Modbus Register

1 Allgemeine Einstellungen

Der Ladecontroller ist unter der eingestellten IP-Adresse (Default: 192.168.0.8) auf dem Port 502 erreichbar. Die Modbus-Adresse ist 255.

2 Register Mapping

Die folgenden Tabellen zeigen die Registerzuordnung

- ModBus Registeradresse
- Wertetyp
- Zugriffart
- Anzeigeformat

2.1 Input Register

ModBus Register Address	Value type	r: read w: write Access	Content	Displayed
100	16 bit	r	Status A-F	Character
101	16 bit	r	Proximity Plug	Decimal [A]
102	32 bit	r	Load time	Decimal
103				
104	16 bit	r	DIP-switch Configuration	Decimal
105	32 bit	r	Firmware version	Decimal
106				
107	16 bit	r	Fehlercodes Hex 1. Kabelabweisung 13A und 20A 2. Kabelabweisung 13 A 3. Ungültiger PP-Wert 4. Ungültiger CP-Wert 5. Status F wegen fehlender Verfügbarkeit der Ladestation 6. Verriegelung 7. Entriegelung 8. LD ist während Verriegelung weggefallen 9. Überstromabschaltung 10. Kommunikationsproblem Ladesteuerung - Messgerät bei aktivierter Überstromabschaltung 11. Status D, Fahrzeug abgewiesen 12. Schützfehler erkannt 13. Fahrzeugseitig keine Diode im Control Pilot Kreis 14. DC Fehlerstrom detektiert	
108	32 bit	r	EM voltage V1	Decimal [1 V]
109				
110	32 bit	r	EM voltage V2	Decimal [1 V]
111				
112	32 bit	r	EM voltage V3	Decimal [1 V]
113				
114	32 bit	r	EM current I1	Decimal [1 A]
115				
116	32 bit	r	EM current I2	Decimal [1 A]
117				
118	32 bit	r	EM current I3	Decimal [1 A]
119				
120	32 bit	r	EM active power (Wirkleistung)	Decimal [1 W]
121				
122	32 bit	r	EM reactive power (Blindleistung)	Decimal [1 W]
123				
124	32 bit	r	EM apparent power (Scheinleistung)	Decimal [1 W]
125				
126	32 bit	r	EM active factor (Wirkfaktor (Cos Phi))	Decimal [1]
127				
128	32 bit	r		Decimal [1 kWh]

129			EM energy since startup (Energie seit Ladesäulenstart)	
130 131	32 bit	r	EM maximum power (actual charge) (Maximal Leistung während Ladung)	Decimal [1 W]
132 133	32 bit	r	EM active load energy /charged energy (entnommene Energie)	Decimal [1 kWh]
134 135	32 bit	r	EM Net-Frequency	Decimal [1 Hz]
136 137	32 bit	r	EM current I1_max	Decimal [1 A]
138 139	32 bit	r	EM current I2_max	Decimal [1 A]
140 141	32 bit	r	EM current I3_max	Decimal [1 A]

2.2 Discrete register

ModBus Register Address	Value type	r: read w: write Access	Content
200	1 bit	r	EN (I1)
201	1 bit	r	XR (I2)
202	1 bit	r	LD (I3)
203	1 bit	r	ML (I4)
204	1 bit	r	CR (A1)
205	1 bit	r	LR (A2)
206	1 bit	r	VR (A3)
207	1 bit	r	ER (A4)
208	1 bit	r	XX (I5)

2.3 Holding Register

ModBus Register Address	Value type	r: read w: write Access	Content	Displayed
300	16 bit	r	Actual charge current	Decimal [A]
301	3x16 bit	r	MAC Address	Hex
302				
303				
304	6x16 bit	r	Serial number via Modbus	ASCII hex coded
305				
306				
307				
308				
309				
310	5x16 bit	r/w	Device name (DNS) via Modbus	ASCII hex coded
311				
312				
313				
314				
315	4x16 bit	r/w	IP via Modbus	decimal
316				
317				
318				
319	4x16 bit	r/w	Subnet mask via Modbus	decimal
320				
321				
322				
323	4x16 bit	r/w	Gateway via Modbus	decimal
324				
325				
326				
327	16 bit	r/w	Definition of output CR	decimal
328	16 bit	r/w	Definition of output LR	decimal
329	16 bit	r/w	Definition of output VR	decimal
330	16 bit	r/w	Definition of output ER	decimal
331	16 bit	r/w	EM Register address V1	decimal
332	16 bit	r/w	EM Register address V2	decimal
333	16 bit	r/w	EM Register address V3	decimal
334	16 bit	r/w	EM Register address I1	decimal
335	16 bit	r/w	EM Register address I2	decimal
336	16 bit	r/w	EM Register address I3	decimal
337	16 bit	r/w	EM Register address active power	decimal
338	16 bit	r/w	EM Register address reactive power	decimal

