SIEMENS
VERSICHARGE AC SERIES

ModBus Map
Product Information

Note
This document is valid for Firmware version V2.136.14 or higher

www.siemens.com/versicharge

Modbus RTU	Modbus TCP
Baud Rate: 38400	Server Port: 502
Minimum Timeout Setting[1]: 5 s	Minimum Timeout Setting[1]: 5 s
Minimum Pollrate[2]: 2 s	Minimum Pollrate[2]: 2 s
8 Data bits	Protocol: IPv4
Even Parity	
1 Stop Bit	

Note
1. The Modbus RTU default device address is 2 and can be modified by writing a new valid value at register 41826.
2. The Modbus TCP communication port supported is 502 and cannot be modified.

Note
Information reporting on registers with dynamic data may take several cycles to update in relation to content changes. The timeout information described above only refers to responding with a value, not necessarily the most recent value.

Note
When the charger is controlled via OCPP, the Modbus interface serves primarily as a monitoring interface. Read carefully the implications of OCPP control on Modbus behavior.

Note
The default value of all Modbus registers will be '0' or space (0x20) if the Modbus application does not receive a new value from other applications.
For example, if the Modbus application does not receive the 'device information' message, all registers whose values are derived from the device information message will retain the default value of '0' or space (0x20).

Note
Modbus port can be turned on/off per customer request (the default is Modbus off). The setting can be changed using Sifinity Go Mobile App or via Siemens support.

