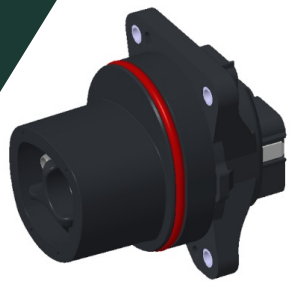
NACS INLET
500V / 1000V

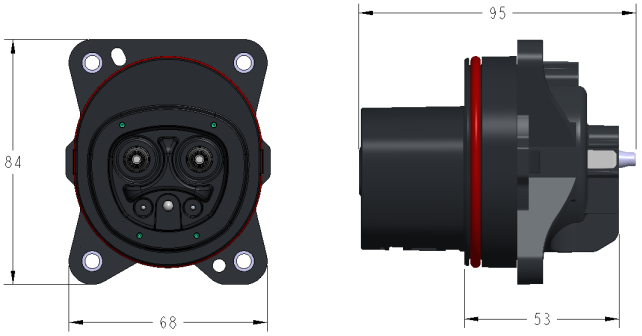
Charging Inlet for direct current (DC) and alternating current (AC) charging, compatible with NACS vehicle charging connectors (EVSE), for installation in electric vehicles for electromobility (EV).



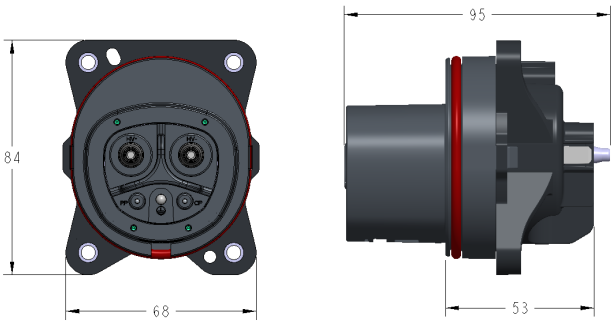
PRODUCT DEFINITION	
Product Type	Vehicle Charging Inlet
Application	For Charging with Alternating Current (AC) and Direct Current (DC)
	For Installation in Electric Vehicles (EV)
	Combined Charging System
Standards / Regulations	UL 2251
Charging Standard	NACS TS-0023666, IEC 62196-1
Charging Mode	Mode 2, 3, 4
Protective Cap	A Protective Cap is Supplied as Standard for the DC and AC Contacts.
Connection Method	Screws Connection (cannot be disconnected)
AMBIENT CONDITIONS	
Ambient Temperature (Operation)	-40°C to +60°C
Ambient Temperature (Storage / Transport)	-40°C to +85°C
Maximum Altitude	4000 m (above sea level)
Degree of Protection	With the inlet mounted to a representative body panel and the connector mated to the inlet, the system shall withstand an IP44 test as described in IEC 60529.
	When mounted to a representative vehicle body panel and unmated to the connector, the inlet shall withstand an IP67 water and dust test as described in IEC 60529.
	When mounted to a representative vehicle body panel and unmated to the connector, the inlet shall withstand an IP6K9K water test as described in IEC 60529.
POWER CONTACTS	
Number	3 (HV+, HV-, PE)
Rated Voltage	The North American Charging Standard exists in both a 500V rated configuration and 1000V rated configuration. The 1000V version is mechanically backwards compatible (i.e. 500V inlets can mate with 1,000V connectors and 500V connectors can mate with 1,000V inlets).
Rated Current	The North American Charging Standard shall specify no maximum current rating. The maximum current rating of the inlet or connector shall be determined by the manufacturer, provided that the temperature limits defined in section 8 are maintained. Tesla has successfully operated the North American Charging Standard above 900A continuously with a non-liquid cooled vehicle inlet.

ELECTRICAL PROPERTIES		DIMENSIONS	
Number of Phases	1	**Height**	84 mm
Charging Power (Nominal Operation)	TBD	**Width**	68 mm
Type of Charging Current	DC, AC 1-phase	**Depth**	95 mm
Insulation Resistance	> 200 MΩ	**Bore Dimensions**	52 mm X 68 mm
Coding	2.7 kΩ (between PE and PP)		

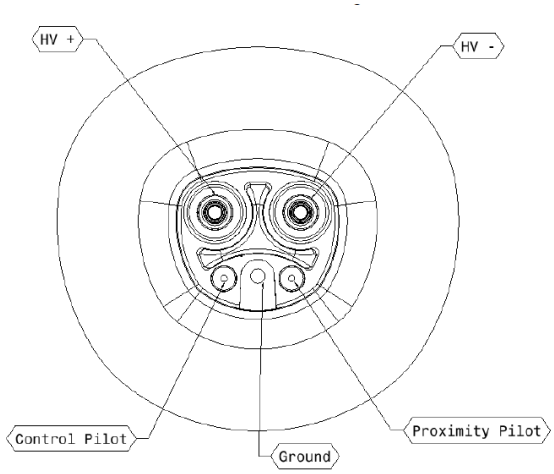
NACS INLET MECHANICAL DRAWING



500V Configuration



1000V Configuration



Inlet - 1,000V and 500V Configuration

SIGNAL CONTACTS	
Number	2 (PP, CP)
Rated Current for Signal Contacts	2A
Rated Voltage for Signal Contacts	30V AC
Note on the Connection Method	Crimp Connection (cannot be disconnected)
Material Contacts	Cu-Alloy
LV Connectors	Connectors: DELPHI 15438866, APTIV 13678638

TEMPERATURE SENSORS	
Sensor Type	NTC Thermistor
Nominal Resistance and Tolerance	R25 100 KΩ ± 5.0%
B Value and Tolerance	B25 / 85 4, 150K ± 3.0%
Maximum Rated Power	P25 200mW
Permissive Operating Current	I25 0.14mA
Temperature	-40°C to +125°C

MECHANICAL PROPERTIES		DESIGN		MATERIAL	
Insertion / Withdrawal Cycles	> 10,000	**Design Line**	Generation 1	**Material**	Plastic
Insertion Force	< 90 N	**Housing Colour**	Black	**Flammability Rating**	V0
Withdrawal Force	< 90 N	**Customer Variations**	On Request	**Material Surface of Contacts**	Ag

MOUNTING	
Restrictions to Mounting Position	0° to 90° Frontal Inclination Possible
Mounting Position of the Locking Actuator	5 mm (Ø)
Mounting Hole Diameter	5 m
Required Mounting Screws	M4
Screws Included in the Scope of Delivery	None

ENVIRONMENTAL PRODUCT COMPLIANCE	
REACH SVHC	Compliant
China RoHS	Compliant
EU RoHS	Compliant

Contact us at **sales@volex.com**
for assistance in finding the right solution for your needs.