

# CPM-12D

Multifunction Power Meter (DIN rail)

Manual



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# CPM-12D Manual

## 1. Product Overview

### Description

CPM-12D din rail mounting power meter with high accuracy measurement for single phase and three-phase system.

Measuring all basic parameters ; V, I, P, Q, kWh, kVarh etc..

Standard with RS485 Modbus RTU communication port, front LCD display with buttons for programming.

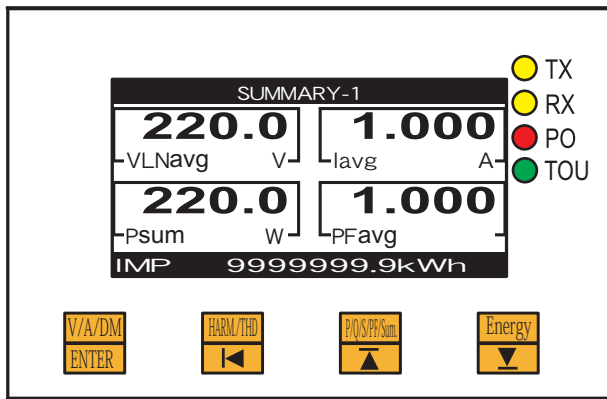
Auto wiring change (Note) via software

CE and FCC approved

Note: Auto wiring change have certain condition limit, please refer to operation manual for further details.

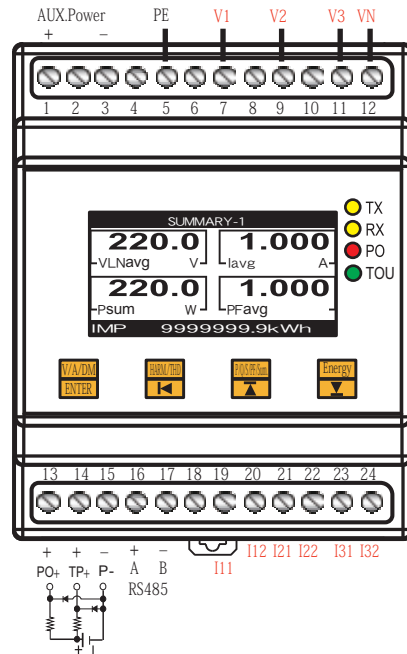
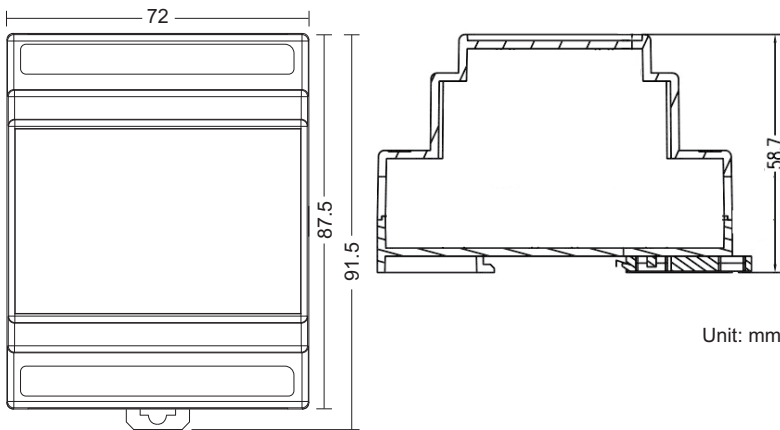
## 2. Specifications

### Panel Description

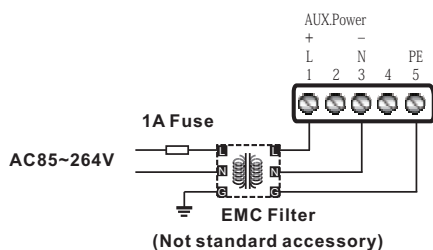


- Enter / Quickly index: Voltage / Current
- Shift / Quickly index: THD
- Up / Quickly index: Power parameters
- Down / Quickly index: Energy parameters

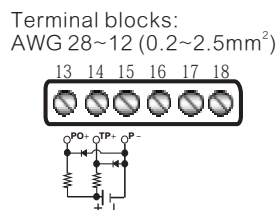
### Dimensions & Installation



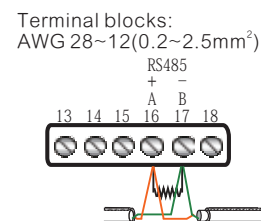
### AUX Power



### Pulse Output



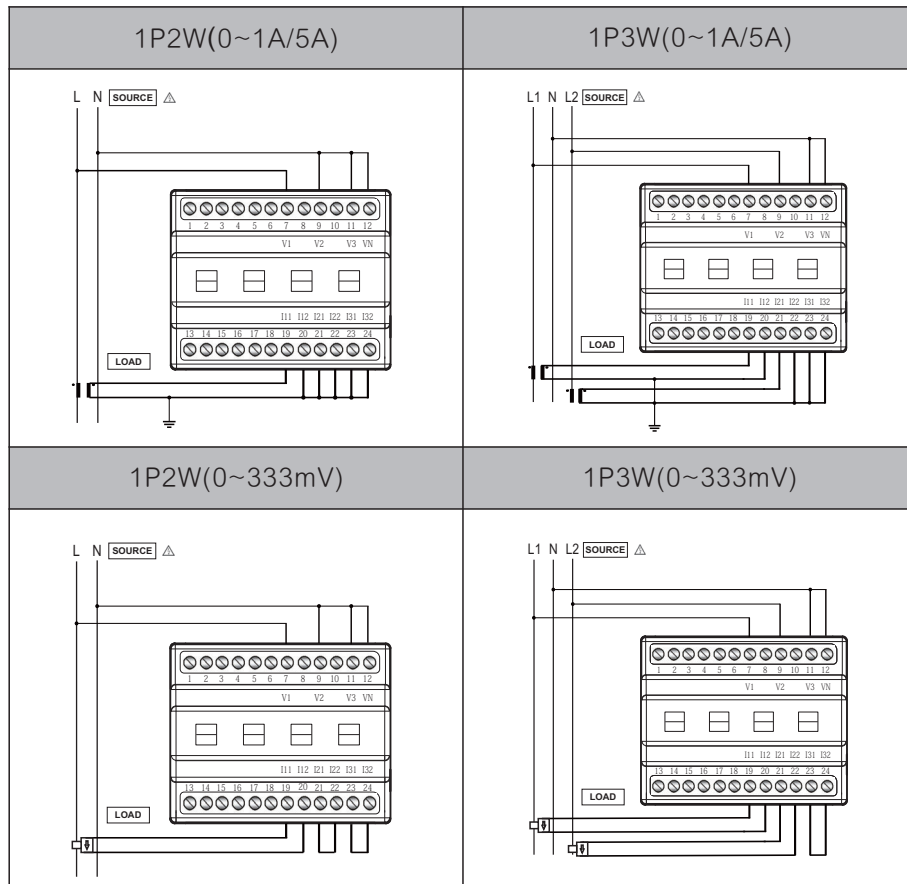
### RS485 Communication port



Max. Distance: 1200M  
Terminate Resistance  
suggested :120Ω/0.5W  
(Not standard accessory)

