



e-MOTICON

e-MObility Transnational strategy for
an Interoperable COmmunity and
Networking in the Alpine Space.


Training «Types of E-CS»

Plugs



- 3 EU-standardized plugs :
 - Schuko (« normal plug »)
 - Type 2 (AC)
 - CCS-Combo2 (DC)
- 1 additional type :
Chademo (for cars from Japan or Korea)




Charging modes	Plug/connector (standard)	Illustration	Characteristics	
Mode 1	Schuko (IEC 60884)		Non dedicated power socket Power (AC) : Nb of phases: I _{max} : V _{max} : Nb of pins:	2- 3,7 kW single phase 10A /16A 220 V 2




Charging modes	Plug/connector (standard)	Illustration	Characteristics	
Mode 2	Type 2 (IEC 62196-2)		Power (AC) : Nb of phases: I _{max} : V _{max} : Nb of pins:	3,7 – 43 kW Single phase/Three phases up to 70A / 63A 250V AC / 480V AC7



Charging modes	Plug/connector (standard)	Illustration	Characteristics	
Mode 3	CCS - Combo 2 (IEC 62196-3)		Power (DC): I _{max} : V _{max} : Communication protocol:	50 kW DC (future system: up to 350 kW) up to 125 A up to 850V DIN 70121



Charging modes	Plug/connector (standard)	Illustration	Characteristics	
Mode 4	Chademo (IEC 62196-3)		Power (DC): I _{max} : V _{max} : Communication protocol:	50 kW DC (future system: 150 kW) up to 125 A up to 500 V DC CAN

Parameters



SLOW charging (3-8 hours for 100 km)

- Lower cost
- +/- 1 customer per day

ACCELERATED charging 22 kVA AC (45-60 min for 100 km)

FAST charging (20-30 min for 100 km)

- High cost (infrastructure + operation)
- (potentially) many customers per day
- Higher price for customer (+/- 1€ per 5 minutes)





Contact

EUROPEAN REGIONAL DEVELOPMENT FUND

Bruno Grandjean - Pôle Véhicule du Futur - bg@vehiculedufutur.com

Project Website: <http://www.alpine-space.eu/projects/e-moticon/en/home>

