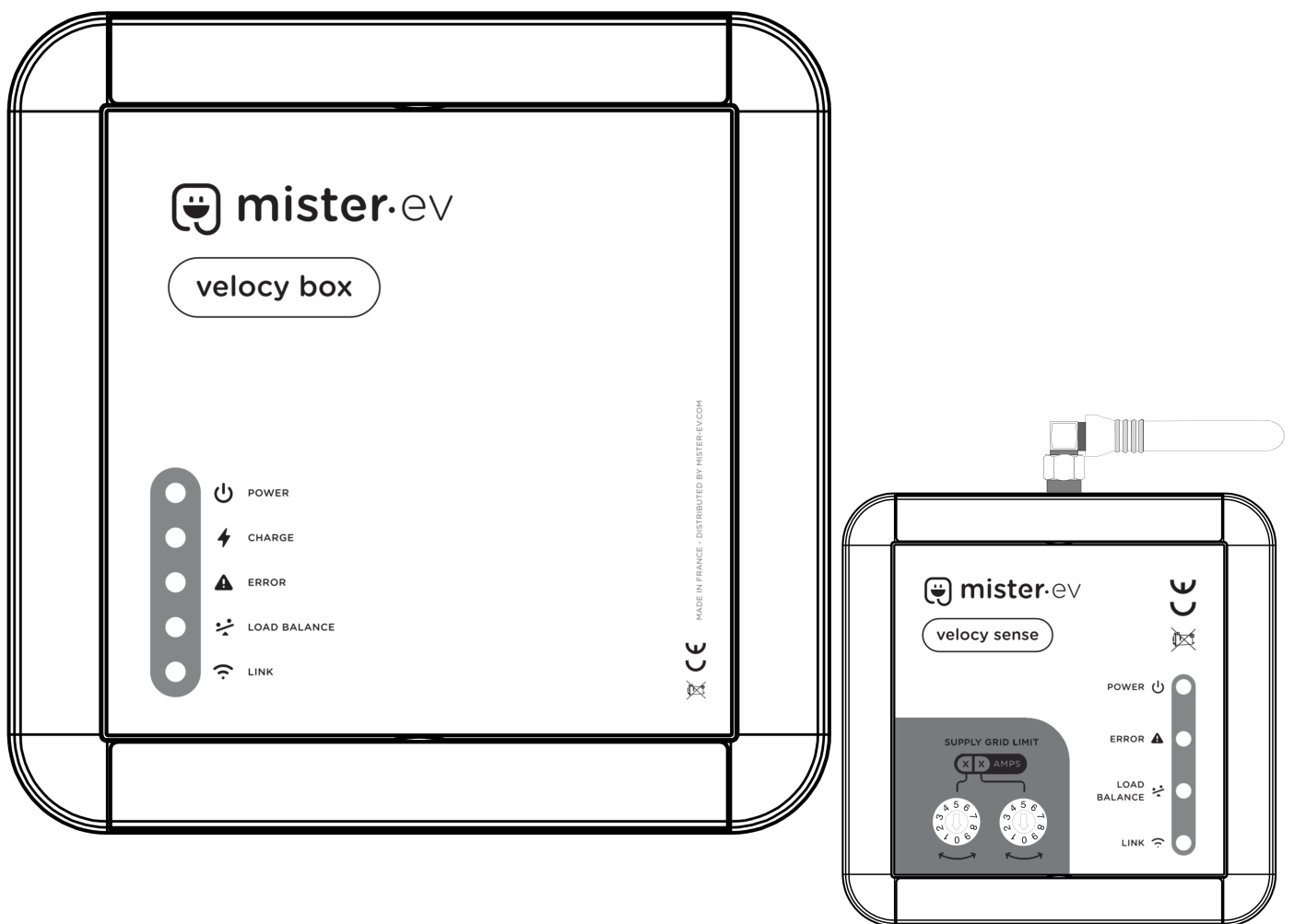


VELOCITY BOX + SENSE

User Manual / Technical Manual



INTRODUCTION

Thank you for purchasing the Velocity BOX! We hope it will give you complete satisfaction and that its advanced features will be of great use to you.

This user manual will help you familiarise yourself with your Velocity BOX and ensure you take full advantage of all its features.

Keep it in a safe place for future reference.

SAFETY INSTRUCTIONS

The Velocity BOX is an alternating current (AC) charging device designed to be installed on a fixed point and connected to a permanent power supply.