### 3. Wiring Instruction

## Voltage and current wiring (CT secondary side distinguishes 1A/5A and 333mV)



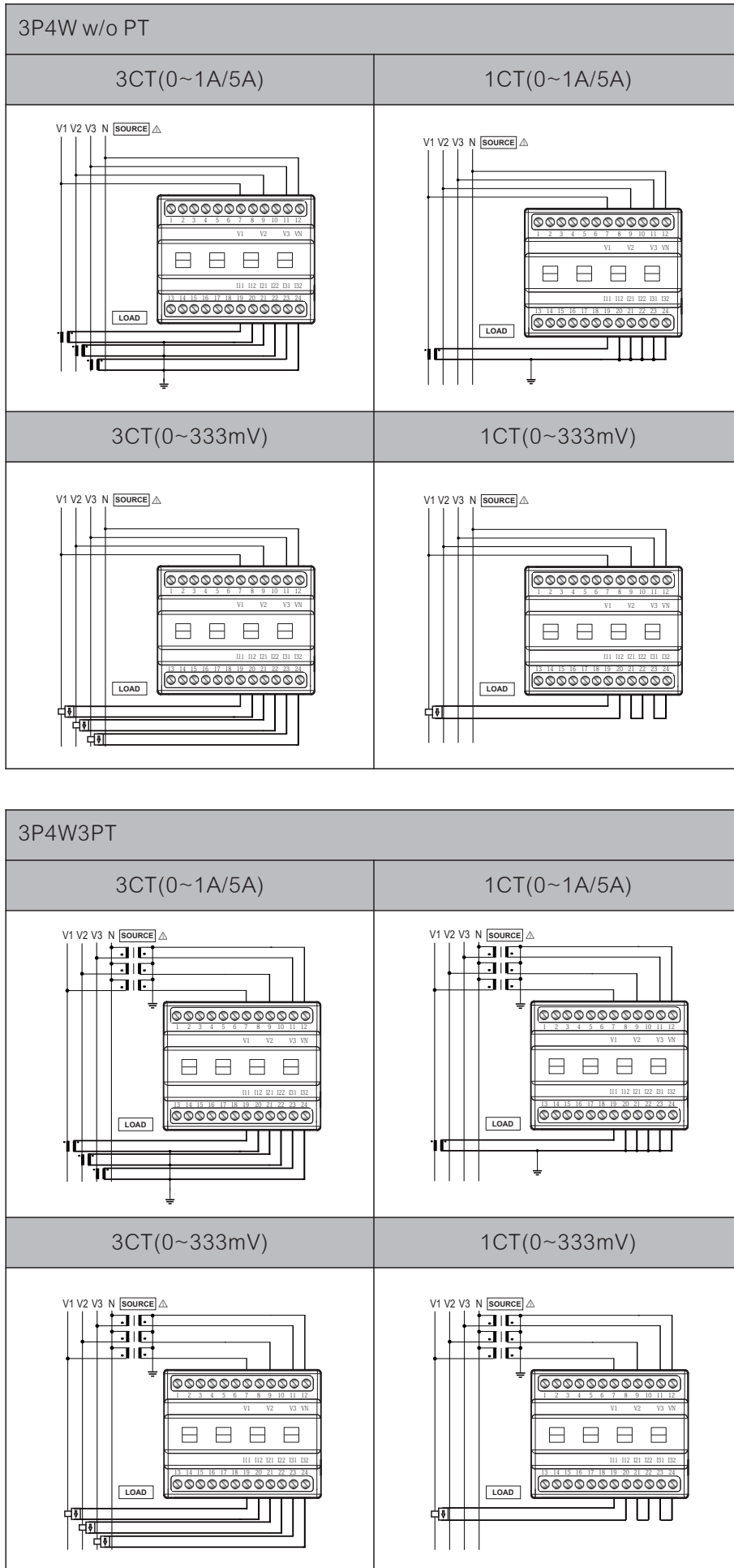
# Voltage and current wiring

3P3W w/o PT		
3CT(0~1A/5A)	2CT(0~1A/5A)	1CT(0~1A/5A)
<p>Wiring diagram for 3CT(0~1A/5A) showing three current transformers connected to three phase lines (V1, V2, V3) and a neutral line (VN). The load is connected to the secondary terminals of the CTs.</p>	<p>Wiring diagram for 2CT(0~1A/5A) showing two current transformers connected to two phase lines (V1, V2) and a neutral line (VN). The load is connected to the secondary terminals of the CTs.</p>	<p>Wiring diagram for 1CT(0~1A/5A) showing one current transformer connected to one phase line (V1) and a neutral line (VN). The load is connected to the secondary terminals of the CT.</p>
3CT(0~333mV)	2CT(0~333mV)	1CT(0~333mV)
<p>Wiring diagram for 3CT(0~333mV) showing three current transformers connected to three phase lines (V1, V2, V3) and a neutral line (VN). The load is connected to the secondary terminals of the CTs.</p>	<p>Wiring diagram for 2CT(0~333mV) showing two current transformers connected to two phase lines (V1, V2) and a neutral line (VN). The load is connected to the secondary terminals of the CTs.</p>	<p>Wiring diagram for 1CT(0~333mV) showing one current transformer connected to one phase line (V1) and a neutral line (VN). The load is connected to the secondary terminals of the CT.</p>
3CT(RC)	2CT(RC)	1CT(RC)
<p>Wiring diagram for 3CT(RC) showing three current transformers connected to three phase lines (V1, V2, V3) and a neutral line (VN). The load is connected to the secondary terminals of the CTs.</p>	<p>Wiring diagram for 2CT(RC) showing two current transformers connected to two phase lines (V1, V2) and a neutral line (VN). The load is connected to the secondary terminals of the CTs.</p>	<p>Wiring diagram for 1CT(RC) showing one current transformer connected to one phase line (V1) and a neutral line (VN). The load is connected to the secondary terminals of the CT.</p>

