

List of mailing addresses Input register, function code (Hex) : 04

Address Register	Enter the registers		Format	Units	The first address of the register	
	Data	Length (bytes)			High bytes	Low bytes
30001	L1 phase voltage	4	Float	V	00	00
30003	L2 phase voltage	4	Float	V	00	02
30005	L3 phase voltage	4	Float	V	00	04
30007	L1 current	4	Float	A	00	06
30009	L2 current	4	Float	A	00	08
30011	L3 current	4	Float	A	00	0A
30013	L1 active power	4	Float	In	00	0C
30015	L2 active power	4	Float	In	00	0E
30017	L3 active power	4	Float	In	00	10
30019	L1 apparent power	4	Float	VA	00	12
30021	L2 apparent power	4	Float	VA	00	14
30023	L3 apparent power	4	Float	VA	00	16
30025	L1 reactive power	4	Float	VAR	00	18
30027	L2 reactive power	4	Float	VAR	00	1A
30029	L3 reactive power	4	Float	VAR	00	1C
30031	L1 power factor	4	Float	None	00	1E
30033	L2 power factor	4	Float	None	00	20
30035	L3 power factor	4	Float	None	00	22
30037	L1 voltage VA current angle	4	Float	Degrees	00	24
30039	L2 voltage VA current angle	4	Float	Degrees	00	26
30041	L3 voltage VA current angle	4	Float	Degrees	00	28
30043	Three-phase phase voltage average	4	Float	V	00	2A
30047	Three-phase current average	4	Float	A	00	2E
30049	Three-phase current VA	4	Float	A	00	30
30053	Total active power	4	Float	W	00	34
30057	Total apparent power	4	Float	VA	00	38
30061	Total reactive power	4	Float	VAR	00	3C
30063	Total power factor	4	Float	None	00	3E
30067	Total voltage VA current angle	4	Float	Degrees	00	42
30071	frequency	4	Float	Hz	00	46
30073	Import active Energy	4	Float	kWh	00	48
30075	Export active Energy	4	Float	kWh	00	4A
30077	Forward reactive Energy	4	Float	kVArh	00	4C
30079	Export reactive Energy	4	Float	kVArh	00	4E
30081	Apparent Energy	4	Float	kVAh	00	50
30083	Ampere-hour	4	Float	Ah	00	52
30085	The current total active power demand	4	Float	W	00	54
30087	The maximum demand for total active power	4	Float	W	00	56

30089	Forward active power demand	4	Float	W	00	58
30091	The maximum demand for forward active power	4	Float	W	00	5A
30093	Export active power demand	4	Float	W	00	5C
30095	Export the maximum active power demand	4	Float	W	00	5E
30101	Current total apparent power demand	4	Float	W	00	64
30103	The current total apparent power is the maximum demand	4	Float	W	00	66
30105	The current neutral current demand	4	Float	Amps	00	68
30107	The maximum demand for neutral current	4	Float	Amps	00	6A
30109	Total reactive power required	4	Float	VAR	00	6C
30111	The maximum demand for total reactive power	4	Float	VAR	00	6E
30113	L1 displacement power factor	4	Float	None	00	70
30115	L2 displacement power factor	4	Float	None	00	72
30117	L3 displacement power factor	4	Float	None	00	74
30119	Total displacement power factor	4	Float	None	00	76
30161	Three-phase voltage phase sequence (Import sequence = 1, Export sequence = 2, lack phase = 3)	4	Float	None	00	A0
30163	Three-phase current phase sequence (Import sequence = 1, Export sequence = 2, lack phase = 3)	4	Float	None	00	A2
30165	L1 voltage crest factor	4	Float	None	00	A4
30167	L2 voltage crest factor	4	Float	None	00	A6
30169	L3 voltage crest factor	4	Float	None	00	A8
30183	L1 K coefficient	4	Float	None	00	B6
30185	L2 K coefficient	4	Float	None	00	B8
30187	L3 K coefficient	4	Float	None	00	BA
30193	Total load characteristics: 1.resistive, 2. Sensibility, 3 capacitance.	4	Float	None	00	C0
30195	L1 Load Characteristics:(1.)resistive, 2Sensibility, 3 capacitance).	4	Float	None	00	C2
30197	L2 Load Characteristics:(1.)resistive, 2Sensibility, 3 capacitance).	4	Float	None	00	C4
30199	L3 Load Characteristics:(1.) resistive, 2 Sensibility, 3 capacitance).	4	Float	None	00	C6
30201	L1-2-line voltage	4	Float	V	00	C8
30203	L2-3-line voltage	4	Float	V	00	CA
30205	L3-1 line voltage	4	Float	V	00	CC
30207	Three-phase line voltage average	4	Float	V	00	CE
30225	Neutral current	4	Float	A	00	E0
30235	L1 -N voltage total harmonic content	4	Float	%	00	EA
30237	L2 -N voltage total harmonic content	4	Float	%	00	EC
30239	L3 -N voltage total harmonic content	4	Float	%	00	EE

