

Modbus Register Map: Easy UPS 3-Phase Modular

990-100009D-001

50-250 kW UPS

Notes:

- Notes: 1. 16-bit registers are transmitted MSB first (i.e. big-endian). 2. INT32 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 serial RTU and Modbus over TCP is supported.
- 5. Signed numbers are twos-compliment

- Signed numbers are twos-compliment
 Status bits are atomic within a single Modbus register. User should not look for consistency across multiple registers, only within a single register.
 For ASCII strings less than the maximum length, the unused characters are filled with nulls.
 Single-register reads of reserved or undefined registers will return an error. Block reads which begin with a valid register will not return an error but will return zeros for undefined registers.
 Strings are two characters per register, first character in high-order byte, second character in low-order byte. Printable ASCII only.
 Bit #0 is least significant bit.
 Data Type column: "INT16"=signed 16-bit integer, "UINT16" = unsigned 16-bit integer, "INT32" = signed 32-bit integer, "ENUM" is a UINT16 value which maps to a defined tist of states." ASCII" = the printable ASCI to 20 0X7E. BOOLEAN= a single bit, 0 or 1.
 "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.

The settings for RS485 port is Disabled by default. Please contact SE local Field Service Representative to get access authority via Tuner or HMI to change the setting to Enable.

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Modicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)			Length #		Multiply Reading	Divide Reading	NMC Modbus	User Modbus	
		· · ·	Bit	Data Point	registers	Data Type	By:	By:	TCP	RTU	Valid Response
									•	•	
Status Data											
40002	0x0001	1		UPS Status	1				x	x	
				UPS operation mode - Battery		BOOLEAN					1=Load is being powered from battery
				Battery is below minimum acceptable runtime		BOOLEAN					1=Battery is below minimum acceptable runtime
			2	Bypass		BOOLEAN					1=System is in Bypass
			3	UPS operation mode - Battery test		BOOLEAN					1=Self-test in progress
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Battery inoperable		BOOLEAN					1=Battery inoperable
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Information alarm present		BOOLEAN BOOLEAN					1=Information alarm present
			14	Warning alarm present Critical alarm present		BOOLEAN					1=Warning alarm present 1=Critical alarm present
Alarm			15	Untical alarm present		BOOLEAN					1=Critical alarm present
40003	0x0002	2		Bypass	1				X	Х	
40005	0x0002	2		Bypass voltage out of tolerance		BOOLEAN					1=Bypass voltage is out of tolerance and UPS is prevented from going into requested bypass mode
			1	Bypass phase sequence incorrect		BOOLEAN					1=The phase rotation on bypass is incorrect
				Bypass frequency out of tolerance		BOOLEAN					1=Bypass frequency is out of tolerance
				Bypass phase missing		BOOLEAN					1=Bypass in requercy is out of tolerance
				Reserved		BOOLEAN					Reserved
				Reserved	1	BOOLEAN	1				Reserved
				Reserved	+	BOOLEAN					Reserved
				Reserved	+	BOOLEAN					Reserved
				Reserved	1	BOOLEAN					Reserved
				Reserved	1	BOOLEAN	1				Reserved
				Reserved		BOOLEAN	1				Reserved
				Reserved		BOOLEAN					Reserved
				Reserved		BOOLEAN					Reserved
				Reserved		BOOLEAN					Reserved
				Reserved		BOOLEAN					Reserved
				Reserved	1	BOOLEAN	1				Reserved

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Modicon Standard Register Number	Absolute Starting Register Address,	Absolute Starting									
	(Hexa-decimal)	Register Address,					Multiply	Divide			
		(Decimal)			Length #		Reading	Reading	NMC Modbus	User Modbus	
			Bit	Data Point	registers	Data Type	By:	By:	TCP	RTU	Valid Response
						-					
40004	0x0003	3		Energy Storage	1				Х	Х	
				Battery breaker BB1 open		BOOLEAN					1=Battery breaker BB1 open
				Battery breaker BB2 open		BOOLEAN					1=Battery breaker BB2 open
				Battery breaker BB3 open		BOOLEAN					1=Battery breaker BB3 open
				Battery breaker BB4 open Batteries are discharging		BOOLEAN					1=Battery breaker BB4 open 1=Batteries are discharging
				Charger shutdown due to high battery temperature		BOOLEAN					1=Charger shutdown due to high battery temperature
				Battery is below minimum acceptable runtime		BOOLEAN					1=Battery is below minimum acceptable runtime
				Battery voltage does not match battery configuration		BOOLEAN					1=Battery voltage does not match battery configuration
				Battery condition is weak		BOOLEAN					1=Battery condition is weak
				Battery condition is poor		BOOLEAN					1=Battery condition is poor
				High battery temperature level		BOOLEAN					1=High battery temperature level
				Low battery temperature level		BOOLEAN					1=Low battery temperature level
				Battery capacity is below minimum acceptable level		BOOLEAN					1=Battery capacity is below minimum acceptable level
				Battery charge power is reduced		BOOLEAN					1=Battery charge power is reduced
				Battery is not working correctly		BOOLEAN					1=Battery is not working correctly
				Battery float charge current exceeds expected value		BOOLEAN					1=Battery float charge current exceeds expected value
40005	0x0004	4		Energy storage	1				Х	Х	
			0	High battery temperature shutdown		BOOLEAN					1=High battery temperature shutdown
			1	Battery configuration is incorrect		BOOLEAN					1=Battery configuration is incorrect
				Charger shutdown due to low battery temperature		BOOLEAN					1=Charger shutdown due to low battery temperature
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved Reserved		BOOLEAN BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		DOOLLAN					
40006	0x0005	5		General	1				Х	х	
10000	0,0000	-		EPO switch activated		BOOLEAN			X	~	1=EPO switch activated
			1	Synchronization unavailable - system is free running		BOOLEAN					1=Synchronization unavailable - system is free running
				Inverter output is not in phase with bypass input		BOOLEAN					1=Inverter output is not in phase with bypass input
			3	UPS operation mode - Battery		BOOLEAN					1=UPS operation mode - Battery
				UPS operation mode - Requested static bypass		BOOLEAN					1=UPS operation mode - Requested static bypass
				UPS operation mode - Forced static bypass		BOOLEAN					1=UPS operation mode - Forced static bypass
				UPS operation mode - Maintenance bypass		BOOLEAN					1=UPS operation mode - Maintenance bypass
				UPS operation mode - Battery test		BOOLEAN					1=UPS operation mode - Battery test
				UPS operation mode - Off		BOOLEAN					1=UPS operation mode - Off
				UPS operation mode - Initialization		BOOLEAN					1=UPS operation mode - Initialization
				UPS operation mode - Static bypass standby		BOOLEAN					1=UPS operation mode - Static bypass standby
				UPS operation mode - Inverter standby		BOOLEAN					1=UPS operation mode - Inverter standby
			12	Reserved		BOOLEAN					1=System operation mode - Off
				Reserved		BOOLEAN					1=System operation mode - Forced static bypass
				Reserved		BOOLEAN					1=System operation mode - Requested static bypass
	1	-	15	Reserved		BOOLEAN			-		1=System operation mode - Maintenance bypass