Register Map

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
1. Charger Specification																					
1.1 OEM/Production																					
40001	40005	0	4	9C41	9C45	0	4	Manufacturer Name	5	Group	ASCII	RO	FC 03	No			N/A	"Siemens AG"	The user can get the Manufacturer Name using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
40006	40007	5	6	9C46	9C47	5	6	Production Date	2	Group	Word 1 - UInt16 Byte 3: Hex Byte 4: Hex	RO	FC 03	No	-	-	N/A	Date based on Charger's Serial Number	Word 1 - YYYY Word 2 - Byte3 (MM) , Byte4 (DD) It is derived from 5th [Year], 6th [MM], and 7th [DD] digit of the Serial Number.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
40008	40012	7	11	9C48	9C4C	7	B	Serial Number	5	Group	ASCII	RO	FC 03	No			N/A	Product Serial Number	The user can get the Product Serial Number using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
40013	40022	12	21	9C4D	9C56	C	15	MLFB Number	10	Group	ASCII	RO	FC 03	No			N/A	Product Catalog Number	The user can get the Product Catalog Number using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
1.2 Charger HW																					
40023	40023	22	22	9C57	9C57	16	16	Platform Type	1	Single	UInt16	RO	FC 03	No			N/A	Value based on the Charger type (1/2/3)	The user can get the charger platform type: 1 -Residential, 2 - Commercial 3 - ERK	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
40025	40025	24	24	9C59	9C59	18	18	Number of Outlets	1	Single	UInt16	RO	FC 03	No			N/A	Value based on the MLFB Number (1/2)	The user can get the number of charging outlets: 1 - 1 outlet 2 - 2 outlets	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
40026	40026	25	25	9C5A	9C5A	19	19	Type of Outlet	1	Single	UInt16	RO	FC 03	No			N/A	Value based on the MLFB Number (0-22)	The user can get the type of outlet: 0 - Left: socket type 2 1 - Left: cable with plug type 2 (7 m) 2 - Left: socket with shutters type 2 - France 3 - Left: cable with plug type 1 (7 m) 4 - Left: cable with plug type GB-/T (6 m) 5 - Front SAE J1772 (20 ft) 6 - Front SAE J1772 (25 ft) 7 - Right: socket type 2 8 - Right: cable with plug type 2 (7 m) 9 - Right: cover type 2 - with shutter and E-plug 10 - Right: cable with plug type 1 (7 m) 11 - Right: cover type 2 - with shutter and F-plug 12 - Right: cover type 2 - with shutter only 13 - (Reserve) 14 - Left and right: socket type 2 15 - Left and Right: cable with plug type 2 (7 m) 16 - Left and Right: cover type 2 - France (7 m) 17 - Left and Right: cable with plug type 1 (7 m) 18 - Left and Right: cable with plug type GB-/T (7 m) 19 - CCS1/J1772 (25ft) 20 - (Reserve) 21 - (Reserve) 22 - Blocked	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
40027	40027	26	26	9C5B	9C5B	1A	1A	Delay Button Status	1	Single	UInt16	RO	FC 03	No	-	-	0 to 4	0 (No Delay)	Get Delay state of the charger: 0 - No delay 1 - 2 Hours delay 2 - 4 Hours delay 3 - 6 Hours delay 4 - 8 Hours delay	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
40028	40028	27	27	9C5C	9C5C	1B	1B	Utilized Connectivity Stream	1	Single	UInt16	RO	FC 03	No	-	-	N/A	0 (Not Commissioned)	This register returns the stream through which the charger is commissioned: 0 - Not Commissioned 1 - Wi-Fi 2 – Cellular 3 - Ethernet **Note**: - Modbus application will not start if charger is not commissioned. - Modbus application will only start in commissioned charger if "Modbus" configuration is "True" in the charger VersiCloud group.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
40029	40029	28	28	9C5D	9C5D	1C	1C	Rated Current	1	Single	UInt16	RO	FC 03	No	1	Amp	N/A	Value based on the MLFB Number	Rated (Maximum) Amps value which is configured from system configuration (6 to 80 Amps)	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
40030	40030	29	29	9C5E	9C5E	1D	1D	Installation Current (DIP switch)	1	Single	UInt16	RO	FC 03	No	1	Amp	N/A	Based on the DIP Switch position on Charger	Derated setting Value in Ampere (Based on Amp switch setting). Below table for ampere rating as per switch position. Switch ----- 48A UL ----- IEC ------ 80A UL position ---- (amps) ----- (amps) ----- (amps) 0 --------- 12 --------- 10 ---------- 12 1 --------- 16 --------- 13 ---------- 16 2 --------- 24 --------- 16 ---------- 24 3 --------- 32 --------- 20 ---------- 32 4 --------- 40 --------- 32 ---------- 40 5 --------- 48 --------- 32 ---------- 48 6 ------- FAULT ------ 32 ---------- 64 7 ------- FAULT ------ 32 ---------- 80 8 ------- FAULT ------ 32 ---------- 80 9 ------- FAULT ------ 32 ---------- 80 Derated Ampere value is derived from the DIP switch ampere rating and Rated Ampere value. For Example, for UL variant: Rated Ampere : 32A DIP Switch Ampere rating: 5 (48A) Derated Ampere (Installation current) : 32A As per the DIP Switch position, ampere rating should be 48A, but as Rated Ampere value is 32A, and because of that installation current will be minimum value from the Derated Ampere and DIP switch ampere current. Note: For 48A UL and IEC chargers, if Amp switch position is detected greater than 9 because of a HW issue then a Bad Amp switch fault will be generated. This fault will not be generated in the 80A UL variant.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
