USER GUIDE

OCPP

GREEN'UP CHARGING STATIONS

THE GLOBAL SPECIALIST IN ELECTRICAL
AND DIGITAL BUILDING INFRASTRUCTURES

legrand®

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USE OF GREEN'UP CHARGING STATION WITH OCPP

Before you start

Legrand ESVE charging station use the protocol version OCPP 1.6J.

You need to have:

- a connected and functional charging station ;
- a communication kit Cat.No 0 590 56 ;
- optional - a RFID kit Cat.No 0 590 59 ;
- an available and functional OCPP 1.6J server ;
- a laptop to set the station and the communication kit ;
- a RJ45 cable between the laptop and the communication kit ;
- a connection to the server that can be used by the charging station ;
- the latest update package (Software version V01.17.00 or higher) available on the Legrand e-catalogue ;

Identification of Legrand charging station connectors :

CHARGING STATION WITH 1 CHARGING POINT (1 EV)		CHARGING STATION WITH 2 CHARGING POINTS (2 EV)
Mode 3 socket (T2S): connectorId1	Mode 3 socket (T2S): connectorId1	Mode 3 socket (T2S) right: connectorId1
	Mode 2 socket (2P+E): connectorId2	Mode 2 socket (2P+E) right: connectorId2
		Mode 3 socket (T2S) left: connectorId3
		Mode 2 socket (2P+E) left: connectorId4
All sockets: ConnectorId0		

How does it work ?

STEP 1 : Installation of the communication and RFID kits.

Check the instructions sheet LE09802AA\XX

STEP 2 : Laptop connection to the communication kit.

Check the communication kit instructions sheet LE09802AA\XX page 14

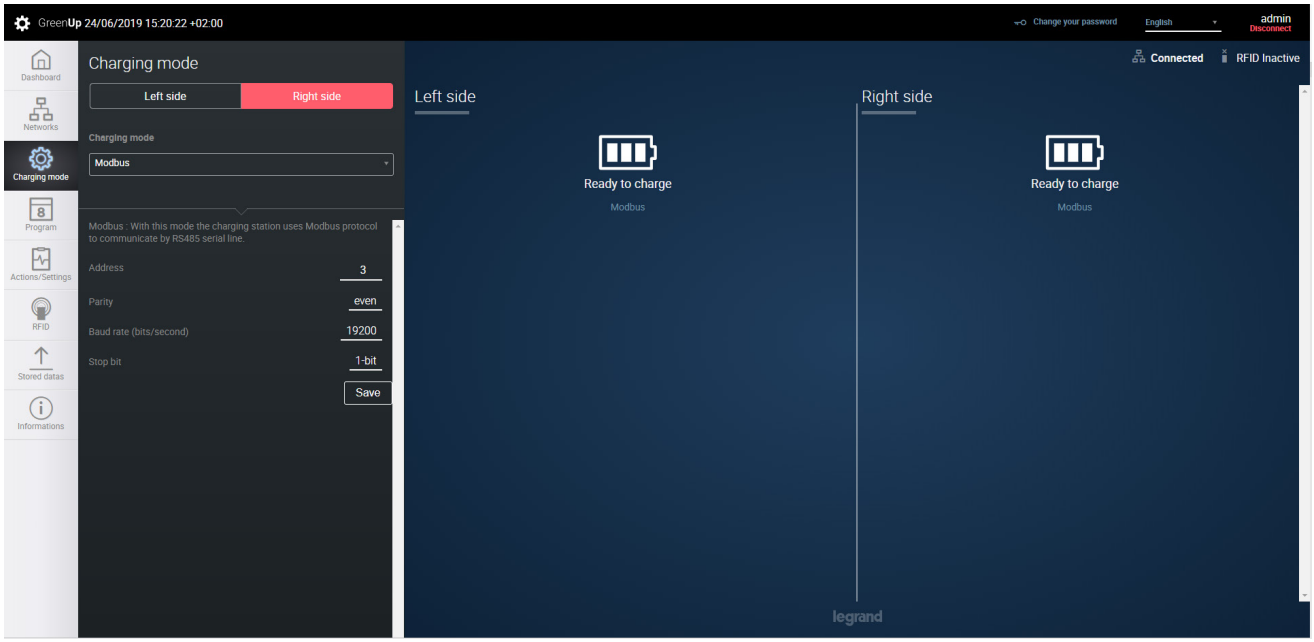
STEP 3 : Charging station set up in OCPP mode

