OCPP 2.0.1
CORE CERTIFIED
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Certificate Holder:	**KOSTAL Industrie Elektrik GmbH**
Certificate Number:	**OCA.0201.0002.CS**
Product Type:	**Charging Station**
Product Designation:	**WB DC-bidi 11kW**
OCPP Software Version:	**2023.21.22860.NB**
Certification Date:	**September 25, 2023**

This certificate attests that the above mentioned product successfully completed certification testing in conformance with the reference specification OCPP 2.0.1 (Edition 2 FINAL, 2022-12-15 including Errata v1.0, 2023-06-30). The optional OCPP protocol features that are covered by this certificate can be found in the Abstract of the Test Report that is part of this certificate.

Test cases have been performed as described in the test report referred to below. The results and remarks can be found in this complete test report.

Applied	Performed by / On	Document Evidence
Conformance testing according to the test specification referenced by the test report	DNV / June 6, 2023	DNV 20230606_Test Report_OCPP 2.0.1_CS_Kostal

The abstract of test report is an integral part of this certificate. This certificate is valid from the Certification Date specified above. This certificate is only applicable to the product designation described above and permits the use of the OCPP logo as laid down in the OCA certification logo license agreement on this product only.

This certificate shall neither be tendered nor accepted by any party as a guarantee covering quality of a product which includes OCPP. The Open Charge Alliance, and/or its agents, including, inter-alia, test laboratories, disclaim liability for any damages or losses incurred by the certified company or by any other party resulting from reliance on the results of OCPP certification testing.

For the Open Charge Alliance:

ONOPH CARON
Chairman

Abstract of the Test Report

Test Report OCPP 2.0.1 Certification	
Test laboratory:	**DNV**
Location:	Arnhem, The Netherlands
Test Report Reference:	DNV 20230606_Test Report_OCPP 2.0.1_CS_Kostal
Product Designation:	**WB DC-bidi 11kW**
Vendor name:	KOSTAL Industrie Elektrik GmbH
Device Under Test:	Charging Station
OCPP Software Version	2023.21.22860.NB

Test Result Summary for the Certified Functionalities

Certification Profile	Test Result	Description
Core	Pass	Basic Charging Station functionality for booting, authorization, configuration, transactions, remote control, including basic security.
Advanced Security	Pass	Support for TLS with client authentication.
Local Authorization List Management	Not Tested	Support for local authorization list management and optionally of an authorization cache.
Smart Charging	Not Tested	Support for Smart Charging, to control charging.
Advanced Device Management	Not Tested	Support for the OCPP Device Model and advanced logging and monitoring.
Reservation	Not Tested	Support for reservation of a connector of a Charging Station.
Advanced User Interface	Not Tested	Support for tariff & cost and DisplayMessage functionality.
ISO 15118 Support	Not Tested	Support for ISO 15118 Smart Charging and Plug and Charge authorization.

Hardware Feature Set

Id	Feature	Supported / Present
HFS-1	Has a detachable cable	No
HFS-2	Has a fixed cable	Yes
HFS-3	Has AC support	No
HFS-4	Has DC support	Yes
HFS-5	Has 1 phase support	No
HFS-6	Has 2 phase support	No
HFS-7	Has 3 phase support	No
HFS-8	No. EVSEs	1
HFS-9	Communication technology	Ethernet
HFS-10	RFID readers	Single

Evse	Current	Phases	Connector	Type	Cable Type
1	DC		1	cCCS2	Fixed Cable

Optional Features

Core

Id	Feature	Supported / Present
C-01	Support for offline authorization of transactions	Yes
C-02	Support for allowing Offline Authorization for Unknown Ids	No
C-03	Support for maximizing energy for invalid ids	Yes
C-04	Support to limit StatusNotifications	No
C-06	Authorization status after cable disconnected on EV side	
C-06.1	Support for maintaining authorization when cable disconnected on EV side	Yes
C-06.2	Support for not maintaining authorization when cable disconnected on EV side	Yes
C-07	Support for using a Master Pass for charging stations with UI	No
C-08	Support for using a Master Pass for charging stations without UI	Yes