The device is designed for indoor or outdoor use and must be mounted on a vertical flat surface (wall or post).

The Velocity BOX has been designed with your safety in mind. However, to avoid any risk of injury or death, please observe the following points:

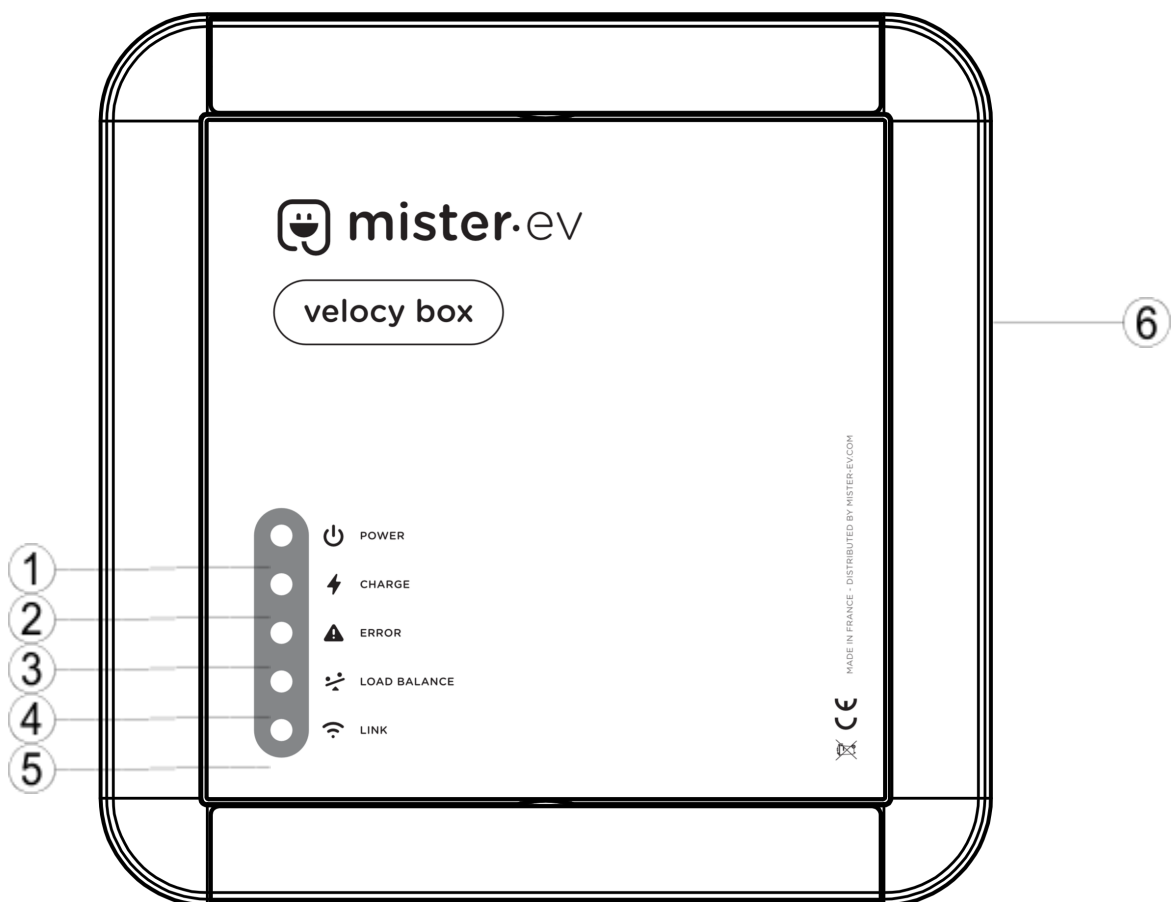
- The device must be installed, repaired and maintained by qualified personnel only.
- The fitter, servicer or maintenance technician must have skills and knowledge in the construction, installation and operation of electrical equipment and have received safety training on the hazards associated with the installation of electric vehicle charging equipment.
- All local regulations must be observed when installing, repairing and maintaining this appliance.
- This device must not be installed if any damage is found when it is unpacked.
- This device must not be used by persons with reduced physical, sensory or mental capabilities without the supervision of a person responsible for their safety.
- This device is designed for use with an IEC-62196 compliant vehicle. Never use it for any other purpose.
- The use of adapters, extension leads or conversion cables on this appliance is prohibited.

Failure to comply with the safety and installation instructions in this manual may invalidate the manufacturer's warranty.

