## SPECIFICATIONS

All specifications and descriptions contained in this document are verified to be accurate at the time of printing. However, because continuous improvement is a goal at iCS, we reserve the right to make product modifications at any time.

Installation	Din Rail Mounted (2 Module)
Connectivity	Wi-Fi or RS485*
Downstream interface	3X CT Clamp Connections
Indicators	4X LEDs showing status of; Power, Internet, Charger and Load Balancing
Current Monitoring	1-100A or 100-800A with 800A CTs**
Power	230v AC
Current Consumption	<150mA
Working Temperature	-40°C — +60°C
Working Humidity	5% — 95%
Dimension	36.5 x 92.02 x 58.7mm

*RS485 compatible with 1 charger only

**800A CT available separately PN: ICSCT800
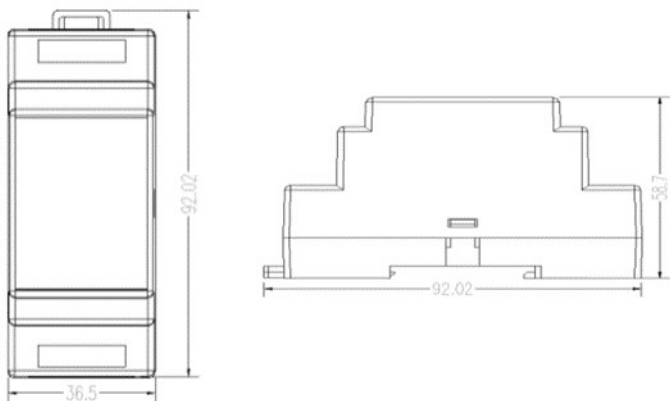
LOAD BALANCING

The ICSLMPS can monitor the electricity usage of the property and dynamically adjust the charge rate of the chargers to ensure that the risk of over exceeding the electrical capacity of the building is reduced.

This is useful in home applications where the incoming supply is limited and there is a possibility of exceeding this capacity if all appliances including the EV charge station are running concurrently.

Wi-Fi connected to the chargers to aid ease of installation without the need to run additional cabling to the chargers.

The ICSLMPS creates it's own Wi-Fi access point allowing easy local configuration using a smartphone, tablet or PC

SOLAR COMPATIBILITY

The ICSLMPS has the functionality to monitor the property's AC connected micro generation (Solar, Wind, Hydro) and dynamically adjust the charge rate of the charger using the following modes:

- Solar—Use's only the excess solar power to charge the car—If the solar drops below the minimum charge rate, the charger will suspend the charge session until the solar generation increases.

- Solar Assist—Use's the excess solar power to charge the car, but will continue charging using power from the grid if the solar drops below the minimum charge rate.

- Full—Charges the car at 32A or the maximum current the car can charge at.