# Voltage and current wiring

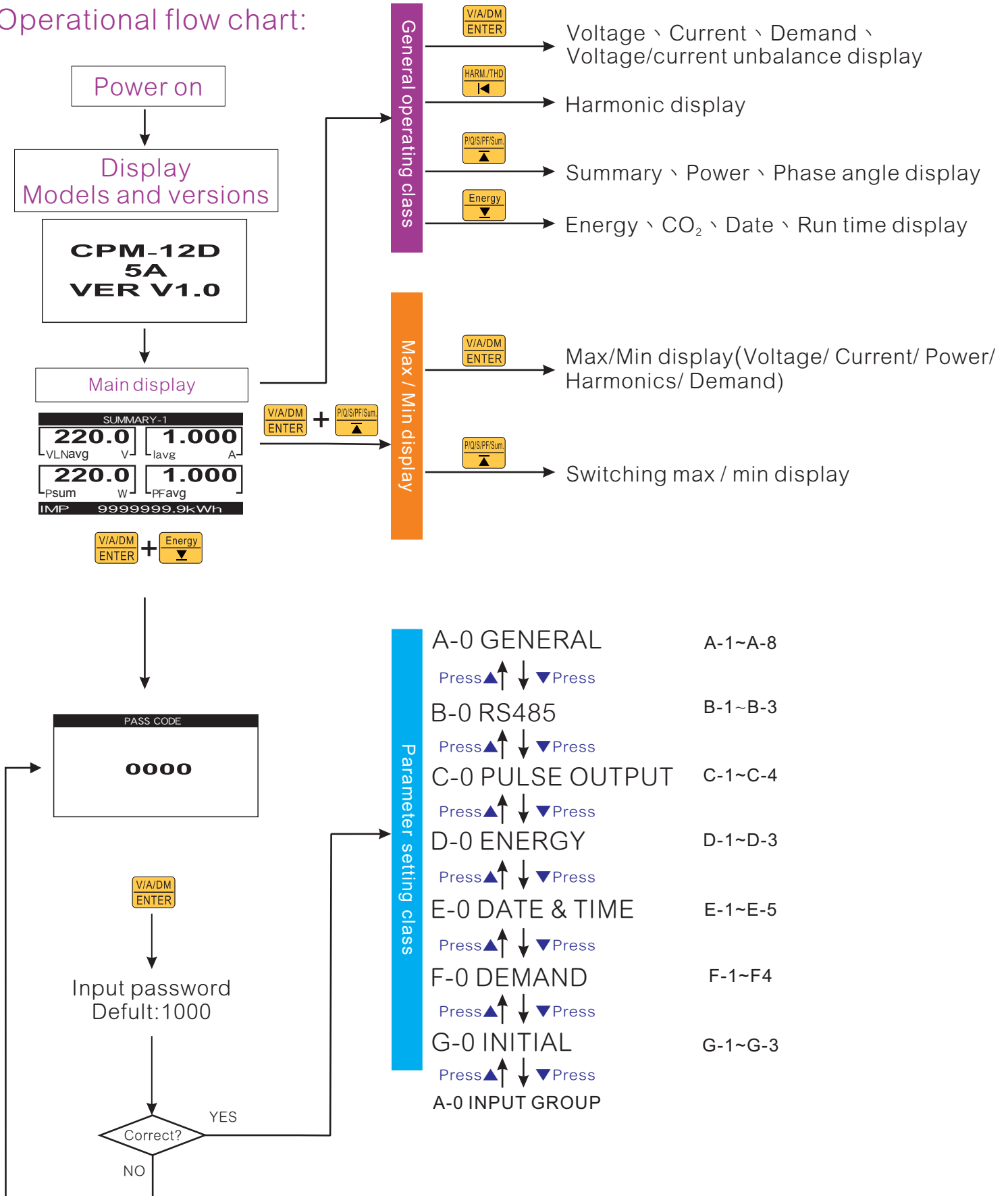
3P3W2PT		
3CT(0~1A/5A)	2CT(0~1A/5A)	1CT(0~1A/5A)
<p>Wiring diagram for 3CT(0~1A/5A). The meter has three current transformers (CTs) labeled V1, V2, and V3. The primary windings are connected to the three phase lines (V1, V2, V3) and the neutral line (VN). The secondary windings are connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>	<p>Wiring diagram for 2CT(0~1A/5A). The meter has two current transformers (CTs) labeled V1 and V2. The primary windings are connected to the two phase lines (V1, V2) and the neutral line (VN). The secondary windings are connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>	<p>Wiring diagram for 1CT(0~1A/5A). The meter has one current transformer (CT) labeled V1. The primary winding is connected to the phase line (V1) and the neutral line (VN). The secondary winding is connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>
3CT(0~333mV)	2CT(0~333mV)	1CT(0~333mV)
<p>Wiring diagram for 3CT(0~333mV). The meter has three current transformers (CTs) labeled V1, V2, and V3. The primary windings are connected to the three phase lines (V1, V2, V3) and the neutral line (VN). The secondary windings are connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>	<p>Wiring diagram for 2CT(0~333mV). The meter has two current transformers (CTs) labeled V1 and V2. The primary windings are connected to the two phase lines (V1, V2) and the neutral line (VN). The secondary windings are connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>	<p>Wiring diagram for 1CT(0~333mV). The meter has one current transformer (CT) labeled V1. The primary winding is connected to the phase line (V1) and the neutral line (VN). The secondary winding is connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>
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<p>Wiring diagram for 3CT(RC). The meter has three current transformers (CTs) labeled V1, V2, and V3. The primary windings are connected to the three phase lines (V1, V2, V3) and the neutral line (VN). The secondary windings are connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>	<p>Wiring diagram for 2CT(RC). The meter has two current transformers (CTs) labeled V1 and V2. The primary windings are connected to the two phase lines (V1, V2) and the neutral line (VN). The secondary windings are connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>	<p>Wiring diagram for 1CT(RC). The meter has one current transformer (CT) labeled V1. The primary winding is connected to the phase line (V1) and the neutral line (VN). The secondary winding is connected to terminals 1-12. A load is connected to the output terminals 13-24.</p>

# Voltage and current wiring



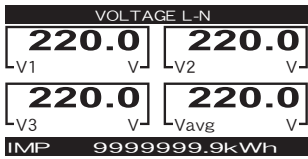
# 4.Operational Processes

## Operational flow chart:

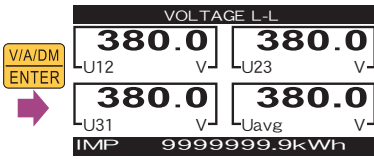


# Voltage/Current/Demand display

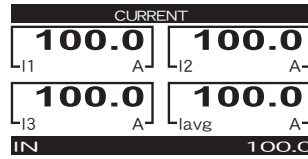
Press **V/A/DM**  
**ENTER**



Each phase voltage



Each line voltage



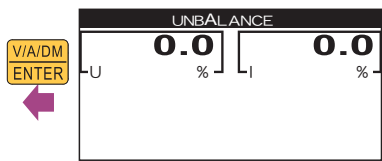
Current & Neutral current



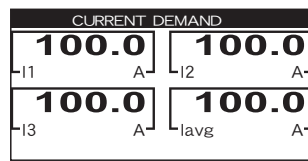
Current load bar graph

**V/A/DM**  
**ENTER**

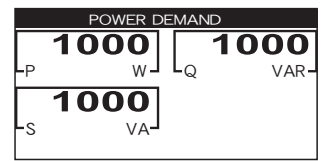
Back to each phase voltage



Voltage/  
Current unbalance



Current demand

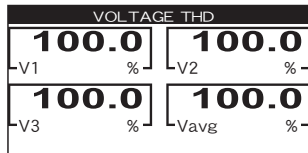


Power demand

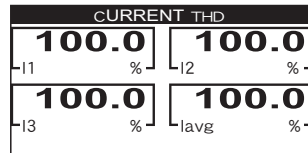
# Total harmonic display

Press **HARM./THD**

System type:  
1P2W/1P3W/  
3P4W1CT/  
3P4W3CT

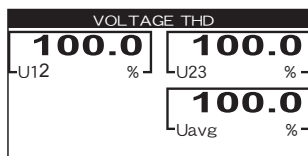


Each phase voltage harmonic & Average phase voltage harmonic

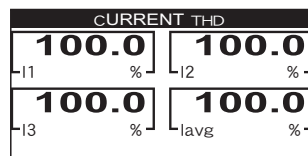


Current harmonic & Average current harmonic

System type:  
3P3W1CT/  
3P3W2CT/  
3P3W3CT/



Each line voltage harmonic & Average line voltage harmonic



Current harmonic & Average current harmonic

# Summary、Power、Phase angle display

Press 

SUMMARY-1			
220.0	1.000		
VLNavg	V	Iavg	A
220	1.000		
Psum	W	PFavg	
IMP	9999999.9kWh		