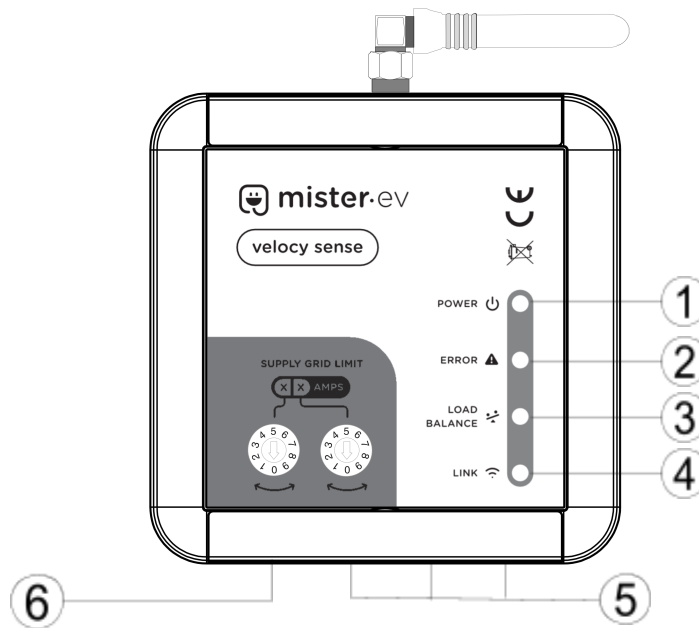
CONTENT OF THE BOX

Velocity BOX	Velocity SENSE (option)
1 x Velocity BOX with Type 2 or 1 cable 1 x Wall holder for Type 2 or 1 connector 1 x Drilling template	1 x Velocity SENSE 1 or 3 x Measuring probe(s) 1 x Power supply

OVERVIEW



- 1. Power indicator:** Lit when the device is switched on.
- 2. Charge indicator:** Steady when charging is in progress, flashing when charging is paused.
- 3. Error indicator:** Indicates the presence of a fault (see **Troubleshooting** on page 11).
- 4. Load Balance indicator:** Lit when the charging power is reduced (see **Energy management** on page 5).
- 5. Link indicator:** Flashes periodically during communication with the Velocity SENSE box.
- 6. Side button:** Enables forced start of charging (see **Tariff management** on page 5).



1. **Power indicator:** Lit when the device is switched on.
2. **Error indicator:** Indicates the presence of a fault (see **Troubleshooting** on page 11).
3. **Load Balance indicator:** Lit when the charging power is reduced (see **Energy management** on page 5).
4. **Link indicator:** Flashes periodically during communication with the Velocity BOX.
5. **Measurement sensor inputs:** Allows connection of one or three power consumption measurement sensors depending on your installation (single-phase or three-phase).
6. **Power supply socket:** Connects to the power supply unit supplied.

STARTING AND STOPPING THE CHARGING PROCESS

1. Open your vehicle's charging port (refer to your vehicle manual)
2. Remove the plug from its wall holder and connect it to your vehicle.
3. The ⚡ indicator lights up after a few seconds. If it does not, refer to the Troubleshooting section on page 11.
4. Once your vehicle is recharged, the ⚡ indicator light goes out.
5. Unlock your vehicle's charging port (refer to your vehicle manual).
6. Hang the plug back into its wall holder.

ENERGY MANAGEMENT

Your Velocity BOX is equipped with a system that ensures maximum charging power according to the power available at any given time on your electrical network.

- When recharging power is momentarily reduced, the ⚡ indicator lights up periodically.
- If the power available is too low to continue the charging process, the ⚡ indicator will remain lit and the ⚡ indicator will flash for 5 minutes before attempting to recharge again.

This management system can be operated using a wired load-shedding device or our optional Velocity SENSE wireless control box.

Contact your electrician to set up this option.

TARIFF MANAGEMENT

Your Velocity BOX is equipped with a system that allows you to limit charging to times when you can benefit from a lower rate.