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Modicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)	Bit	Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
			Unt	Balaron	rogiotoro	Duta 1990	<u> 0j.</u>	5):			
40007	0x0006	6		General	1				Х	Х	
				System operation mode - Off		BOOLEAN					1=System operation mode - Static bypass standby
				System operation mode - Forced static bypass		BOOLEAN					1=Product not registered
				System operation mode - Requested static bypass		BOOLEAN					
			3	System operation mode - Maintenance bypass		BOOLEAN					
				System operation mode - Static bypass standby		BOOLEAN					
				System operation mode - ECO mode		BOOLEAN					
				Product not registered		BOOLEAN					
				Reserved Reserved		BOOLEAN BOOLEAN					
				System locked in bypass operation		BOOLEAN					1=System locked in bypass operation
				Reserved		BOOLEAN					1-System locked in bypass operation
				Unsupported power module type detected		BOOLEAN					1=Unsupported power module type detected
				Unsupported static bypass switch module type		BOOLEAN					1=Unsupported power module type detected 1=Unsupported static bypass switch module type detected
				Reserved		BOOLEAN					
			13	Configured UPS power rating exceeds frame power		BOULEAN					1=Configured UPS power rating exceeds frame power rating
				rating		BOOLEAN				1	-oomigured of o power rating exceeds traine power rating
				Reserved		BOOLEAN					
40008	0x0007	7		General	1				Х	Х	
			0	Reserved		BOOLEAN					
				No SBS present		BOOLEAN					1=No SBS present
				No power module(s) present		BOOLEAN					1=No power module(s) present
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Ambient temperature out of tolerance		BOOLEAN					1=Ambient temperature out of tolerance
				Ambient temperature high		BOOLEAN					1=Ambient temperature high
				Inverter is off due to a request by the user		BOOLEAN					1=Inverter is off due to a request by the user
				Reserved Warranty expiring soon		BOOLEAN BOOLEAN					1=Warranty expiring soon
				Technical check recommended		BOOLEAN					1=Technical check recommended
				Air filter technical check recommended		BOOLEAN					1=Air filter technical check recommended
				Reserved		BOOLEAN					
				UPS surveillance detected fault		BOOLEAN					1=UPS surveillance detected fault
				Display communication lost - display is disconnected		500227.11					
				from the system		BOOLEAN					1=Display communication lost - display is disconnected from the system
			15	Reserved		BOOLEAN					T=Display communication lost - display is disconnected from the system
40009	0x0008	8		General	1	- 5022514			Х	Х	
	22 900	-		Display communication not authenticated		BOOLEAN				~	1=Display communication not authenticated
				Reserved		BOOLEAN				1	
			2	Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Incorrect UPS model number detected		BOOLEAN					1=Incorrect UPS model number detected
	-			Reserved	-	BOOLEAN		-	-		
				Reserved		BOOLEAN					
				Internal power module redundancy lost		BOOLEAN					1=Internal power module redundancy lost
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					4-Deven Markula ID as afferentian ant OK
				Power Module ID configuration not OK DC-DC current limitation threshold lowered due to		BOOLEAN					1=Power Module ID configuration not OK
										1	4-DO DO summer till station through all laws and due to blick to summer the
				high temperature Reserved		BOOLEAN					1=DC-DC current limitation threshold lowered due to high temperature
				PFC AC current limitation threshold lowered due to		BOULEAN					
				high temperature						1	1=PFC AC current limitation threshold lowered due to high temperature
			13			BOOLEAN					5 , 1 1
				Reserved		BOOLEAN					
			15	Reserved		BOOLEAN					

			1		1			cale			
Modicon Standard Register Number	Absolute Starting Register Address,	Absolute Star Register Addre	ting								
	(Hexa-decimal)	(Decimal)	Bi	t Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
40010	0x0009	9		Reserved	1		I	r –	X	X	
40011	0x000A	10		Reserved	1				X	X	
40012	0x000B	11		Input	1				Х	Х	
			0	Input voltage out of tolerance		BOOLEAN					1=Input voltage out of tolerance
			1	Input phase sequence incorrect Input frequency out of tolerance		BOOLEAN					1=Input phase sequence incorrect 1=Input frequency out of tolerance
				Input hequency out of tolerance		BOOLEAN					1=Input phase missing
				Reserved		BOOLEAN					i inpacpinado micoring
			5	Reserved		BOOLEAN					
			6	Reserved		BOOLEAN					
				Reserved Reserved		BOOLEAN					
			9	Neutral displacement detected		BOOLEAN					1=Neutral displacement detected
			10	Reserved		BOOLEAN					
			11	1 Reserved		BOOLEAN					
			12	2 Reserved		BOOLEAN					
				Reserved Reserved		BOOLEAN BOOLEAN					
				5 Reserved	1	BOOLEAN					
40013	0x000C	12		Output	1				X	Х	
			0	Output voltage out of tolerance		BOOLEAN					1=Output voltage out of tolerance
				Output frequency out of tolerance		BOOLEAN		<u> </u>			1=Output frequency out of tolerance
			- 2	Overload or short-circuit on UPS Overload on UPS due to high ambient temperature		BOOLEAN					1=Overload or short-circuit on UPS 1=Overload on UPS due to high ambient temperature
				Reserved		BOOLEAN					
			5	Load on UPS is above warning level		BOOLEAN					1=Load on UPS is above warning level
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
			10) Reserved		BOOLEAN					
			11	1 Reserved		BOOLEAN					
				2 Reserved		BOOLEAN					
				3 Reserved 4 Reserved		BOOLEAN BOOLEAN					
				5 Reserved		BOOLEAN					
40014	0x000D	13		Parallel system	1				Х	Х	
			0	Parallel communication lost on PBUS cable 1 Parellel communication lost on PBUS cable 2		BOOLEAN					1=PBUS cable 1 may be damaged
				General parallel system event		BOOLEAN					1=PBUS cable 2 may be damaged 1=The parallel system is not configured correctly or is not working correctly
			3	Reserved		BOOLEAN					T= The parallel system is not comigured correctly of is not working correctly
											1=UPS is unable to communicate with one of the parallel UPSs. The UPS might have been
			4	Parallel unit not present		BOOLEAN					powered down or PBUS cables may be damaged.
			5	Parallel redundancy lost		BOOLEAN					1=The configured parallel redundancy is lost, either because the output load is too high, because there are not enough parallel UPSs available.
				Not enough UPSs ready to turn on inverter		BOOLEAN					1=One or more parallel UPSs have been requested to turn on inverter, but not enough UPSs are ready for system to enter inverter on operation
	1			Reserved Reserved	1	BOOLEAN	l	I			Reserved
	1		9	Reserved	1	BOOLEAN					
			10	Reserved		BOOLEAN					
				1 Reserved		BOOLEAN					
			12	2 Reserved 3 Reserved		BOOLEAN					
			14	4 Reserved	1	BOOLEAN	l				
			15	5 Reserved		BOOLEAN					
40015	0x000E	14		Power module	1				Х	Х	
				Power module inoperable Power module temperature warning		BOOLEAN					1=Power module inoperable 1=Power module temperature warning
			2			BOOLEAN					1=Power module overheated
	1		3	Reserved		BOOLEAN					
			4	Reserved		BOOLEAN					
				Reserved		BOOLEAN					
	1		6	Reserved Power module fan inoperable	1	BOOLEAN	l	I			1=Power module fan inoperable
	1		8	Power module disabled		BOOLEAN					1=Power module disabled
			9	Power module surveillance detected fault		BOOLEAN					1=Power module surveillance detected fault
			10	PMC communication lost - disconnected		BOOLEAN					1=PMC communication lost - disconnected
				PMC communication lost - connected PMC communication not authenticated	-	BOOLEAN					1=PMC communication lost - connected 1=PMC communication not authenticated
				Reserved	1	BOOLEAN					
			14	4 Reserved		BOOLEAN					
			15	5 Reserved		BOOLEAN					
40016	0x000F	15		Reserved	1				X	X	