30241	The total harmonic content of the L1 current	4	Float	%	00	F0
30243	The total harmonic content of L2 current	4	Float	%	00	F2
30245	The total harmonic content of the L3 current	4	Float	%	00	F4
30249	The average value of the total harmonic content of the three-phase phase voltage	4	Float	%	00	F8
30251	The average value of the total harmonic content of the three-phase current	4	Float	%	00	FA
30259	Current L1 current demand	4	Float	A	01	02
30261	Current L2 current demand	4	Float	A	01	04
30263	Current L3 current demand	4	Float	A	01	06
30265	L1 maximum current demand	4	Float	A	01	08
30267	L2 maximum current demand	4	Float	A	01	0A
30269	L3 maximum current demand	4	Float	A	01	0C
30101	Current total apparent power demand	4	Float	VA	00	64
30103	The current total apparent power is the maximum demand	4	Float	VA	00	66
30105	The current neutral current demand	4	Float	Amps	00	68
30107	The maximum demand for neutral current	4	Float	Amps	00	6A
30109	Total reactive power required	4	Float	VAR	00	6C
30111	The maximum demand for total reactive power	4	Float	VAR	00	6E
30113	L1 displacement power factor	4	Float	None	00	70
30115	L2 displacement power factor	4	Float	None	00	72
30117	L3 displacement power factor	4	Float	None	00	74
30119	Total displacement power factor	4	Float	None	00	76
30161	Three-phase voltage phase sequence (Import sequence = 1, Export sequence = 2, lack phase = 3)	4	Float	None	00	A0
30163	Three-phase current phase sequence (Import sequence = 1, Export sequence = 2, lack phase = 3)	4	Float	None	00	A2
30165	L1 voltage crest factor	4	Float	None	00	A4
30167	L2 voltage crest factor	4	Float	None	00	A6
30169	L3 voltage crest factor	4	Float	None	00	A8
30183	L1 K coefficient	4	Float	None	00	B6
30185	L2 K coefficient	4	Float	None	00	B8
30187	L3 K coefficient	4	Float	None	00	BA
30193	Total load characteristics: (1.)resistive, 2Sensibility, 3 capacitance).	4	Float	None	00	C0

30195	L1 Load Characteristics:(1.)resistive, 2Sensibility, 3 capacitance).	4	Float	None	00	C2
30197	L2 Load Characteristics:(1.)resistive, 2Sensibility, 3 capacitance).	4	Float	None	00	C4
30199	L3 Load Characteristics:(1.) resistive, 2Sensibility, 3 capacitance).	4	Float	None	00	C6
30201	L1-2-line voltage	4	Float	V	00	C8
30203	L2-3-line voltage	4	Float	V	00	CA
30205	L3-1 line voltage	4	Float	V	00	CC
30207	Three-phase line voltage average	4	Float	V	00	CE
30225	Neutral current	4	Float	A	00	E0
30235	L1 -N voltage total harmonic content	4	Float	%	00	EA
30237	L2 -N voltage total harmonic content	4	Float	%	00	EC
30239	L3 -N voltage total harmonic content	4	Float	%	00	EE
30241	The total harmonic content of the L1 current	4	Float	%	00	F0
30243	The total harmonic content of L2 current	4	Float	%	00	F2
30245	The total harmonic content of the L3 current	4	Float	%	00	F4
30249	The average value of the total harmonic content of the three-phase phase voltage	4	Float	%	00	F8
30251	The average value of the total harmonic content of the three-phase current	4	Float	%	00	FA
30259	Current L1 current demand	4	Float	A	01	
30261	Current L2 current demand	4	Float	A	01	
30263	Current L3 current demand	4	Float	A	01	
30265	L1 maximum current demand	4	Float	A	01	08
30267	L2 maximum current demand	4	Float	A	01	0A
30269	L3 maximum current demand	4	Float	A	01	0C
30335	L1-2-line voltage total harmonic content	4	Float	%	01	4E
30337	L2-3-line voltage total harmonic content	4	Float	%	01	50
30339	L3-1 line voltage total harmonic content	4	Float	%	01	52
30341	The average value of the total harmonic content of the three-phase line voltage	4	Float	%	01	54
30343	Total active energy	4	Float	kWh	01	56
30345	Total reactive energy	4	Float	kVarh	01	58
30347	L1 forward active energy	4	Float	kWh	01	5A
30349	L2 forward active energy	4	Float	kWh	01	5C
30351	L3 forward active energy	4	Float	kWh	01	5E
30353	L1 reverses active energy	4	Float	kWh	01	60
30355	L2 Export active energy	4	Float	kWh	01	62
30357	L3 reverses active energy	4	Float	kWh	01	64