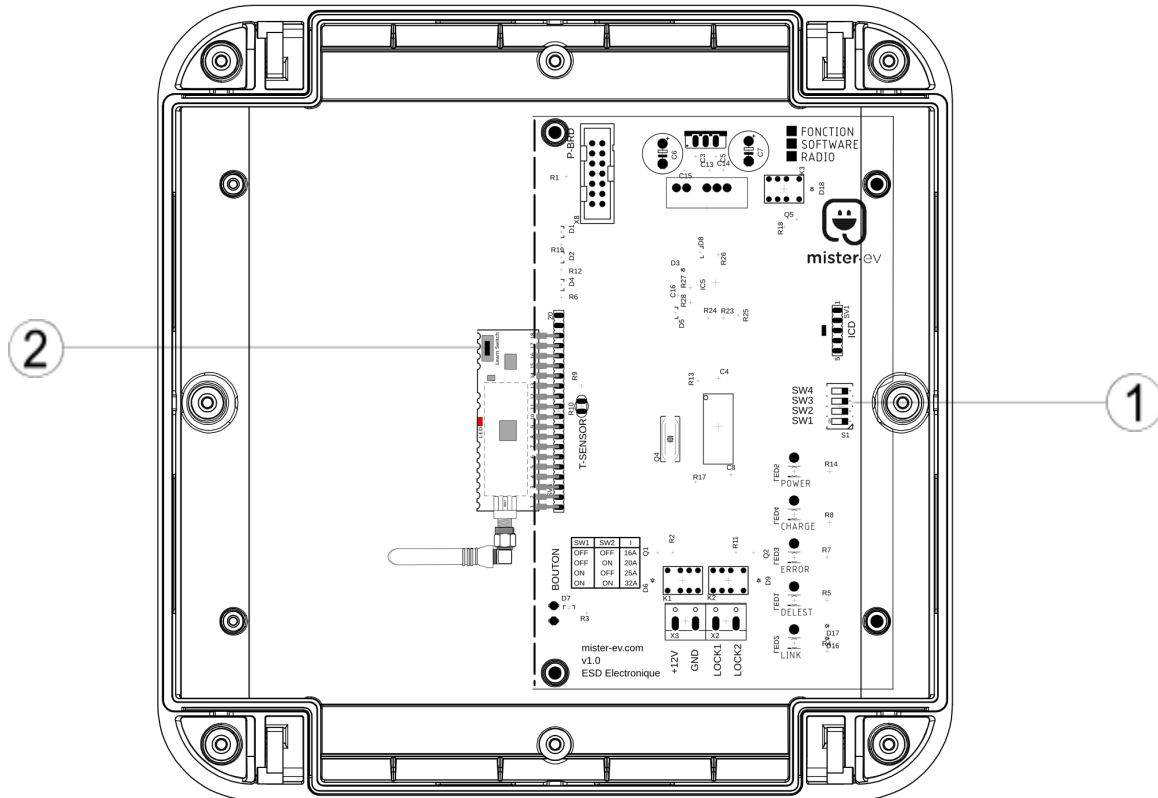
- When recharging is paused waiting for the reduced rate, the ⚡ and ⚡ indicators flash.
- Press the button on the side of the unit to force the charging process to start.

Contact your electrician to set up this option.



These instructions are intended for professionals trained and authorised to install electric vehicle charging equipment. Failure to comply with these instructions may invalidate the manufacturer's warranty.

INSTALLATION - CONFIGURATION : VELOCITY BOX (FRONT COVER)



1. Charging current setting (in Amperes) :

The charging current is configured using micro switches SW1 and SW2 according to the following table:

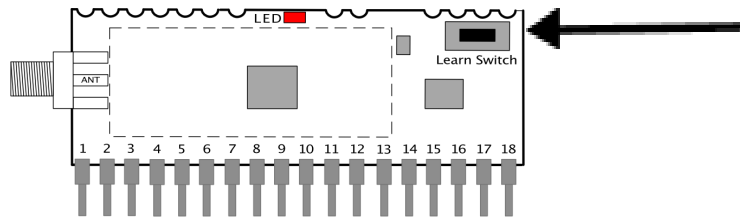
SW1	SW2	I Max	P Max Single P	P Max Three P
OFF	OFF	16A	3,7kW	11kW
OFF	ON	20A	4,6kW	13,8kW
ON	OFF	25A	5,7kW	17,2kW
ON	ON	32A	7,4kW	22kW

Select a charging setting in line with the maximum current available at any time on the network, except in the case of an installation with energy management (Velocity SENSE or wired option), in which case it will be possible to set this setting at a higher value, without however exceeding the rating of the subscriber circuit-breaker.

2. Wireless module (Velocity SENSE option) :

This button is used to pair the Velocity BOX with the Velocity SENSE. Pairing is carried out at the factory, so this procedure is not necessary on a new device. In the event of an after-sales service requiring the replacement of one of the radio modules, it may be necessary to carry out this procedure to re-establish communication between the Velocity BOX and the Velocity SENSE.