						Sc	ale			
Modicon Standard	Absolute Starting					00	dio			
Register Number	Register Address,	Absolute Starting								
	(Hexa-decimal)	Register Address,				Multiply	Divide			
	(nexa-accimal)	(Decimal)		Length #		Reading	Reading	NMC Modbus	User Modbus	
		(Doomai)	Bit Data Point	registers	Data Type	By:	By:	TCP	RTU	Valid Response
			Bata Fornt	Tegisters	Data Type	by.	Dy.	101	KIU	Valid Nesponse
40017	0x0010	16	Static bypass switch	1				Х	Х	
10011	0/0010		0 Static bypass switch fan inoperab	le .	BOOLEAN			~	~	1=Static bypass switch fan inoperable
			1 Reserved		BOOLEAN					
			2 Reserved		BOOLEAN					
			3 Static bypass switch inoperable		BOOLEAN					1=Static bypass switch inoperable
			4 Static bypass switch controller co	mmunication lost - disconnecte	BOOLEAN					1=Static bypass switch controller communication lost - disconnected
			5 Static bypass switch controller co	mmunication lost - connected	BOOLEAN					1=Static bypass switch controller communication lost - connected
			6 Static bypass switch controller co	mmunication not authenticated	BOOLEAN					1=Static bypass switch controller communication not authenticated
			7 Static bypass switch module disa	bled	BOOLEAN					1=Static bypass switch module disabled
			8 Reserved		BOOLEAN					
			9 Reserved		BOOLEAN					
			10 Reserved		BOOLEAN					
			11 Reserved		BOOLEAN					
			12 Reserved		BOOLEAN					
			13 Reserved		BOOLEAN					
			14 Reserved		BOOLEAN					
40040	0.0044	47	15 Reserved		BOOLEAN		_	×	V	
40018	0x0011	17	Switchgear	1	0001541			Х	Х	
			0 Breaker UIB open		BOOLEAN					1=Breaker UIB open
			1 Breaker UOB open 2 Breaker MBB closed		BOOLEAN BOOLEAN					1=Breaker UOB open 1=Breaker MBB closed
			3 Breaker SIB open		BOOLEAN					1=Breaker SIB open
			4 Breaker SSIB open		BOOLEAN					1=Breaker SSIB open
			5 Breaker IMB closed		BOOLEAN					1=Breaker IMB closed
			6 Breaker RIMB closed		BOOLEAN					1=Breaker RIMB closed
			7 Ext. MBB closed		BOOLEAN					T-Breaker Nimb closed
			8 Reserved		BOOLEAN					
			9 Ground fault detected		BOOLEAN					1=Ground fault detected
			10 Genset is supplying the UPS		BOOLEAN					1=Genset is supplying the UPS
			11 Battery room ventilation inoperab	le	BOOLEAN					1=Battery room ventilation inoperable
			12 External battery monitoring detect	ted fault	BOOLEAN					1=External battery monitoring detected fault
			13 UOB redundant monitoring not we		BOOLEAN					1=UOB redundant monitoring not working correctly
			14 MBB redundant monitoring not we	orking correctly	BOOLEAN					1=MBB redundant monitoring not working correctly
			15 Reserved		BOOLEAN					
40019	0x0012	18	Switchgear	1				Х	Х	
			0 Reserved		BOOLEAN					
	1		1 UPS locked in static bypass mode	e: activated	BOOLEAN					
										1=UPS locked in static bypass mode: activated
			2 High efficiency mode disabled		BOOLEAN					1=High efficiency mode disabled
			3 External energy storage monitorir	ig: minor alarm	BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm
			 External energy storage monitorin External energy storage monitorin 	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorir 4 External energy storage monitorir 5 External charger off command: ac	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm
			3 External energy storage monitorir 4 External energy storage monitorir 5 External charger off command: ac 6 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorin 4 External energy storage monitorin 5 External charger off command: ac 6 Reserved 7 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorin 4 External energy storage monitorin 5 External charger off command: an 6 Reserved 7 Reserved 8 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			Silvernal energy storage monitorin External energy storage monitorin External charger off command: ac Reserved Reserved Reserved Reserved Reserved Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorin 4 External energy storage monitorin 5 External charger off command: at 6 Reserved 7 Reserved 8 Reserved 9 Reserved 10 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorir 4 External energy storage monitorir 5 External charger off command: ar 6 Reserved 8 Reserved 9 Reserved 10 Reserved 10 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorir 4 External energy storage monitorir 5 External charger off command: ar 6 Reserved 7 Reserved 9 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorir 4 External energy storage monitorir 5 External charger off command: ar 6 Reserved 8 Reserved 9 Reserved 10 Reserved 10 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
			3 External energy storage monitorir 4 External energy storage monitorir 6 Reserved 7 Reserved 8 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013	19	3 External energy storage monitorir 5 External charger off command: ar 6 Reserved 7 Reserved 8 Reserved 9 Reserved 10 Reserved 12 Reserved 12 Reserved 12 Reserved 12 Reserved 13 Reserved 14 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			×	×	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorir 4 External energy storage monitorir 6 Reserved 7 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 13 Reserved 13 Reserved 13 Reserved 13 Reserved 14 Reserved 15 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			×	X	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorin 4 External energy storage monitorin 5 External charger off command: ar 6 Reserved 7 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 18 Reserved 19 Reserved 10 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 5 SMC	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			X	X	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorir 4 External energy storage monitorir 5 External energy storage monitorir 6 Reserved 7 Reserved 8 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 18 Reserved 19 Reserved 10 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN					1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorir 5 External charger off command: ar 6 Reserved 7 Reserved 8 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 18 Reserved 19 Reserved 10 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Sexerved 17 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			X	X	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorin 4 External energy storage monitorin 5 External energy storage monitorin 6 Reserved 7 Reserved 8 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 18 Reserved 19 Reserved 10 Reserved 10 Reserved 10 Reserved 10 Reserved 11 Reserved 12 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			X	X	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorin 5 External charger off command: ar 6 Reserved 7 Reserved 9 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 18 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 20 Reserved 3 Reserved 3 Reserved 2 Reserved 3 Reserved 3 Reserved 4 Reserved 5 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			X	X	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm
40020	0x0013		3 External energy storage monitorir 5 External charger off command: ar 6 Reserved 7 Reserved 9 Reserved 10 Reserved 12 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 16 Reserved 17 Reserved 18 Reserved 19 Reserved 10 Reserved 11 Reserved 12 Reserved 13 Reserved 14 Reserved 15 Reserved 20 Reserved 21 Reserved 21 Reserved 21 Reserved 21 Reserved	ng: minor alarm ng: major alarm	BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN BOOLEAN			X	X	1=High efficiency mode disabled 1=External energy storage monitoring: minor alarm 1=External energy storage monitoring: major alarm