30359	L1 always has active energy	4	Float	kWh	01	66
30361	L2 always has active energy power	4	Float	kWh	01	68
30363	L3 always has active energy r	4	Float	kWh	01	6A
30365	L1 forward reactive energy	4	Float	kVArh	01	6C
30367	L2 forward reactive energy	4	Float	kVArh	01	6E
30369	L3 forward reactive energy	4	Float	kVArh	00	6E
30371	L1 Export reactive energy	4	Float	kVArh	00	70
30373	L2 Export reactive energy	4	Float	kVArh	00	72
30375	L3 reverses reactive energy	4	Float	kVArh	00	74
30377	L1 total reactive energy	4	Float	kVArh	00	76
30379	L2 total reactive energy	4	Float	kVArh	00	A0
30381	L3 total reactive energy	4	Float	kVArh	00	A2
30403	The 2-63rd harmonic content of the L1 phase voltage	248	Float	%	00	A4
30527	The 2nd-63rd harmonic content of the L2 phase voltage	248	Float	%	00	A6
30651	The 2nd-63rd harmonic content of the L3 phase voltage	248	Float	%	00	A8
30775	The 2nd-63rd harmonic content of the L1 current	248	Float	%	00	B6
30899	The 2nd-63rd harmonic content of the L2 current	248	Float	%	00	B8
31023	The 2nd-63rd harmonic content of the L3 current	248	Float	%	00	BA
31147	L1 voltage total harmonics	4	Float	%	00	C0
31149	L2 voltage total harmonics	4	Float	%	00	C2
31151	L3 voltage total harmonics	4	Float	%	00	C4
31153	L1 current total harmonics	4	Float	%	00	C6
31155	L2 current total harmonics	4	Float	%	00	C8
31157	L3 current total harmonics	4	Float	%	00	CA
32649	Total active power maximum	4	Float	In	00	CC
32651	Total reactive power maximum	4	Float	VAR	00	CE
32653	Total apparent power maximum	4	Float	VA	00	E0
32655	The maximum active power of the L1 phase	4	Float	W	00	EA
32657	L2 phase active power maximum	4	Float	W	00	EC
32659	L3 phase active power maximum	4	Float	W	00	EE
32661	L1 phase reactive power maximum	4	Float	VAR	00	F0
32663	L2 phase reactive power maximum	4	Float	VAR	00	F2
32665	L3 phase reactive power maximum	4	Float	VAR	00	F4
32667	L1 phase is at the maximum power value	4	Float	VA	00	F8
32669	L2 phase apparent at power maximum	4	Float	VA	00	FA
32671	L3 phase is at the maximum power value	4	Float	VA	01	02
32673	L1 current maximum	4	Float	A	01	04

32675	L2 current maximum	4	Float	A	01	06
32677	L3 current maximum	4	Float	A	01	08
32679	The maximum value of the Current neutral line	4	Float	A	01	0A
32681	Total current maximum	4	Float	A	01	0C
32683	L1-N phase voltage maximum	4	Float	V	01	4E
32685	L2-N phase voltage maximum	4	Float	V	01	50
32687	L3-N phase voltage maximum	4	Float	V	01	52
32689	L1-2 line voltage maximum	4	Float	V	01	54
32691	L2-3 line voltage maximum	4	Float	V	01	56
32693	L3-1 line voltage maximum	4	Float	V	01	58
32695	The minimum value of total active power	4	Float	W	01	5A
32697	The minimum value of Total reactive power	4	Float	VAR	01	5C
32699	Total apparent power minimum	4	Float	VA	01	5E
32701	L1 minimum active power	4	Float	W	01	60
32703	L2minimum active power	4	Float	W	01	62
32705	L3minimum active power	4	Float	W	01	64
32707	L1 minimum reactive power	4	Float	VAR	01	66
32709	L2minimum reactive power	4	Float	VAR	01	68
32711	L3reactive power minimum	4	Float	VAR	01	6A
32713	L1 apparent power minimum	4	Float	VA	01	6C
32715	L2 apparent power minimum	4	Float	VA	01	6E
32717	L3 apparent power minimum	4	Float	VA	01	70
32719	L1 current minimum	4	Float	A	01	72
32721	L2 current minimum	4	Float	A	01	74
32723	L3 current minimum	4	Float	A	01	76
32725	The minimum value of the neutral current line	4	Float	A	01	78
32727	The minimum total current	4	Float	A	01	7A
32729	L1-N Minimum phase voltage	4	Float	V	01	7C
32731	L2-N Minimum phase voltage	4	Float	V	01	92
32733	L3-N Minimum phase voltage	4	Float	V	02	0E
32735	L1-2-line voltage minimum	4	Float	V	02	8A
32737	L2-3 line voltage minimum	4	Float	V	03	06
32739	L3-1 line voltage minimum	4	Float	V	03	82
32763	Total power factor maximum	4	Float	None	03	FE
32765	L1 power factor maximum	4	Float	None	04	7A
32767	L2 power factor maximum	4	Float	None	04	7C
32769	L3 power factor maximum	4	Float	None	04	7E
32771	L1 voltage total harmonic maximum	4	Float	%	04	80
32773	L2 voltage total harmonic maximum	4	Float	%	04	82
32775	L3 voltage total harmonic maximum	4	Float	%	04	84
32777	L1 current total harmonic maximum	4	Float	%	0A	58
32779	L2 current total harmonic maximum	4	Float	%	0A	5A
32781	L3 current total harmonic maximum	4	Float	%	0A	5C

