

E-mobility ID-codes

The purpose of IDs, ID usage and ID format

The purpose and usage of e-mobility IDs

E-mobility ID codes are IDs with a national country code for Mobility Service Providers (MSP) and Charge Station Owners (CSO) or Charge Point Operators (CPO). These unique IDs for organizations that manage charge stations or offer charge services to EV drivers are needed to identify these organizations for international billing and data exchange. Issuing and managing codes for EV driver contracts and charging stations ensures that charging stations can be found throughout Europe and that transactions for access and payment are reliable.

The code consist of two parts: the first part to identify the CSO/CPO and MSP and the second part to identify the individual recharging point and contract within these organizations.

The IDRO issues only the first 5 digits of - IDs for CSO/CPOs and MSPs, and the CSO/CPO and MSP issue the second part to identify respectively the specific charge point (EVSE) or contract (EMA). For the CSO/CPO this total ID of part one and two is called EVSE-ID (Electric Vehicle Supply Equipment) and for the MSP this is called the EMA-ID (Electric Mobility Account). They are conceived by CSO/CPOs and MSPs purely as identifiers. Consequently, they are not meant to contain other information and should not be considered as marketing tools.

ID format part 1 (first 5 characters) and 2 (remaining characters)

The IDACS Consortium agreed to use the current format for part one and two as this is adequate for European e-mobility ID issuing and usable for the market. This format was initially published by ISO as part of ISO 15118 and eMI3. eMI3 specified and clarified some characters of the ISO 15118-2:2014 code.

For the use of the ID-format, the IDACS Consortium:

- strongly advises companies NOT to use the optional separators between IT systems. They are meant for visibility only, not for IT communication. It is up to individual companies how to display the ID's and where which separators are put.
- leaves it up to Mobility Service Provider (MSP) to use or not use the 'Check digit', as it is mainly for their own benefits and usage and it has no impact on connected organisations, like CPO's.
- requires the 'Type character' to be used in all new situations for Contracts with "C" as 'type character', and at least an EVSE ID is needed for all charge points with "E" as 'type character'. If the CPO or CSO is also using the ID's for Pools or Stations is up to the CSO/CPO. If used that way a "P" or "S" must be used. It is meant for use cases addressing POI on maps, such as request for reservation of an EVSE.

The IDACS Consortium acknowledges that possible changes on the format in the future can be processed based on consensus.



Issued by:	ID Registration Organisations (IDRO)				Emobility Provider			
Description	Country	Separator	EMP	Separator	Type	Contract ID instance	Separator	Check digit
Example	AT	"_"	EVB	"_"	C	12A23GHI	"_"	3
Explanation	2 characters (alphanumeric) [ISO 3166-1 alpha-2]{2}	optional [-]{1}	3 characters (alphanumeric) [A-Z;0-9]{3}	optional [-]{1}	1 character type identifier (alphanumeric) [A-Z]{1}	8 characters (alphanumeric) [A-Z;a-z;0-9]{8}	optional [-]{1}	Optional calculated check digit [0-9]{1}
	part one				part two			

Issued by:	ID Registration Organisations (IDRO)				Charge point operator / unit	
Description	Country	Separator	CPO or LOC	Separator	Type	Charge point ID
Example	FR	"*"	EDF	"*"	E	2542AX8769
Explanation	2 characters (alphanumeric) [ISO 3166-1 alpha-2]{2}	optional [*]{1}	3 characters (alphanumeric) [A-Z;0-9]{3}	optional [*]{1}	1 character type identifier E for EVSE or P for Pool or S for Station (alphanumeric) [A-Z]{1}	Up to 30 characters (alphanumeric) [A-Z;a-z;0-9]{max 30}
	part one				part two	

	= optional, but strong advice not to use it between IT systems and only for visibility
	= optional, and used for helpdesk or internal MSP checks. Usage up to MSP
	= obliged to use (non optional) at least on EVSE level and Contract level
	= obliged to use

Figure 1: Updated agreed ID formats

Annex 1 presents an overview of the syntax of the IDs for MSP and their contracts

Annex 2 shows Syntax IDs for CPOs, Location Owners and the charge points or Electric Vehicle Supply Equipment ID (EVSE ID)

Annex 3 illustrates how an EVSE is defined in the charging infrastructure

[Annex 1: Syntax ID's for MSP and their contracts](#)

(Also and more extensively explained by eMI3 deliverable: V1.0 Electric Vehicle ICT Interface Specifications: Part 2 Business Objects)

The Electric Mobility Account (eMA) ID MUST match the following structure – this is used for identifying MSPs and their contracts:

(the notation corresponds to the augmented Backus-Naur Form (ABNF) as defined in RFC 5234):

<eMA ID> = <Country Code> <S> <Provider ID> <S> <ID Type> <Contract ID-Instance> <S> <Check Digit>

Explanation:

<Country Code> = 2 ALPHA; two character country code according to ISO-3166-1 (Alpha-2-Code)

<Provider ID> = 3 (ALPHA / DIGIT); three alphanumeric characters, referring to the MSP

<ID Type> = “C”; one character “C” indicating that this ID represents a reference to a “Contract”

<Contract ID Instance> = 8 (ALPHA / DIGIT); eight alphanumeric characters referring to the internal service contract between MSP and its customer

<Check Digit> = *1 (ALPHA / DIGIT); Optional, for own MSP usage to verify valid contract codes

<S> = *1 (“-”); optional separator, but advised not to use it between IT systems and only for visibility purposes

ALPHA = %x41-5A / %x61-7A; according to RFC 5234 (7-Bit ASCII)

DIGIT = %x30-39; according to RFC 5234 (7-Bit ASCII)

An example for a valid eMA ID therefore is “DE8AACA2B3C4D5L” or with dashes “DE-8AA-CA2B3C4D5-L”.

