your Smart Pro can use surplus solar output to charge your EV, increasing your self-consumption. This can be set up within the Indra App by navigating to “More” and then “Microgeneration”.



## Support & Frequently Asked Questions

Although the Indra App has been designed to be intuitive and self-explanatory, should you have any further questions. Then please check out our “FAQs” which cover a host of topics; you’ll find more ways to get help in the “Contact us” page.



# Charging Cable Stowage



**NOTE: APPROPRIATE CHARGING CABLE STOWAGE IS ESSENTIAL TO PREVENT INADVERTANT TRIPS/ FALLS OR DAMAGE TO THE EV CONNECTOR**

## **Tethered Variants (190105A101 & 190105A102)**

- Disconnect the Smart Pro connector from your EV.  
*Seek manufacturer guidance on how to do so, as this is often EV specific (Nissan Leaf disconnection is via the EV's key fob for example)*
- Coil the 5metre long charging cable around the circumference of the rear body of the Smart Pro, several times, leaving a very short tail.
- Push the male charging connector into the blank holster recess of the Smart Pro unit, so that it clips/ latches into position and is held.
- **Ensure that no part of the coiled charging lead is trailing on or close to the ground.**

## **Socketed Variant (190105A103)**

- Disconnect the Smart Pro from your EV.  
*Seek manufacturer guidance on how to do so, as this is often EV specific (Nissan Leaf disconnection is via the EV's key fob for example)*
- Remove your charging cable connector from the EV socket FIRST.
- Completely detach your charging cable from the Smart Pro unit by first pushing gently inwards towards the rear of the charger unit (*this removes any pressure from the locking pin, allowing it to retract fully*).
- Secondly, carefully pull downwards on your charging cable connector to remove it from the Smart Pro device.
- Coil and stow this loose cable somewhere secure, and where it won't create a trip hazard.

# Technical Specifications

<b>General Specification</b>	
Model Name	<b>Smart Pro</b>
Mode	Mode 3: Type 2 socket, Type 1 or Type 2 tethered cable
Overall Dimensions	200mm x 130mm x 420mm
Weight	3.5kg ( <i>excluding cable</i> )
Operating temperature	-20°C to 50°C
Charging Cable Length	Up to 5m
Operating humidity	10% to 85%
Installation	Indoor / Outdoor wall mounted
Communications	Ethernet or Cellular Network (optional)
Communication Protocol	Kaluza proprietary, TLS
User Interface	<ul style="list-style-type: none"> <li>• Capacitive Touch Panel</li> <li>• Customer Companion App</li> </ul>
Certification	<ul style="list-style-type: none"> <li>• CE certified</li> </ul>
<b>Electrical Specification</b>	
Max. output power	7.2kW (1P)
Input voltage	230V, AC ± 10% (1P)
Output current	Variable up to 32A
Nominal frequency	50Hz
Degree of protection	IP65 protection
Overvoltage category	CAT III

# Troubleshooting

## LED Signal Descriptions:

	LED state	Description
1	All LEDs off	<p>Unit is in a powered OFF state.</p> <p>The unit has no power. Check the wiring and make sure that all connections are correct. Ensure that all switches are in the correct state.</p> <p>If the connections are correct and checked twice contact Customer support.</p>
2	Primary LED White, lit in Steady State	<p>Smart mode.</p> <p>The unit is connected to Indra. The unit will charge based on driver requirements and smart schedules.</p>
3	Primary LED Blue, lit in Steady State	<p>Boost mode.</p> <p>The 'Boost' button has been pressed. The unit is now charging at full power.</p>
4	Primary LED Orange, lit in Steady State	<p>Solar Match Mode</p> <p>The unit is using micro-generated, on-site electricity to charge the EV</p>
5	Primary LED Red, lit in Steady State	<p>Fault mode – permanent.</p> <p>The unit has encountered a major error. Perform a hard restart on the unit by turning the rotary isolator switch on and off or but flipping the RCD inside the house consumer unit.</p> <p>If the steady red light persists, contact Customer Support.</p>
6	Primary LED Purple, Flashing on Start-up/ immediately after a Power Cycle	<p>Booting.</p> <p>The unit is now powering up and running its start-up sequence, this will last for a period of approximately 30 seconds.</p>
7	Primary LED Blue, Flashing**	<p>Software update in progress.</p> <p>The unit is now downloading a software update from the cloud. Ensure that the unit is not disconnected from the internet during this period/ procedure.</p>
8	Primary LED Purple, Flashing** (continuing after Start-up sequence)	<p>The charger cannot communicate with Indra.</p> <p>The repeating flashing pattern gives an indication of the fault:  <b>1 flash, repeating</b> - Connected to the internet but unable to connect to Indra. Contact Customer Support.  <b>2 flashes, repeating</b> - There is a problem with the connection to your router. Check all cables are plugged in, that the ethernet cable functions and that other devices in the home are connected to the internet or try restarting the router.  <b>3 or more flashes, repeating</b> - There is likely a problem with the router. Check that other devices in the home are connected to the internet and try restarting the router.</p>
9	Primary LED Red, Flashing**	<p>The charger has a temporary fault.</p> <p>Try resetting the charger by turning it off and on at the fuse box / rotary switch.</p> <p>Contact Customer support if this does not resolve the problem.</p>

# Servicing, Maintenance & Support

If you run into any problems with your Smart Pro, please don't try to repair it yourself. The Smart Pro **MUST NOT** be repaired by the customer. Repair of the charger is to be carried out **ONLY** by the manufacturer or their approved installation partners.

In the case that any Smart Pro system safety component (defined as any breaker, fuse, limit cut out, enclosure, grounding equipment) fails completely or partially; maintenance or replacement of the charger may be required.

## Disposal



In accordance with European Directive 2002/96/EC on Waste Electrical and Electronic Equipment ("WEEE") and its implementation in national law, used electrical devices such as the Smart Pro must be collected separately and recycled in an environmentally responsible manner.

*All end of life Smart Pro devices must be returned to Indra Renewable Technologies Ltd for appropriate recovery & recycling.*

If this cannot be achieved, then the customer must take the end of life product to a designated collection facility (DCF) as detailed by their local authority (LA). Such facilities include civic amenity and waste collection sites.

## Support and Contact Information

We're sure you'll enjoy charging with your Smart Pro, but if you do experience any issues or require technical support, please get in touch with your **installation retail partner** in the first instance.

You will require your **customer account number**, which can be found within the '**Contact Us**' section of the Indra App, along with your charger serial number, the date of installation, and a brief description of the issue

## Open Source Declaration

This product contains Free/Open Source Software. For further information, please visit [https://storage.googleapis.com/etp\\_oss/index.html](https://storage.googleapis.com/etp_oss/index.html)



## Contact INDRA

For more information, please contact us;



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Unit 1, Sentinel House,  
Sparrowhawk Close, Malvern,  
Worcestershire, WR14 1GL



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[www.indra.co.uk](http://www.indra.co.uk)