Modbus register map for Modbus TCP Galaxy 5000 & 5500 with G5K9635CH

Revision	Changes	Applicable FW Version
1	First Revision	chu512
2	Modification of the Data Type for Battery current (UINT16 -> INT16)	chu512

Part number:
990-5380

Schneider Electric

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Notes:
1. 16-bit registers are transmitted MSB first (i.e. big-endian).
2. UINT16 and UINT32 are most-significant word in n+0, least significant word in n+1 (i.e. big-endian).
3. Function codes 3 and 4 are supported
4. Modbus over TCP is supported.
5. Signed numbers are twos-compliment
6. Status bits are atomic within a single Modbus register. User should not look for consistency across multiple registers, only within a single register.
7. For ASCII strings less than the maximum length, the unused characters are filled with nulls.
8. Single-register reads of reserved or undefined registers will return an error. Block reads which begin with a valid register will return zeros for undefined registers.
9. Strings are two characters per register, first character in high-order byte, second character in low-order byte. Printable ASCII only.
10. Bit #0 is least significant bit.
11. Data Type column: "INT16"=signed 16-bit integer, "UINT16" = unsigned 16-bit integer, "INT32" = signed 32-bit integer, "UINT32" = unsigned 32-bit integer, "ENUM" is a UINT16 value which maps to a defined list of states, "ASCII" = the printable ASCII subset from 0x20 - 0x7E. BOOLEAN= a single bit, 0 or 1.
12. "Absolute Starting Register Address" = 0 (the column heading used in this table) is equivalent to "Register 40001" in Modicon terminology, which is address zero when transmitted over the wire.

Modicon Standard Register Number	Absolute Starting Register Address, (Hexadeci	Absolute Starting Register Address, (Decimal)	Bit	Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	Valid Response
40001	0x0000	0		Over all status of the UPS. 0 = Status unknown 2 = No alarms present 4 = Warning alarms present 8 = Critical alarms present	1	ENUM			
40002	0x0001	1		NMC application name	9	ASCII			
40011	0x000A	10		NMC card model number	9	ASCII			
40020	0x0013	19		NMC card serial nummber	8	ASCII			
40028	0x001B	27		NMC card hardware revision	9	ASCII			
40037	0x0024	36		NMC card firmware revision	9	ASCII			
40046	0x002D	45		Reserved for future use	3				
40049	0x0030	48		Reserved for internal use	2	UINT16			
40051	0x0032	50		NMC card manufacture date	7				
40057	0x0038	56		Reserved for future use	8				
40065	0x0040	64		Alarm/Status Register	1	UINT16			

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			0	*Load protected*		BOOLEAN			0: Output is not protected 1: Output is protected
			1	*UPS coupled*		BOOLEAN			0: Inverter is not used 1: Inverter is used
			2	*Internal UPS hardware fault exists*		BOOLEAN			1 - An internal UPS hardware fault exists
			3	*NA*		BOOLEAN			
			4	*Battery usage status*		BOOLEAN			1 - On battery power in response to an input power problem
			5	*Battery low warning*		BOOLEAN			1 - Low battery
			6	*End of backup time (Voltage or Time)*		BOOLEAN			1 - UPS is in shutdown state
			7	*Operation on static switch*		BOOLEAN			1 - (In bypass) Bypass AC Input is used as source of power
			8	*NA*		BOOLEAN			
			9	*Communication fault*		BOOLEAN			1 - UPS serial communication fault exists
			10	*NA*		BOOLEAN			1 - UPS output overload
			11	*Emergency stop*		BOOLEAN			1 - Emergency stop in progess
			12	*NA*		BOOLEAN			
			13	*NA*		BOOLEAN			
			14	*NA*		BOOLEAN			
			15	*NA*		BOOLEAN			
40066	0x0041	65		Alarm/Status Register	1	UINT16			
			0	*NA*		BOOLEAN			
			1	*UPS in online mode*		BOOLEAN			1 - UPS in online mode
			2	*UPS in Eco Mode*		BOOLEAN			1 - UPS in Eco Mode
			3	*Unitary / Parallel*		BOOLEAN			0 - Unitary 1 - Parallel
			4	*NA*		BOOLEAN			
			5	*NA*		BOOLEAN			
			6	*Maintenance bypass switch status*		BOOLEAN			For Maintenance Bypass : Q5N open (@B0x047B = 1) AND Q3BP closed (@B0x0416 = 1)
			7	*ECO mode usage status*		BOOLEAN			1 - ECO mode
			8	*NA*		BOOLEAN			
			9	*NA*		BOOLEAN			
			10	*NA*		BOOLEAN			
			11	*NA*		BOOLEAN			
			12	*NA*		BOOLEAN			
			13	*NA*		BOOLEAN			
			14	*NA*		BOOLEAN			
			15	*NA*		BOOLEAN			