OCPP SERVER CONNECTION PROCESS

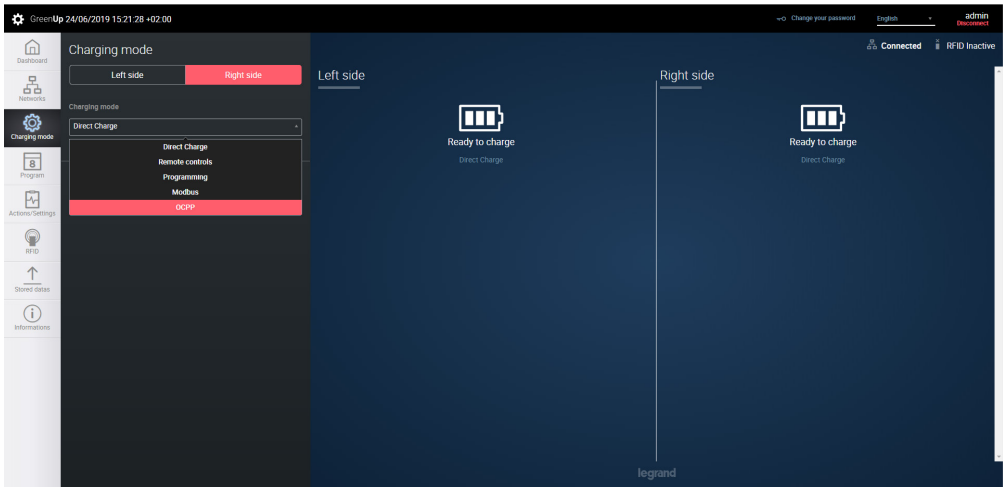
1. Browse the charging stations's web pages by logging into the Communication kit Cat.No 0 590 56 via the IP address (default 192.168.1.200).

2. Connect to the web pages using the Id and password (by default admin/admin). For a reminder of the first connection procedure, please check the communication kit's instructions sheet LE09802A-XX.