40031	40031	30	30	9C5F	9C5F	1E	1E	Meter Type	1	Single	UInt16	RO	FC 03	No			0 to 8	Value based on the MLFB Number	0 - no metering 1 - Basic 2 - ANSI 3 - MID 4 - integrated meter MID 5 - Eichrechtskonform Metering (ERK) 7 - CMC Meter 9 - OnBoard CMC 25 - Blocked"	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
1.3 Charger SW																					
40032	40036	31	35	9C60	9C64	1F	23	A8 FW Version	5	Group	ASCII	RO	FC 03	No			N/A	Value based on the FW Flashed in A8	Firmware Flashed in A8: For example, 2.113, 2.125, 2.135, 2.136, etc.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
40037	40041	36	40	9C65	9C69	24	28	M0 FW Version	5	Group	ASCII	RO	FC 03	No			N/A	Value based on the FW Flashed in M0	Firmware Flashed in A8: For example, 4.3.5, 4.4.1, 5.1.1 etc.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
40042	40042	41	41	9C6A	9C6A	29	29	Modbus App Version	1	Single	UInt16	RO	FC 03	No			N/A	Value based on the FW Flashed in A8	Firmware Flashed in A8: For example, 1/2/3/4/5/6/7/8/9...	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
40043	40048	42	47	9C6B	9C70	2A	2F	A8 FW Variant	6	Group	ASCII	RO	FC 03	No			N/A	Value based on the FW Flashed in A8	This register returns the FW variant name. For example, Amazon, Ford 80A, etc. The value of this register group will be derived from the build name as follows: Build Name <-----> Register Value 2.135.12-XXX+YYY.24-05 YYY 2.135.22+24-05 Blank (0x20) **Note:** The value of this register group can be blank if build doesn't have variant name.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
40049	40051	48	50	9C71	9C73	30	32	A8 FW Release Date	3	Group	ASCII	RO	FC 03	No	-	-	N/A	Value based on the FW Flashed in A8	This register returns the FW release year and work week. The value of this register group will be derived from the build name as follows: Build Name <-----> Register Value 2.135.12-XXX+YYY.24-05 Year: 24 and WW: 05 2.135.12-XXX Blank (0x20) 2.135.48+24-30 Year: 24 and WW: 30 **Note:** The value of this register group can be blank if build doesn't have release date.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
2. Authentication																					
40080	40080	79	79	9C90	9C90	4F	4F	RFID Authorization Status	1	Single	UInt16	RW	FC 03, FC 06, FC 16	Yes			0 or 1	Value based on current RFID Authorization Status	Get/Set the RFID Authorization: 0 - RFID Authorization Disabled 1 - RFID Authorization Enabled **Note:** For the chargers which do not support RFID, the user can read/write this register, and setting this register with one will set target current to zero.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136
40081	40087	80	86	9C91	9C97	50	56	Add/Remove RFID Cards	7	Group	Byte1 - Uint8 Byte 2 - 0 Byte 3 - 0 Byte4 - Uint8 Byte 5 to 14 - HEX	WO	FC 16	No			Byte1- 1 to 4 Byte4- 4 or 7 or 10	N/A	The User can add the new RFID card using this register: Byte 1 = 1 Add admin card = 2 Remove admin card = 3 Add user card = 4 Remove user card Byte 2 = Reserved Byte 3 = Reserved Byte 4 = UID Size Byte 5 to 14 = UID of the RFID card(4, 7 or 10 bytes) **Note:** For chargers which do not support RFID, the user can write these registers but there will not be any effect on charger functionality.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid 0x22 - RFID Application User card whitelist has more than 50 RFID Cards 0x23 - RFID Application Admin card whitelist has more than 5 RFID Cards	V2.136
40088	40338	87	337	9C98	9D92	57	151	RFID User Card Whitelist	251	Group	Word 1: UInt16 Word 2-251: Hex	RO	FC 03	No			N/A	0	The User can read the added user card number and UIDs using this register: Word 1 - White List Count Word 2-6 - UID RFID 1 ..... Word 247-251 - UID RFID 50 **Note 1**: First register will provide added card count and remaining registers will provide the RFID Card UIDs. The user needs to read the data in multiple of 5 for UIDs. **Note 2:** Per the Modbus standard, the user can read maximum #125 register in single read query so multiple read queries will require to read entire data. **Note 3:** For chargers which do not support RFID, the user can read this register, and values will be zero if the user cards are not whitelisted.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
3. State of Charger																					
3.1 (Mode 3) Charging States																					
41600	41600	1599	1599	A280	A280	63F	63F	EVSE State	1	Single	ASCII	RO	FC 03	No			N/A	Based on the current charger state	Supported J1772 STATES List: - "A1", "A2" - "B1", "B2" - "C1", "C2" - " E" [Recoverable Fault] - " F" [Non-Recoverable Fault] List of recoverable fault is as follows: Code: Fault Name 2: Line phase A under volt 3: Line phase B under volt 4: Line phase C under volt 6: Line phase A over volt 7: Line phase B over volt 8: Line phase C over volt 10: Line phase A zero volt 11: Line phase B zero volt 12: Line phase C zero volt 25: Bad pilot voltage 35: EEPROM rw fault 36: FRAM rw fault 37: Metering chip rw fault 46: Ground monitoring fault 47: On-board temperature fault 49: Onboard temperature fault NTCA 50: Onboard temperature fault NTCA and NTCB 51: Onboard temperature fault NTCB 52: Cable maximum temperature PTCA 53: Cable maximum temperature PTCA and PTCB 54: Cable maximum temperature PTCB	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
3.2 Charger States																					