Id	Feature	Supported / Present
C-09	Supported Transaction Start points	
C-09.1	Start transaction options - EVConnected	Yes
C-09.2	Start transaction options - Authorized	Yes
C-09.3	Start transaction options - DataSigned	No
C-09.4	Start transaction options - PowerPathClosed	Yes
C-09.5	Start transaction options - EnergyTransfer	Yes
C-09.6	Start transaction options - ParkingBayOccupancy	No
C-10	Supported Transaction Stop points	
C-10.1	Stop transaction options - EVConnected	Yes
C-10.2	Stop transaction options - Authorized	Yes
C-10.3	Stop transaction options - PowerPathClosed	Yes
C-10.4	Stop transaction options - EnergyTransfer	Yes
C-10.5	Stop transaction options - ParkingBayOccupancy	No
C-12	Unlocking of connector when cable disconnected on EV side	
C-12.1	Support for unlocking connector when cable disconnected on EV side	No
C-12.2	Support for not unlocking when cable disconnected on EV side	Yes
C-13	Support for Reset per EVSE	No
C-14	Support for retrieving / deleting CustomerInformation - CustomerIdentifier	No
C-20	Allowing New Sessions Pending a FirmwareUpdate	Yes
C-21	Support for queuing all or only Transaction related messages until they are delivered to the CSMS	No
C-23	Supported time sources	{ list } at least Heartbeat
C-25	Support for setting a TimeOffset	No
C-26	Support for setting the TimeZone	No
C-28	Toggle sending clock aligned meter values when a transaction is ongoing / Idle	Yes
C-29	TriggerMessage	Select all supported suboptions
C-29.1	Trigger message - MeterValues	Yes
C-29.2	Trigger message - TransactionEvent	Yes
C-29.3	Trigger message - LogStatusNotification	Yes
C-29.4	Trigger message - FirmwareStatusNotification	Yes
C-29.5	Trigger message - StatusNotification	Yes
C-29.6	Trigger message - BootNotification	Yes

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Id	Authorization Options for Local Start	Tested During Certification
C-30	Authorization - using RFID ISO14443	Yes
C-31	Authorization - using RFID ISO15693	No
C-32	Authorization - using KeyCode	No
C-33	Authorization - using locally generated id	No
C-34	Authorization - MacAddress	No
C-35	Authorization - NoAuthorization	No

Id	Authorization Options for Remote Start	Tested During Certification
C-36	Authorization - using RFID ISO14443	Yes
C-37	Authorization - using RFID ISO15693	No
C-38	Authorization - using centrally, in the CSMS generated id	No
C-39	Authorization - NoAuthorization	No

Id	Metervalues	Tested During Certification	Supported According to Vendor
C-40	Supported MeterValue Measurands		
C-40.1	SampledTxStarted Measurands	Energy.Active.Import.Register	Power.Active.Import Voltage Current.Import Frequency Energy.Active.Import.Register Energy.Active.Export.Register SoC
C-40.2	SampledTxUpdated Measurands	Voltage Energy.Active.Import.Register	Power.Active.Import Voltage Current.Import Frequency Energy.Active.Import.Register Energy.Active.Export.Register SoC
C-40.3	SampledTxEnded Measurands	Energy.Active.Import.Register	Power.Active.Import Voltage Current.Import Frequency Energy.Active.Import.Register Energy.Active.Export.Register SoC

Id	Metervalues	Tested During Certification	Supported According to Vendor
C-40.4	AlignedData Measurands	Voltage Energy.Active.Import.Register	Power.Active.Import Voltage Current.Import Frequency Energy.Active.Import.Register Energy.Active.Export.Register SoC
C-40.5	AlignedDataTxEnded Measurands	Energy.Active.Import.Register	Power.Active.Import Voltage Current.Import Frequency Energy.Active.Import.Register Energy.Active.Export.Register SoC

Id	Feature	Supported / Present
C-41	Supported Cipher Suites	TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 TLS_RSA_WITH_AES_128_GCM_SHA256 TLS_RSA_WITH_AES_256_GCM_SHA384
C-42	Signed Metervalues	No
C-43	Install Firmware with ongoing transaction	No
C-47	Support for falling back to default OCPP reconnection mechanism when NetworkConnection profile connection has failed	Yes
C-48	Authorization of remote start	
C-48.1	Option for authorization in case of a remote start	Yes
C-48.2	Option for no authorization in case of a remote start	Yes
C-58	Option for disabling remote authorization	No
C-49	Authorization Cache	Yes
C-59	Option for disabling remote authorization for cached invalid idTokens	No
C-51	Configurable TxStartPoint	Yes
C-52	Configurable TxStopPoint	Yes
C-53	Support for lifetime cached token	Yes
C-54	Supported policies for replacing cached entries	Yes
C-56	Support for providing the SummaryInventory	Yes