Here is the procedure to follow for pairing:



The Velocity BOX and Velocity SENSE units are both fitted with the above radio module. Locate the pairing button on each and follow the procedure below:

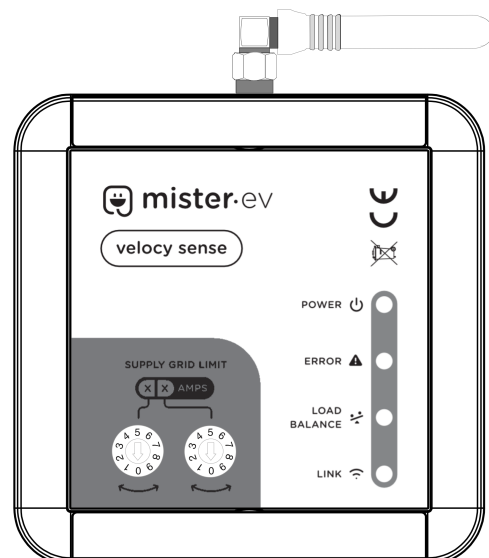
1. Power up the Velocity BOX and Velocity SENSE to be paired.
2. Press and hold the pairing button on the Velocity SENSE box for 2 seconds until the LED starts flashing. The module is now waiting to be paired.
3. Briefly press the pairing button on the Velocity BOX. The Velocity BOX and Velocity SENSE are now paired.
4. Briefly press the pairing button on the Velocity SENSE box to exit pairing mode.

INSTALLATION - CONFIGURATION : VELOCITY SENSE

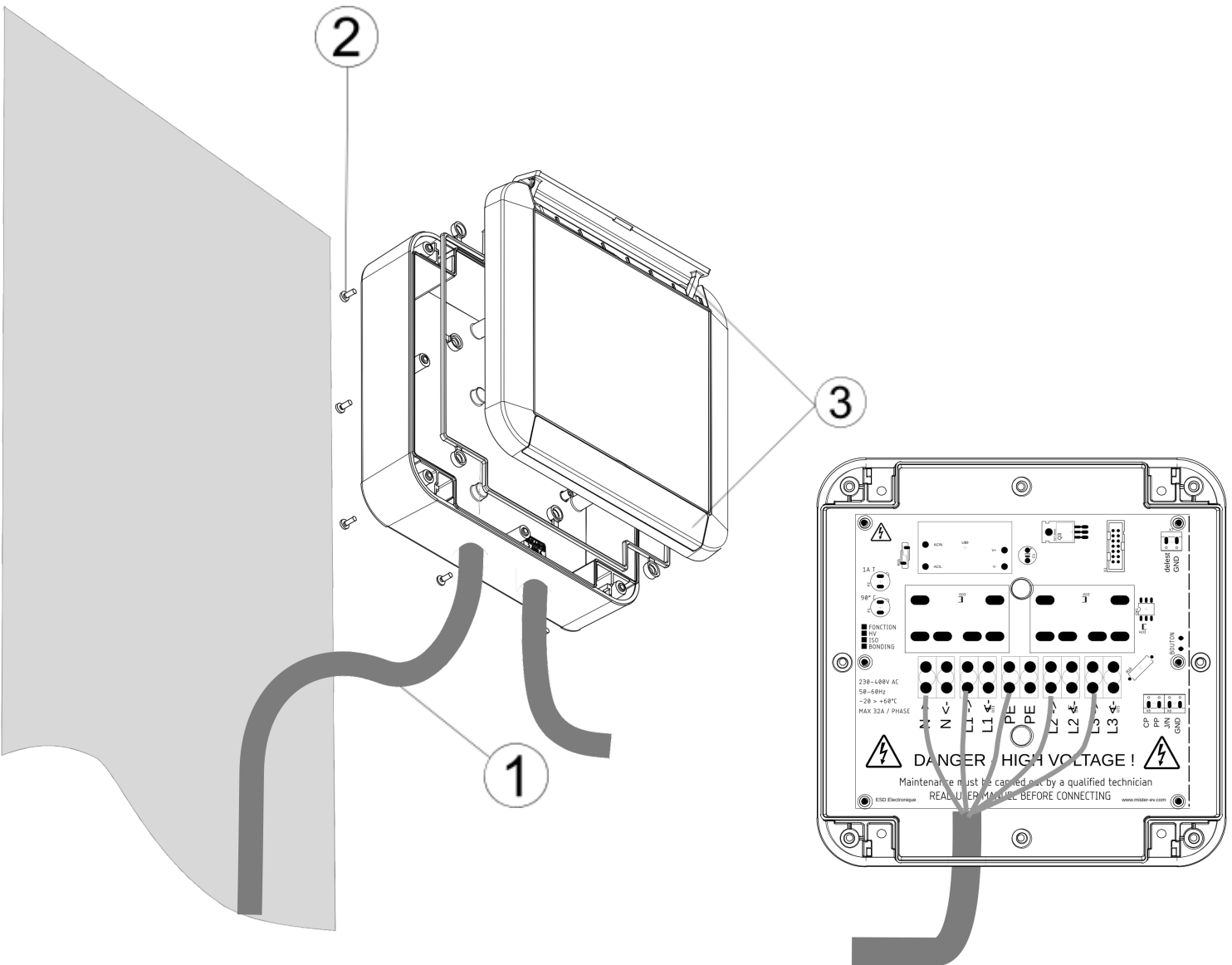
Using a flathead screwdriver, select the maximum current supported by the electrical subscription on the two coding wheels.