32783	The minimum value of the total power factor	4	Float	None	0A	5E
32785	L1 power factor minimum	4	Float	None	0A	60
32787	L2 power factor minimum	4	Float	None	0A	62
32789	L3 power factor minimum	4	Float	None	0A	64
32791	L1 voltage total harmonic minimum	4	Float	%	0A	66
32793	L2 voltage total harmonic minimum	4	Float	%	0A	68
32795	L3 voltage total harmonic minimum	4	Float	%	0A	6A
32797	L1 current total harmonic minimum	4	Float	%	0A	6C
32799	L2 current total harmonic minimum	4	Float	%	0A	6E
32801	L3 current total harmonic min	4	Float	%	0A	70
34877	Rate 1: Total active energy	4	Float	kWh	0A	72
34879	Rate 2: Total active energy	4	Float	kWh	0A	74
34881	Rate 3: Total active energy	4	Float	kWh	0A	76
34883	Rate 4 Total Active energy	4	Float	kWh	0A	78
34885	Rate 1 Import active energy	4	Float	kWh	0A	7A
34887	Rate 2 Forward active energy	4	Float	kWh	0A	7C
34889	Rate 3: Forward active energy	4	Float	kWh	0A	7E
34891	Rate 4 Forward active energy	4	Float	kWh	0A	80
34893	Rate 1: Export active power	4	Float	kWh	0A	82
34895	Rate 2 reverse active power	4	Float	kWh	0A	84
34897	Rate 3 Reverse Active Watt-Hours	4	Float	kWh	0A	86
34899	Rate 4 Reverse Active Watt-Hours	4	Float	kWh	0A	88
34901	Rate 1: Total reactive energy	4	Float	kWh	0A	8A
34903	Rate 2: Total reactive energy	4	Float	kWh	0A	8C
34905	Rate 3: Total reactive energy	4	Float	kWh	0A	8E
34907	Rate 4: Total reactive energy	4	Float	kWh	0A	90
34909	Rate 1: Forward reactive energy	4	Float	kWh	0A	92
34911	Rate 2 Forward Reactive Energy Degree	4	Float	kWh	0A	94
34913	Rate 3: Forward reactive power	4	Float	kWh	0A	96
34915	Rate 4 Forward Reactive Electricity	4	Float	kWh	0A	98
34917	Rate 1 Reverse Reactive Energy Degree	4	Float	kWh	0A	9A
34919	Rate 2 reverse reactive power	4	Float	kWh	0A	9C
34921	Rate 3 reverse reactive power	4	Float	kWh	0A	9E
34923	Rate 4 Reverse Reactive Electricity	4	Float	kWh	0A	A0

Prompt:

- The power factor symbol indicates the direction of the current, the Import sign indicates the forward current, VA the negative sign indicates the Export current.
- The total active power demand is calculated as follows: forward reverse
- The total active/reactive energy is equal to forward + reverse
- The temperature range is 0-2000, which means -50-150°C. Calculate the temperature value: $(val - 500) * 0.1$. The temperature value returned by Modbus is uint16_t, VA the lower 11 bits are valid, so the temperature value is: $((val \& 0x07FF) - 500) * 0.1$.

Hold register, function code (Hex): 03 (read) / 10 (write).