							Sc	ale		1	
Modicon Standard	Absolute Starting					+	30	aic			
Register Number	Register Address,	Absolute Starting									
rtogiotor rtambor		Register Address,					Multiply	Divide			
	(Hond doonnal)	(Decimal)			Length #		Reading	Reading	NMC Modbus	User Modbus	
		(Decirrici)	Bit	Data Point	registers	Data Type	By:	Bv:	TCP	RTU	Valid Response
							-7	-/:			
40021	0x0014	20		IMC	1				Х	Х	
				IMC enabled switch disabled		BOOLEAN					1=IMC enabled switch disabled
				Redundant IM controller not available		BOOLEAN					1=Redundant IM controller not available
				Redundant IM controller ADC calibration failed		BOOLEAN					1=Redundant IM controller ADC calibration failed
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved Reserved		BOOLEAN					
				IMC communication lost - disconnected		BOOLEAN					1=IMC communication lost - disconnected
				IMC communication lost - disconnected		BOOLEAN					1=IMC communication lost - disconnected 1=IMC communication lost - connected
				IMC communication lost - connected		BOOLEAN					1=IMC communication lost - connected 1=IMC communication not authenticated
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		- 50225 84					
40022	0x0015	21		Reserved	1				Х	Х	
40023	0x0016	22		Reserved	1				Х	Х	
40024	0x0017	23		Network	1				Х	Х	
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Communication link between NMC and SMC is lost.		DOOLLAN					1=Communication link between NMC and SMC is lost. NMC is disconnected from the
				NMC is disconnected from the system		BOOLEAN					system
			Ŭ	Communication link between NMC and SMC is lost.		DOOLLIN					Sjoon
			10	NMC is connected to the system		BOOLEAN					1=Communication link between NMC and SMC is lost. NMC is connected to the system
				Communication between NMC and SMC is not authen	ticated	BOOLEAN					1=Communication between NMC and SMC is not authenticated
				NMC firmware incompatible		BOOLEAN					1=NMC firmware incompatible
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
Otatia Data			15	Reserved							
Static Data 41281	0x500	1280		UPS Model Name	40	ASCII			х	х	
41281	0x500	1280		UPS Model Name UPS Serial Number	10	ASCII			X	X	
41291 41299	0x50A 0x512	1290		UPS Serial Number UPS Firmware Version	12	ASCII			X	X	
41299	0x512 0x51E	1258		UPS Hardware Version	8	ASCII			X	X	
41319	0x526	1310		NMC 1 Model Name	8	ASCII			X	X	
41313	0x520	1318		NMC 1 Serial Number	16	ASCII			X	x	
41343	0x53E	1342		NMC 1 Firmware Version	16	ASCII			X	X	
41359	0x54E	1358		NMC 1 Hardware Version	8	ASCII			X	X	
41367	0x556	1366		NMC 2 Model Name	8	ASCII			Х	Х	
41375	0x55E	1374		NMC 2 Serial Number	16	ASCII			Х	Х	
41391	0x56E	1390		NMC 2 Firmware Version	16	ASCII			Х	Х	
41407	0x57E	1406		NMC 2 Hardware Version	8	ASCII			Х	Х	
41415	0x586	1414		HMI Model Name	8	ASCII			X	Х	Option
41423	0x58E	1422		HMI Serial Number	8	ASCII			X	X	Option
41431	0x596	1430		HMI Firmware Version	12	ASCII			X	X	Option
41443	0x5A2	1442		HMI Hardware Version	8	ASCII			Х	Х	Option