Id	Feature	Supported / Present
C-57	Support for cancelling ongoing log file upload	No
C-60	Support for cancelling ongoing firmware update	Yes

Advanced Security

Id	Certification Profile: Advanced Security	Supported / Present
AS-2	Additional root certificate check mechanism implemented	No
AS-3	Update Charging Station Certificate - CertificateSignedRequest Timeout	No

Additional Questions

Id	Additional Questions for Lab Testing	Supported / Present
AQ-1	Can the last CSMSRootCertificate can be removed?	No
AQ-2	Does the Charging Station have a cable lock, which prevents the EV driver to connect the EV and EVSE before authorization?	No
AQ-3	Can the last ChargingStationCertificate be removed?	Yes
AQ-4	Is there at least one unsupported NumberOfPhases?	No
AQ-5	Does the Charging Station have at least one hardWired monitor?	No
AQ-6	Does the Charging Station have a pre-configured monitor?	No
AQ-7	Is your Charging Station able to download firmware while there is an ongoing transaction?	Yes
AQ-8	Does your Charging Station enforce a selection of EVSE prior to authorization?	No
AQ-9	Does your Charging Station support charging an EV using IEC 61851-1?	No

Other Relevant Settings

Id	Limit / Setting	Value
ORS-1	ItemsPerMessageGetReport	1000
ORS-2	ItemsPerMessageGetVariables	1000
ORS-3	ItemsPerMessageSetVariables	1000
ORS-4	BytesPerMessageGetReport	1 MiB
ORS-5	BytesPerMessageGetVariables	1 MiB
ORS-6	BytesPerMessageSetVariables	1 MiB
ORS-9	Minimum SampledDataTxUpdatedInterval supported	0
ORS-10	Maximum SampledDataTxUpdatedInterval supported	2147483647
ORS-11	Minimum HeartbeatInterval supported	0
ORS-12	Maximum HeartbeatInterval supported	2147483647
ORS-16	WebSocketPingInterval	30

Id	Security Related Settings	Value
ORS-17	CertificateEntries	0

Id	Firmware Management Settings	Value
ORS-24	Supported file transfer protocols	http, https, ftp, ftps

Performance Measurement Result

Name	Max Value	Unit	Description
OCPP response time	2	seconds	The response time for when waiting for an OCPP response message after sending an OCPP request message. This entails all OCPP messages. Messages to the DUT can be handled within this timeout.
OCPP triggered function response time	2	seconds	The response time used when waiting for an asynchronous OCPP report after requesting this report.
Transaction authorization time by RequestStartTransactionRequest	2	seconds	The time between a RequestStartTransactionRequest and the corresponding TransactionEventRequest. Only cases where the RequestStartTransactionRequest immediately results in an authorization followed by a TransactionEventRequest, without the need of any additional manual actions or chargingState transitions inbetween are included.
Transaction authorization end time by RequestStopTransactionRequest	2	seconds	The time between a RequestStopTransactionRequest and the corresponding TransactionEventRequest Only cases where the RequestStopTransactionRequest immediately results in an end of the authorization followed by a TransactionEventRequest, that do not contain transactionInfo.chargingState = EVConnected are included.

Name	Min Value	Max Value	Average Value	Unit
OCPP response time	0.02	1.80	0.03	seconds
OCPP triggered function response time	0.02	1.58	0.37	seconds
Transaction authorization time by RequestStartTransactionRequest	0.07	0.19	0.13	seconds
Transaction authorization end time by RequestStopTransactionRequest	not measurable	not measurable	not measurable	seconds

Communication technology used during performance measurement:	Ethernet

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Statement of Approval

Vendor		
Name	Holger Hasselmann	Date: 21-09-2023
Company	KOSTAL Industrie Elektrik GmbH	Signature:
Department	BU-C	
Position	Senior Project Manager	i.A.
Location	Hagen, Germany	

Test laboratory		
Name	Casper van der Sluis	Date: 25-09-2023
Company	DNV	Signature:
Department	Digital System Operations	
Position	Consultant Digital System Operations	
Location	Arnhem, The Netherlands	