SPECIFICATION

VESTEL

EVC04

Modbus TCP/IP

Specification

Revision History:

v1.0	Görkem ÖZVURAL (04.12.2020, First version)
v1.1	Mehmet KOSE (25.01.2020, ChargePointState, alive register exp, charging state, equipment state changes)
v1.2	Mehmet KOSE(29.01.2020, Charging current reg type, Failsafe timeout expl.)
V1.3	Mehmet KOSE(30.03.2021, EVSE Fault Code(reg 1006) fix data type from uint16 to uint32)
V1.4	Buğra Görkem Özdağ(23.06.2021, Default timeout value is 20 sec. Session max current, Evse min current, Evse max current and cable max current units are changed to A)
V1.5	Buğra Görkem Özdağ(24.06.2021, TCP socket behavior explanation in timeout condition)

Modbus TCP/IP Protocol Parameters

Vestel EVC04 charging station acts as a slave device in the Modbus TCP/IP communication. Charging station should be in the same network with the master device or a proper routing should be applied to provide communication between slave and the master devices in different sub networks. Each charging station should have different IP address. Modbus TCP communication port number is 502 and Modbus Unit ID is 255 for Vestel EVC04 charging stations. There can be only one active Modbus master connection at any time.

1. Slave Register Map

Key	Register Address	Number of Registers	R/W	Data Type	Description	Unit
Serial Number	[100,124]	25	R	String	Serial Number, Currently 16 Digit	
Chargepoint ID	[130,179]	50	R	String	Chargepoint ID	
Brand	[190,199]	10	R	String	Chargepoint Brand	
Model	[210,214]	5	R	String	Chargepoint Model	
Firmware version	[230,279]	50	R	String	Firmware version	
Date	[290,291]	2	R	uint32	Current date of CP	yymmdd
Time	[294,295]	2	R	uint32	Current time of CP	hhmmss
Chargepoint Power	[400,401]	2	R	uint32	Max power of Chargepoint	W
Number of Phases	404	1	R	uint16	0: 1-phase 1: 3-phase	
Chargepoint State	1000	1	R	uint16	0: "Available", 1: "Preparing", 2: "Charging", 3: "SuspendedEVSE", 4: "SuspendedEV", 5: "Finishing", 6: "Reserved", 7: "Unavailable", 8: "Faulted",	
Charging State	1001	1	R	uint16	0: Not Charging, State Ax, Bx, Dx or C1 1: Charging, state C2	
Equipment State	1002	1	R	uint16	0: Initializing 1: Running 2: Fault 3: Disabled 4: Updating	
Cable State	1004	1	R	uint16	0: Cable not connected 1: Cable connected, vehicle not connected 2: Cable connected, vehicle connected 3: Cable connected, vehicle connected, cable locked	
EVSE Fault Code	1006	1	R	uint32	0: No fault Other: Fault code	
Current L1	1008	1	R	uint16	L1 Instantaneous Current	mA

Current L2	1010	1	R	uint16	L2 Instantaneous Current	mA
Current L3	1012	1	R	uint16	L3 Instantaneous Current	mA
Voltage L1	1014	1	R	uint16	L1 Voltage	V
Voltage L2	1016	1	R	uint16	L2 Voltage	V
Voltage L3	1018	1	R	uint16	L3 Voltage	V
Active Power Total	[1020,1021]	2	R	uint32	Total Active Power	W
Active Power L1	[1024,1025]	2	R	uint32	L1 Active Power	W
Active Power L2	[1028,1029]	2	R	uint32	L2 Active Power	W
Active Power L3	[1032,1033]	2	R	uint32	L3 Active Power	W
Meter Reading	[1036,1037]	2	R	uint32	Meter Reading	0.1 kWh
Session Max Current	1100	1	R	uint16	Max possible charging current for active session	A
EVSE Min Current	1102	1	R	uint16	Min possible charging current for EVSE	A
EVSE Max Current	1104	1	R	uint16	Max possible charging current for EVSE	A
Cable Max Current	1106	1	R	uint16	Max possible charging current for charging cable	A
Session Energy	[1502,1503]	2	R	uint32	Total Energy for current charging session	Wh
Session Start Time	[1504,1505]	2	R	uint32	Session start time	hhmmss
Session Duration	[1508,1509]	2	R	uint32	Session duration	s
Session End Time	[1512,1513]	2	R	uint32	Session end time	hhmmss
Failsafe Current	2000	1	R/W	uint16	Failsafe charging current during communication failure	A
Failsafe Timeout	2002	1	R/W	uint16	Communication timeout for switching to Failsafe charging current. If the timeout has occurred and the TCP socket is still active, TCP socket restarts. If set, Failsafe period is timeout/2, otherwise 20 sec.	s
Charging Current	5004	1	R/W	uint16	Dynamic charging current	A
Alive Register	6000	1	R/W	uint16	EMS (Master) writes 1 EVSE (Slave) writes 0 (EVSE checks this register at a period of (Failsafe Timeout)/2 for a value of 1, and sets it to 0. Period cannot go less than 3 seconds)	