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40067	0x0042	66		Alarm/Status Register	1	UINT16			
			0	*NA*		BOOLEAN			
			1	*Battery replacement*		BOOLEAN			1 - Battery need replacement
			2	*Battery test status*		BOOLEAN			0 - Battery test OK 1 - Battery test failed (battery need replacement)
			3	*NA*		BOOLEAN			
			4	*NA*		BOOLEAN			
			5	*NA*		BOOLEAN			
			6	*NA*		BOOLEAN			
			7	*NA*		BOOLEAN			
			8	*Battery test in progress*		BOOLEAN			1 - Battery test in progress
			9	*NA*		BOOLEAN			
			10	*Internal battery temperature status*		BOOLEAN			1 - The internal battery temperature exceeds the critical threshold
			11	*NA*		BOOLEAN			
			12	*NA*		BOOLEAN			
			13	*NA*		BOOLEAN			
			14	*NA*		BOOLEAN			
			15	*Battery switch status*		BOOLEAN			0 = Battery switch open 1 = Battery switch close
40068	0x0043	67		*Alarm/Status Register*		UINT16			
			0	*NA*		BOOLEAN			
			1	*End of warranty soon*		BOOLEAN			
			2	*End of AC capacitors life*		BOOLEAN			
			3	*End of battery life*		BOOLEAN			
			4	*End of DC capacitors life*		BOOLEAN			
			5	*End of fan life*		BOOLEAN			
			6	*End of power supply board life*		BOOLEAN			
			7	*NA*		BOOLEAN			
			8	*NA*		BOOLEAN			
			9	*NA*		BOOLEAN			
			10	*NA*		BOOLEAN			
			11	*NA*		BOOLEAN			
			12	*NA*		BOOLEAN			
			13	*NA*		BOOLEAN			
			14	*NA*		BOOLEAN			
			15	*NA*		BOOLEAN			
40069	0x0044	68		Alarm/Status Register	1	UINT16			
			0	*NA*		BOOLEAN			
			1	*NA*		BOOLEAN			
			2	*NA*		BOOLEAN			
			3	*NA*		BOOLEAN			
			4	*NA*		BOOLEAN			