41601	41601	1600	1600	A281	A281	640	640	EVSE Error Code	1	Single	Int16	RO	FC 03	No			N/A	0	Supported Error Codes: 0: No fault 1: Reserved 2: Line phase A under volt 3: Line phase B under volt 4: Line phase C under volt 5: Reserved 6: Line phase A over volt 7: Line phase B over volt 8: Line phase C over volt 9: Reserved 10: Line phase A zero volt 11: Line phase B zero volt 12: Line phase C zero volt 13: Reserved 14: Reserved 15: Reserved 16: Reserved 17: Reserved 18: Reserved 19: Reserved 20: Reserved 21: Reserved 22: Load phase A zero volt 23: Load phase B zero volt 24: Load phase C zero volt 25: Bad pilot voltage 26: Bad amp switch position 27: ADC fault 28: Static memory fault 29: CCID fault 30 :CCID self-test fault 31 :Reserved 32 :Reserved 33 :Reserved 34: Reserved 35: EEPROM rw fault 36: FRAM rw fault 37: Metering chip rw fault 38: CCID close ON fault 39: Reserved 40: Connector lock fault 41: Cable max temperature fault 42: Welded contact phase A fault 43: Welded contact phase B fault 44: Welded contact phase C fault 45: Diode fault 46: Ground monitoring fault 47: On-board temperature fault 48: Over current fault **Siemens 80A charger specific faults:** 49: Onboard temperature fault NTCA 50: Onboard temperature fault NTCA and NTCB 51: Onboard temperature fault NTCB 52: Cable maximum temperature PTCA 53: Cable maximum temperature PTCA and PTCB 54: Cable maximum temperature PTCB	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
41602	41602	1601	1601	A282	A282	641	641	OCPP State	1	Single	UInt16	RO	FC 03	No			1 to 7	1 (Available)	If charger is connected to the OCPP backend the value of this register will be as follows: 1- Available 2 - Preparing 3 - Charging 4 - Suspended EV 5- Suspended EVSE 6 - Faulted 7- Finishing 8- Unavailable If charger is not connected to the OCPP backend this register value will be 1.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41603	41603	1602	1602	A283	A283	642	642	PCBA Temperature/ On Board TempB	1	Single	Int16	RO	FC 03	No	1	°C	N/A	Based on Current Temperature	Get the on board temperature B value in Celsius	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136
41604	41604	1603	1603	A284	A284	643	643	Off Board TempA	1	Single	Int16	RO	FC O3	No	1	°C	N/A	Based on Current Temperature	Get the cable temperature A value in Celsius. Note: For the chargers do not have cable temperature sensors or disabled, reading this register will always return 0.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136
41605	41605	1604	1604	A285	A285	644	644	On Board TempA	1	Single	Int16	RO	FC O3	No	1	°C	N/A	Based on Current Temperature	Get the on board temperature A value in Celsius. Note: For the chargers do not have second on-board temperature sensor, reading this register will always return 0.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136
41606	41606	1605	1605	A286	A286	645	645	Off Board TempB	1	Single	Int16	RO	FC O3	No	1	°C	N/A	Based on Current Temperature	Get the cable temperature B value in Celsius. Note: For the chargers do not have cable temperature sensors or disabled, reading this register will always return 0.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
4. Load Management & Charging Session Analysis																					
4.1 Limit Charging Power & Energy Delivered																					
41634	41634	1633	1633	A2A2	A2A2	661	661	Charging Current Limit	1	Single	UInt16	RW	FC 03, FC 06, FC 16	Yes	1	Amp	0 to 8000	Based on the Installation Current [see register 29 Installation Current (DIP switch)]	The user can get/set the Modbus charging current limit using this register. Values <= 100 are interpreted as A unit. Values > 100 are interpreted as 0.01A unit. Which means that values 0 to 100 are in A units. And values 101 to 8000 are in 0.01A units. Example: - The user should write 6 or 600 for 6A. - The user should write 48 or 4800 for 48A. - The user should write 850 for 8.5A. **Note:** - There are also other ways to limit the max current outside of Modbus. (e.g. OCPP smart charging or power level set in the cloud apps). - This register returns the same value set by the user except it always returns it in the 0-80A range. This returned value does not represent what the EV is actually consuming; instead, it simply represents the max current setting from Modbus. Example: - If user sets 8000 the return value will be 80. - If user sets 750 the return value will be 8. - if user sets 31 the return value will be 31. - A limit lower than 6A will pause the charging (per charging standards). - Modbus exception will be thrown on setting value higher than 8000.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
41641	41642	1640	1641	A2A9	A2AA	668	669	Charging Session Energy Phase Sum	2	Group	Uint32 (Big-endian)	RW	FC 03, FC 16	No	1	Watthours	0, 50 to 8191000	0	The user can get/set the Charging Session Energy Phase Sum using this register. The user can set the kWh value after which charging should stop automatically. For example, if current energy value is 200 and user set 100 in this register then charging will stop automatically when energy consumption reaches to 300 kWh [200+100]. **Note1:** This value is persistent and retained overpower cycle. **Note2:** If charger is paused after completion of session, then it can be un-paused by setting max charging current 6A or higher using register 1633. **Note3:** After completion of existing session, the previous target energy value will not be considered, and the user must write the new value into this register for next session. **Note4:** Setting Zero to this register will stop energy monitoring and ongoing charging session will not stop even after reaching to the previously configured target energy.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136