339	16 bit	r/w	EM Register address apparent power	decimal
340	16 bit	r/w	EM Register address active factor	decimal
341	16 bit	r/w	EM Register address energy since startup	decimal
342	16 bit	r/w	EM Register address maximum power (actual charge)	decimal
343	16 bit	r/w	EM Register address actual active energy	decimal
344	16 bit	r/w	EM Register address Net-Frequency	decimal
345	16 bit	r/w	EM Register address current I1_max	decimal
346	16 bit	r/w	EM Register address current I2_max	decimal
347	16 bit	r/w	EM Register address current I3_max	decimal
348	16 bit	r/w	EM Register address reset 1	decimal
349	16 bit	r/w	EM value reset 1	decimal
350	16 bit	r/w	EM Register address reset 2	decimal
351	16 bit	r/w	EM value reset 2	decimal
352	32 bit	r/w	EM conversation factor V1	decimal [1/1000]
353				
354	32 bit	r/w	EM conversation factor V2	decimal [1/1000]
355				
356	32 bit	r/w	EM conversation factor V3	decimal [1/1000]
357				
358	32 bit	r/w	EM conversation factor I1	decimal [1/1000]
359				
360	32 bit	r/w	EM conversation factor I2	decimal [1/1000]
361				
362	32 bit	r/w	EM conversation factor I3	decimal [1/1000]
363				
364	32 bit	r/w	EM conversation factor active power	decimal [1/1000]
365				
366	32 bit	r/w	EM conversation factor reactive power	decimal [1/1000]
367				
368	32 bit	r/w	EM conversation factor apparent power	decimal [1/1000]
369				
370	32 bit	r/w	EM conversation factor active factor	decimal [1/1000]
371				
372	32 bit	r/w	EM conversation factor energy since startup	decimal [1/1000]
373				
374	32 bit	r/w		decimal [1/1000]

375			EM conversation factor maximum power (actual charge)	
376	32 bit	r/w	EM conversation factor actual active energy	decimal [1/1000]
377				
378	32 bit	r/w	EM conversation factor Net-Frequency	decimal [1/1000]
379				
380	32 bit	r/w	EM conversation factor current I1_max	decimal [1/1000]
381				
382	32 bit	r/w	EM conversation factor current I2_max	decimal [1/1000]
383				
384	32 bit	r/w	EM conversation factor current I3_max	decimal [1/1000]
385				
386	32 bit	r/w	EM Baudrate	int, default: 9600
387				
388	16 bit	r/w	EM Modbus Address	int, default: 5
389	16 bit	r/w	EM config cycle time	int, [ms], default: 2000 ms
390	16 bit	r/w	Activation of the charging contactor monitoring	Integer 0: monitoring deactivated 1: Voltage measurement via Sense 2: Monitoring via Contactor Monitor (NO) 3: Monitoring via Contactor Monitor (NC) 4: Monitoring via Energy Meter
391	8 x 16 bit	r/w	EM name	ASCII hex coded, 15 characters
392				
393				
394				
395				
396				
397				
398				
500	16 bit	r/w	EM # words V1	int (0-2)
501	16 bit	r/w	EM # words V2	int (0-2)
502	16 bit	r/w	EM # words V3	int (0-2)
503	16 bit	r/w	EM # words I1	int (0-2)
504	16 bit	r/w	EM # words I2	int (0-2)
505	16 bit	r/w	EM # words I3	int (0-2)
506	16 bit	r/w	EM # words active power	int (0-2)
507	16 bit	r/w	EM # words reactive power	int (0-2)
508	16 bit	r/w	EM # words apparent power	int (0-2)
509	16 bit	r/w	EM # words active factor	int (0-2)
510	16 bit	r/w	EM # words energy since startup	int (0-2)

511	16 bit	r/w	EM # words maximum power (actual charge)	int (0-2)
512	16 bit	r/w	EM # words actual active energy	int (0-2)
513	16 bit	r/w	EM # words Net-Frequency	int (0-2)
514	16 bit	r/w	EM # words current I1_max	int (0-2)
515	16 bit	r/w	EM # words current I2_max	int (0-2)
516	16 bit	r/w	EM # words current I3_max	int (0-2)
517	16 bit	r/w	EM Reset Read Number Register1	int
518	16 bit	r/w	EM Reset Read Number Register2	int
519	16 bit	r/w	Contactor Monitoring Wait-Time for Aux Contact	int, [ms], default: 500 ms
520	16 bit	r/w	Definition of input EN	decimal
521	16 bit	r/w	Definition of input XR	decimal
522	16 bit	r/w	Definition of input LD	decimal
523	16 bit	r/w	Definition of input ML	decimal
524	16 bit	r/w	Definition of input XX	decimal
525	16 bit	r/w	Lock time	decimal
526	16 bit	r/w	Unlock time	decimal
527	16 bit	r/w	Actor cycle time	decimal
528	16 bit	r/w	Maximal Charging Current	decimal
529	11x16 bit	r	ICCID	Character
530				
531				
532				
533				
534				
535				
536				
537				
538				
539				
540	15x16 bit	r/w	APN	Character
541				
542				
543				
544				
545				

