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2014 Nissan Altima Service and Repair Manual

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USAGE

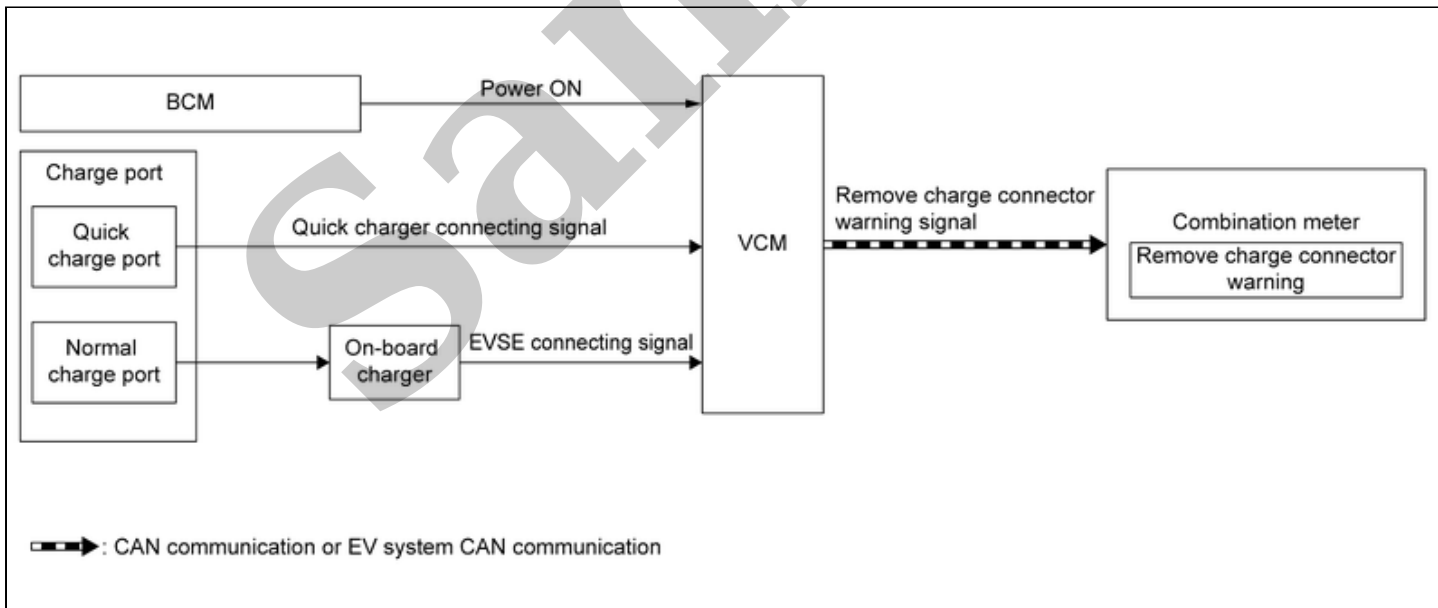
When READY operation is performed while charge connector is connected, this warns driver that charge connector is connected.

Symbol	Message
 <p style="text-align: center;">SIEMD-7091347-04-000367848</p>	<p style="text-align: center;">Can't start Charging plug Connected</p>

SYNCHRONIZATION WITH MASTER WARNING LAMP

Not existed

System diagram



SIEMD-7091347-01-000377112

SIGNAL PATH

- When performing READY operation, READY signal is input from BCM to VCM.
- When VCM detects connection status of normal or quick charge connector according to EVSE input signal from normal charge port and quick charger connection signal from quick charger and the normal or quick charge connector is connected, VCM transmits the remove charge connector warning signal to the combination meter.
- When combination meter receives the remove charge connector warning signal, it displays the remove charge connector warning on vehicle information display.