Summary-1  
Phase voltage/  
Current/ Active  
power/ PF/  
IMP active energy

SUMMARY-2			
220.0	1.000		
VLLavg	V	Iavg	A
220	1.000		
Psum	W	PFavg	
IMP	9999999.9kWh		

Summary-2  
Line voltage/  
Current/  
Active power/ PF/  
IMP active energy

SUMMARY-3			
100	100		
Psum	W	Qsum	VAR
100	100		
Ssum	VA	PFavg	
IMP	9999999.9kWh		

Summary-3  
Active power/  
Reactive power/  
Apparent power/ PF/  
IMP active energy

SUMMARY-4			
100	100		
Psum	W	Qsum	VAR
100	100		
Ssum	VA	Freg	Hz
IMP	9999999.9kWh		

Summary-4  
Active power/  
Reactive power/  
Apparent power/  
Frequency/  
IMP active energy

POWER FACTOR			
1.000	1.000		
PF1	PF2		
1.000	1.000		
PF3	PFavg		

Each phase power  
factor/  
Average power factor

APPARENT POWER			
100	100		
S1	VA	S2	VA
100	300		
S3	Ssum		
9999999.9kVAh			

Each phase  
apparent power/  
Apparent energy

REACTIVE POWER			
100	100		
Q1	VAR	Q2	VAR
100	300		
Q3	Qsum		
IMP 9999999.9kVARh			

Each phase reactive  
power/  
IMP reactive energy

ACTIVE POWER			
100	100		
P1	W	P2	W
100	300		
P3	Psum		
IMP 9999999.9kWh			

Each phase active  
power/  
IMP active energy

L-N VOLTAGE ANGLE			
0.0	120.0		
V1-V1	V2-V1		
240.0			
V3-V1			

Phase voltage angle  
V1-V1  
V2-V1  
V3-V1

L-L VOLTAGE ANGLE			
0.0	120.0		
V12-V12	V23-V12		
240.0			
V31-V12			

Line voltage angle  
V12-V12  
V23-V12  
V31-V12

CURRENT ANGLE			
360.0	360.0		
I1-V1	I2-V1		
360.0			
I3-V1			

Current phase angle  
I1-V1(V12)  
I2-V1(V12)  
I3-V1(V12)

Back to Summary-0

# Energy and Time display

Press 

ACTIVE ENERGY	
IMP	9999999.9 kWh
EXP	9999999.9 kWh
TOT	9999999.9 kWh
NET	9999999.9 kWh

IMP/ EXP/ Total active /  
Net active energy

REACTIVE ENERGY	
IMP	9999999.9 kVARh
EXP	9999999.9 kVARh
TOT	9999999.9 kVARh
NET	9999999.9 kVARh

IMP/ EXP/ Total  
reactive /  
Net reactive energy

APPARENT ENERGY	
TOT	9999999.9 kVAh

Total apparent  
energy

CO2 EMISSION	
999.999 kg	

CO<sub>2</sub>

Back to active energy

HOUR METERS	
OPR	999999.59 hh:mm
RUN	999999.59 hh:mm

Operation time/  
Running time(Time  
start at current of  
secondary side >1%)

DATE & TIME	
DATE	2017/01/01 YY/MM/DD
TIME	23:59:59 hh:mm:ss

Date and Time

# Max/Min display

Press +

MAX VOLTAGE L-N			
220.0	220.0		
-V1	V-	-V2	V-
220.0	220.0		
-V3	V	-Vavg	V-

Max phase voltage

MAX VOLTAGE L-L			
380.0	380.0		
-U12	V	-U23	V-
380.0	380.0		
-U31	V	-Uavg	V-
IMP 9999999.9kWh			

Max line voltage

MAX CURRENT			
100.0	100.0		
-I1	A-	-I2	A-
100.0	100.0		
-I3	A-	-Iavg	A-

Max current

MAX POWER			
100	100		
-P	W	-Q	VAR-
100	100		
-S	VA	-PFavg	

Max power



MIN VOLTAGE L-N			
200.0	200.0		
-V1	V	-V2	V-
200.0	200.0		
-V3	V	-Vavg	V-

Min phase voltage

MIN VOLTAGE L-L			
380.0	380.0		
-U12	V	-U23	V-
380.0	380.0		
-U31	V	-Uavg	V-
IMP 9999999.9kWh			

Min line voltage

MIN CURRENT			
100.0	100.0		
-I1	A-	-I2	A-
100.0	100.0		
-I3	A-	-Iavg	A-

Min current

MIN POWER			
100	100		
-P	W	-Q	VAR-
100	100		
-S	VA	-PFavg	

Min power



MAX POWER DEMAND			
1000	1000		
-P	W	-Q	VAR-
1000	1000		
-S	VA		

Max power demand

MAX THD OF CURRENT			
100.0	100.0		
-I1	%	-I2	%
100.0	100.0		
-I3	%	-Iavg	%

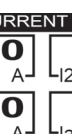
Max THD of current

MAX THD OF VOLTAGE			
100.0	100.0		
-V1	%	-V2	%
100.0	100.0		
-V3	%	-Vavg	%

Max THD of voltage

MAX FREQUENCY	
60.0	Hz
-Freq	

Max frequency



MIN POWER DEMAND			
10	10		
-P	W	-Q	VAR-
10	10		
-S	VA		

Min power demand

MIN THD OF CURRENT			
100.0	100.0		
-I1	%	-I2	%
100.0	100.0		
-I3	%	-Iavg	%

Min THD of current

MIN THD OF VOLTAGE			
100.0	100.0		
-V1	%	-V2	%
100.0	100.0		
-V3	%	-Vavg	%

Min THD of voltage

MIN FREQUENCY	
60.0	Hz
-Freq	

Min frequency

MAX CURRENT DEMAND			
100.0	100.0		
-I1	A-	-I2	A-
100.0	100.0		
-I3	A-	-Iavg	A-

Max current demand

Back to Max phase voltage

# System information inquiry

Press  + 

SYSTEM INFO

**BASIC PARAMETER**

RS485 PARAMETER

WIRING INFO

CO2 EMISSION

DEVICE INFO

TOU DATA

V/A/DM  
ENTER

HARM./THD

(Press 2 sec)

BASIC PARAMETER

SYSTEM: 3P4W3CT

PT/PRI: 500V

PT/SEC: 500V

CT/PRI: 5A

CT/SEC: 5A

ENERGY: 0.1 kWh

Basic parameter

SYSTEM INFO

RS485 PARAMETER

WIRING INFO

CO2 EMISSION

**DEVICE INFO**

TOU DATA

EVENT LOG

PIQ/SIPF/Sum

Energy

RS485 PARAMETER

ADDRESS: 001

BAUDRATE: 115200

PARITY: N.8.1

RS485 parameter

System information

PIQ/SIPF/Sum

Energy

WIRING INFO

V1	11
V2	12
V3	13

Wiring information

PIQ/SIPF/Sum

Energy

CO2 EMISSION

RATIO: 0.638kg

WEIGHT: 999.999kg

CO<sub>2</sub> emission

PIQ/SIPF/Sum

Energy

DEVICE INFO

MODEL: CPM-12D

VERSION: V1.2

OUTPUT:RS485+PO

Device information

PIQ/SIPF/Sum

Energy

TOU INFO	
LAST MONTH	
THIS MONTH	

Month selection

※THIS MONTH and LAST MONTH display in the same way



(Press 2 sec)