-	1	<u>г</u>			r	6	ale		1	
Modicon Standard	Abaaluta Otaatiaa					30	ale			
Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)	Bit Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
Dum and a Data		г – т		-	-	1		1		
Dynamic Data										
44097	0x1000	4096	Frequency (input)	1	UINT16	0.1	10	х	Х	Hz
44097	0x1000	4096	Voltage L1 - N	1	UINT 16 UINT 16	0.1	10	X	x	
44098	0x1001	4097	Voltage L2 - N	1	UINT 16 UINT 16	1	1	X	X	Vrms Vrms
44099	0x1002 0x1003	4098	Voltage L2 - N Voltage L3 - N	1	UINT16 UINT16	1	1	X	X	Vrms
44100	0x1003	4099	Voltage L1-2 (input)	1	UINT16	1	1	X	x	Vrms
44101	0x1004	4100	Voltage L2-3 (input)	1	UINT 16 UINT 16	1	1	X	x	Vrms
44102	0x1005	4101	Voltage L2-3 (input)	1	UINT16	1	1	X	X	Vrms
44103	0x1006	4102	Current L1 (input)	1	UINT16 UINT16	1	1	X	X	amps
44104	0x1007	4103	Current L2 (input)	1	UINT16	1	1	X	x	
44105	0x1008	4104	Current L3 (input)		UINT16	1	1	X	X	amps
44106	0x1009	4105	Active power L1 (input)	1	UINT16 UINT16	1	1	X	X	amps kW
44107	0x100A	4106	Active power L2 (input)	1	UINT16	1	1	X	X	kW
44108	0x100B	4107 4108	Active power L2 (input) Active power L3 (input)	1		1	1	X		kW
44109	0x100C	4108	Active power L3 (Input)		UINT16					kW kVA
44110	0x100D	4109	Apparent power L1 (input) Apparent power L2 (input)	1	UINT16 UINT16	1	1	X	X X	
44111 44112	0x100E	4110 4111	Apparent power L2 (input) Apparent power L3 (input)	1	UINT16 UINT16	1	1	X	X	kVA
44112	0x100F	4111 4112		1			100			kVA
44113	0x1010	4112	Power factor L1 Power factor L2		UINT16	0.01	100	X	X	
44114 44115	0x1011	4113	Power factor L2 Power factor L3	1	UINT16 UINT16	0.01	100	X	X	
44115	0x1012	4114 4115	Total active power (input)	1	UINT16	1	100	X	x	hant .
44116	0x1013	4115		1	UINT16	1	1	X	X	kW kVA
Bypass	0X1014	4116	Total apparent power (input)	1	UINT 16	1	1	~	~	KVA
44353	0x1100	4352	Frequency (bypass)	1	UINT16	0.1	10	х	Х	Hz
44353	0x1100	4352	Voltage L1-N (bypass)	1	UINT16	0.1	10	X	x	Vrms
44354	0x1101	4353	Voltage L2-N (bypass)	1	UINT16	1	1	X	X	Vrms
44356	0x1102	4354	Voltage L2-N (bypass)	1	UINT 16 UINT 16	1	1	x	X	Vrms
44357	0x1103	4355	Voltage L1-2 (bypass)	1	UINT16	1	1	X	x	Vrns
44358	0x1104	4357	Voltage L2-3 (bypass)	1	UINT16	1	1	X	X	Vrms
44358	0x1105	4358	Voltage L2-3 (bypass)	1	UINT16	1	1	X	X	Vrms
44360	0x1108	4359	Current L1 (bypass)	1	UINT16	1	1	x	x	amps
44360	0x1107	4359	Current L2 (bypass)	1	UINT 16 UINT 16	1	1	X	x	amps
44361	0x1108	4360	Current L3 (bypass)	1	UINT16	1	1	X	X	amps
44362	0x1109	4362	Active power L1 (bypass)	1	UINT16	1	1	x	X	kW
44364	0x110A	4362	Active power L2 (bypass)	1	UINT16	1	1	X		kW kW
44364	0x110B	4363	Active power L2 (bypass) Active power L3 (bypass)	1	UINT16	1	1	X	x	kW
44365	0x110C	4365	Apparent power L1 (bypass)	1	UINT 16 UINT 16	1	1	X	x	kvv kVA
44366	0x110E	4365	Apparent power L2 (bypass)	1	UINT 16 UINT 16	1	1	x	X	kVA kVA
44367	0x110E	4366	Apparent power L2 (bypass)	1	UINT 16 UINT 16	1	1	X	x	kVA kVA
44369	0x110P	4367	Power factor L1	1	UINT 16 UINT 16	0.01	100	X	x	KVA
44369 44370	0x1110	4368	Power factor L1	1	UINT16 UINT16	0.01	100	X	X	
44370	0x1112	4369	Power factor L2 Power factor L3	1	UINT16 UINT16	0.01	100	X	X	
44371	0x1112 0x1113	4370	Total active power (bypass)	1	UINT16	1	100	X	X	kW
44372	0x1113 0x1114	4371		1		1	1	X	X	kW kVA
443/3	UX1114	4312	Total apparent power (bypass)	1 1	UINT16	1	1	~	∧	NVA