The wheel on the left corresponds to tens, and the wheel on the right to units.

Warning: if the box is powered up, switch the power supply off and on again to confirm the change.



INSTALLATION - MOUNTING AND WIRING: VELOCITY BOX



1. Insert the power cable into the cable gland and connect it to the power terminals. In the case of a single-phase supply, only wire L1, do not bridge L1 - L2 - L3.

CAUTION: leave 20cm of cable unattached to the wall so that the box can be rotated freely to gain access to the rear screws.

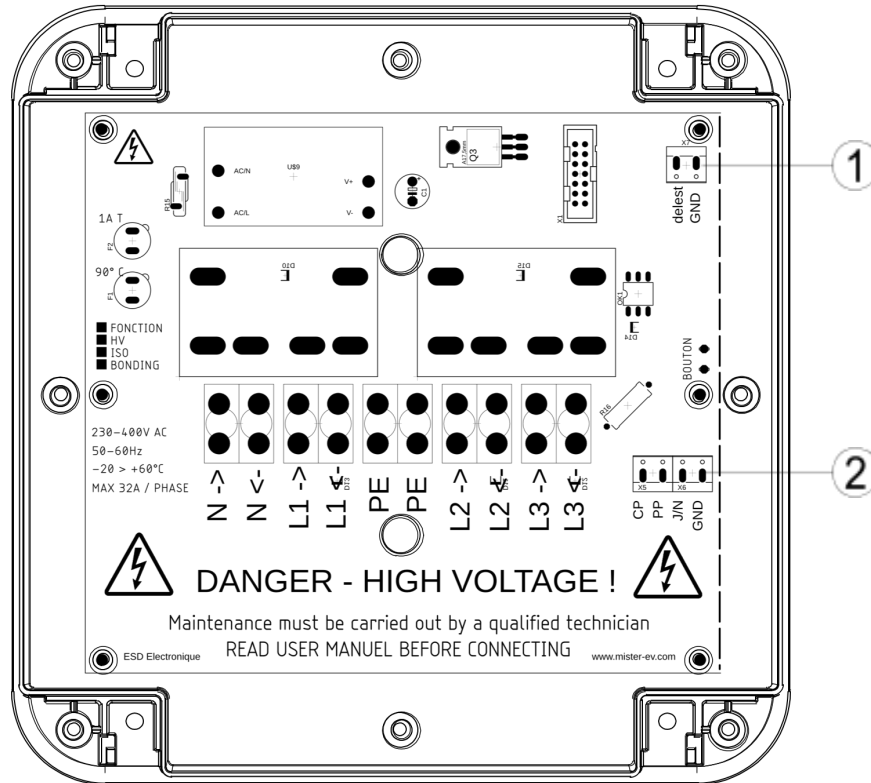
2. Place the front panel on the case and screw it in from the rear using the 8 screws supplied.

3. Using the drilling template, drill and anchor the 4 holes in the wall, then screw the box into the holes accessible under the two hinged covers at the top and bottom of the box. Finally, tighten the cable gland to ensure that the assembly is watertight.

4. Fix the wall bracket close to the casing so that the user can easily attach the charging connector when charging is complete.

CAUTION: the connector must always be hooked back onto this support, and the user must not wrap the cable around the casing and leave the connector upside down, particularly if the device is used outdoors (risk of water ingress).