TOU LAST MONTH	
SHARP LOAD	
PEAK LOAD	
VALLEY LOAD	
NORMAL LOAD	
SUMMARY	
2017/01/01~ 2017/01/31	

Item selection

※PEAK、VALLEY、NORMAL、SUMMARY display content is the same as SHARP



(Press 2 sec)

TOU INFO-SHARP	
IMP	99999999.9 kWh
EXP	99999999.9 kWh
ACTIVE ENERGY	

Active energy



TOU INFO-SHARP	
IMP	99999999.9 kVARh
EXP	99999999.9 kVARh
REACTIVE ENERGY	

Reactive energy



TOU INFO-SHARP	
TOT	99999999.9 kVAh
APPARENT ENERGY	

Apparent energy



TOU INFO-SHARP			
P	W	Q	VAR
1000		1000	
S	VA		
1000			
MAX POWER DEMAND			

Max power demand



TOU INFO-SHARP			
I1	A	I2	A
100.0		100.0	
I3	A	Iavg	A
100.0		100.0	
MAX CURRENT DEMAND			

Max current demand



Back to active energy

EVENT LOG	
17/07/17 12:30:59	
17/07/16 15:45:51	
17/07/14 10:36:29	
17/07/10 22:27:38	
17/07/08 02:14:42	
17/07/05 23:08:00	





Sorting by time  
EVENT LOG has 16 records



EVENT LOG NO. 10	
CHANNEL:0	
OBJECT:Frequency	
STATUS:ALERT	
VALUE:0.00Hz	
DATA:2018/01/01	
TIME:00:00:00	
17/07/17 12:30:59	

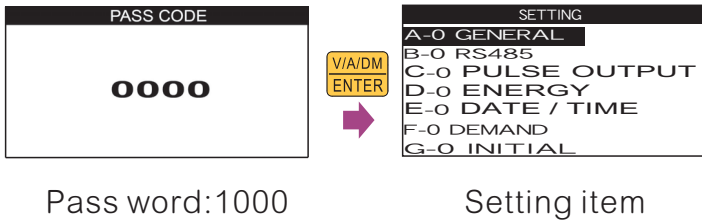
EVENT LOG NO. number  
According to the location number stored in the 485 table

# Key Description

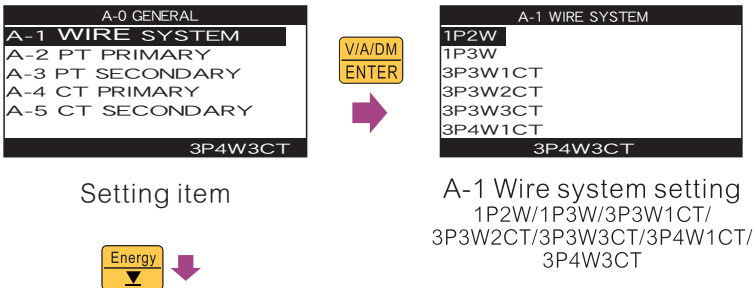
-  Move/Increase
-  Down/Decrease
-  Into setting or confirm setting and back to previous menu
-  Press 2 Sec back to previous menu or main display





## 5. Programming Setting Parameters setting

Press  + 







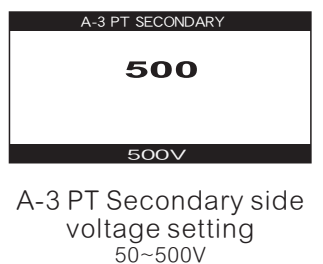
### A-0 General Setting







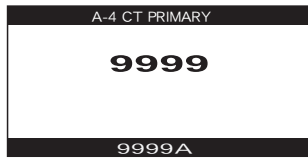
-  Move/Increase
-  Down/Decrease
-  Into setting or confirm setting and back to previous menu
-  Press 2 Sec back to previous menu



-  Move/Increase
-  Down/Decrease
-  Confirm setting and back to previous menu
-  Press 2 Sec back to previous menu



-  Move/Increase
-  Down/Decrease
-  Confirm setting and back to previous menu
-  Press 2 Sec back to previous menu



A-4 Current setting of CT primary side  
1~9999A



Increase



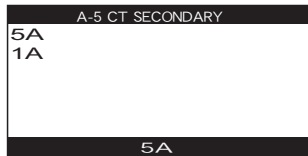
Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



A-5 Current setting of CT second side  
5A/1A

※This display is not available at 333mV



Move



Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



A-6 Password modify  
0000~9999



Increase



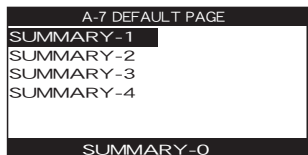
Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



A-7 Main display select  
SUMMARY1~4



Move



Down



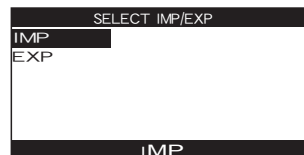
Confirm setting and back to previous menu



Press 2 Sec back to previous menu



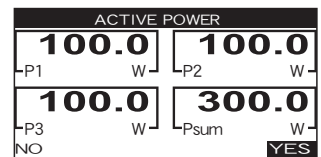
A-8 Wire change progress



Select system input is IMP/EXP



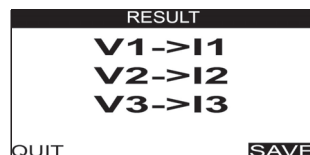
Wire change processing



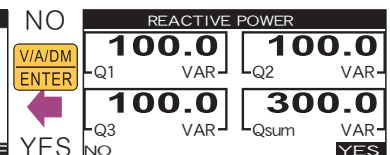
Confirm active power values:  
YES/NO



Wiring change failure  
Press Enter to QUIT



Wiring change complete:  
default / SAVE / QUIT



Confirm reactive power values:  
YES/NO

Auto wiring change condition limit:  
3P4W-3CT: VN must be correct and  $\theta < \pm 59^\circ$   
3P4W-1CT:  $\theta < \pm 59^\circ$   
3P3W-2CT: V2 must be correct and  $\theta < \pm 59^\circ$   
3P3W-3CT: V2 must be correct and  $\theta < \pm 59^\circ$   
1P3W: VN must be correct and  $\theta < \pm 59^\circ$   
1P2W:  $\theta < \pm 59^\circ$   
3P3W-1CT: N/A

## B-0 RS485 Setting



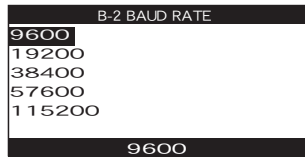
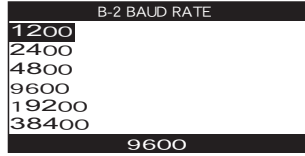
Setting item



B-1 Device address setting  
1~247



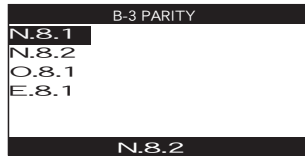
- Increase
- Decrease
- Confirm setting and back to previous menu
- Press 2 Sec back to previous menu