100A

009319

ICSLMPS

009319
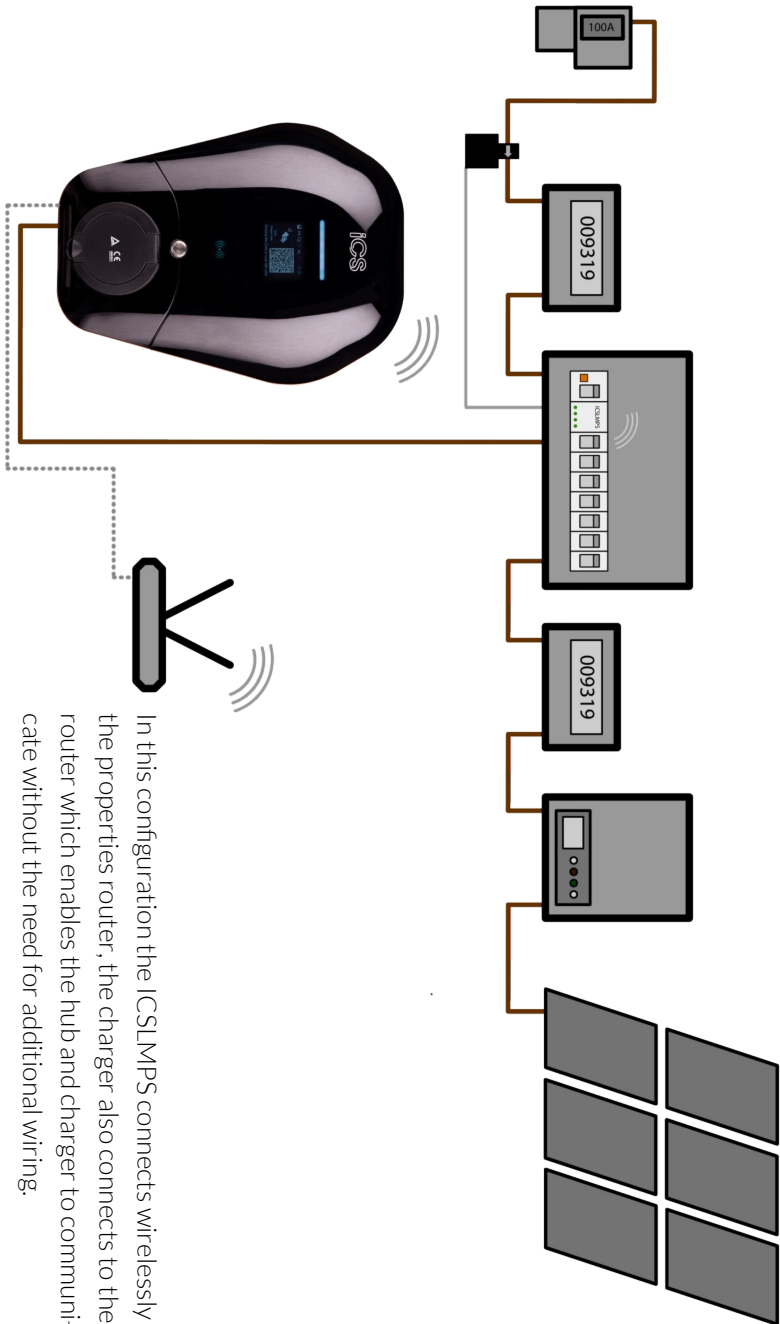
In this configuration the ICSLMPS connects wirelessly to the properties router, the charger also connects to the router which enables the hub and charger to communicate without the need for additional wiring.

INSTALLATION—Wiring

1. Fit the CT Clamp around the Live incoming meter tail,

2. Connect the CT Clamp cable to CT1 Position on the ICSLMPS—Positive on the left, Negative on the right

3. Connect the 230V power supply to the top of the unit.

Optional—If hard wiring to 1 charger, connect a two core cable to the RS485 connectors.

INSTALLATION—Access the setup page

1. Power on the ICSLMPS,

2. Connect your smart device (Phone/ Laptop) to the ICSLMPS Wi-Fi network ICS-XXXXXXXX the password is ics654321

3. Once connected, open an internet browser and navigate to the IP address 192.168.4.1 you should then see the page below.

ICS Load Management

Comm Mode:	◉ UDP ○ RS485
Work Mode:	◉ Master ○ CT
Phase:	◉ Single ○ Three
CT Position:	○ Main Switch ◉ Splitter
CT:	◉ 2000:1 ○ 8000:1
Input Current(0.1A):	160
Safe Current(0.1A):	20
☑ Connector1	Addr 1 ⌄ Idx 1 ⌄ Comm ☐ Curr(A) 0,0,0
☐ Connector2	Addr 2 ⌄ Idx 1 ⌄ Comm ☐ Curr(A) 0,0,0

INSTALLATION—Configuration

Comm Mode:

UDP—for wireless connections

RS485—for wired connections.

Work Mode:

Master—A legacy mode for chargers not updated. Does not support Solar

CT—For chargers connected to the internet and on the latest firmware.

MASTER MODE SETUP:

Phase:

Single—for single phase connected chargers

Three— for 3 phase connected chargers, with additional CT Clamps

CT Position:

Main Switch—Where the CT Clamp is around the main incoming tails.

