

Change request for the ChargingStateKind

04/30/2025 10:42 AM - Owen Wu

Status:	Resolved	Start date:	04/30/2025
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:			
Target version:			
Final Decision:		Version:	2.2
Closed Reason:	--Not Set---	Needs More Information:	No
Breaking Change:			

Description

*Background:

In the current definition of the “ChargingStateKind” enum within the OpenFMB specification, the value “ChargingStateKind_Idle” is assigned the value “0”. While this accurately represents the idle state of an EVSE, it introduces a functional ambiguity when used in Protocol Buffers. In protobuf, the default value of an enum field is always `0`, and this value is implicitly used when the field is unset. This makes it difficult to distinguish between an intentionally set “Idle” state and an uninitialized or unknown value.

*Current Enum Definition:

```
enum ChargingStateKind {
ChargingStateKind_Idle = 0;
ChargingStateKind_Charging = 1;
ChargingStateKind_EVConnected = 2;
ChargingStateKind_SuspendedEV = 3;
ChargingStateKind_SuspendedEVSE = 4;
}
```

Proposed Solution

*Proposed Change:

To resolve the ambiguity and enhance clarity when handling default and unknown enum values, it is proposed to:

1. Introduce a new value “ChargingStateKind_UNDEFINED = 0” to explicitly represent an unknown or uninitialized state.
2. Bump all existing values by 1, starting with “ChargingStateKind_Idle = 1”.

*Proposed Enum Definition:

```
enum ChargingStateKind {
ChargingStateKind_UNDEFINED = 0; // Represents an unknown or uninitialized state
ChargingStateKind_Idle = 1;    // No connection between EV and EVSE
ChargingStateKind_Charging = 2; // Energy is flowing between EVSE and EV
ChargingStateKind_EVConnected = 3; // EV is physically connected to EVSE
ChargingStateKind_SuspendedEV = 4; // EV is connected but not drawing power
ChargingStateKind_SuspendedEVSE = 5; // EVSE is not offering energy to EV
}
```

Related issues:			
Related to OpenFMB DataModel - OpenFMBIssues #7137: 2.2 Data Model Final Test...	In Progress	02/24/2025	03/31/2025

History

- #1 - 04/30/2025 10:42 AM - Owen Wu
- Status changed from New to Triage
- #2 - 04/30/2025 10:42 AM - Owen Wu
- Status changed from Triage to Accepted
- #3 - 04/30/2025 02:40 PM - Owen Wu

- Related to OpenFMBIssues #7137: 2.2 Data Model Final Testing Phase added

#4 - 05/05/2025 01:40 PM - Owen Wu

- Subject changed from Change request for the EVSEStatusProfile to Change request for the ChargingStateKind
- Status changed from Accepted to In Progress

#5 - 05/05/2025 01:50 PM - Owen Wu

- Status changed from In Progress to Resolved

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