Addican Standard Absolute Starting							S	cale			
Bysise Mark	Modicon Standard	Absolute Starting					Ŭ	cuic			
Image: Problem Probat Probate Probat Probat Probat Probat Probat Probat Probat Probat Probat	Register Number		Absolute Starting								
Norm Norm Norm Norm Norm Norm Norm Norm Norm 4400 0x100 4400 Norm 1 NT16 1 N X Norm 4400 0x100 4400 Norm X Norm Norm 4411 Norm 1 NT16 1 X X Norm 4412 0x100 4411 Norm 1 NT16 1 X X Norm 4411 0x100 4411 Norm 1 NT16 1 X X Norm 4411 0x100 4411 Norm 1 NT16 1 X X Norm 4411 0x100 4411 Norm 1 NT16 1 X X Norm 4411 0x10 1 NT16 1 NT16 X X Norm 4411 0x10 1 NT16 1 NT1	-	(Hexa-decimal)	Register Address,					Divide			
No. O											
4466 0.1200 4600 Videal LAN 1 N/Te 1 N X X Ha 4610 0.0200 4600 Videal LAN 1 N/Te 1 X X Ha 4610 0.0200 4611 Videal LAN 0 N/Te 1 1 X X Videal LAN 4612 0.0200 4611 Videal LAN 0.0116 1 1 X X Videal LAN 4616 0.0200 4614 Videal LAN 0.0116 1 1 X X Videal LAN 4616 0.0200 4617 Carrent LA 0.0116 1 1 X X Videal LAN 4618 0.0200 4617 Carrent LA 0.0116 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 <th2< th=""> <th2< th=""> 2</th2<></th2<>				Bit Data Point	registers	Data Type	By:	By:	TCP	RTU	Valid Response
4466 0.1200 4600 Videal LAN 1 N/Te 1 N X X Ha 4610 0.0200 4600 Videal LAN 1 N/Te 1 X X Ha 4610 0.0200 4611 Videal LAN 0 N/Te 1 1 X X Videal LAN 4612 0.0200 4611 Videal LAN 0.0116 1 1 X X Videal LAN 4616 0.0200 4614 Videal LAN 0.0116 1 1 X X Videal LAN 4616 0.0200 4617 Carrent LA 0.0116 1 1 X X Videal LAN 4618 0.0200 4617 Carrent LA 0.0116 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 <th2< th=""> <th2< th=""> 2</th2<></th2<>	Output	1	1 1		1	r	1	1	1	1	
64610 0.61201 4600 Voltage 1.34 1 0.176 1 1 X X Vmms 4411 0.6120 4610 Voltage 1.34 0.116 1 1 X X Vmms 4413 0.61204 4612 Voltage 1.3 0.0176 1 1 X X Vmms 4413 0.61204 4612 Voltage 1.3 0.0176 1 1 X X Vmms 4413 0.61204 4612 Voltage 1.3 0.0176 1 1 X X Vmms 4416 0.01207 4616 0.0176 1 1 X X Vmms 4417 0.0120 4617 0.0176 1 1 X X Vmms 4418 0.0176 1 0.0176 1 X X Vmms 4419 0.0100 X X X X X X X 44100		0x1200	4608	Erequency	1	LIINT16	0.1	10	x	x	Hz
4461 6,1202 4461 Virge LAN 1 untite 1 1 X X Virge LAN 44613 6,1205 4614 Virge LAN 1 untite 1 1 X X Virge LAN 44614 6,1205 4413 Virge LAN 1 untite 1 1 X X Virge LAN 44614 6,1205 4414 Virge LAN 1 Untite 1 1 X X Virge LAN 4417 0,1205 4416 Virge LAN 1 Untite 1 1 X X Virge LAN 4418 0,1205 4401 Current LAN 1 Untite 1 1 X X Virge LAN 4418 0,1205 4401 Current LAN 1 Untite 1 1 X X Virge LAN 4421 0,1205 4617 Current LAN 1 Untite 1 1 X X Virge LAN 4422 0,1205 4623 Alter LAN Untite					1						
44613 64724 4912 Vings 1.3 Vings 1.3 Vings 1.4 Vings 1.4 Vings 1.4 Vings 1.4 44614 6.750 4613 Vings 1.3 Vings 1.3 Vings 1.3 Vings 1.3 Vings 1.3 Vings 1.3 44616 6.7507 44616 Current 1.1 Vings 1.4 Vings 1.4 <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td>					1			1			
44614 001205 4413 Voltige L3-1 1 Ummers 1 1 X X Numers 44615 001205 4416 Voltige L3-1 1 1 1 1 X X Numers 44617 001206 4616 Corrent L3 Ummers 1 1 X X Numers 44617 001206 4617 Corrent L3 Ummers 1 1 X X Numers 44618 001206 4617 Corrent L3 Ummers 1 1 X X Numers 44201 001206 4621 Corrent L3 Ummers 1 1 X X Numers 44201 001207 4623 Advance Jummers 1 1 1 X X Numers 44201 001207 4623 Advance Jummers 1 1 1 X X Numers 4423 001216 <td></td> <td>0x1203</td> <td></td> <td>Voltage L3-N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		0x1203		Voltage L3-N							
44616 0x1206 4614 Volge 3.1 1 0 NT is 1 1 X X X NTms 44616 0x1207 4617 Corrent 3 Corrent 3 Corrent 3 Antice 1 1 1 X X mage 44616 0x1206 4617 Corrent 3 Antice 1 1 X X Antice Antice <td></td>											
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44613 0,17369 4461 0,17369 4461 0,1736 4461 0,1736 4461 0,1738 4462 0,1738 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718 4463 0,0718											
44619 0x1200 4497 0x1201 4497 0x1201 Addie power 13 1 0x170 1 X X x arring and power 13 4409 0x1200 4401 0x1200 4401 0x120 4401 4401 1 1 X X X X 44020 0x1211 4425 Apparent power 12 percentage 1 UNT 6 0x1 10 X <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
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44623 Ord200 4621 Apparent power L1 1 UNT6 1 L X X VA 44633 Ord205 4623 Apparent power L2 1 UNT6 1 1 X X VA 44634 Ord205 4623 Apparent power L2 1 UNT6 1 1 X X VA 44624 Ord205 4623 Apparent power L2 1 UNT6 1 1 X X VA 44626 Ord211 4623 Apparent power L3 percentage 1 UNT6 1 1 X X WA 44628 Ord214 4628 Power fields/1 1 UNT6 1 1 X X WA 44633 Ord216 4633 Power fields/1 1 UNT6 1 1 X X WA 44635 Ord216 4684 The presentage 1 UNT6 1 1 X <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
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44624 Ox1207 4623 Apparent power 13 percentage 1 UNT16 0.1 10 X X X VAA 44025 Ox1201 44234 Apparent power 12 percentage 1 UNT16 0.1 10 X X N											
44625 Ohr1210 46/24 Apparent power 11 percentage 1 UNT16 0.1 10 X X % 44026 Ohr1211 46/26 Apparent power 12 percentage 1 UNT16 0.1 10 X X % 44027 Ohr1214 46/26 Apparent power 12 percentage 1 UNT16 0.1 10 X X % 44027 Ohr1214 46/26 Power factor 12 1 UNT16 0.1 10 X X % 44628 Ohr1216 46/26 Power factor 12 1 UNT16 0.01 100 X X power factor 44031 Ohr1216 46/20 Power factor 12 1 UNT16 0.1 10 X X power factor 44032 Ohr1216 46/20 Power factor 12 1 UNT16 1 1 X X power factor 44032 Ohr131 46/84 The pingesentoter y rotege 10	44023	0x120E									
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Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge Image: Plancharge <	44876	0x130B	4875	The general condition of the charger	1	1			х	х	
Image: Constraint of the status of battery breakers Image: Constraint of the status of the status of battery breakers Image: Constraint of the status of t				Elect Choree							1=FLOAT charge
Image: Constraint of the status of battery breakers Image: Constraint of the status of the status of battery breakers Image: Constraint of the status of battery breakers Image: Constraint of the status of the s				0 I loar Gharge							
Image: Constraint of the status of battery breakers Image: Constraint of the status of the status of battery breakers Image: Constraint of the status of the				Boost Charge		1					1=BOOST charge
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Addition Addition Addition Addition Addition Addition 44877 0x130C 4876 Combined status of battery breakers 1 ENUM X X Addition 0=open 1=closed				OFF		1					1=OFF
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44877 0x130C 4876 Combined status of battery breakers 1 ENUM X X 1=closed				x Reserved		1					
44877 0x130C 4876 Combined status of battery breakers 1 ENUM X X 1=closed				······································							0=open
44878 0x130D 4877 Reserved 1 X X	44877	0x130C	4876	Combined status of battery breakers	1	ENUM			Х	х	
	44878	0x130D	4877	Reserved	1	1	1		Х	Х	

						1	6	cale			
Modicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)		Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
44879	0x130E	4878		Status of battery self-test. Can indicate the battery test status triggered by user-commanded or scheduled self-test	1				x	x	
			0	Test is pending		BOOLEAN					Battery self-test inactive
			1	Test in progress		BOOLEAN					Battery self-test is running
			2	Test complete		BOOLEAN					Self-Test is completed
			3	Test failed		BOOLEAN					Self-test is failed
			4	Test was refused		BOOLEAN					Self-test is aborted due to user command
			5	Test was aborted		BOOLEAN					Self-test is aborted due to system critical alarm
			6	source modifier		BOOLEAN					Battery self-test state unknown
			x	Reserved		BOOLEAN					
44880	0x130F	4879		Reserved	1				х	х	
44881	0x1310	4880		Status indicates the battery health state result from battery test		ENUM			x	x	0=Unknown 1=BatteryOk 2=BatteryDefect 3=BatteryDefect 4=Not defined -127= Not defined
44882	0x1311	4881		Measurement of the total available battery capacity in Ah for the UPS	1	UINT16	1	1	х	х	Ah
44883	0x1312	4882		Reserved	1	UINT32	1	1	Х	Х	
44884 Parallel	0x1313	4883		Reserved	1	UINT32	1	1	х	Х	
44884	0x1314	4884		The present phase-to-phase input current in amperes in A (phase 1)	2	UINT32	1	1	х	х	amps
44885	0x1316	4886		The present phase-to-phase input current in amperes in A (phase 2)	2	UINT32	1	1	х	x	amps
44886	0x1318	4888		The present phase-to-phase input current in amperes in A (phase 3)	2	UINT32	1	1	x	x	
44887	0x131A	4890		The present phase-to-phase bypass current in			1	1	^	^	amps
				amperes in A (phase 1) The present phase-to-phase bypass current in	2	UINT32	1	1	Х	х	amps
44888	0x131C	4892		amperes in A (phase 2)	2	UINT32	1	1	х	х	amps
44889	0x131E	4894		The present phase-to-phase bypass current in amperes in A (phase 3)	2	UINT32	1	1	х	х	amps
44890	0x1320	4896		The present phase-to-phase output current in amperes in A (phase 1)	2	UINT32	1	1	х	х	amps
44891	0x1322	4898		The present phase-to-phase output current in amperes in A (phase 2)	2	UINT32	1	1	х	х	amps
44892	0x1324	4900		The present phase-to-phase output current in amperes in A (phase 3)	2	UINT32	1	1	х	х	amps
44893	0x1326	4902		The present total apparent output power (for all three phases) for the parallel system The percentage of the UPS system capacity presently	1	UINT16	1	1	х	х	kVA
44894	0x1327	4903		used across all phases. The load percentage for the highest phase load is displayed	1	UINT16	0.1	10	x	x	%
44895	0x1328	4904		The present total active output power (for all three phases) for the parallel system	1	UINT16	1	1	х	x	ĸW
System							1				
45377	0x1500	5376	\vdash	Ambient temperature	1	UINT16	0.1	10	х	х	°C
45378	0x1501	5377		General Switch gear status	1				x	x	Bit mask For each bit, 0 = open, 1 =closed
			1	UIB SSIB		BOOLEAN BOOLEAN					1=Closed 1=Closed
			2	IMB		BOOLEAN					1=Closed
				UOB SIB		BOOLEAN					1=Closed 1=Closed
			5	Reserved Reserved		BOOLEAN					
			7	Reserved		BOOLEAN					
			8	Reserved Reserved		BOOLEAN BOOLEAN	1				
			10	MBB		BOOLEAN					1=Closed
				Reserved Reserved		BOOLEAN BOOLEAN					
			13	Reserved		BOOLEAN					
				Reserved Reserved		BOOLEAN BOOLEAN	1				