Splitter—For chargers fitted on a separate distribution board, in this scenario put the CT clamp on the tails feeding that board.

CT:

2000:1 — For the included CT Clamp

8000:1— For optional 800A CT Clamps (ICSCT800)

Input current: The main incoming fuse size in 0.1A (E.g. 100A fuse 1000)

Safe current: A safety buffer (E.g. 20A buffer 200)

Connector: Adr—should be the connector number.

Idx—number of sockets the charger has.

Comm—this will become ticked to show the charger is communicating.

Curr(A)— Shows the current the charger is pulling.

CT MODE SETUP:

Phase:

Single—for single phase connected chargers

Three— for 3 phase connected chargers, with additional CT Clamps

CT Addr: Keep as 1

WIFI SETUP:

The only options that need changing in the green are below:

WiFi SSID: The customers WiFi name

WiFi Password: The customers WiFi password

Once all the changes have been made, press the 'Set to Hub' Button.

We always recommend that the chargers are fully updated during the commissioning process however if for any reason this cannot be done then the ICSLMPS can be set up in legacy mode.

Charger Configuration—Updated Chargers

1.   Connect to the chargers Web Configurator (See charger instructions)

2.   Navigate to the 'Balance' tab

3.   Mode should be set to Master TCP unless advised by iCS.

Balance

Mode	Master TCP Server
Data Format	Modbus RTU
Tcp Port	22401

4.   Data Format and TCP should remain as default.

CT Tab:

CT

No	Position	Ratio	Mode
1	MainSwitch	2000 : 1	Single
2	N/A		
3	N/A		

- 'No' — relates to which connection the CT Clamp is wired into.

- Position— Relates to where the CT Clamp is located

- Ratio— 2000:1 for standard CTs, 8000:1 for ICSCT800

- Mode—Single Phase or Three Phase

Grid Current Tab:

Rated Current—This should be set as the main fuse size (100A =1000)

Safe Current —This is set as a safety buffer (20A Buffer = 200)

Energy Mode:

Solar—Use's only the excess solar power to charge the car—If the solar drops below the minimum charge rate, the charger will suspend the charge session until the solar generation increases.

Solar Assist—Use's the excess solar power to charge the car, but will continue charging using power from the grid if the solar drops below the minimum charge rate.

Full—Charges the car at 32A or the maximum current the car can charge at.

Energy Management Server:

Offline should be set as true unless advised by iCS

Once all changes have been made press the submit button and then reboot.

Submit   Reboot

Charger Configuration—Legacy Chargers

We always recommend that the chargers are fully updated during the commissioning process however if for any reason this cannot be done then the ICSLMPS can be set up in legacy mode.

1. Connect to the chargers Web Configurator (See charger instructions)

2. Navigate to the 'Software' tab

3. Select the modbusType to UDP for Wi-Fi connected units, or RS485 for wired units.

4. The Load Balance Address should be '1', if you have multiple chargers change this number sequentially.

5. Press the Submit button and then Reboot.

User Configuration	
Basic	
Network	
Software	
modbusType	UDP
Load Balance Addr	1
Time Zone	Europe/London

MAINTENANCE AND REPAIR

Regularly inspect the ICSLMPS for damage. If damage is found, contact iCS.

The ICSLMPS contains no user-serviceable components. If the unit is not operating correctly, contact iCS.

Regularly conduct a visual inspection of the unit.

IMPORTANT !

READ THIS ENTIRE DOCUMENT BEFORE INSTALLING OR USING THE CHARGER. FAILURE TO DO SO OR TO FOLLOW ANY OF THE INSTRUCTIONS AND WARNINGS IN THIS DOCUMENT CAN RESULT IN FIRE, ELECTRICAL SHOCK, SERIOUS INJURY OR DEATH.

THE CHARGER MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN.

THE ENTIRE INSTALLATION MUST COMPLY WITH THE LATEST BS 7671 REGULATIONS.