3. Select the page "**Charging Mode**".

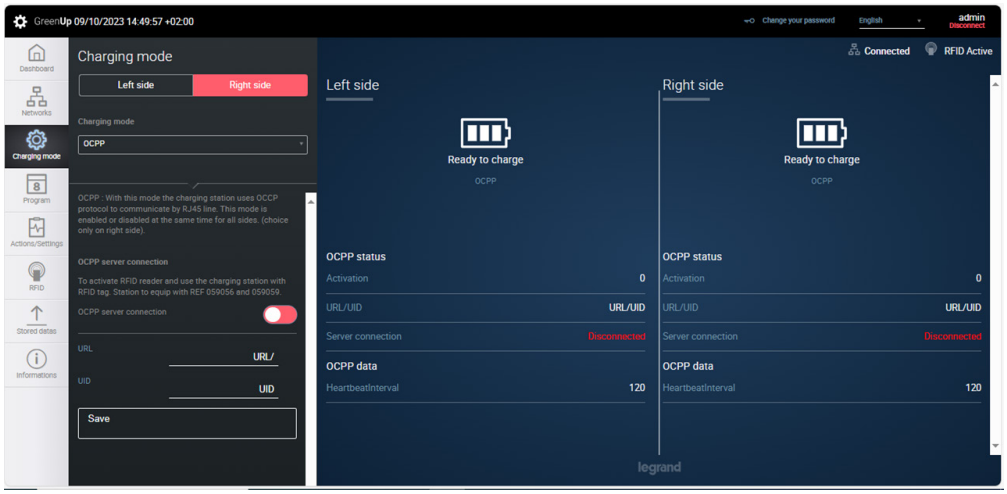


4. Select **OCPP mode** in the load mode selection tab.



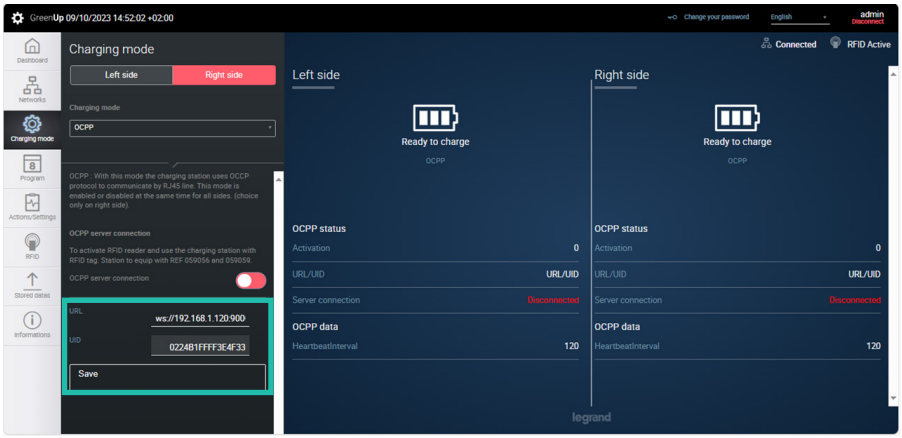
When selecting the OCPP charging mode, the charging station will change mode automatically.

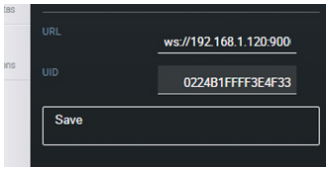
For a double charging station, the OCPP charging mode will be imposed on both sides of the station (previously select the right side of the charging station).



OCPP SERVER CONNECTION PROCESS

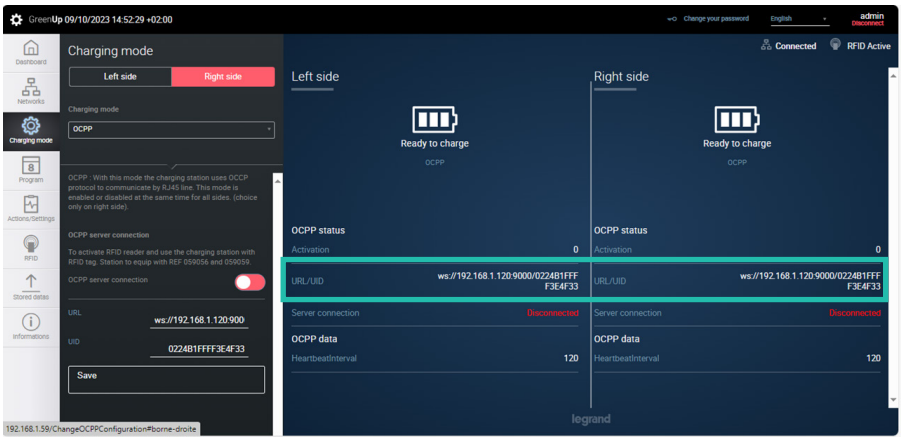
5. Complete the connection parameters



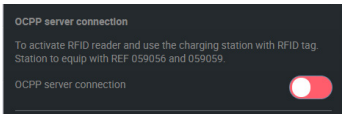


- Complete the **URL server** in WS or WSS protocol
- Complete the **charging station UID** on the OCPP server
- And save the data by pressing the **"Save"** button