Register address	parameter	The first address of the register		Feasible range	Mode
		High letters section	Low letters section		
40001	Demand time	00	00	The requirement to read the minute calculation first. When the demand time reaches the demand period demand The value is valid.Length:4bytes Data Type: Float	ro
40003	Demand cycle	00	02	Demand cycle time, unit: min, default: 60 min Configurable range: 0~60, 0 represents real-time update (1s update is required once.) Volume) Length:4bytes Data Type: Floating-point number	r/w
40005	Slip time	00	04	Default 1 point. Range: 1 ~ (Demand period -1). Length:4bytes Data Type: Floating-point number	r/w
40007	Demand Calculator style	00	06	Default: Slip calculation, Configurable range: 0 = How the slip is calculated 1 = How the interval is calculated Length :4-byte Data Format: Float	r/w
40011	Meter system module style	00	0A	Meter System Mode: DEFAULT: 3P4W Configurable range: 1 = 1P2W. 2 = 3P3W. 3 = 3P4W, 4 = 1P3W. 5 = 3P3W Balance load. 6 = 3P4W Balance load. Length:4bytes Data Type: Floating-point number Note: Access rights are required to set it up	r/w

40015	Access Permissions (Write password.) Obtaining permissions, Read the certificate of permission state)	00	0E	Read Operation: Obtain the status of the current access permission. 0= Access not obtained; 1= Access permissions have been obtained. Write operation: Write the correct password to obtain access permission. Length:4bytes Data Type: Floating-point number	r/w
40019	Communication check digits VA stop bits	00	12	Communication check digits VA stop bits: Default: 1-bit stop bit VA no check Configurable range: 0 = 1 stop bit VA no check 1 = 1 bit stop bit VA even check. 2 = 1 bit stop bit VA odd check 3 = 2-bit stop bit VA no check Length:4bytes Data Type: Floating-point number	r/w
40021	Meter mailing address	00	14	Meter mailing address: Default 1. Configurable range: 1~247 length: 4 bytes Data Type: Floating-point number	r/w
40025	password	0	18	Read operation: obtain the system password; Write operation: change the system password; Default: 1000 Length:4bytes Data Type: Floating-point number	r/w
40029	Newsletter baud rate	00	1C	Newsletter Baud Rate: 0 = 2400 baud. 1 = 4800 baud. 2 = 9600 baud, default. 3 = 19200 baud. 4 = 38400 baud Length:4bytes Data Type: Floating-point number	r/w
40047	PT1	00	2E	PT1 range: 100- 500000V, default: 230 Length:4bytes Data Type: Floating-point number Note: Access rights are required to set it up	r/w
40049	PT2	00	30	PT2 Range: 100- 480V, Default: 230 Length:4bytes Data Type: Floating-point number	r/w
40051	CT1	00	32	Note: Access rights are required to set it up CT1 Range: 1-9999A, Default: 5, Length:4bytes Data Type: Floating-point number Note: Access rights are required to set it up	r/w

40053	CT2	00	34	CT2Range: 1A or 5A, Default: 5A Length: 4 byte Data Format: Float Note: Access rights are required to set it up	r/w
40057	The current is set in reverse (Used when the transformer is reversed)	00	38	0 = L1 Frd, L2 Frd, L3 Frd 1 = L1 Rev, L2 Frd, L3 Frd 2 = L1 Frd, L2 Rev, L3 Frd 3 = L1 Rev, L2 Rev, L3 Frd 4 = L1 Frd, L2 Frd, L3 Rev 5 = L1 Rev, L2 Frd, L3 Rev 6 = L1 Frd, L2 Rev, L3 Rev 7=L1Rev, L2Rev, L3Rev Defaultis0 Length: 4 bytes Data Type: Floating-point number Note: Access rights are required to set it up	r/w
40059	LCD display rotation time	00	3A	The default is 5 seconds Configurable range: 1~255 seconds Length:4bytes Data Type: Floating-point number	r/w
40061	Backlight lights up the time	00	3C	Default is 60, points Therangeis0~121,0representsthebacklightconstant, VA121representsthebacklightlong VA dark Length: 4 bytes Data Type: Floating-point number	r/w
40513	DO-1 output mode	02	00	DO-1 output mode 00 00 = level; 00 01= pulse Length: 2 bytes Data Type: Hex	r/w
40514	DO-2 output mode	02	01	DO-2 output mode 00 00 = level; 00 01= pulse Length: 2 bytes Data Type: Hex	r/w
40521	DO-1 pulse output width	02	08	DO-1 Pulse output time width (1000ms: 50 ~ 3000) Length:2bytes Data Type: Unsigned integer 16-bit	r/w
40522	DO-2 pulse output is wide degree	02	09	DO-2 Pulse output time width (1000ms: 50 ~ 3000) Length:2bytes Data Type: Unsigned integer 16-bit	r/w
40769	DI input anti-resist Jitter filter Time	03	00	DI filtering time attempt(0ms: 0~255) , The default is 100ms Length:2bytes Data Type: Unsigned integer 16-bit	r/w