Modicon Standard Register Number	Absolute Starting Register Address, (Hexadeci	Absolute Starting Register Address, (Decimal)	Bit	Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	Valid Response
			5	NA		BOOLEAN			
			6	NA		BOOLEAN			
			7	NA		BOOLEAN			
			8	Main AC voltage status		BOOLEAN			1 - Main AC is not OK/Voltage out of range
			9	Main AC fuse status		BOOLEAN			1 - Main AC fuse fault
			10	Rectifier thermal fault		BOOLEAN			1 - Rectifier thermal fault
			11	Main AC frequency status		BOOLEAN			1 - Main AC frequency out of range
			12	Rectifier thermal overload		BOOLEAN			1 - Rectifier thermal overload
			13	NA		BOOLEAN			
			14	NA		BOOLEAN			
			15	NA		BOOLEAN			
40070	0x0045	69		NA					
40071	0x0046	70		Alarm/Status Register	1	UINT16			
			0	NA		BOOLEAN			
			1	NA		BOOLEAN			
			2	NA		BOOLEAN			
			3	NA		BOOLEAN			
			4	NA		BOOLEAN			
			5	Bypass overload status		BOOLEAN			0 - Bypass input power not overload 1 - Bypass input power overload
			6	Bypass thermal overload status		BOOLEAN			0 - No thermal overload on bypass input 1 - Thermal overload exists on bypass input
			7	Bypass out of tolerance		BOOLEAN			1 - Bypass out of tolerance
			8	NA		BOOLEAN			
			9	Bypass frequency status		BOOLEAN			0 - Bypass frequency in range 1 - Bypass frequency out of range
			10	Bypass voltage status		BOOLEAN			0 - Bypass voltage in range 1 - Bypass voltage out of range
			11	Phase displacement between AC bypass voltage and output.		BOOLEAN			0 - In phase 1 - Phase out of range
			12	NA		BOOLEAN			
			13	NA		BOOLEAN			
			14	Bypass switch status		BOOLEAN			1 - Bypass switch open
			15	NA		BOOLEAN			
40072	0x0047	71		Alarm/Status Register	1	UINT16			
			0	Internal bypass hardware fault exists		BOOLEAN			0 - Hardware fault no longer exist 1 - Hardware fault due to Bypass internal fault (fuse, relay, …)
			1	Source synchronization		BOOLEAN			0 = External or on Bypass 1 = Internal
			2	NA		BOOLEAN			
			3	NA		BOOLEAN			
			4	NA		BOOLEAN			

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			5	NA		BOOLEAN			
			6	NA		BOOLEAN			
			7	NA		BOOLEAN			
			9	Static switch thermal fault		BOOLEAN			1 - Static switch thermal fault
			10	NA		BOOLEAN			
			11	Output switch status		BOOLEAN			1 - Output switch open
			12	NA		BOOLEAN			
			13	NA		BOOLEAN			
			14	NA		BOOLEAN			
			15	NA		BOOLEAN			
40073	0x0048	72		NA					
40074	0x0049	73		Alarm/Status Register	1	UINT16			
			0	Charger hardware fault exists		BOOLEAN			1 - Battery choper fault exists
			1	NA		BOOLEAN			
			2	NA		BOOLEAN			
			3	Battery charging status		BOOLEAN			1 - Battery is charging
			4	NA		BOOLEAN			
			5	NA		BOOLEAN			
			6	NA		BOOLEAN			
			7	NA		BOOLEAN			
			8	NA		BOOLEAN			
			9	NA		BOOLEAN			
			10	NA		BOOLEAN			
			11	NA		BOOLEAN			
			12	NA		BOOLEAN			
			13	NA		BOOLEAN			
			14	NA		BOOLEAN			
			15	NA		BOOLEAN			
40075	0x004A	74		Alarm/Status Register	1	UINT16			
			0	NA		BOOLEAN			
			1	NA		BOOLEAN			
			2	NA		BOOLEAN			
			3	NA		BOOLEAN			
			4	NA		BOOLEAN			
			5	NA		BOOLEAN			
			6	NA		BOOLEAN			
			7	DC imblance alarm		BOOLEAN			1 - Rectifier DC bus imblance
			8	NA		BOOLEAN			
			9	NA		BOOLEAN			
			10	NA		BOOLEAN			
			11	NA		BOOLEAN			
			12	NA		BOOLEAN			
			13	NA		BOOLEAN			

