

CHARGING STATIONS FOR ELECTRIC AND PLUG-IN CARS

Advantages of charging stations



Let's first look at what is the advantage of an electric car charger over a standard charge from a single-phase (two-pin) socket at home to answer the question, do I need a special charging station at home?



One of the answers to this question lies in the **SPEED** of charging the electric car battery from zero to full charge and whether it is acceptable to you. The charging speed depends on the capacity of the battery and the power it consumes per hour.

The standard Schuko socket allows charging the battery with a maximum current of 16A, which is equivalent to approximately 3680W. The charging cables in turn deliberately reduce the magnitude of the current from 16 to 12A, in order to protect the installation from overloading. So the power drawn from the battery per hour drops to 2760W. For a mass battery of about 40kWh, the time required to fully charge it under these conditions would be about 15 hours.



REDUCES CHARGING TIME BY UP TO 3 TIMES

7kW single-phase charger will speed up the charging process between 2 and 3 times. Thus, the same battery with a capacity of 40kWh will be charged for about 6 hours, enough time to fully charge at night rate and the car to be charged 100% for the next day.

40kWh

2018 Nissan LEAF



7kW

home charging
station



6 hours

charging
time



SECURITY -

ANOTHER REASON TO CHOOSE THE HOME CHARGING STATION

Standard household outlets are not designed to withstand continuous loads with maximum power for 10-15 hours. These loads, combined with the long duration, can cause the installation to heat up, increasing the risk of damage and fire. The purpose-built charging point, including the charging station and its accompanying installation, ensure that they are safe from any electrical hazards.



ENSURE YOUR COMFORT

Another advantage that ensures the use of a home charger station is convenience. The commitment to looking for a convenient place near home for charging the car battery and the loss of time during its charging period is dropped.



PORTABLE ELECTRIC VEHICLE CHARGERS

Provides single-phase AC portable EV chargers with rated power of 3.7kW and 7.3kW AC with has multiple safety protection mechanisms such as over current, over voltage and over temperature protection to ensure safe use.

Portable EV chargers are light in weight and stable in performance, resistant to falling and pressure. The waterproof performance is up to IP65, and it can work normally when immersed in water for a short time

It is usually carried with the car to facilitate the owner to charge in any charging condition.

TECHNICAL DATA

- Rated voltage: 207-253V AC
- Poles: 1P+N+ PE
- Rated current: adjustable
- Charging cable length: 4m
- IP code: IP65
- Connector material: Flame retardant, RoHS, wear resistance, rolling pressure resistance, high and low temperature resistance, stamping resistance, high oil resistance, ultraviolet rays resistance.
- Protections: Over temperature, over/under voltage protection, over current protection, residual current protection(AC30mA,DC6mA)
- Terminals: silver plated
- Gun head material: ABS, safe and durable, not easy to ignite
- Display: LCD
- Charger size (LxWxH): 180x82x50mm
- Working temperature: from -25 to +50°C
- Working humidity: 3-95%
- Working altitude: <2000m

Catalogue number	Number of poles	Rated power (kW)	Output current (A)	Cable length (m)	Packing/ Box
98EVP37	1P+N+ PE	3.7	6-16 adjustable	4	1
98EVP73	1P+N+ PE	7.3	6-32 adjustable	4	1



RFID ELECTRIC VEHICLE CHARGING WALL BOXES

RFID EV Charging wall box, it is easy to install, stable in performance, and has a complete protection mechanism. The LCD display can show the detailed charging status. To operate RFID function, it has a card writer and management program. The charger can be used with a stand. This device is a charger that, for reasons of convenience and safety, must meet a number of technical requirements, while at the same time being designed to supply our vehicle in the comfort of our homes. This is the ideal solution for supplying electricity to the battery, as it allows us to make the most of idle hours, such as at night, to charge our vehicles.

ADVANTAGES

- Applicable with 99% of electric vehicles
- Two installation modes: on the wall or on a stand
- Easy charging activation via magnetic card
- Precise monitoring of PWM signal variations
- Oxygen-free pure copper cables, flame retardant and high temperature resistance

ADDITIONAL FUNCTIONS:

- **RFID Function:** The charging station can be configured with contactless IC card swiping function, and charging can only be carried out through authorized IC card. If the IC card is lost, the internal dip switch can be used to set the IC card losing module. There are 2 IC cards which are authorized
- **DLB Function:** This function is the automatic distribution of charging current, through an external current transformer. During the charging process, the charging station will monitor the online charging current in real time and make corresponding adjustments. When it is detected that the current of the main circuit is greater than the set current, the charging station will reduce the charging current until the charging is stopped. When it is detected that the current of the main circuit is less than the set current, the charging station will continue to increase the charging current until 32A or 63A. In this state, the maximum charging current of the charging station is 32A and 63A. While the charging current is uncertain, the current setting switch of the charging station becomes the transformation ratio setting switch of the current transformer. The transformation ratio of the external current transformer is set by software or factory setting. The factory default current transformer transformation ratio is 100A/5A.
- **RCMU function:** When the charging station is working, if there is a DC leakage current signal, the RCMU will immediately output a fault signal and cut off the output power within 300ms, ensuring the safety and reliability of personal and property. If the fault is eliminated, the charging station will automatically restart charging according to the program within 3S. Before charging, the RCMU module of the device will automatically carry out the accuracy and detection of the DC leakage current to ensure the safe and reliable operation of the device.
- **CT access function:** The charging station can provide an analog input function, the input analog is AC0-5A, which is used to display the current working current. When the detected working current is greater than the set current value, the charging station will reduce the charging current to the set current value. Thereby ensuring the safe and reliable operation of the charging station.
- **LCD display function**

TECHNICAL DATA

- Charger output: socket type 2
- Rated voltage: 207-253V AC; 360-440V AC
- Poles: 1P+N+ PE; 3P+N+ PE
- Rated current: adjustable
- IP code: IP54
- Connector material: Flame retardant, RoHS, wear resistance, rolling pressure resistance, high and low temperature resistance, stamping resistance, high oil resistance, ultraviolet rays resistance.
- Protections: Over temperature, over/under voltage protection, over current protection, residual current protection(AC30mA,DC6mA), surge protection
- Terminals: silver plated
- Gun head material: ABS, safe and durable, not easy to ignite
- RFID module for IC card with 2 cards
- DLB: CT 100/5A
- Lock: Electro-magnetic lock DC 12V 4 wire type
- Communication mode: OCPP1.6 Wi-Fi, 4G
- Display: LCD
- Mounting: wall or post
- Charger size (LxWxH): 245x123x357mm
- Working temperature: from -25 to +50°C
- Working humidity: 3-95%
- Working altitude: <2000m

Catalogue number	Rated voltage (V)	Number of poles	Rated power (kW)	Packing/ Box
98EV73	207-253	1P+N+ PE	7.3	1
98EV11	360-440	3P+N+ PE	11	1
98EV22	360-440	3P+N+ PE	22	1



EV CHARGING CABLES

EV charging cable is the carrier connecting electric vehicle and charging pile. And its basic function is to transmit electric energy.

EV Charging cables are generally used in charging stations, parking lots, hotels, communities, garages, and other areas.

At present, the safety of electric vehicles has become the focus of the industry.

During electric vehicles' charging and discharging process, it is important to pay attention to safety issues because of the long usage time, high current intensity, and high frequency of cables.

Based on ensuring good insulation performance, electric vehicle charging cable shall have high heat resistance and aging resistance.

At the same time, it shall have good low smoke and flame-retardant characteristics during combustion to minimize loss and injury.

Type 2 AC charging cables double-plug version (Type 2 to Type 2 or Female to Male Extension Cable), which is used for the connection from the charging station end to the electric vehicle end. Product meets the IEC 62196-2 charging connector standards. They are mainly two current options of 16A and 32A, which are divided into single-phase and three-phase version and defaults to a 5m black straight cable.

TECHNICAL DATA

- Type: female to male type 2 charging cable
- Cable length: 5m
- Case material: thermoplastic, flame retardant grade UL94 V-0
- Pin: copper alloy, silver + thermoplastic on the top
- Insulation resistance: $>500\text{M}\Omega(\text{DC}500\text{V})$
- Conductive terminal temperature rise: $\leq 50\text{K}$
- Withstand voltage: $2500\text{V}/\text{min}$
- Contact resistance: $\leq 0.3\text{m}\Omega$
- Mechanical life: no-load plug in/ pull out >50000 times
- Coupled insertion force: $45\text{N}\sim 80\text{N}$
- Withstanding impact: Tolerable to 2-ton car rolling or 1m height drop without damage.

Catalogue number	Operating voltage (V)	Rated current (A)	Suitable for charging station with power (kW)	Cable type	Cable length (m)	Packing/ Box
98EVP32/1P	207-253	32	7.3	3x6+2x0.5mm ²	5	1
98EVP16/3P	360-440	16	11	5x2.5mm+2x0.5mm ²	5	1
98EVP32/3P	360-440	32	22	5x6mm+2x0.5mm ²	5	1



EV CHARGING PILLAR

In cases where the charging station cannot be installed on a wall and the parking space is remote from the building, it is recommended to install the charging station on a pillar to which the charging cable is freely accessible.

Catalogue number:

98EVPOLE