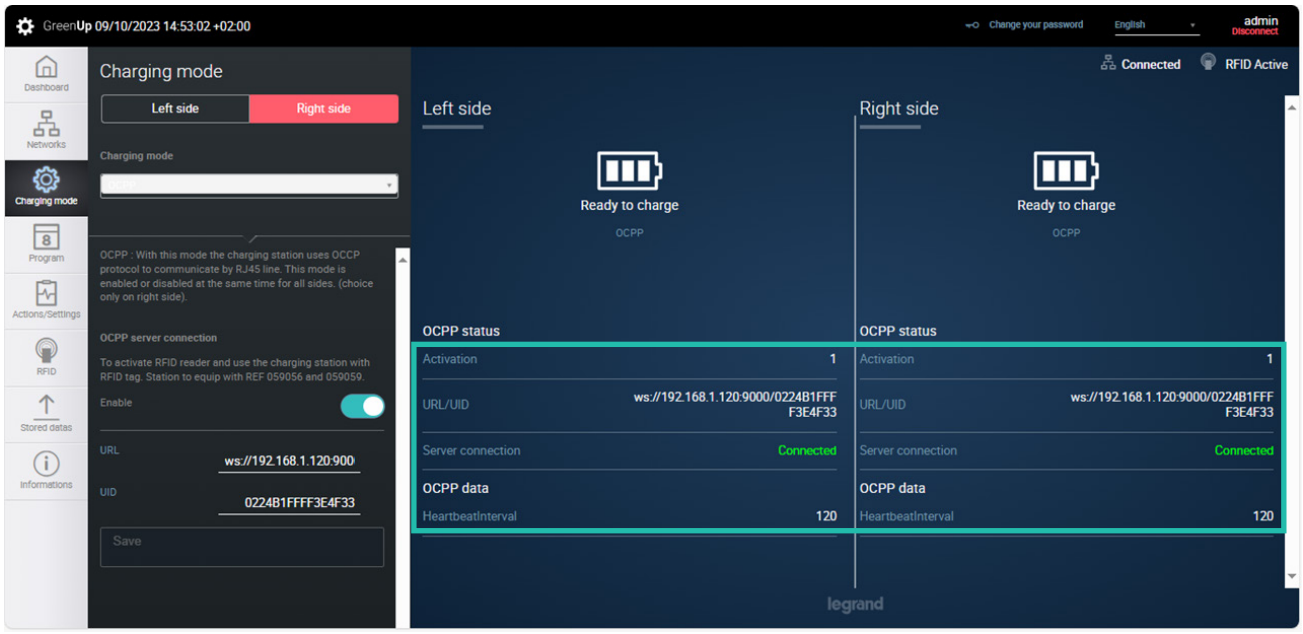
URL and UID data is provided by the charging operator.



6. Enable server connection



- Enable "**OCPP server connection**" button
- The charging station will attempt to connect to the server using the transmitted information



The status of activation and connection to the server can be checked in "**OCPP status**" part.
The OCPP status allows to know the connection situation of the charging station in relation to the OCPP server.

Activation: If the variable is 0, the charging station is not connected to the server via web socket. If the variable is at 1, the charging station is connected to the server via web socket

Server connection: Disconnected/Connection/Connected are the 3 connection status that can be viewed.

Heartbeatinterval: interval of sending (in secondes) the heartbeat by the charging station to the server. This interval is given by the server when the charging station is connecting.

AVAILABLE FEATURES AND CONFIGURATIONS

The supported OCPP 1.6J functions (Borne to Server) are as follows:

- “Authorize“ ex:
  [2,“26765260829432299233“,“Authorize“,{“idTag“:“XXXXXXXXXXXXXXXX“}]
  IdTagInfo support expiryDate and parentIdTag.

- “BootNotification” ex: [2,“46740660243372615052“,“BootNotification“,{“chargeBoxSerialNumber“:“260988“,“chargePointModel“:“059004“,“chargePointVendor“:“Legrand“,“firmwareVersion“:“V01.01.65/V01.01.08“,“meterType“:“internal“}]

- “DataTransfert”: N.A

- “DiagnosticsStatusNotification”: example coming soon

- “FirmwareStatusNotification”: example coming soon

- “Heartbeat” ex:
  [2,“11101862315294265356“,“Heartbeat“,{}]

- “MeterValues” ex:
  [2,“14057949118014675557“,“MeterValues“,{“connectorId“:2,“transactionId“:XXXX,“meterValue“:[{“timestamp“:“2019-04-19T16:26:44.277+02:00“,“sampledValue“:[{“value“:“1.64“,“context“:“Sample.Clock“,“format“:“Raw“,“mesurand“:“Current.Import“,“location“:“Outlet“,“unit“:“A“},{“value“:“3.1816661“,“context“:“Sample.Clock“,“format“:“Raw“,“mesurand“:“Energy.Active.Import.Interval“,“unit“:“Wh“},{“value“:“381.79993“,“context“:“Sample.Clock“,“format“:“Raw“,“mesurand“:“Power.Active.Export“,“location“:“Outlet“,“unit“:“W“}]}]}]

- “StartTransaction” ex:
  [2,“31895085733530537308“,“StartTransaction“,{“connectorId“:2,“idTag“:“XXXXXXX“,“meterStart“:0,“reservationId“:0,“timestamp“:“2019-04-19T16:25:43.083+02:00“}]
  IdTagInfo support expiryDate and parentIdTag.