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			14	*NA*		BOOLEAN			
			15	*NA*		BOOLEAN			
40076	0x004B	75		Reserved for future use					
40077	0x004C	76		Alarm/Status Register	1	UINT16			
			0	*NA*		BOOLEAN			
			1	*Inverter major fault*		BOOLEAN			1 - Failure due to inverter malfunction
			2	*Inverter overload status*		BOOLEAN			1 - Inverter overload
			3	*Inverter thermal overload status*		BOOLEAN			1 - Thermal overload
			4	*Inverter limitation status*		BOOLEAN			0 - No current limitation 1 - Current limitation
			5	*Inverter fuse fault*		BOOLEAN			1 - Inverter fuse fault
			6	*NA*		BOOLEAN			
			7	*NA*		BOOLEAN			
			8	*NA*		BOOLEAN			
			9	*NA*		BOOLEAN			
			10	*Internal UPS temperature alarm*		BOOLEAN			
			11	*NA*		BOOLEAN			
			12	*NA*		BOOLEAN			
			13	*NA*		BOOLEAN			
			14	*NA*		BOOLEAN			
			15	*NA*		BOOLEAN			
40078	0x004D	77		Alarm/Status Register	1	UINT16			
			0	*NA*					
			1	*NA*					
			2	*NA*					
			3	*NA*					
			4	*NA*					
			5	*NA*					
			6	*NA*					
			7	*NA*					
			8	*NA*					
			9	*NA*					
			10	*NA*					
			11	*NA*					
			12	*NA*					
			13	*NA*					
			14	*NA*					
			15	Output thermal overload					1 - Output thermal overload
40079	0x004E	78		NA					
40080	0x004F	79		Alarm/Status Register	1	UINT16			
			0	*Output overload*		BOOLEAN			1 - An overload condition exists
			1	*Output in short-circuit*		BOOLEAN			1 - Output in short-circuit

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			2	*NA*		BOOLEAN			
			3	*NA*		BOOLEAN			
			4	*NA*		BOOLEAN			
			5	*NA*		BOOLEAN			
			6	*NA*		BOOLEAN			
			7	*NA*		BOOLEAN			
			8	*NA*		BOOLEAN			
			9	*NA*		BOOLEAN			
			10	*NA*		BOOLEAN			
			11	*NA*		BOOLEAN			
			12	*NA*		BOOLEAN			
			13	*NA*		BOOLEAN			
			14	*NA*		BOOLEAN			
			15	*NA*		BOOLEAN			
40081	0x0050	80		Reserved for future use	176				
40257	0x0100	256		Mains input phase 1 current	1	UINT16			Amps
40258	0x0101	257		Mains input phase 2 current	1	UINT16			Amps
40259	0x0102	258		Mains input phase 3 current	1	UINT16			Amps
40260	0x0103	259		Reserved for future use	3				
40263	0x0106	262		Bypass input phase 1current	1	UINT16			Amps
40264	0x0107	263		Bypass input phase 2 current	1	UINT16			Amps
40265	0x0108	264		Bypass input phase 3 current	1	UINT16			Amps
40266	0x0109	265		Output phase 1 current	1	UINT16			Amps
40267	0x010A	266		Output phase 2 current	1	UINT16			Amps
40268	0x010B	267		Output phase 3 current	1	UINT16			Amps
40269	0x010C	268		Reserved for future use	2				
40271	0x010E	270		Battery current	1	INT16			Amps
40272	0x010F	271		Reserved for future use	6				
40278	0x0115	277		Mains input phase 1 to phase 2 voltage	1	UINT16			Volts
40279	0x0116	278		Mains input phase 2 to phase 3 voltage	1	UINT16			Volts
40280	0x0117	279		Mains input phase 3 to phase 1 voltage	1	UINT16			Volts
40281	0x0118	280		Inverter phase 1 to neutral voltage	1	UINT16			Volts
40282	0x0119	281		Inverter phase 2 to neutral voltage	1	UINT16			Volts
40283	0x011A	282		Inverter phase 3 to neutral voltage	1	UINT16			Volts
40284	0x011B	283		Reserved for future use	6	UINT16			
40290	0x0121	289		Bypass input phase 1 to phase 2 voltage	1	UINT16			Volts
40291	0x0122	290		Bypass input phase 2 to phase 3 voltage	1	UINT16			Volts
40292	0x0123	291		Bypass input phase 3 to phase 1 voltage	1	UINT16			Volts
40293	0x0124	292		Output phase 1 to neutral voltage	1	UINT16			Volts
40294	0x0125	293		Output phase 2 to neutral voltage	1	UINT16			Volts
40295	0x0126	294		Output phase 3 to neutral voltage	1	UINT16			Volts
40296	0x0127	295		Output phase 1 to phase 2 voltage	1	UINT16			Volts
40297	0x0128	296		Output phase 2 to phase 3 voltage	1	UINT16			Volts