546				
547				
548				
549				
550				
551				
552				
553				
554				
555	10x16 bit	r/w	APN User	Character
556				
557				
558				
559				
560				
561				
562				
563				
564				
565	10x16 bit	r/w	APN Pass	Character
566				
567				
568				
569				
570				
571				
572				
573				
574				
575	16 bit	r/w	PIN der ext. SIM	Decimal 0- 9999
576	16 bit	r	RSSI	decimal
577	4x16 bit	r	IMEI	decimal
578				
579				
580				
600	16 bit	r/w	RFID Card Reader Addresse	decimal
601	16 bit	r/w	RFID Card Reader Baud-rate	decimal
602	16 bit	r/w	Portal verify response	decimal
603	16 bit	r/w	RFID Card Reader Card Buzzer Coil Address	decimal
604	16 bit	r/w	RFID Card Reader Card Data #of words	decimal
605	16 bit	r/w	RFID Card Reader Card Data Address	decimal

606	16x16 bit	r	RFID Card Reader Card Data	Character
607				
608				
609				
610				
611				
612				
613				
614				
615				
616				
617				
618				
619				
620				
621				

2.4 Coils

ModBus Register Address	Value type	r: read w: write Access	Content	Displayed
400	1 bit	r/w	Charge enable	Boolean (0/1)
401	1 bit	r/w	Digital request	Boolean (0/1)
402	1 bit	r/w	Station available	Boolean (0/1)
403	1 bit	r/w	Manual lock via Modbus	Boolean (0/1)
404	1 bit	r/w	DHCP enable/disable via Modbus	Boolean (0/1)
405	1 bit	r/w	Status Register 1 steuern	Boolean (0/1)
406	1 bit	r/w	Status Register 2 steuern	Boolean (0/1)
407	1 bit	r/w	Status Register 3 steuern	Boolean (0/1)
408	1 bit	r/w	Status Register 4 steuern	Boolean (0/1)
409	1 bit	r/w	EM overcurrent detection enabled	Boolean (0/1), default: 0
410	1 bit	r/w	EM Register Order: High Register First	Boolean (0/1), default: 0
412	1 bit	r/w	Reject State D vehicle	Boolean (0/1)
413	1 bit	w	Reset EVCC	Boolean (0/1)
416	1 bit		Reserve	Boolean (0/1)
417	1 bit	w	Start Update	Boolean (0/1)
418	1 bit	r/w	Use internal SIM	Boolean (0/1), default: 1
419	1 bit	r/w	Enable RFID Card Reader	Boolean (0/1)
420	1 bit	r/w	Enable RFID Card Reader Buzzer	Boolean (0/1)
421	1 bit	r/w	Enable RFID Card Reader Buzzer Pulse	Boolean (0/1)
422	1 bit	r/w	RFID Card Reader Register Order	Boolean (0/1)
423	1 bit	r	Enable via RFID Card White-list	Boolean (0/1)
424	1 bit	r	RFID Card Reader Card present	Boolean (0/1)

Konfiguration der DIP-Schalter

DIP-Schalter			
1	PX-Abfrage	ON	PX-Abfrage, Case B, Ladekabel mit Stecker an der Ladekonsole
		OFF	Keine PX-Abfrage, Case C, Ladekabel fest angeschlossen
2	PX-Auswertung	ON	Stecker/Kabel mit geringer Stromtragfähigkeit abweisen
		OFF	Stecker/Kabel mit geringer Stromtragfähigkeit zulassen
3	PX-Auswahl	ON	13 A-Stecker/Kabel abweisen
		OFF	13 A- und 20 A-Stecker/Kabel abweisen
4	Verriegelung	ON	Verriegelung ausführen
		OFF	Verriegelung nicht ausführen
5	FI-Auslöser	ON	FI wird bei einem erkannten Schützfehler ausgelößt
		OFF	FI wird bei einem erkannten Schützfehler nichtausgelößt
6	Verriegelung Rückmeldung	ON	Rückmeldung Verriegelung an Eingang LD auswerten
		OFF	Rückmeldung Verriegelung an Eingang LD nicht auswerten
7	Freigabe Ladevorgang	ON	Freigabe Ladevorgang Eingang EN auswerten
		OFF	Freigabe Ladevorgang Eingang EN nicht auswerten
8	Verfügbarkeit Ladestationv	ON	Verfügbarkeit Ladestation Eingang XR auswerten
		OFF	Verfügbarkeit Ladestation Eingang XR nicht auswerten
9	Manuelle Verriegelung	ON	Manuelle Verriegelung Eingang ML auswerten
		OFF	Manuelle Verriegelung Eingang ML nicht auswerten
10	Freigabe über ETH	ON	Freigabebit in Modbus-Register auswerten
		OFF	Freigabebit in Modbus-Register nicht auswerten

Konfiguration des Drehpotentiometers

Drehpoti Stufen:

- 0=5A
- 1=6A
- 2=10A
- 3=13A
- 4=16A
- 5=20A
- 6=32A
- 7=63A
- 8=70A
- 9=80A