INSTALLATION - MOUNTING AND WIRING: VELOCITY BOX



1. Wired load shedding terminal block :

If you don't have the optional Velocity SENSE box, you can use the Velocity BOX's energy management functions with a load-shedding module of your choice fitted with an unpowered contactor.

CAUTION: no voltage is allowed to be present on this terminal block!

Operating logic :

- Contact open: Operation at full power
- Contact closed : Automatic power reduction

If this terminal block is not used, it must be opened.

2. Tariff management terminal block (day/night option) :

This terminal block is used to activate charging only during reduced tariff periods. It must be connected to a day/night module fitted with a unpowered contact.

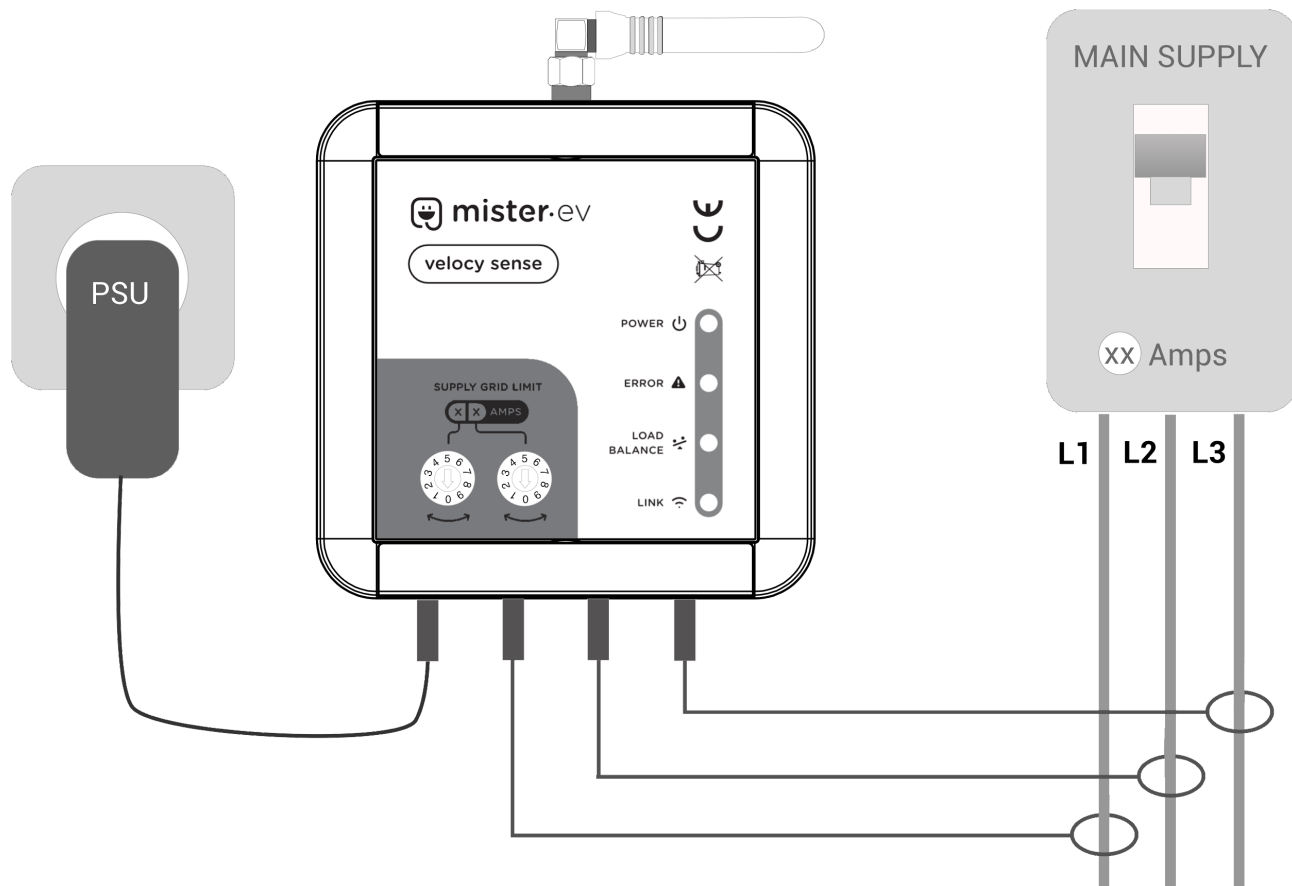
CAUTION: no voltage is allowed to be present on this terminal block!