- “StatusNotification” ex :

[2,“32978631724077548134“,“StatusNotification“,{“connectorId“:2,“errorCode“:“NoError“,“info“:“No failure“,“status“:“-SuspendedEVSE“,“vendorId“:“Legrand“}]

- “StopTransaction” ex :

[2,“95499847395981752639“,“StopTransaction“,{“idTag“:“XXXXXXXXXX“,“meterStop“:16,“timestamp“:“2019-04-19T16:28:21.917+02:00“,“transactionId“:XXXXXXXXXXX,“reason“:“Local“,“transactionData“:[{“timestamp“:“2019-04-19T16:28:21.917+02:00“,“sampledValue“:[{“value“:“1.40“,“context“:“Interruption.End“,“format“:“Raw“,“mesurand“:“Current.Import“,“unit“:“A“},{“value“:“2.8147619“,“context“:“Interruption.End“,“format“:“Raw“,“mesurand“:“Energy.Active.Import.Interval“,“unit“:“Wh“}]}]}]

IdTagInfo support expiryDate and parentIdTag.

The supported OCPP 1.6J functions (Server to charging station) are:

- “CancelReservation” : available ;
- “ChangeAvailability” : available ;
- “ChangeConfiguration” : available ;

Check the chapter “Configuration“.

- “ClearCache” : available ;
- “ClearChargingProfile” : available ;
- “DataTransfer” : not available ;
- “GetCompositeSchedule” : available ;
- “GetConfiguration” : available ;

Check the chapter “Configuration“.

- “GetDiagnostics” : available ;
- “GetLocalListVersion” : available ;
- “RemoteStartTransaction” : available ;
- “RemoteStopTransaction” : available ;
- “ReserveNow” : available ;
- “Reset” : available ;
- “SendLocalList” : available ;
- “SetChargingProfile” : available ;
- “TriggerMessage” : available ;
- “UnlockConnector” : available ;
- “UpdateFirmware” : available ;

Configurations possibilities :

CORE PROFILE	OCPP 1.6	READ	WRITE	BY DEFAULT	REMARKS
AllowOfflineTxForUnknownId	Optional	OK	Accepted	False	
AuthorizationCacheEnabled	Optional	OK	Accepted	False	
AuthorizeRemoteTxRequests	Required	OK	Accepted	True	
BlinkRepeat	Optional	OK	Accepted	60	No action on Legrand station
ClockAlignedDataInterval	Required	OK	Accepted	0	No action on Legrand station
ConnectionTimeOut	Required	OK	Accepted	60	60sec by default
GetConfigurationMaxKeys	Required	OK	N.A.	255	
HeartbeatInterval	Required	OK	Accepted	60	Between 10 and 86400 sec
LightIntensity	Optional	OK	Rejected	100	No action on Legrand station
LocalAuthorizeOffline	Required	OK	Accepted	False	
LocalPreAuthorize	Required	OK	Accepted	False	
MaxEnergyOnInvalidId	Optional	OK	Rejected	0	
MeterValuesAlignedData	Required	OK	Accepted		Please check "supportedMeterValuesAlignedData"
MeterValuesAlignedDataMaxLength	Required	OK	Rejected	50	
MeterValuesSampledData	Required	OK	Accepted		Please check "supportedMeterValuesSampledData"
MeterValuesSampledDataMaxLength	Optional	OK	Rejected	50	
MeterValueSampleInterval	Required	OK	Accepted	30	- 10 s
MinimumStatusDuration	Optional	OK	Accepted	0	
NumberOfConnectors	Required	OK	N.A.	0	Depend of the reference of the product
ResetRetries	Required	OK	Accepted	1	
ConnectorPhaseRotation	Required	OK	Not supported	Unknown	No action on Legrand station
ConnectorPhaseRotationMaxLength	Optional	OK	N.A.	1	No action on Legrand station
StopTransactionOnEVSideDisconnect	Required	OK	Accepted	True	No action on Legrand station
StopTransactionOnInvalidId	Required	OK	Accepted	False	