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Modicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)	Bit	Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
45379	0x1502	5378		UPS mode operation mode of the UPS	2	ENUM			x	x	Initialize/Off Operation = 0x10 Self Test = 0x90 Battery Operation = 0x04 Normal Operation = 0x04 Request Static Bypass = 0x08 Forced Static Bypass = 0x28 Maintenance Bypass = 0x280 Hot Standby = Reserved Inverter Standby = Reserved Static Bypass Standby = 0x10000 Battery Test = 0x84 Inverter Sol = 0x82
45381	0x1504	5380		System operation mode	1	ENUM			Х	х	
			0	Reserved		BOOLEAN					
				System: inverter on		BOOLEAN					System is in inverter operation
				requested static bypass		BOOLEAN					System is in requested static bypass operation
			3	Force static bypass		BOOLEAN					System is in forced static bypass operation
				Initialize/off		BOOLEAN					System is in off operation
				Inverter SPOT		BOOLEAN					System is in Inverter SPOT operation
			6	Maintenance Bypass		BOOLEAN					System is in maintenance bypass operation
				ECO Mode		BOOLEAN					System is in ECO bypass operation
				ECOnversion(AdvEcoMode)		BOOLEAN					System is in ECOnversion operation
				Static Bypass Standby Reserved		BOOLEAN BOOLEAN					System is in static bypass standby operation
			10	Reserved		BOOLEAN					
			12	Reserved		BOOLEAN					
			13	Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
45382	0x1505	5381		Power module present status	1	UINT16			х	х	
			0	PM 1 present		BOOLEAN					1=PM1 present
			1	PM 2 present		BOOLEAN					1=PM2 present
			2	PM 3 present PM 4 present		BOOLEAN					1=PM3 present
				PM 4 present PM 5 present		BOOLEAN BOOLEAN					1=PM4 present
				PM 6 present		BOOLEAN					1=PM5 present 1=PM6 present
			x	Reserved		BOOLEAN					I-F WO present
45383	0x1506	5382		External breaker status	1	UINT16			Х	Х	
			0	Reserved		BOOLEAN					
				Reserved		BOOLEAN					
			2	Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
				Reserved		BOOLEAN					
			5	Reserved Reserved		BOOLEAN BOOLEAN					
				Reserved	1	BOOLEAN					
				Reserved	1	BOOLEAN					
					1						4-01
				Ext. MBB Reserved		BOOLEAN BOOLEAN					1=Closed
				Reserved	1	BOOLEAN					
				Reserved	1	BOOLEAN					
				Reserved	1	BOOLEAN					
				Reserved	1	BOOLEAN					
45384	0x1507	5383		Main IM controller	1	ENUM			х	х	1 = MIM 2 = RIM
											2 = Available
		5384				ENUM			х	х	4 = Unavailable
45385	0x1508			Redundant IM controller Status	1	1				1	6 = No Redundant IM

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Modicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)		Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
NMC	1	1	1		T	1	1	1	1	1	
46401	0x1900	6400		NMC 1 Probe 1 temperature measured by sensor	1	UINT16	0.1	10	x		°C Only available from NMC.
46402	0x1901	6401		NMC 1 probe 1 humidity measured by sensor	1	UINT16	0.1	10	х		% RH Only available from NMC.
46403	0x1902	6402		NMC 1 Probe 2temperature measured by sensor	1	UINT16	0.1	10	x		°C Only available from NMC.
46404	0x1903	6403		NMC 1 probe 2 humidity measured by sensor	1	UINT16	0.1	10	х		% RH Only available from NMC.
46405	0x1904	6404		NMC 2 Probe 1 temperature measured by sensor	1	UINT16	0.1	10	х		°C Only available from NMC.
46406	0x1905	6405		NMC 2 probe 1 humidity measured by sensor	1	UINT16	0.1	10	х		% RH Only available from NMC.
46407	0x1906	6406		NMC 2 probe 2 temperature measured by sensor	1	UINT16	0.1	10	х		°C Only available from NMC.
46408	0x1907	6407		NMC 2 probe 2 humidity measured by sensor	1	UINT16	0.1	10	х		N RH Only available from NMC.
46409	0x1908	6408		Sensor Type NMC 1 Sensor 1	1	UINT16			x		Only available from two. Orunknown 1=temperature only 2=temperature and humidity 3=dry contactor 4=Not defined -32768 = Not defined
46410	0x1909	6409		Sensor Type NMC 1 Sensor 2	1	UINT16			x		0=unknown 1=temperature only 2=temperature and humidity 3=dry contactor 4=Not defined -32768 = Not defined
46411	0x190A	6410		Sensor Type NMC 2 Sensor 1	1	UINT16			x		0=unknown 1=temperature only 2=temperature and humidity 3=dry contactor 4=Not defined -32768 = Not defined
46412	0x190B	6411		Sensor Type NMC 2 Sensor 2	1	UINT16			x		0=unknown 1=temperature only 2=temperature and humidity 3=dry contactor 4=Not defined -32768 = Not defined