B-2 Baud rate setting  
1200/2400/4800/9600/19200/  
38400/57600/115200 bps



- Increase
- Decrease
- Confirm setting and back to previous menu
- Press 2 Sec back to previous menu

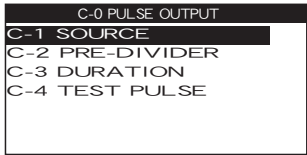


B-3 Parity check setting  
N.8.1/N.8.2/O.8.1/E.8.1

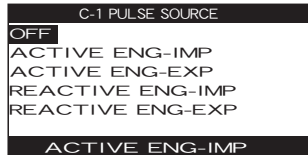


- Move
- Down
- Confirm setting and back to previous menu
- Press 2 Sec back to previous menu

# C-0 Pulse Output Setting



Setting item



C-1 Parameters setting of pulse output  
OFF/AE.IMP/AE.EXP/RE.IMP/RE.EXP



Move



Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



C-2 Divider of pulse output  
1~9999次



Increase



Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



C-3 Pulse width setting:  
0~5000(ms)



Increase



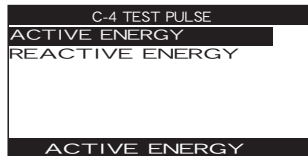
Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



C-4 Test pulse setting  
Active energy/Reactive energy



Move



Down

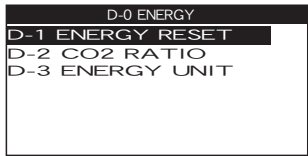


Confirm setting and back to previous menu

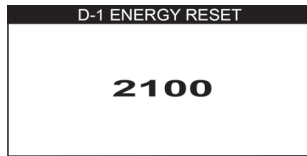


Press 2 Sec back to previous menu

# D-0 Energy Setting



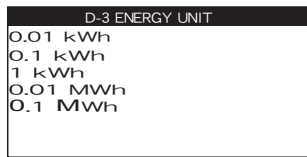
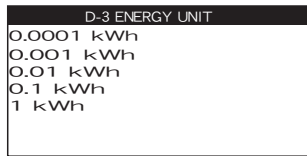
Setting item



D-1 Reset energy  
2100



D-2 Total CO<sub>2</sub> weight of  
energy  
00.000~60.000kg



D-3 Energy unit setting



Increase



Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



Increase



Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



Move



Down

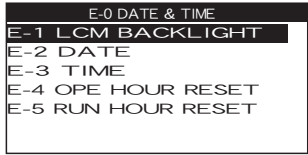


Confirm setting and back to previous menu



Press 2 Sec back to previous menu

## E-0 Date & Time Setting



Setting item



E-1 LCM backlight delay time setting  
0~15Min  
0 is always ON



Increase



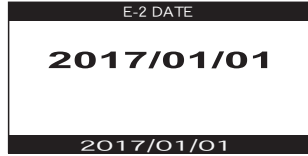
Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



E-2 Date setting



Increase



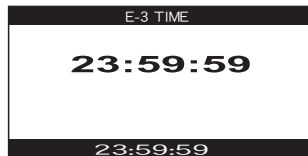
Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



E-3 Time setting



Increase



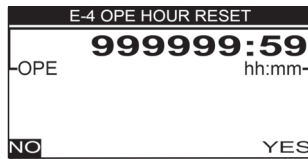
Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



E-4 Reset operation time  
NO/YES



Move



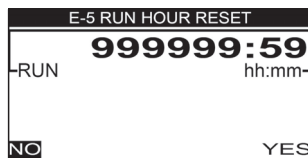
Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



E-5 Reset running time  
NO/YES



Move



Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu

# F-0 Demand Setting



Setting item



F-1 Calculation method:  
SLIDE/FIX



Move



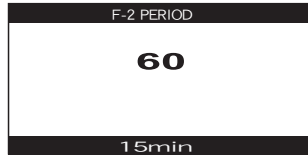
Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



F-2 Demand interval time  
setting:  
1~60Min



Increase



Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



F-3 Reset demand:  
DEMAND



Move



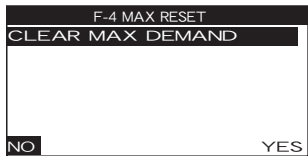
Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



F-4 Reset Maximum  
demand:  
MAX DEMAND



Move



Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu

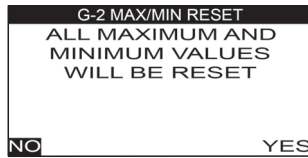
## G-0 Initial



Setting item



G-1 Meter reset  
After inputting 7170, it will reboot and return to default value, but the adjusted value will be retained.



G-2 Reset MAX/MIN value



G-3 Clear auto-wiring



Increase



Decrease



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



Move



Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu



Move



Down



Confirm setting and back to previous menu



Press 2 Sec back to previous menu

# 6.RS485 Communication Table

System setting ( Function code : 03h , 06h , 10h )

## Input group

Parameter	Address	Range	Description	Default	Property
WIRE	0000h	0~6	Metering system type 0: 1P2W 1: 1P3W 2: 3P3W1CT 3: 3P3W2CT 4: 3P3W3CT 5: 3P4W1CT 6: 3P4W3CT	6	R/W
PT PRI	0001h	100 ~ 1200000V	PT Primary side voltage(High Word)	500	R/W
	0002h		PT Primary side voltage(Low Word)		R/W
PT SEC	0003h	50~500V	PT Secondary side voltage	500	R/W
CT PRI	0004h	5~9999A (1~9999A)	CT Primary side current	5	R/W
PASS WORD	0005h	0000~9999	Password setting	1000	R/W
DISPLAY	0006h	0~3	Main summary display select 0: SUMMARY-1 1: SUMMARY-2 2: SUMMARY-3 3: SUMMARY-4	0	R/W
CT SEC	0007h	0~2	CT Secondary side current 0: 5A 1: 1A 2: 333mV(Only for reading, not set)	0	R/W
MAX-MIN Reset	0008h	0 or 55h	Reset all max/min values 0: NO 55h: YES	0	R/W
Data Config	0009h	0~3	High byte and low byte setting bit0: Floating data bit1: General data 0: HIGH WORD 1: LOW WORD	0	R/W

## RS485 communication setting

Parameter	Address	Range	Description	Default	Property
RS485 ADDR	002Ah	1~247	Device address setting	1	R/W
RS485 BAUD	002Bh	0~7	Baud rate 0: 1200 1: 2400 2: 4800 3: 9600 4: 19200 5: 38400 6: 57600 7: 115200 bps	3	R/W
RS485 PARI	002Ch	0~3	Parity Check 0: N.8.1 1: N.8.2 2: O.8.1 3: E.8.1	1	R/W

## Pulse output setting

Parameter	Address	Range	Description	Default	Property
PLS SLCT	0037h	0~4	Parameter setting of pulse output 0: OFF 1: AE.IMP 2: AE.EXP 3: RE.IMP 4: RE.EXP	1	R/W
PLS DIVE	0038h	1~9999	Divider of pulse output	1	R/W
PLS HIGH	0039h	0~5000 (mS)	Pulse width setting ; 0 is duty cycle 50%	0	R/W