CORE PROFILE	OCPP 1.6	READ	WRITE	BY DEFAULT	REMARKS
StopTxnAlignedData	Required	OK	Accepted		Please check "supported-StopTxnAlignedData"
StopTxnAlignedDataMax-Length	Optional	OK	N.A	10	
StopTxnSampledData	Require	OK	Accepted		Please check "supported-StopTxnSampledData"
StopTxnSampledDataMax-Length	Optional	OK	N.A	10	
SupportedFeatureProfiles	Required	OK	N.A	Core,FirmwareMan-agement, LocalAuth-ListManagement,Re-moteTrigger,Reserva-tion,SmartCharging	
SupportedFeatureProfilesMax-Length	Optional	OK	N.A	6	
TransactionMessageAt-tempts	Required	OK	Accepted	3	
TransactionMessageRetryIn-terval	Required	OK	Accepted	10	
UnlockConnectorOnEVSide-Disconnect	Required	OK	Accepted	True	No action on Legrand station (always true)
WebSocketPingInterval	Required	OK	Accepted	300	No action on Legrand station
SupportedFileTransferProto-cols	Required	OK	OK	FTP, SFTP, FTPS, HTTP, HTTPS	

LOCAL AUTH LIST MANAGEMENT PROFILE	OCPP 1.6	READ	WRITE	BY DEFAULT	REMARKS
LocalAuthListEnabled	Required	OK	Accepted	False	
LocalAuthListMaxLength	Required	OK	N.A	500	
SendLocalListMaxLength	Required	OK	N.A	500	

RESERVATION PROFILE	OCPP 1.6	READ	WRITE	BY DEFAULT	REMARKS
ReserveConnectorZeroSup-ported	Optional	OK	N.A	True	

SMART CHARGING PROFILE	OCPP 1.6	READ	WRITE	BY DEFAULT	REMARKS
ChargeProfileMaxStackLevel	Required	OK	N.A	100	
ChargingScheduleAllowedChargin-gRateUnit	Required	OK	N.A	Current,Power	
ChargingScheduleMaxPeriods	Required	OK	N.A	100	
ConnectorSwitch3to1PhaseSup-ported	Optional	OK	N.A	False	
MaxChargingProfilesInstalled	Required	OK	N.A	100	

LEGRAND PROFILE	OCPP 1.6	READ	WRITE	BY DEFAULT	REMARKS
chargingStationMaxLimit	N.A	OK	OK	64	
confBasicTime	N.A	OK	OK	10	
confAuthorizeTime	N.A	OK	OK	20	
confBottNotificationTime	N.A	OK	OK	30	
defaultIdTag1	N.A	OK	OK	LEGRAND001	
defaultIdTag2	N.A	OK	OK	LEGRAND002	
MaxCurrentInstallationRight	N.A	OK	N.A		Allows to know the maximum limit of the installation
MaxCurrentInstallationLeft	N.A	OK	N.A		Allows to know the maximum limit of the installation
MaxCurrentCableRight	N.A	OK	N.A		Allows to know the maximum limit of the charging cable used
MaxCurrentCableLeft	N.A	OK	N.A		Allows to know the maximum limit of the charging cable used
MeterType	N.A	OK	N.A	Internal	"Internal" or "external" (external under delopment)
networkEthernetAddress	N.A	OK	N.A		
networkEthernetNetmask	N.A	OK	N.A		
networkEthernetGateway	N.A	OK	N.A		
networkWiFiAddress	N.A	OK	N.A		
networkWiFiNetmask	N.A	OK	N.A		
networkWiFiGateway	N.A	OK	N.A		
oCPPPlugAndCharge	N.A	OK	OK	False	
serverReconnectionTime	N.A	OK	OK	30	
UID	N.A	OK	OK	Null	
URL	N.A	OK	OK	Null	

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