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Starting Address of the Group Registers (Dec)	Starting Address of the Group Registers (Hex)	System Version (Release)	System Version (Build)	Group Name (Text)	Group Code (Hex)	Group Complexity (Hex)	Group Version (Hex)
45056	B000	-	-	STATION DATA (status, commands, registers, settings)	B001	10	0100

MODBUS PROTOCOL DETAILS

Function Code (Dec)	Exception Codes (Dec)	Data Encoding
1	01, 02, 03, 04	"Big Endian" (most significant byte first)
2	01, 02, 03, 04	
3	01, 02, 03, 04	
4	01, 02, 03, 04	
5	01, 02, 03, 04	
6	01, 02, 03, 04	
15	01, 02, 03, 04	
16	01, 02, 03, 04	

MODBUS OVER SERIAL DETAILS

Physical Layer	Trasmission Modes	Device Addressing	Baud Rates (bit/s)	Data Bits	Data bits trasmission sequence	Parity	Stop Bits
standard EIA/TIA 485 (RS-485) two-wire configuration	RTU	1÷247 (default 1)	9.600, 19.200, 38.400 (default 19.200), option 57.600	8	Least significant bit first	no, odd, even (default even)	1, 2 (default 1)

MASTER/SLAVE COMMUNICATION TIMING

Timer Description	Timer Value (msec)
Inter-character time-out	
Response delay (from master request)	
Delay Time (between two master trasmissions)	

REFER ALSO TO:

www.modbus.org

- MODBUS over serial line specification and implementation guide V1.02
- MODBUS APPLICATION PROTOCOL SPECIFICATION V1.1b

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [bit]	Description	Note	Read Function Codes (Dec)	Data Storing (2)
	45056	B000		STATION STATE			
	45056	B000	1	station powered	1=powered	2	
	45057	B001	1	working mode	0=stand alone 1=managed	2	
	45058	B002	1	charge state	1 = charge terminated	2	

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [bit]	Description	Note	Read Function Codes (Dec)	Write Function Codes (Dec)	Data Storing (2)
45056	B000			STATION COMMANDS				
45056	B000		1	Firmware Reset (password protected)			5, 15	
45057	B001		1	Statistics Reset (password protected)			5, 15	
45058	B002		1	Absolute Current Reduction	1=absolute current reduction	1	5, 15	Y
45059	B003		1	Not implemented	0=not implemented	1	5, 15	
45060	B004		1	Confirm new password (password protected)	1=confirm	1	5, 15	
45061	B005		1	Not implemented	0 = not implemented	1	5, 15	
45062	B006		1	EVPlug charge authorization	1=CHARGE PERMITTED, 0=CHARGE NOT PERMITTED	1	5, 15	
45063	B007		1	EVPlug disable	1=disabled	1	5, 15	
45064	B008		2	EV Charging Level 1 (Configurable) - LSb EV Charging Level 2 (Configurable) - MSb	00 = 100%, 01 = 75%, 10 = 50%, 11 = 50%	1	15	
45066	B00A		1	DomPlug charge authorization	1=CHARGE PERMITTED, 0=CHARGE NOT PERMITTED	1	5, 15	
45067	B00B		1	DomPlug disable	1=disabled	1	5, 15	
45068	B00C		1	Start/Stop (button on HMI)	0=START,1=STOP	1	5, 15	
45069	B00D		1	Derogation	0=derogate OFF,1=derogate ON	1	5, 15	