## Energy setting

Parameter	Address	Range	Description	Default	Property
TOAL RST	0048h	0 or 55h	Reset Active, Reactive, Apparent energy and CO <sub>2</sub> values 0: NO 55h: YES	0	R/W
CO <sub>2</sub> RATE	004Ah	00.000~60.000kg	Rate setting of CO <sub>2</sub> weight per kWh	638	R/W
Energy Unit	004Bh	0~6	0: 0.0001kWh 1: 0.001kWh 2: 0.01kWh 3: 0.1kWh 4: 1kWh 5: 0.01MWh 6: 0.1MWh	3	R/W

## Time setting

Parameter	Address	Range	Description	Default	Property
BACK LIGH	004Eh	0~15Min	LCM backlight delay time setting ; 0 is always ON	1	R/W
Year	004Fh	2000~2099	Year	2017	R/W
Month	0050h	1~12	Month	1	R/W
Day	0051h	1~31	Day	1	R/W
Hour	0052h	0~23	Hour	0	R/W
Minute	0053h	0~59	Minute	0	R/W
Second	0054h	0~59	Second	0	R/W
OPER HOUR RST	0055h	0 or 55h	Reset operation time 0: NO 55h: YES	0	R/W
RUN HOUR RST	0056h	0 or 55h	Reset operation time 0: NO 55h: YES	0	R/W

## Demand setting

Parameter	Address	Range	Description	Default	Property
DEMD MODE	005Bh	0~1	Calculation method: 0: SLIDE 1: FIX	0	R/W
DEMD TIME	005Ch	1~60Min	Demand interval time setting	15	R/W
DEMD RST	005Dh	0 or 55h	Reset deman values 0: NO 55h: YES	0	R/W
MAX DEMD RST	005Eh	0 or 55h	Reset max demand values 0: NO 55h: YES	0	R/W

## Initialization setting

Parameter	Address	Range	Description	Default	Property
INIT	0062h	0000~9999	Initialization code:7170	7170	R/W

Event logging setting ( Code: 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
Event Log	0080h	0~1	Event logging function enable 0: OFF 1: ON	0	R/W
Event Log ch	0081h	0~65535	Bit0: 1st event logging~~Bit15: 16th event logging 0: OFF 1: ON	0	R/W
Event Log ch 1 Parameter SLCT	0082h	0~35	Parameter: 0: FREQ 1: U1 2: U2 3: U3 4: ULN.AVG 5: U12 6: U23 7: U31 8: ULL.AVG 9: I1 10: I2 11: I3 12: I.AVG 13: IN 14: P-1 15: P-2 16: P-3 17: P.SUM 18: Q-1 19: Q-2 20: Q-3 21: Q.SUM 22: S-1 23: S-2 24: S-3 25: S.SUM 26: Pf1 27: PF2 28: PF3 29: PF.AVG 30: P.DM 31: Q.DM 32: S.DM 33: I.AVG.DM 34: Uunbl 35: Iunbl	12	R/W
Event Log ch 1 Compare	0083h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 1 SP	0084h	According to parameter range	Set point (High Word)	1000	R/W
	0085h		Set point (Low Word)		
Event Log ch 1 delay time	0086h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 2 Parameter SLCT	0087h	0~35	Refer to ch1	12	R/W
Event Log ch 2 Compare	0088h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 2 SP	0089h	According to parameter range	Set point (High Word)	1000	R/W
	008Ah		Set point (Low Word)		
Event Log ch 2 delay time	008Bh	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 3 Parameter SLCT	008Ch	0~35	Refer to ch1	12	R/W
Event Log ch 3 Compare	008Dh	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 3 SP	008Eh	According to parameter range	Set point (High Word)	1000	R/W
	008Fh		Set point (Low Word)		
Event Log ch 3 delay time	0090h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 4 Parameter SLCT	0091h	0~35	Refer to ch1	12	R/W
Event Log ch 4 Compare	0092h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 4 SP	0093h	According to parameter range	Set point (High Word)	1000	R/W
	0094h		Set point (Low Word)		
Event Log ch 4 delay time	0095h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 5 Parameter SLCT	0096h	0~35	Refer to ch1	12	R/W
Event Log ch 5 Compare	0097h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 5 SP	0098h	According to parameter range	Set point (High Word)	1000	R/W
	0099h		Set point (Low Word)		
Event Log ch 5 delay time	009Ah	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 6 Parameter SLCT	009Bh	0~35	Refer to ch1	12	R/W
Event Log ch 6 Compare	009Ch	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 6 SP	009Dh	According to parameter range	Set point (High Word)	1000	R/W
	009Eh		Set point (Low Word)		
Event Log ch 6 delay time	009Fh	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 7 Parameter SLCT	00A0h	0~35	Refer to ch1	12	R/W
Event Log ch 7 Compare	00A1h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 7 SP	00A2h	According to parameter range	Set point (High Word)	1000	R/W
	00A3h		Set point (Low Word)		
Event Log ch 7 delay time	00A4h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 8 Parameter SLCT	00A5h	0~35	Refer to ch1	12	R/W
Event Log ch 8 Compare	00A6h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 8 SP	00A7h	According to parameter range	Set point (High Word)	1000	R/W
	00A8h		Set point (Low Word)		
Event Log ch 8 delay time	00A9h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 9 Parameter SLCT	00AAh	0~35	Refer to ch1	12	R/W
Event Log ch 9 Compare	00ABh	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W

Parameter	Address	Range	Description	Default	Property
Event Log ch 9 SP	00ACh	According to parameter range	Set point (High Word)	1000	R/W
	00ADh		Set point (Low Word)		
Event Log ch 9 delay time	00AEh	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 10 Parameter SLCT	00AFh	0~35	Refer to ch1	12	R/W
Event Log ch 10 Compare	00B0h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 10 SP	00B1h	According to parameter range	Set point (High Word)	1000	R/W
	00B2h		Set point (Low Word)		
Event Log ch 10 delay time	00B3h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 11 Parameter SLCT	00B4h	0~35	Refer to ch1	12	R/W
Event Log ch 11 Compare	00B5h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 11 SP	00B6h	According to parameter range	Set point (High Word)	1000	R/W
	00B7h		Set point (Low Word)		
Event Log ch 11 delay time	00B8h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 12 Parameter SLCT	00B9h	0~35	Refer to ch1	12	R/W
Event Log ch 12 Compare	00BAh	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 12 SP	00BBh	According to parameter range	Set point (High Word)	1000	R/W
	00BCh		Set point (Low Word)		
Event Log ch 12 delay time	00BDh	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 13 Parameter SLCT	00BEh	0~35	Refer to ch1	12	R/W
Event Log ch 13 Compare	00BFh	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 13 SP	00C0h	According to parameter range	Set point (High Word)	1000	R/W
	00C1h		Set point (Low Word)		
Event Log ch 13 delay time	00C2h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 14 Parameter SLCT	00C3h	0~35	Refer to ch1	12	R/W
Event Log ch 14 Compare	00C4h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 14 SP	00C5h	According to parameter range	Set point (High Word)	1000	R/W
	00C6h		Set point (Low Word)		
Event Log ch 14 delay time	00C7h	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 15 Parameter SLCT	00C8h	0~35	Refer to ch1	12	R/W
Event Log ch 15 Compare	00C9h	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 15 SP	00CAh	According to parameter range	Set point (High Word)	1000	R/W
	00CBh		Set point (Low Word)		
Event Log ch 15 delay time	00CCh	0~3000	Delay time (x10mS)	0	R/W
Event Log ch 16 Parameter SLCT	00CDh	0~35	Refer to ch1	12	R/W
Event Log ch 16 Compare	00CEh	0~2	0: more than(>) 1: equal(=) 2: less than(<)	0	R/W
Event Log ch 16 SP	00CFh	According to parameter range	Set point (High Word)	1000	R/W
	00D0h		Set point (Low Word)		
Event Log ch 16 delay time	00D1h	0~3000	Delay time (x10mS)	0	R/W
Even Log Clear	00D2h	0 or 55h	Clear all event logs 0: None 55h: Reset	0	R/W