4.2 Switch between 1ph- & 3ph-charging																					
41643	41643	1642	1642	A2AB	A2AB	66A	66A	Charger Phase	1	Single	UInt16	RO	FC 03	No				Based on the charger Type	0 : 1-Phase Charger 1 : 3-Phase Charger	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
4.3 Actual charging values																					
41648	41648	1647	1647	A2B0	A2B0	66F	66F	Charging Current Phase L1	1	Single	UInt16	RO	FC 03	No	1	Amp		0	Actual Irms of Phase 1	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41649	41649	1648	1648	A2B1	A2B1	670	670	Charging Current Phase L2	1	Single	UInt16	RO	FC 03	No	1	Amp		0	Actual Irms of Phase 2 **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41650	41650	1649	1649	A2B2	A2B2	671	671	Charging Current Phase L3	1	Single	UInt16	RO	FC 03	No	1	Amp		0	Actual Irms of Phase 3 **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
41651	41651	1650	1650	A2B3	A2B3	672	672	Average Charging Current	1	Single	UInt16	RO	FC 03	No	1	Amp		0	Actual Irms of Phase Sum **Note:** Value in this register will populate for #1 and #3 phase chargers.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41652	41652	1651	1651	A2B4	A2B4	673	673	Charging Voltage Phase V(L1-N)	1	Single	UInt16	RO	FC 03	No	1	Volt		0	Actual Vrms of Phase 1 **Note:** Value in this register will populate for #1 and #3 phase chargers.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41653	41653	1652	1652	A2B5	A2B5	674	674	Charging Voltage Phase V(L2-N)	1	Single	UInt16	RO	FC 03	No	1	Volt		0	Actual Vrms of Phase 2 Note: This register is relevant for 3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41654	41654	1653	1653	A2B6	A2B6	675	675	Charging Voltage Phase V(L3-N)	1	Single	UInt16	RO	FC 03	No	1	Volt		0	Actual Vrms of Phase 3 Note: This register is relevant for 3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41655	41655	1654	1654	A2B7	A2B7	676	676	Charging Voltage Line V(L1-L2)*	1	Single	UInt16	RO	FC 03	No	1	Volt		0	The user can get the line to line voltage of Line 1 to Line 2 using this register. **Note**: This register is relevant for 3 phase chargers excluding ERK variant. For ERK variant, this register value will be 0.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41656	41656	1655	1655	A2B8	A2B8	677	677	Charging Voltage Line V(L2-L3)*	1	Single	UInt16	RO	FC 03	No	1	Volt		0	The user can get the line to line voltage of Line 2 to Line 3 using this register. **Note**: This register is relevant for 3 phase chargers excluding ERK variant. For ERK variant, this register value will be 0.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41657	41657	1656	1656	A2B9	A2B9	678	678	Charging Voltage Line V(L3-L1)*	1	Single	UInt16	RO	FC 03	No	1	Volt		0	The user can get the line to line voltage of Line 3 to Line 1 using this register. **Note**: This register is relevant for 3 phase chargers excluding ERK variant. For ERK variant, this register value will be 0.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
4.4. Charging Fallback Settings																					
41661	41661	1660	1660	A2BD	A2BD	67C	67C	Fallback Current Phase Sum	1	Single	UInt16	RW	FC 03, FC 06, FC 16	No	1	Amp	0 or 6 to Max Charger Capacity	Based on Charger Capacity	This current phase sum will be set if Modbus connection is lost for "Fallback time". **Note1:** The user must set this register again after power cycle or Modbus application soft reset as it is not persistent.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.128
41662	41662	1661	1661	A2BE	A2BE	67D	67D	Fallback Time	1	Single	UInt16	RW	FC 03, FC 06, FC 16	No	1	Seconds	0, 60-600 s	0	If the Modbus connection is lost for this period, the configured current Phase Sum value in register 41661 will be set. **Note1:** Set this value between 60-600 as per the requirement if load management feature is required. **Note2:** The user must set this register again after power cycle or Modbus application soft reset as it is not persistent.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.128
4.5 Additional charging session information																					
41663	41663	1662	1662	A2BF	A2BF	67E	67E	Current Charging Speed L1	1	Single	UInt16	RO	FC 03	No	1	Watt	N/A	0	The user can get the active power of phase 1 using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41664	41664	1663	1663	A2C0	A2C0	67F	67F	Current Charging Speed L2	1	Single	UInt16	RO	FC 03	No	1	Watt	N/A	0	The user can get the active power of phase 2 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41665	41665	1664	1664	A2C1	A2C1	680	680	Current Charging Speed L3	1	Single	UInt16	RO	FC 03	No	1	Watt	N/A	0	The user can get the active power of phase 3 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41666	41666	1665	1665	A2C2	A2C2	681	681	Current Charging Speed Phase Sum	1	Single	UInt16	RO	FC 03	No	1	Watt	N/A	0	The user can get the total active power using this register. **Note:** For 1 phase charger, read this register to get L1 charging speed.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.122