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Modicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)	Bit	Data Point	Length # registers	Data Type	Multiply Reading	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
Configuration		1	1		1	1	1			· · · · ·	
Data											
48193	0x2000	8192		Mains configuration setting	1	ENUM			Х	Х	
				single input							1=single input
			1 X	Dual inputs	_						1=Dual inputs
48194	0x2001	8193		UPS voltage setting	1				Х	х	
10101	0/2001	0100		Reserved					~	~	
				Reserved							
				Reserved							
				Reserved Reserved							
			4	Voltage is 380VAC							
			6	Voltage is 400VAC	1	1	1				
			7	Voltage is 415VAC			1				
			х	Reserved							
48195	0x2002	8194		Output acceptable frequency setting	2	ENUM			х	x	H250_1 = 0x80 H250_3 = 0x100 H250_10 = 0x200 H260_1 = 0x400 H260_1 = 0x400 H260_10 = 0x1000
48197	0x2004	8196		Output system upper acceptable voltage setting percentage	1	UINT16	1	1	х	х	3~10. %.
48198	0x2005	8197		Switchgear system breaker present setting	1	UNTIO			Х	х	5-10, 70.
10100	0/2000	0101		UIB breaker present setting	· ·				~	~	1=UIB present
				SSIB breaker present setting							1=SSIB present
			2	Reserved							(
			3	UOB breaker present setting SIB breaker present setting							1=UOB present 1=SIB present
				Reserved							1-SIB present
			6	Reserved							
			7	Reserved							
				Reserved							
				Reserved							4-Ext MPD arrest
				Ext MBB breaker present setting Reserved							1=Ext MBB present
			12	Reserved							
				Reserved							
			14	Reserved							
				Reserved							
48199	0x2006	8198		Date and time setting	2	UINT32	1	1	Х	Х	s. Time stamp seconds from 2000/01/01 ms.
48201	0x2008	8200		Out of sync bypass transfer delay setting	1	UINT16	1	1		x	Only available from user modbus RTU.
48202	0x2009	8201		The UPS power rating	1	UINT16	1	1		X	kVA
48203 48204	0x200A 0x200B	8202 8203		Output overload threshold setting Slew rate of the inverter	1	UINT16 ENUM	1	1	X	X X	%
40204	UX200D	0203		Slew rate of the inverter Slew rate is 0.25Hz		BOOLEAN	+		^	^	
				Slew rate is 0.5Hz	1	BOOLEAN	1				
			2	Slew rate is 1.0Hz		BOOLEAN					
				Slew rate is 2.0Hz		BOOLEAN					
				Slew rate is 4.0Hz		BOOLEAN					
			5	Slew rate is 6.0Hz Reserved		BOOLEAN	+				
48205	0x200C	8204		Input ramp-in time setting in seconds	1	UINT16	1		х	х	s
48206	0x200D	8205		Reserved	1	UINT16	1	1	~	X	%. In Wave 2 (Voltage compensation)
48207	0x200E	8206		Reserved	1	UINT16	1		Х	X	

							Scale				
Nodicon Standard Register Number	Absolute Starting Register Address, (Hexa-decimal)	Absolute Starting Register Address, (Decimal)	Bit	Data Point	Length # registers	Data Type	Multiply Reading By:	Divide Reading By:	NMC Modbus TCP	User Modbus RTU	Valid Response
40000	0.0005	0007		De des des secontrisses for a second de s					1	1	N+0 = 0x01
48208	0x200F	8207		Redundancy settings for power modules	1	ENUM			Х	Х	N+1 = 0x02
			0	N+0 N+1							1=N+0 1=N+1
				Reserved							
											-1=autostart disabled
48209	0x2010	8208		Delay time before autostart of the inverter after input source returns after an outage	1	ENUM				Х	0=autostart enable
48210	0x2011	8209		Battery solution	1	UINT16	1	1		x	Only available from user modbus RTU. Only available from user modbus RTU.
48210	0x2011	8210		Battery type	1	ENUM			Х	x	Only available from user moubus RTO.
			0	VRLA		BOOLEAN					
				Reserved Li-ion		0001541					
	-			Reserved		BOOLEAN					
				Reserved							
48212	0x2013	8211									CA.
			\square	Setting for charge current rate by user	1	UINT16	0.01	100		Х	Only available from user modbus RTU.
48213	0x2014	8212		Setting for battery minimum allowed temperature	1	UINT16	0.1	10		x	Celsius. Only available from user modbus RTU.
48214	0x2015	8213									Celsius.
40214	0,2015	0213		Setting for battery maximum allowed temperature	1	UINT16	0.1	10		Х	Only available from user modbus RTU.
48215	0x2016	8214		Battery deep discharge settings		ENUM				x	0=Disable
48215	0x2016	8214		Battery deep discharge settings	1	ENUM				~	1=Enable Only available from user modbus RTU.
40040	0.0047	0045									%. 5-60
48216	0x2017	8215		The charging capacity based on system kW rating	1	UINT16	1	1		Х	Only available from user modbus RTU.
48217	0x2018	8216		Time of day battery test should start	2	UINT32	1	1	Х	Х	The min should be 0 the max should be 86399 (24 hours).
48219	0x201A	8218		Day of week battery test should start	1	ENUM			х	х	
48220		8219	0	Test on Monday		BOOLEAN					
48220		8219	1	Test on Tuesday		BOOLEAN					
48220		8219	2	Test on Wednesday		BOOLEAN					
48220		8219	3	Test on Thursday		BOOLEAN					
48220		8219	4	Test on Friday		BOOLEAN					
48220		8219		Test on Saturday		BOOLEAN					
48220		8219	•	Test on Sunday		BOOLEAN					
48220		8219	-	Reserved		BOOLEAN					
48220	0x201B	8219	~~	Setting for automatic test	1	ENUM					
40220	032016	0219		Never autotest	1	BOOLEAN			Х	х	
				Autotest every week		BOOLEAN					
			2	Autotest every 2 weeks		BOOLEAN					
			3	Autotest every 4 weeks Autotest every 8 weeks		BOOLEAN BOOLEAN					
			5	Autotest every 12 weeks		BOOLEAN					
				Autotest every 26 weeks		BOOLEAN					
				Autotest every 52 weeks		BOOLEAN					
			x	Reserved	1	BOOLEAN					1 = Unit1
					1						2 = Unit2
	0x201C	8220		The parallel UPS unique number of the operated							3 = Unit3
48221						UINT16			Х	Х	4 = Unit4
48222	0x201D	8221		Setting for which parallel UPSs are present in the system. Each UPS can be selected as present or not	1						
40222	032010	0221		present.		1			х	х	
		_	0	uint_1		BOOLEAN					1=Present
				uint_2		BOOLEAN					1=Present
			2	uint 3 uint 4		BOOLEAN BOOLEAN			l		1=Present 1=Present
				Reserved		DOULEAIN					
										L	
48223	0x201E	8222		The selected number of redundant UPSs in the	1	L					N+0 = 0x01
40223			0	parallel system. N+0		ENUM			Х	х	N+1 = 0x02 1=N+0
				N+0							1=N+1
			Ĺ			L				L	

	Scale											
							30	ale				
Modicon Standard	Absolute Starting											
Register Number	Register Address,											
	(Hexa-decimal)	Register Address,	,				Multiply	Divide				
		(Decimal)			Length #		Reading	Reading	NMC Modbus	User Modbus		
			Bit	Data Point	registers	Data Type	By:	By:	TCP	RTU	Valid Response	
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