WARNING/INDICATOR OPERATING CONDITION

When all of the following conditions are satisfied

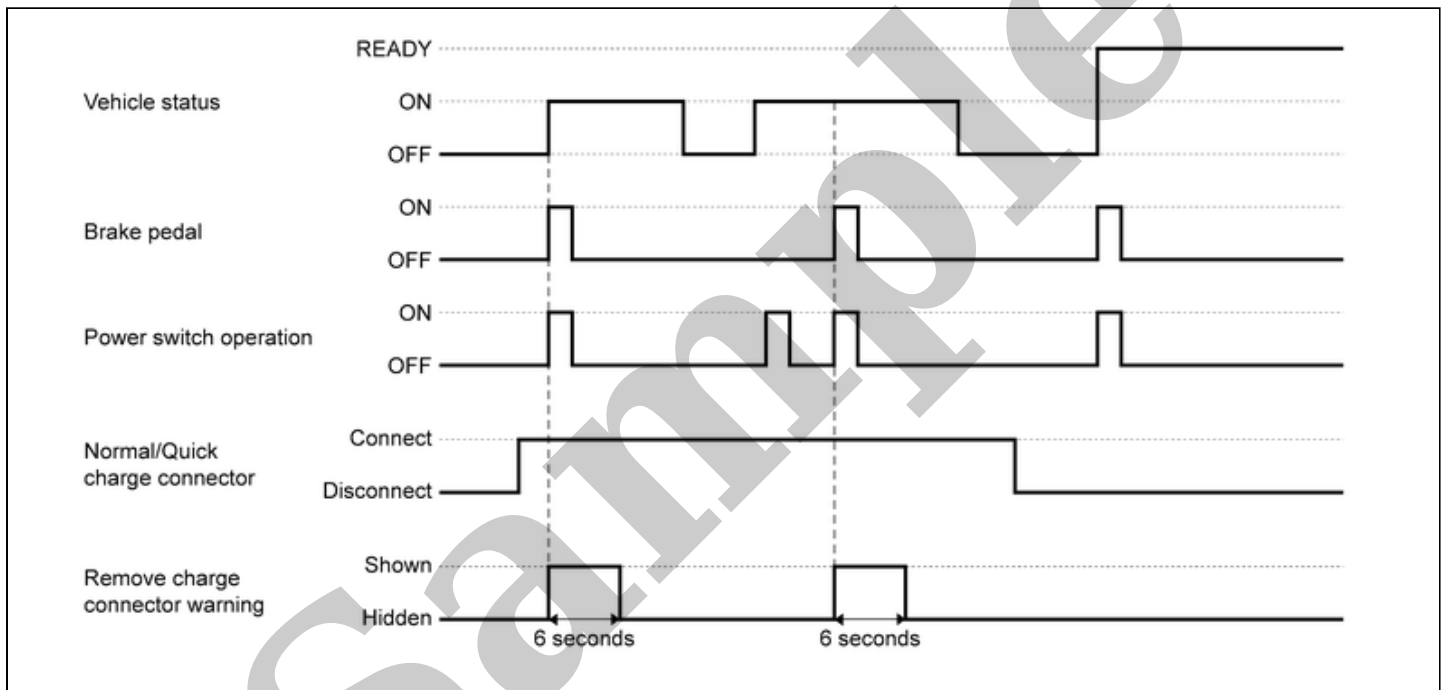
- Normal or quick charge connector is connected.
- Power switch: OFF → ON

WARNING/INDICATOR CANCEL CONDITION

When any of the following conditions is satisfied

- Normal or quick charge connector is disconnected (removed).
- Power switch turns OFF.

TIMING CHART



SIEMD-7091347-02-000377087

DESCRIPTION

When 12V battery remains uncharged condition, 12V battery automatic charge control automatically charges 12V battery and minimizes the 12V battery consumption by decreasing SOC.

For details of control, Refer to [System Description](#).

Sample

DESCRIPTION

Power voltage variable control system reduce power consumption of high power battery by changing output of DC/DC converter to 13-15 V to according to status of use of electrical equipment and 12 V battery.

For details of control, Refer to [System Description](#).

Sample

- The vehicle charging system consists of on-board charger, DC / DC converter, and high-voltage junction box.
 - The vehicle is charged using various chargers, charging cables, a quick charge port or a normal charge port equipped on the vehicle.
 - Supports quick charge and 6 kW normal charge.
- A charge status indicator is installed in the center of instrument panel so that the charge status can be checked even from outside vehicle.
- Adopted a charge port lamp that improves workability when charging.

Sample

SPECIFICATIONS

Rated input voltage	AC220V - AC230V (single phase)
Rated input frequency	50Hz/60Hz
Maximum rated current	32A
Sensitive current of GFI (Ground Fault Interrupter) circuit breaker in NISSAN Genuine portable type EVSE (Electric Vehicle Supply Equipment)	15mA
Charging modes / Type of connection	<ul style="list-style-type: none"> • Mode 2 / Case B (Normal charge with NISSAN Genuine portable type EVSE (Electric Vehicle Supply Equipment)) • Mode 3 / Case B/C (Normal charge with public charging stand, etc) • Mode 4 / Case C (Quick charge)
Required installation (over current protection)	The methods of protection against over current and over voltage shall be in accordance with national codes. Suitable over current protection devices for the wiring of houses or buildings shall be installed.
IP Degree	IP44: When the NISSAN EVSE or NISSAN Mode3 cable is connected to the normal charge port.
Operating temperature	Same as vehicle operating temperature
Storage temperature	Same as vehicle storage temperature
Altitude	Up to 9,843 ft (3,000 m)
Applicable standard	<ul style="list-style-type: none"> • SAE J1772: 2010 • EN61851-1: 2011 • EN61851-21: 2002 • IEC61851-1: 2010 • IEC61851-21: 2001 • EN61000-6-1: 2007 • EN61000-6-3: 2007
Adaptors	Do not use an extension cable or electrical adaptor.