Note: This identifier definition is a more precise interpretation of ISO/ IEC 15118 eMA ID Id in a sense that ISO/IEC 15118 eMA ID is proposing an instance of 9 Alpha/digits.

Alpha characters SHALL be interpreted case insensitively.

Annex 2: Syntax IDs for CPOs, Location Owners and the charge points or Electric Vehicle Supply Equipment ID (EVSE ID)

(Also and more extensively explained by eMI3 deliverable: V1.0 Electric Vehicle ICT Interface Specifications: Part 2 Business Objects)

The EVSE ID MUST match the following structure (the notation corresponds to the augmented Backus-Naur Form (ABNF) as defined in RFC5234):

<EVSE ID> = <Country Code> <S> <CPO or Loc owner ID> <S> <ID Type> <Charge Point ID>

Explanation:

<Country Code> = 2 ALPHA; two character country code according to ISO-3166-1 (Alpha-2-Code)

<CPO or Location Owner ID> = 3 (ALPHA / DIGIT); three alphanumeric characters, referring to the EVSE Operator or Location Owner

<ID Type> = “E” for EVSE (Charge point), “S” for Charge Station, P for Charge Pool; one character indicating that this ID represents an “EVSE”, “Station” or “Pool”.

<Charge Point ID> = 1-30 (ALPHA / DIGIT); between 1 and 30 sequence of alphanumeric characters, allowing the EVSE Operator (CPO) to identify one specific EVSE. In case of “Station” it refers to identify the station (which can have one or more charge points. In case of “Pool” it refers to a charge pool.

A charge point MUST have an ID, Pools and Stations are up to the owners/operators.

<S> = *1 (“*”); optional separator, but advised not to use it between IT systems and only for visibility purposes

ALPHA = %x41-5A / %x61-7A; according to RFC 5234 (7-Bit ASCII)

DIGIT = %x30-39; according to RFC 5234 (7-Bit ASCII)

An example for, a valid EVSE ID is “FRA23E45B78C” with “FR” indicating France, “A23” representing a particular EVSE Operator, “E” indicating that it is of type “EVSE” and “45B78C” representing the power outlet ID, that is to say one of its EVSEs.

NOTE: In contrast to the eMA ID, no check digit is specified for the EVSE ID.

Alpha characters SHALL be interpreted case insensitively.

Annex 3 Charging Infrastructure Overview

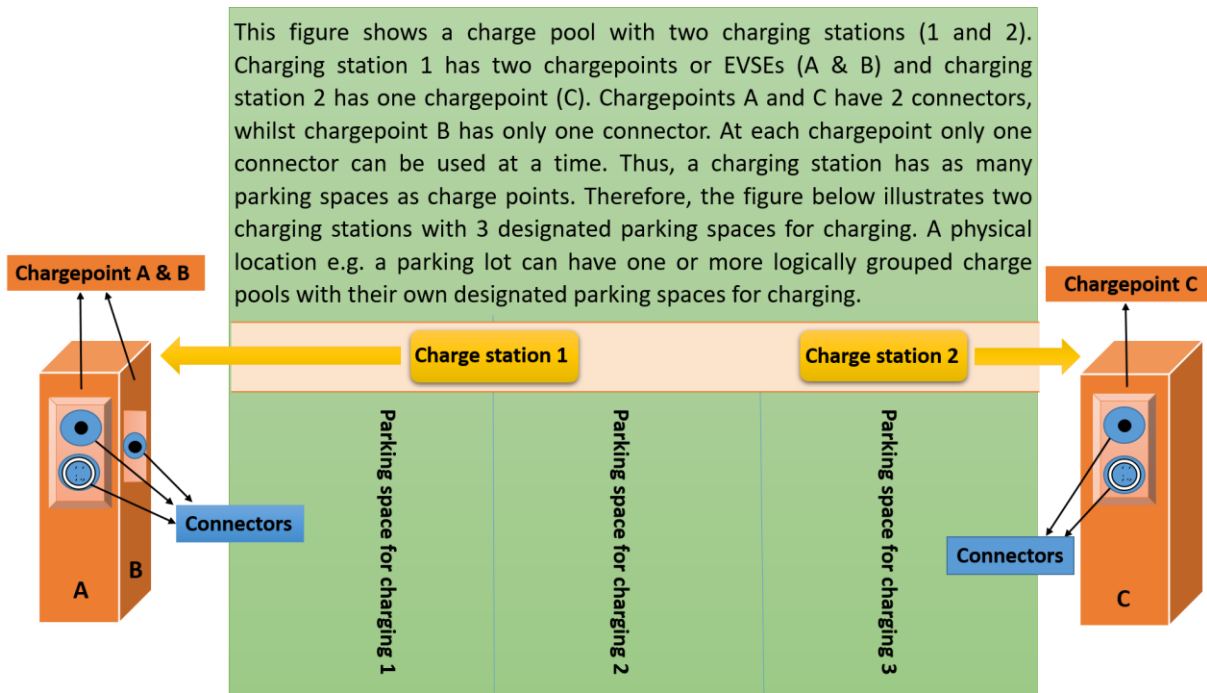


Figure 2 Location, pool, station, point (EVSE), connector