

Charging sequence flowchart

Charger

START

Vehicle

Send start-of-charging signal (d1 ON)

Recognize start-of-charging (f ON)

Compatibility check

Transmit battery parameters: Max. voltage to stop charging, Target voltage, Total battery capacity, etc.

Transmit charger parameters: Max. output voltage, Max. output current, Error flag etc.

Compatibility check :Calculate Max. charging time

Recognize start permission signal (j ON)

Send start permission signal (k ON)

Connector lock and perform insulation test
Send charging ready signal (d2 ON)

Recognize charging ready signal (g ON)
EV contactor ON

Charging Current Control

Output current
Checking circuit condition, charging time etc.

Checking battery condition, temperature etc.
Calculate optimal charging current
Transmit charging current value in every 100ms
Checking input current value and error signal

Battery voltage becomes Max. value
Terminate charging

Output zero current

Send zero current signal

Recognize charging stop (j OFF)
Terminate charging process (d1 , d2 OFF)
Connector unlock

Confirm zero input current
EV contactor OFF
Send charging stop signal (k OFF)