Time required for charging

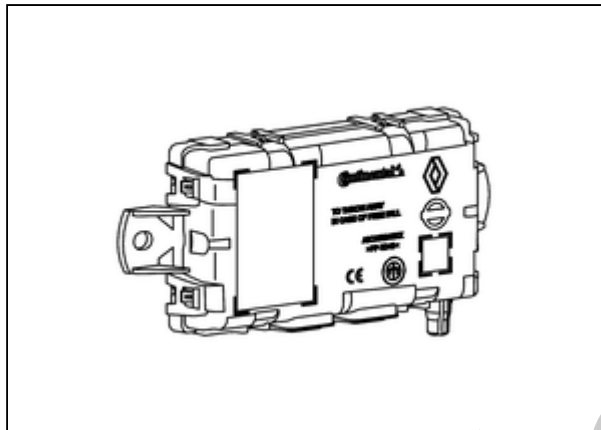
Charge time is depending on the vehicle conditions

- Li-ion battery charge level when charge is started.
- Li-ion battery temperature
- Type of available charger or connected power supply
- Years of use of Li-ion battery
- Usage of equipment that consume electricity, such as air conditioners
- Operating condition of battery temperature control function

The estimated charge time is displayed on vehicle information display of combination meter according to signal from VCM.

FUNCTIONS WITHIN THE SYSTEM

CPLC converts signals of quick charge communication between charger and vehicle.



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INDIVIDUAL OPERATION

CPLC is ECU that converts signals of quick charge communication between charger and vehicle during quick charge.

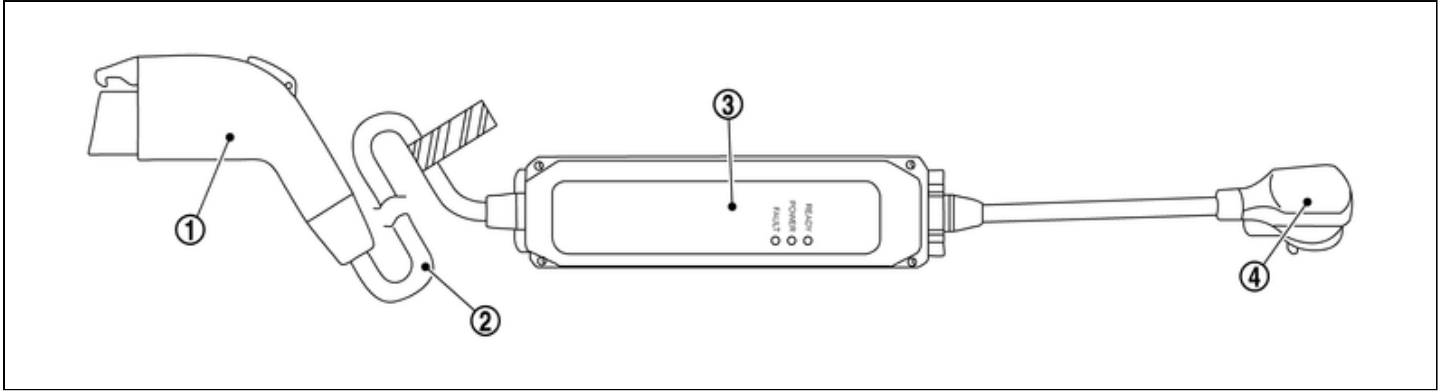
Operation

CPLC is ECU that converts signals of quick charge communication between charger and vehicle during quick charge via CAN communication.

PARTS LOCATION

CPLC is installed to under front floor spacer near passenger foot.

120V EVSE (L1)