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [word]	Bit Position	Description	Type	Scale	Unit	Range	Note	Read Function Code (Dec)	Data Storing (2)
STATION REGISTERS												
	45056	B000	1	0x0001 : Error condition detected 0x0002 : Charge request 0x0004 : Charge in progress 0x0008 : Charge waiting 0x0010 : RFID read 0x0020 : Date and time request 0x0040 : Remote identification request 0x0100 : EVPlug charge process (1=active, 0=inactive) 0x0200 : EVPlug inserted 0x0400 : EVPlug contactor closed 0x0800 : EVPlug locked 0x1000 : DomPlug charge process (1=active, 0=inactive) 0x2000 : DomPlug inserted 0x4000 : DomPlug contactor closed	Station State						4	
	45057	B001	1	0x0001 : Main power failure 0x0002 : Low battery voltage 0x0010 : EVPlug locking system malfunction (unlock) 0x0020 : EVPlug locking system malfunction (lock) 0x0040 : EVPlug maximum charging current exceeded 0x0080 : EVPlug CP Failure detected (EV/cable/EVSE side) 0x0100 : EVPlug CP Failure detected (EVSE side) 0x0200 : EVPlug PP non-standard value detected 0x0400 : EVPlug diode not detected on EV side 0x0800 : EVPlug contactor failure 0x1000 : DomPlug maximum charging current exceeded	Station Errors						4	Y
	45058	B002	5		Last UserID Read (if no RFID=0000 0000 0000 0000)						4	
	45063	B007	1		Backup Battery Voltage Level		1/100	V	0..1500		4	
	45064	B008	1	0x0001 : Two side version 0x0002 : RFID reader (activate=1, not=0) 0x0004 : EVPlug lock 0x0008 : Ventilation system (yes=1, no=0) 0x0010 : Three phase (3P=1, 1P=0) 0x0020 : Type station (Plastic=1, metallic=0)	Hw Configuration						4	Y
	45065	B009	8		Serial Number						4	Y
	45073	B011	1		Rated Current		1/100	A	0..8000		4	
	45074	B012	2		HW Version				n.n.n.n		4	Y
	45076	B014	2		SW Version				n.n.n.n		4	Y
	45078	B016	1		Max Assignable Charging Current		1/100	A	0..8000	(3)	4	Y
	45079	B017	1		Charging Current on L1 (Instant)		1/100	A	0..8000		4	
	45080	B018	1	Reserved	Charging Current on L2 (Instant)		1/100	A	0..8000			
	45081	B019	1	Reserved	Charging Current on L3 (Instant)		1/100	A	0..8000			
	45082	B01A	1		Charge Average Current on L1		1/100	A	0..8000		4	
	45083	B01B	1		Charge Average Current on L2		1/100	A	0..8000			
	45084	B01C	1		Charge Average Current on L3		1/100	A	0..8000			
	45085	B01D	1		Charge Peak Current on L1		1/100	A	0..8000		4	
	45086	B01E	1	Reserved	Charge Peak Current on L2		1/100	A	0..8000			
	45087	B01F	1	Reserved	Charge Peak Current on L3		1/100	A	0..8000			
	45088	B020	2		Actual Charging Time		1	sec	0..4294967295		4	
	45090	B022	2		Actual Idle Time		1	sec	0..4294967295		4	
	45092	B024	2		Actual Waiting Time		1	sec	0..4294967295		4	
	45094	B026	5		UserID currently served (if no RFID=0000 0000 0000 0000)						4	
	45099	B02B	2		Total number of charge				0..4294967295		4	Y
	45101	B02D	1		Total Average charging current (Full price)		1/100	A	0..8000		4	Y
	45102	B02E	1		Total Average charging current (Low cost price)		1/100	A	0..8000		4	Y
	45103	B02F	2		Total charging time (Full price)		1	sec	0..4294967295		4	Y
	45105	B031	2		Total charging time (Low cost price)		1	sec	0..4294967295		4	Y
HISTORIC STATION REGISTERS												
	45107	B033	2		Charge ID				0..4294967295		4	Y
	45109	B035	5		UserID (if no RFID=0000 0000 0000 0000)						4	Y
				First Word 0x0001 : Plug type (1=EV,0=Dom) 0x0002 : 0x0004 : Charge state (1=terminated) 0x0008 : Main Power Failure 0x0010 : Generic HW error (recoverable) 0x0020 : Generic HW error (non-recoverable)								

Historical record N°1	45114	B03A	2	0x0040 : Phase charge (1=Three,0=Mono) Second Word 0x0001 : EVPlug locking system malfunction (unlock) 0x0002 : EVPlug locking system malfunction (lock) 0x0004 : EVPlug maximum charging current exceeded 0x0008 : EVPlug CP Failure detected (EV/cable/EVSE side) 0x0010 : EVPlug CP Failure detected (EVSE side) 0x0020 : EVPlug PP non-standard value detected 0x0040 : EVPlug diode not detected on EV side 0x0080 : EVPlug contactor failure 0x0100 : DomPlug maximum charging current exceeded	Charge Properties						4	Y	
	45116	B03C	4		Date and Time IN						1 Word (MSW): DD-MM 2 Word : YYYY 3 Word : hh-mm 4 Word (LSW) : ss-(nd)	4	Y
	45120	B040	4		Date and Time OUT						1 Word (MSW): DD-MM 2 Word : YYYY 3 Word : hh-mm 4 Word (LSW) : ss-(nd)	4	Y
	45124	B044	1		Average current on L1		1/100	A	0..8000			4	Y
	45125	B045	1	Reserved	Average current on L2		1/100	A	0..8000				Y
	45126	B046	1	Reserved	Average current on L3		1/100	A	0..8000				Y
	45127	B047	1		Peak current on L1		1/100	A	0..8000			4	Y
	45128	B048	1	Reserved	Peak current on L2		1/100	A	0..8000				Y
	45129	B049	1	Reserved	Peak current on L3		1/100	A	0..8000				Y
	45130	B04A	2		Charging Time		1	sec	0..4294967295			4	Y
45132	B04C	2		Waiting Time		1	sec	0..4294967295			4	Y	
Historical record N°2	45134	B04E	27									Y	
Historical record N°3	45161	B069	27									Y	
Historical record N°4	45188	B084	27									Y	
Historical record N°5	45215	B09F	27									Y	
Historical record N°6	45242	B0BA	27									Y	
Historical record N°7	45269	B0D5	27									Y	
Historical record N°8	45296	B0F0	27									Y	
Historical record N°9	45323	B10B	27									Y	
Historical record N°10	45350	B126	27									Y	

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [word]	Bit Position	Description	Scale	Unit	Range	Note	Read Function Codes (Dec)	Write Function Codes (Dec)	Data Storing (2)	
	45056	B000			STATION SETTINGS								
	45056	B000	4		System Date and time (in RW)				1 Word (MSW): GG-MM 2 Word: AAAA 3 Word: hh-mm 4 Word (LSW): ss-(nd)	3	6, 16		
	45060	B004	2		Password to access maintenance commands FACTORY/CUSTOMER					3	6, 16		
	45062	B006	2		New password (password protected)					3	6, 16		