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
41667	41667	1666	1666	A2C3	A2C3	682	682	Power Factor Phase L1	1	Single	UInt16	RO	FC 03	No	0,001	-	N/A	0	The user can get the power factor of Phase 1 using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41668	41668	1667	1667	A2C4	A2C4	683	683	Power Factor Phase L2	1	Single	UInt16	RO	FC 03	No	0,001	-	N/A	0	The user can get the power factor of Phase 2 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41669	41669	1668	1668	A2C5	A2C5	684	684	Power Factor Phase L3	1	Single	UInt16	RO	FC 03	No	0,001	-	N/A	0	The user can get the power factor of Phase 3 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41670	41670	1669	1669	A2C6	A2C6	685	685	Average Power Factor	1	Single	UInt16	RO	FC 03	No	0,001	-	N/A	0	The user can get the Average Power Factor using this register. **Note:** For 1 phase charger, this register value will be same as L1 Power Factor. **Note:** For 3 phase chargers, this register value will return the average of all phases thus for 1 phase load, the value will be [Power Factor Phase L1 / 3].	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135
41671	41671	1670	1670	A2C7	A2C7	686	686	Apparent Power Phase L1	1	Single	UInt16	RO	FC 03	No	1	volt-amps	N/A	0	The user can get the Apparent power of Phase 1 using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41672	41672	1671	1671	A2C8	A2C8	687	687	Apparent Power Phase L2	1	Single	UInt16	RO	FC 03	No	1	volt-amps	N/A	0	The user can get the Apparent power of Phase 2 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
41673	41673	1672	1672	A2C9	A2C9	688	688	Apparent Power Phase L3	1	Single	UInt16	RO	FC 03	No	1	volt-amps	N/A	0	The user can get the Apparent power of Phase 3 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41674	41674	1673	1673	A2CA	A2CA	689	689	Apparent Power Phase Sum	1	Single	UInt16	RO	FC 03	No	1	volt-amps	N/A	0	The user can get the average Apparent Power using this register. **Note:** For 1 phase charger, read this register to get L1 Apparent Power.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41675	41675	1674	1674	A2CB	A2CB	68A	68A	Reactive Power Phase L1	1	Single	Int16	RO	FC 03	No	1	volt-amperes reactive	N/A	0	The user can get the Reactive power of Phase 1 using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41676	41676	1675	1675	A2CC	A2CC	68B	68B	Reactive Power Phase L2	1	Single	Int16	RO	FC 03	No	1	volt-amperes reactive	N/A	0	The user can get the Reactive power of Phase 2 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41677	41677	1676	1676	A2CD	A2CD	68C	68C	Reactive Power Phase L3	1	Single	Int16	RO	FC 03	No	1	volt-amperes reactive	N/A	0	The user can get the Reactive power of Phase 3 using this register. **Note:** Value in this register will populate for #3 phase charger only.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41678	41678	1677	1677	A2CE	A2CE	68D	68D	Reactive Power Phase Sum	1	Single	UInt16	RO	FC 03	No	1	volt-amperes reactive	N/A	0	The user can get the average Reactive power using this register. **Note:** For 1 phase charger, read this register to get L1 Reactive Power.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
41693	41694	1692	1693	A2DD	A2DE	69C	69D	Real Energy Consumed Phase Sum	2	Group	Uint32 (Big-endian)	RO	FC 03	No	1	Watthours	N/A	0	The user can get the total consumed Real Energy using this register.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.135