40770	DI-1 counter	03	01	DI-1 counter Length:4bytes Data Type: Unsigned integer 32-bit Write 0 to the register, which is clear, write other values to the register except 0, Not responding	r/w
40772	DI-2 counter	03	03	DI-2 counter Length:4bytes Data Type: Unsigned integer 32-bit Write 0 to the register, which is clear, write other values register except 0, Not responding	
40774	DI-3 counter	03	05	DI-3 counter Length:4bytes Data Type: Unsigned integer 32-bit Write 0 to the register, which is clear, write other values register except 0, Not responding	r/w
40776	DI-4 counter	03	07	DI-4 counter Length:4bytes Data Type: Unsigned integer 32-bit Write 0 to the register, which is clear, write other values register except 0, Not responding	r/w
41025	DO-1 Alarm Parameters(1)	04	00	DO-1 alarm parameters Range: 0~29, VA 255; Default: 255 = Length without associated parameters : 2 bytes Data Type: Unsigned integer 16-bit	r/w
41026	DO-1 action delay	04	01	DO-1 action delay, unit: ms Range:0~9999; Default: 200ms Length:2bytes Data Type: Unsigned integer 16-bit	r/w
41027	DO-1 Closure High Value(2)	04	02	High value length of DO-1 closure: 4 bytes Data Type: Floating-point number	r/w
41029	The high value of DO-1 disconnection (2).	04	04	DO-1 Broken high-value length: 4 byte Data Type: Floating-point number	r/w
41031	DO-1 Low value disconnected (2)	04	06	DO-1 Broken low value length: 4 byte Data Type: Floating-point number	r/w
41033	DO-1 Closed low value (2)	04	08	DO-1 Closed low value length : 4 byte Data Type: Floating-point number	r/w

41035	DO-2 Alarm Parameters(1)	04	0A	DO-2 alarm parameters Range: 0~29, VA 255; Default: 255 = No associated parameter Length:2bytes Data Type: Unsigned integer 16-bit	r/w
41036	DO-2 action delay	04	0B	DO-2 action delay in ms Range:0~9999; Default: 200ms Length:2bytes Data Type: Unsigned integer 16-bit	r/w
41037	The high value of DO-2 closure (2).	04	0C	DO-2 Closed high-value length: 4 byte Data Type: Floating-point number	r/w
41039	The high value of DO-2 disconnection (2).	04	0E	DO-2 Broken high-value length: 4 byte Data Type: Floating-point number	r/w
41041	DO-2 Low value disconnected (2)	04	10	DO-2 Broken low value length: 4 byte Data Type: Floating-point number	r/w
41043	DO-2 Closed low value (2)	04	12	DO-2 Closed low value length: 4 byte Data Type: Floating-point number	r/w
41105	DO-1 state	04	50	DO-1 status 0 = Disconnect (HO 或 LO) 1 = HC (closed high value) 2 = LC (closed low value) Length:2bytes Data Type: Unsigned integer 16-bit	ro
41106	DO-2 state	04	51	DO-2 status 0 = Broken 1 = HC (closed high value) 2 = LC (closed low value) Length:2bytes Data Type: Unsigned integer 16-bit	ro
41281	SOE-01 (3) Event logging	05	00	SOE-01 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41285	SOE-02 (3) Event logging	05	04	SOE-02 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro

41289	SOE-03 (3) Event logging	05	08	SOE-03 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41293	SOE-04 (3) Event logging	05	0C	SOE-04 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41297	SOE-05 (3) Event logging	05	10	SOE-05 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41301	SOE-06(3) Event logging	05	14	SOE-06 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41305	SOE-07 (3) Event logging	05	18	SOE-07 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41309	SOE-08 (3) Event logging	05	1C	SOE-08 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41313	SOE-09 (3) Event logging	05	20	SOE-09 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41317	SOE-10 (3) Event logging	05	24	SOE-10 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41321	SOE-11 (3) Event logging	05	28	SOE-11 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro

41325	SOE-12 (3) Event logging	05	2C	SOE-12 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41329	SOE-13 (3) Event logging	05	30	SOE-13 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41333	SOE-14 (3) Event logging	05	34	SOE-14 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41337	SOE-15 (3) Event logging	05	38	SOE-15 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41341	SOE-16 (3) Event logging	05	3C	SOE-16 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Seconds Length: 8 bytes Data Type: BCD	ro
41345	SOE-17 (3) Event logging	05	40	SOE-17 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41349	SOE-18 (3) Event logging	05	44	SOE-18 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41353	SOE-19 (3) Event logging	05	48	SOE-19 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41357	SOE-20 (3) Event logging	05	4C	SOE-20 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro