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40298	0x0129	297		Output phase 3 to phase 1 voltage	1	UINT16			Volts
40299	0x012A	298		Reserved for future use	3				
40302	0x012D	301		Battery voltage	1	UINT16			Volts
40303	0x012E	302		Reserved for future use	2				
40305	0x0130	304		Output phase 1 active power	1	UINT16			kW
40306	0x0131	305		Output phase 2 active power	1	UINT16			kW
40307	0x0132	306		Output phase 3 active power	1	UINT16			kW
40308	0x0133	307		Output phase 1 apparent power	1	UINT16			kVA
40309	0x0134	308		Output phase 2 apparent power	1	UINT16			kVA
40310	0x0135	309		Output phase 3 apparent power	1	UINT16			kVA
40311	0x0136	310		Total output active power	1	UINT16			kW
40312	0x0137	311		Total output apparent power	1	UINT16			kVA
40313	0x0138	312		Reserved for future use	1	UINT16			
40314	0x0139	313		Total output percent load	1	UINT16			%
40315	0x013A	314		Output phase 1 peak factor	1	UINT16		100	Peak factor will be in multiples of 100
40316	0x013B	315		Output phase 2 peak factor	1	UINT16		100	Peak factor will be in multiples of 100
40317	0x013C	316		Output phase 3 peak factor	1	UINT16		100	Peak factor will be in multiples of 100
40318	0x013D	317		Output power factor	1	UINT16		100	Power factor will be in multiples of 100 (0 to 100)
40319	0x013E	318		Mains input frequency	1	UINT16			Hz
40320	0x013F	319		Inverter frequency	1	UINT16			Hz
40321	0x0140	320		Bypass input frequency	1	UINT16			Hz
40322	0x0141	321		Output frequency	1	UINT16			Hz
40323	0x0142	322		Reserved for future use	6				
40329	0x0148	328		Battery nominal backup time	1	UINT16			minutes
40330	0x0149	329		Battery remaining runtime	1	UINT16			minutes
40331	0x014A	330		Battery temperature	1	UINT16			℃
40332	0x014B	331		Battery remaining capacity	1	UINT16			%
40333	0x014C	332		Reserved for future use	3				
40336	0x014F	335		Battery discharge duration	1	UINT16			minutes
40337	0x0150	336		Reserved for future use	6				
40343	0x0156	342		UIO sensor port 1 temperature in deg F	1	UINT16			℉
40344	0x0157	343		UIO sensor port 1 maximum temperature threshold in deg F	1	UINT16			℉
40345	0x0158	344		UIO sensor port 1 minimum temperature threshold in deg F	1	UINT16			℉
40346	0x0159	345		Reserved for future use	39				
40385	0x0180	384		UIO sensor port 1 temperature	1	UINT16			℃
40386	0x0181	385		UIO sensor port 1 maximum temperature threshold	1	UINT16			℃
40387	0x0182	386		Reserved for future use	2				
40389	0x0184	388		UIO sensor port 1 minimum temperature threshold	1	UINT16			℃
40390	0x0185	389		Reserved for future use	2				
40392	0x0187	391		UIO sensor port 1 humidity	1	UINT16			%
40393	0x0188	392		UIO sensor port 1 maximum humidity threshold	1	UINT16			%
40394	0x0189	393		Reserved for future use	2				
40396	0x018B	395		UIO sensor port 1 minimum humidity threshold	1	UINT16			%

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40397	0x018C	396		Reserved for future use	20				
40417	0x01A0	416		UPS manufacturere name	18	ASCII			Schneider Electric
40435	0x01B2	434		UPS product name	15	ASCII			MGE Galaxy 5500
40450	0X01C1	449		Reserved for future use	12				
40462	0X01CD	461		UPS serial number	12	ASCII			
40474	0X01d9	473		Reserved for future use	48				
40522	0X0209	521		Nominal output apparent power	1	UINT16			kVA