The purpose of this communication is to update you about the release of software functionalities for the ABB Terra AC Wallbox.

**Scope**

- Charger Firmware v1.6.2
- ChargerSync App v1.9.0
- ChargerSync Essentials Operational portal v1.9.0
- TerraConfig App v1.9.0
- TerraConfig Service Portal v1.8.0

The release covers the existing portfolio.

- CE non-display / display (MID certified, Eichrecht certified)
- UL non-display / display (UL certified)

**Documents**

- Modbus documentation update
- OCPP implementation documentation update
- Load management documentation update
## Firmware 1.6.2

### Features

**Load management - update**
- Improved the algorithm for local dynamic load management for single charger by introducing a phase-based load balancing algorithm
- Introduced the option to take into account the maximum phase imbalance of the grid in the dynamic load management algorithm for single charger
- Introduced fallback limit variable that can be described as the value (in Ampere) to which the charger will limit its power output to at the moment the connection with an external meter is lost for a certain amount of seconds

**UK Smart Charging Legislation Compliance**
- Support off-peak charging
- Support Randomized Delay
- Customized OCPP key - RandomDelayCancel

**IT network on MID designs**
- Mistake proof validation check at charger level during firmware update process
- Increase WiFi password length (to 32 characters)
- Improved daisy chain

**Show Charger IMEI**
- PE detection as default disable in the charger firmware
- Support OCPP URL length of 200 characters
- Charger by default process the scanning of ABB and external RFID card
- MID certificate version number update

### Modbus

**Lock/Unlock cable on charger side**

**Improved 4100H – Set Charging Current Limit use case**
Set Charging Current Limit register could be set anytime instead of during transaction

**EV1 meter support**
- EV1 meter also supported by reading correct Active power total register.
- Different ABB meters are identified internally by charger and information transferred according to specific profile

**New Modbus register to define communication timeout while in secondary mode**
- Provides a configurable approach to support interoperability

### OCPP

**Smart Charging profile update**
- GetCompositeSchedule
- Support complex charging schedule by increased stack and periods for different charger variants via:
  - ChargeProfileMaxStackLevel (16 for display models, 3 for non-display)
  - ChargingScheduleMaxPeriods (25 for all variants)
- report SupportedFeatureProfiles key to include SmartCharging profile while using GetConfiguration
### GetDiagnostics
In Firmware Management profile, GetDiagnostics and DiagnosticsStatusNotification messages also supported.

Moving forward custom message diagnostic log will be phased out.

- **New key support:**
  - MaxEnergyOnInvalidId
  - StopTransactionOnInvalidId
  - ResetRetries
  - TransactionMessageAttempts
  - TransactionMessageRetryInterval

### Support UTC time zone offset format
Charger supports processing currentTime in the format of UTC±HH:MM as well send by Central System/OCPP Server.

This zone offset could be used for the purpose of identifying/displaying the time in local time zone. Possible to extract from BootNotification and Heartbeat messages.

**OCPP keys to support local time zone**
Keys supports for country specific local time adjustment and display purposes.

**MeterValuesSampledData according to Measurand enumeration**

**Improvement on UpdateFirmware from external OCPP server**
Charger supports to use ABB URL 'location' to perform UpdateFirmware from external OCPP server.

**Support mobile app operation by OCPP DataTransfer message**

**Allow OfflineTxForUnknownId**

**OCPP key to associate RFID tag with Free vending**
Align with DC charger approach, New FreevendIdTag key to associate with FreevendEnabled for auto charge behavior

**AuthorizationKey support**

**chargePointVendor is updated as ABB**

### Bugs
Further updates and improvements
Digital 1.9 (TerraConfig App, ChargerSync App, TerraConfig portal, ChargerSync portal)

### Features

<table>
<thead>
<tr>
<th><strong>ChargerSync app - remote control</strong></th>
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<tbody>
<tr>
<td><strong>UK Smart Charging Legislation</strong></td>
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<tr>
<td>Apps to support:</td>
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<tr>
<td>- deployment of UK schedule and randomized delay at moment of commissioning</td>
</tr>
<tr>
<td>- possibility to modify / override schedule</td>
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<tr>
<td>- possibility to modify randomized delay within ChargerSync app with each charge session initiated</td>
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**Load management - update**

Changed UI to support update to local load management supported with FW 1.6

**Reset charger settings to defaults**

Feature in TerraConfig app to reset all the charger setting to default values and configure freshly again.

This resets different channel inputs setting/limit done by mobile app, OCPP or ChargerSync cloud. Additionally, "Device Sync" option in the mobile app could be used for sync if the reset was performed during offline.

Helpful when load management/current limit setting not working as expected due to lowest limit.

**ChargerSync portal: show total cost for free vend sessions**

**TerraConfig portal: OCPP link alias**

**Apps: Increase WiFi password length**

WiFi password supports maximum 32 characters

**TerraConfig App supports to enable/disable PE detection circuit**

### Bugs

| **TerraConfig portal: Existing URL to be extended to other customers** |
| **TerraConfig portal: filter on 3rd party OCPP configuration** |
| **ChargerSync portal: possibility to reuse a company name** |
| **ChargerSync portal: automated daylight saving time** |

**Improved CRUD UI for TC app**

Improved the Create, Read, Update, Delete UI for TC app

**further improvements**