41361	SOE-21 (3) Event logging	05	50	SOE-21 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41365	SOE-22 (3) Event logging	05	54	SOE-22 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41369	SOE-23 (3) Event logging	05	58	SOE-23 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41373	SOE-24 (3) Event logging	05	5C	SOE-24 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41377	SOE-25 (3) Event logging	05	60	SOE-25 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41381	SOE-26 (3) Event logging	05	64	SOE-26 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41385	SOE-27 (3) Event logging	05	68	SOE-27 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41389	SOE-28 (3) Event logging	05	6C	SOE-28 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes Data Type: BCD	ro
41393	SOE-29 (3) Event logging	05	70	SOE-29 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second	ro

				Length: 8 bytes Data Type: BCD	
41397	SOE-30 (3) Event logging	05	74	SOE-30 Event Log Information; The form is as follows: Type - Event Reason - Year - Month - Day - Hour - Minute - Second Length: 8 bytes	ro
461441	Time	F0	00	Data Type: BCD Second-minute-hour-week-day-month-year-20 Length: 8 bytes Data Type: BCD	r/w
461445	Running time	F0	04	Day-hour-minute, Day = 2 bytes; time = 1 byte; Minutes = 1 byte	r/w
				Length: 4 bytes Data type: BCD For example: 04 23 21 57 indicated Runtime = 423 days + 21 hours + 57 minutes Write 00 00 00 00 00 to reset the run time	
461457	Reset historical data	F0	10	00 00= Reset demand information 00 03 = Reset battery information 00 04 = Reset the maximum VA minimum values 00 05 = Reset SOE records 00 06 = Reset DI Counter Length:2bytes Data Type: Hex	r/w
461697	Meter information	F1	00	Meter information: model VA version number Length:16bytes Data type: AscII(Character ASCII)	ro
463233	Rates	F7	00	Rate code-minute-hour Rate code: 01, 02, 03, 04, 05, 06, 07, 08 min: 00-59 Hours: 00-23 Length:36 bytes Data type: BCD	r/w
463793	Continuous uptime	F9	30	Meter duration : 4 bytes Data Type: Floating-point number	r/w

Hint:

Table-1 Alarm Parameters

serial number	Alarm parameters	Number	Alarm parameters	Number	Alarm parameters
0	L1-N phase voltage	10	L3 current	20	Total reactive power of the system
1	L2-N phase voltage	11	Average line current	21	L1 apparent power
2	L3-N phase voltage	12	Neutral current	22	L2 apparent power
3	Average phase voltage	13	L1 active power	23	L3 apparent power
4	L1-2-line voltage	14	L2 active power	24	The total apparent power of the system
5	L2-3-line voltage	15	L3 active power	25	L1 power factor
6	L3-1 line voltage	16	Total system power	26	L2 power factor

7	Average line voltage	17	L1 reactive power	27	L3 power factor
8	L1 current	18	L2 reactive power	28	Total system power factor
9	L2 current	19	L3 reactive power	29	Grid frequency

2. Pay attention to the highest VA lowest values of DO: HC>HO >LO >LC

3. SOE information form: type - event cause (status) - year - month - day - hour - minute -Second; Type: 0~67 VA99 (4

forms-2).

Event Reason: 0 = No Affiliation; 1 VA 2 indicate the cause of the event. 1 = HC alarm triggered; 2 = LC alarm trigger year:

Year of the event. For example: 2017, year=17;

Month: The month in which the event occurred;

Day: The date of the event;

Time: The time period during which the event occurred;

Minutes: The minute segment in which the event occurred;

Second: The second period in which the event occurred;

Table-2 Event Record Information

serial number	Description of the event record	serial number	Description of the event record	serial number	Description of the event record
0	L1 voltage alarm	14	L2 active power alarm	28	Total power factor alarm
1	L2 voltage alarm	15	L3 active power alarm	29	Frequency alarm
2	L3 voltage alarm	16	Total active power alarm	60	Power on the power supply
3	Average phase voltage alarm	17	L1 reactive power alarm	61	The power supply is de-energized
4	L1-2 voltage alarm	18	L2 reactive power alarm	62	CT2 changes
5	L2-3 voltage alarm	19	L3 reactive power alarm	63	CT1 changes
6	L3-1 voltage alarm	20	Total reactive power alarm	64	PT2 changes
7	L-L Current alarm	21	L1 apparent power alarm	65	PT1 changes
8	L1 current alarm	22	L2 apparent power alarm	66	The battery level resets