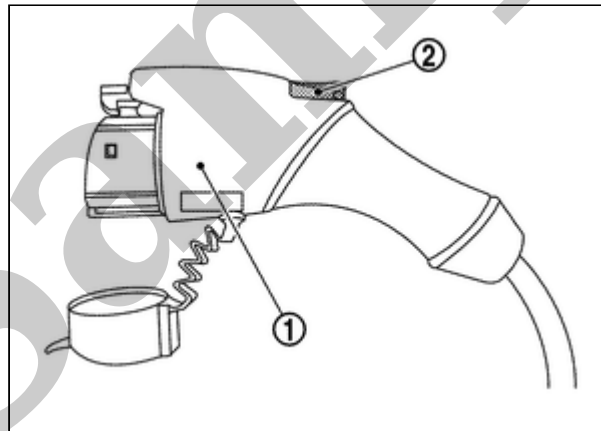
SIEMD-7322752-05-000238640

①	Normal charge connector	②	Cable	③	Control box
④	Plug				

The EVSE (Electric Vehicle Supply Equipment) is manufactured based on the specifications prescribed in SAE-J1772, and is for charging by connecting a commercial power source to the vehicle. The EVSE consists of a plug, cable, control box, and a normal charge connector and supplies power to the vehicle using commercial power. By conducting PWM communication with the PDM (Power Delivery Module), the EVSE performs safe and suitable charging for the vehicle.

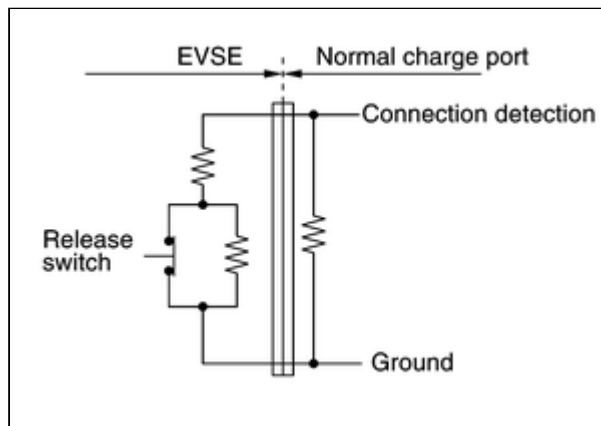
Normal Charge Connector

The normal charge connector ① is equipped with a release switch ② to maintain the connection between the normal charge port and the charge connector.



SIEMD-7322752-02-SCIA0604ZZ

The charging connector is equipped with a release switch to maintain the connection between the normal charging port and the charging connector. In addition, a circuit for detecting the hold status is incorporated into the release switch, which stops the charging temporarily if the release switch is pressed during charging.



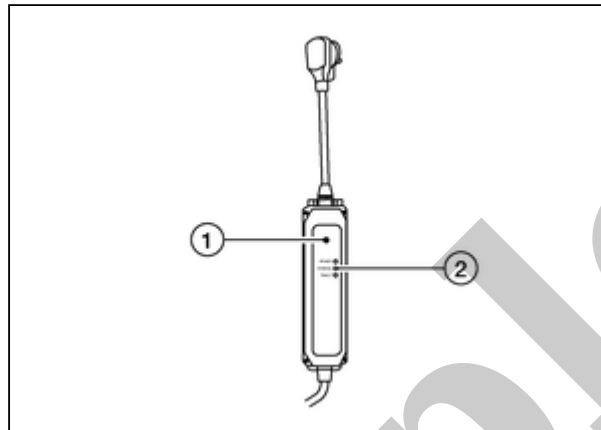
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**NOTE:**

- When the release switch is pressed, the contacts turn OFF.
- The release switch cannot be pressed while the charge connector is locked.

Control Box

The control box ① is equipped with an indicator ② that can be used to check the charging status and malfunction detection status. The indicator operates in the following cases when a commercial power supply is connected to the EVSE.



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List of Operations

READY	POWER	FAULT	Explanation
ON (Approx.0.5 s)	ON (Approx.0.5 s)	ON (Approx.0.5 s)	All indicator lamps will illuminate for a 0.5 second check when the EVSE is first connected to the outlet socket.
ON	OFF	OFF	The EVSE is connected to the outlet socket. If the Normal Charge Connector is connected to the vehicle of Normal Charge Port, the charging is completed or the charge timer is set. Refer to System Description .
ON	ON	OFF	The EVSE is charging the vehicle.
OFF	OFF	OFF	No power is detected by the EVSE from the outlet socket. Check the outlet supply breaker. If the outlet supply is normal and all the indicator lamps do not illuminate for 0.5 second, perform EVSE inspection. Refer to Symptom Table (120V/240V EVSE) or Symptom Table (120V EVSE).
Blink	OFF	OFF	The EVSE could not detect sufficient Outlet Socket Earth grounding for reliable EV charging.
Blink	Blink	ON	The temperature detection circuit in the plug of the EVSE is malfunctioning.
Blink	OFF	ON	(Charge current is reduced.)
Blink	Blink	Blink	The EVSE detected excessive heat in the plug.
Blink	OFF	Blink	(Charge current is reduced.)
ON	Blink	ON	The EVSE internal circuits malfunction.
ON	OFF	ON	
ON	OFF	Blink	The EVSE detected leakage current or PWM signal error. Stop the EVSE immediately.