Start address (External)	End address (External)	Start address (Internal)	End address (Internal)	Start address (External) Hex	End address (External) Hex	Start address (Internal) Hex	End address (Internal) Hex	Register Name	Number of 16bit registers	Single / Group	Data type	Access	Supported Function Code	Range Validation	Multiplication Factor	Units	Valid Write Value Range	Default Value	Description	Supported Exceptions	FW Version
5. Reset																					
41826	41826	1825	1825	A362	A362	721	721	RTU Slave Address	1	Single	UInt16	RW	FC 06, FC 16, FC 03	Yes			1 - 247 but not existing slave address	2	Set Modbus RTU slave address **Note:** After setting new slave address, the application will require ~20 seconds to reconfigure slave address.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.120
41827	41827	1826	1826	A363	A363	722	722	Reboot Charger	1	Single	UInt16	WO	FC 06, FC 16	Yes			1 or 2	N/A	1 - Soft Reset (Modbus Application reset) 2 - Hard Reset (A8 board reset) **Note:** After Soft reset, the Modbus application will restart after 60 seconds. So, wait for 60 seconds after applying soft reset command.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.118
6. Admin Whitelist																					
41853	41878	1852	1877	A37D	A396	73C	755	RFID Admin Card Whitelist	26	Group	Word 1: UInt16 Word 2-26: Hex	RO	FC 03	No			N/A	0	The User can read the added user card number and UIDs using this register: Word 1 - Admin Card Whitelist Count Word 2-6 - Admin Card UID 1 ..... Word 22-26 - Admin Card UID 5 **Note 1:** First register will provide added card count and remaining registers will provide the RFID Card UIDs. The user needs to read the data in multiple of 5 for UIDs. **Note 2:** For the chargers which do not support RFID, the user can read this register, and value will be zero if admin cards are not whitelisted.	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.136
41879	41879	1878	1878	A397	A397	756	756	Reset RTU Slave Address	1	Single	UInt16	WO	FC 06, FC 16	Yes			1		The User can reset the Modbus RTU slave address to default value (2) by writing 1 to this register: 1 - Reset Modbus RTU slave address to the default value	0x01 - Function code not supported 0x02 - The data address received in the query is not an allowable address for the slave. More specifically, the combination of reference number and transfer length is invalid	V2.122