9	L2 current alarm	23	L3 apparent power alarm	67	Demand resets
10	L3 current alarm	24	Total apparent power alarm	99	No associated events
11	Average current alarm	25	L1 power factor alarm		
12	Neutral current alarm	26	L2 Power factor alarm		
13	L1 alarm active power	27	L3 Power Alarm factor		

Function code 02 is used to read the input status

Register address	serial number	parameter	The first address of the register		Scope of feasibility	Mode
			High bytes	Low bytes		
10001	1	DI-1 state	00	00	DI1 state, 1=ON, 0=OFF length: 1 bit Data type: binary	ro
10002	2	DI-2 state	00	01	DI2 state, 1=ON, 0=OFF length: 1 bit Data type: binary	ro
10003	3	DI-3 state	00	02	DI3 state, 1=ON, 0=OFF length: 1 bit Data type: binary	ro
10004	4	DI-4 state	00	03	DI4 state, 1=ON, 0=OFF length: 1 bit Data type: binary	ro

Function code 01 reads the DO status

Register address	serial number	parameter	The first address of the register (Hex)		Scope of feasibility	mode
			High bytes	Low bytes		
00001	1	DO-1 status	00	00	DO-1 status, 1=ON, 0=OFF length : 1 bit Data Type: Binary	ro
00002	2	DO-2 status	00	01	DO-2 status, 1=ON, 0=OFF length: 1 bit Data Type: Binary	ro

Function code 05 controls the DO status

Serial number	parameter	Register start address		Scope of feasibility	Mode
		High bytes	Low bytes		
1	Control DO-1	00	00	0xFF00=ON, 0x0000=OFF Length: 2 bytes Data type: Hex	w
2	Control DO- 2	00	01	0xFF00=ON, 0x0000=OFF Length: 2 bytes Data type: Hex	w

illustrate

1. Read the input register

Example: Read "Total active power".

Send: 01 04 01 56 00 02 90 27

thereinto

01 = Modbus address of the meter

04 = Function code

01 = The high byte of the register start address

56 = the low byte of the register start address

00 = the high byte of the number of registers

02 = the low byte of the number of registers

90 = CRC Low byte of checksum

27 = CRC High byte of checksum return: 01 04

04 43 66 33 34 1B 38

thereinto

01 = Modbus address of the meter

04 = Function code

04 = Number of bytes of data returned

43 = data, (high bytes of high words)

66 = data, (high word low byte)

33 = data, (high bytes of low words)

34 = data, (low bytes of low words)

1B = CRC Low byte of checksum

38 = CRC High byte of checksum

Explanation: 43 66 33 34(Hex) = 230.2 (Floating point)

2. Read hold registers

Example: Read "Pulse 1 Output Width" send: 01

03 00 0C 00 02 04 08 thereinto

01 = Modbus address of the meter

03 = Function code

00 = the high byte of the register start address

0C = the low byte of the register start address

00 = the high byte of the number of registers

02 = the low byte of the number of registers

04 = CRC Low byte of checksum

08 = CRC High byte of checksum return: 01

03 04 42 C8 00 00 6F B5

thereinto

01 = Modbus address of the meter

03 = Function code

04 = Number of bytes of data returned

42 = data, (high bytes of high words)

C8 = data, (high word low byte)

00 = data, (high byte of low word)
00 = data, (low bytes of low words)
6F = CRC Low byte of checksum
B5 = CRC High byte of checksum explain: 42 C8 00 00
(Hex) = 100 (Floating point)

3. Write hold registers

Example: Set the Pulse Constant of Pulse 1 = 100 imp/kWh send: 01 10 00 16 00 02 04 3F 80 00 00 7F 75 thereinto

- 01 = Modbus address of the meter
- 10 = function code
- 00 = the high byte of the register start address
- 16 = the low byte of the register's start address
- 00 = the high byte of the number of registers
- 02 = the low byte of the number of registers
- 04 = The number of bytes in which the data is written
- 3F = data, (high bytes of high words)
- 80 = data, (high word low byte)
- 00 = data, (high byte of low word)
- 00 = data, (low bytes of low words)
- 7F = CRC Low byte of checksum
- 75 = CRC High byte of checksum explain: 3F 60 00 00 (Hex) = 1 (Floating point), According to the definition of registers, 1 represents 100 imp/kWh return: 01 10 00 16 00 02 A0 0C thereinto

- 01 = Modbus address of the meter
- 10 = function code
- 00 = the high byte of the register start address
- 16 = the low byte of the register's start address
- 00 = the high byte of the number of registers
- 02 = the low byte of the number of registers
- A0 = CRC Low byte of checksum
- 0C = CRC High byte of checksum

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