Operating logic :

- Contact closed: Charging authorised
- Open contact: Recharging forbidden

If this terminal block is not used, it must be shunted.

INSTALLATION - MOUNTING AND WIRING : VELOCITY SENSE



The Velocity SENSE module must be installed close to the subscriber's main circuit breaker/meter.

A domestic socket is required to connect the box's power supply unit.






Depending on your configuration, clip one sensor for a single-phase installation, or 3 sensors for a three-phase installation directly onto the phase wires at the output of the customer circuit breaker.

In a three-phase installation, the order in which the phases are connected has no influence on the operation of the device.

TROUBLESHOOTING

Velocity BOX





Indicators : 0 = ON * = Flashing

					Cause	Solution
0	*		0		Mains power temporarily insufficient. Charging process paused.	Charging restarts automatically after 5 minutes. If the problem occurs too frequently, you may need to request a power increase from your energy supplier. Contact your electrician.
0	0		0		Temporary power reduction.	Charging is carried out at reduced power. Maximum power will be restored automatically when your electrical installation permits it.
0		*			Internal power relay failure.	Switch the charging station off and on again. If the problem persists, contact your electrician.
0	*	0			Internal overheating, charging interrupted.	Charging will resume once the device has cooled down. Check that your Velocity BOX is not exposed to a source of heat or direct sunlight. If the problem persists, contact your electrician.
0	*		*		Charge pending reduced rate.	Charging will start when your energy supplier switches to a reduced tariff. You can press the side button to force it to start.
0		0			Error on the vehicle or charging device.	Switch the charging station off and on again. If the problem persists, contact your electrician.

TROUBLESHOOTING

Velocy SENSE

Indicators : 0 = ON * = Flashing

				Cause	Solution
0	*	0		Configuration error. Control not possible.	The "SUPPLY GRID LIMIT" value must be equal to or greater than 15A
0	0			Current measurement impossible.	Check the connection of the measurement probes.

RECOMMENDED ELECTRICAL EQUIPMENT AND WIRING

I max	Min. cable cross-section	Circuit breaker	Residual current switch
16A	2.5mm ²	20A	Type A or Type B or Hi
20A	4mm ²	25A	Type A or Type B or Hi
25A	6mm ²	32A	Type A or Type B or Hi
32A	10mm ²	40A	Type A or Type B or Hi

RESTRICTION OF LIABILITY

The operation and compatibility of your Velocy BOX is guaranteed within the limits of the electric vehicles marketed at the date of purchase of your equipment.

The responsibility of the manufacturer and distributor is limited to any repair or replacement not exceeding, in its totality, the price you paid for your equipment.

In no event shall the manufacturer or distributor be liable under this warranty for any sum in excess of the market value of the equipment at the time of discovery of the defect.

The manufacturer or distributor does not authorise any individual or legal entity to create any other liability in addition to this warranty.

The decision to repair or replace a part with a new, refurbished or non-original part that meets the same quality criteria as the original part is at the manufacturer's sole discretion.

The manufacturer and distributor disclaim all liability for incidental, special or collateral damages arising out of or in connection with the use of the Velocy BOX, including, but not limited to: breakdown service to your vehicle (repair, towing, replacement vehicle), loss of value of your equipment or vehicle, loss of personal or business property,

loss of time, loss of income, travel costs (public transport, hire vehicle, fuel or energy), accommodation costs, service call costs, negligence, additional costs (telephone, mail, fax, postage), pain and suffering or tort.

PRODUCT TRACKING

All the products in our range have a serial number. At the time of purchase, you must provide your distributor with your contact details. This will enable you to benefit from any product updates. Remember to inform us of any change of contact details if you move house or resell the product to a third party.

In accordance with the French Data Protection Act, you have the right to rectify your personal data at any time.

TECHNICAL DATA

Velocity BOX

- Supply : 230V AC Single phase or 400V Three phase
- Current : 32A max
- Operating temperature : -20 à +60°C
- Ingress protection : IP54 (case) - IP44 (plug with cap)
- Wireless module : 869,5 Mhz

Velocity SENSE

- Supply : 9V DC
- Wireless module : 869,5 Mhz
- Current measurement range : 15 à 99A +/-5%

MANUFACTURER

The Velocity BOX and Velocity SENSE boxes are manufactured in France by ESD Electronique and distributed by :

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