# Metering parameters reading ( Code : 03h )

Parameter	Address	Range	Description	Default	Property
FREQ	0130h	45.00~65.00Hz	Frequency		R
U1	0131h	0.0 ~1200000.0V	Phase1 voltage (High Word)		R
	0132h		Phase1 voltage (Low Word)		R
U2	0133h	0.0 ~1200000.0V	Phase2 voltage (High Word)		R
	0134h		Phase2 voltage (Low Word)		R
U3	0135h	0.0 ~1200000.0V	Phase3 voltage (High Word)		R
	0136h		Phase3 voltage (Low Word)		R
ULN.AVG	0137h	0.0 ~1200000.0V	Average phase voltage (High Word)		R
	0138h		Average phase voltage (Low Word)		R
U12	0139h	0.0 ~1200000.0V	Phase1 line voltage (High Word)		R
	013Ah		Phase1 line voltage (Low Word)		R
U23	013Bh	0.0 ~1200000.0V	Phase2 line voltage (High Word)		R
	013Ch		Phase2 line voltage (Low Word)		R
U31	013Dh	0.0 ~1200000.0V	Phase3 line voltage (High Word)		R
	013Eh		Phase3 line voltage (Low Word)		R
ULL.AVG	013Fh	0.0 ~1200000.0V	Average line voltage (High Word)		R
	0140h		Average line voltage (Low Word)		R
I1	0141h	0.000~9999.000A	I1 current (High Word)		R
	0142h		I1 current (Low Word)		R
I2	0143h	0.000~9999.000A	I2 current (High Word)		R
	0144h		I2 current (Low Word)		R
I3	0145h	0.000~9999.000A	I3 current (High Word)		R
	0146h		I3 current (Low Word)		R
I.AVG	0147h	0.000~9999.000A	Average current (High Word)		R
	0148h		Average current (Low Word)		R
IN	0149h	0.000~9999.000A	Neutral current (High Word)		R
	014Ah		Neutral current (Low Word)		R
P-1	014Bh	-999999999~999999999W	Phase1 active power (High Word)		R
	014Ch		Phase1 active power (Low Word)		R
P-2	014Dh	-999999999~999999999W	Phase2 active power (High Word)		R
	014Eh		Phase2 active power (Low Word)		R
P-3	014Fh	-999999999~999999999W	Phase3 active power (High Word)		R
	0150h		Phase3 active power (Low Word)		R
P.SUM	0151h	-999999999~999999999W	Total active power (High Word)		R
	0152h		Total active power (Low Word)		R
Q-1	0153h	-999999999~999999999VAR	Phase1 reactive power (High Word)		R
	0154h		Phase1 reactive power (Low Word)		R
Q-2	0155h	-999999999~999999999VAR	Phase2 reactive power (High Word)		R
	0156h		Phase2 reactive power (Low Word)		R
Q-3	0157h	-999999999~999999999VAR	Phase3 reactive power (High Word)		R
	0158h		Phase3 reactive power (Low Word)		R
Q.SUM	0159h	-999999999~999999999VAR	Total reactive power (High Word)		R
	015Ah		Total reactive power (Low Word)		R
S-1	015Bh	0~999999999VA	Phase1 apparent power (High Word)		R
	015Ch		Phase1 apparent power (Low Word)		R
S-2	015Dh	0~999999999VA	Phase2 apparent power (High Word)		R
	015Eh		Phase2 apparent power (Low Word)		R
S-3	015Fh	0~999999999VA	Phase3 apparent power (High Word)		R
	0160h		Phase3 apparent power (Low Word)		R
S.SUM	0161h	0~999999999VA	Total apparent power (High Word)		R
	0162h		Total apparent power (Low Word)		R
PF1	0163h	-0.020~-/+1.000~0.020	Phase1 power factor		R
PF2	0164h	-0.020~-/+1.000~0.020	Phase2 power factor		R
PF3	0165h	-0.020~-/+1.000~0.020	Phase3 power factor		R
PF.AVG	0166h	-0.020~-/+1.000~0.020	Average Power Factor		R
Uunbl	0167h	0~300.0%	Voltage unbalance		R
Iunbl	0168h	0~300.0%	Current unbalance		R
Load Type	0169h	R: 82 L: 76 C: 67	R: Resistive, L: Inductive, C: Capacitive		R
P.DM.	016Ah	-999999999~999999999W	Total active power demand (High Word)		R
	016Bh		Total active power demand (Low Word)		R
Q.DM.	016Ch	-999999999~999999999VAR	Total reactive power demand (High Word)		R
	016Dh		Total reactive power demand (Low Word)		R
S.DM.	016Eh	0~999999999VA	Total apparent power demand (High Word)		R
	016Fh		Total apparent power demand (Low Word)		R
I1.DM.	0170h	0.000~9999.000A	I1 current demand (High Word)		R
	0171h		I1 current demand (Low Word)		R
I2.DM.	0172h	0.000~9999.000A	I2 current demand (High Word)		R
	0173h		I2 current demand (Low Word)		R
I3.DM.	0174h	0.000~9999.000A	I3 current demand (High Word)		R
	0175h		I3 current demand (Low Word)		R
I.AVG.DM.	0176h	0.000~9999.000A	Average current demand (High Word)		R
	0177h		Average current demand (Low Word)		R

Parameter	Address	Range	Description	Default	Property
kWh-IMP	0181h	0.0~9999999.9kWh	Import active energy (High Word)		R
	0182h		Import active energy (Low Word)		R
kWh-Exp	0183h	0.0~9999999.9kWh	Export active energy (High Word)		R
	0184h		Export active energy (Low Word)		R
kWh-Total	0185h	0.0~9999999.9kWh	Total active energy (High Word)		R
	0186h		Total active energy (Low Word)		R
kWh-Net	0187h	-999999.9~9999999.9kWh	Net active energy (High Word)		R
	0188h		Net active energy (Low Word)		R
kVARh-IMP	0189h	0.0~9999999.9kVARh	Import reactive energy (High Word)		R
	018Ah		Import reactive energy (Low Word)		R
kVARh-Exp	018Bh	0.0~9999999.9kVARh	Export reactive energy (High Word)		R
	018Ch		Export reactive energy (Low Word)		R
kVARh-Total	018Dh	0.0~9999999.9kVARh	Total reactive energy (High Word)		R
	018Eh		Total reactive energy (Low Word)		R
kVARh-Net	018Fh	-999999.9~9999999.9kVARh	Net reactive energy (High Word)		R
	0190h		Net reactive energy (Low Word)		R
kVAh-Total	0191h	0.0~9999999.9kVAh	Total apparent energy (High Word)		R
	0192h		Total apparent energy (Low Word)		R
Reserved	0193h		Reserved		R
Reserved	0194h		Reserved		R
CO <sub>2</sub>	0195h	0.000~99999.999kg	Total CO <sub>2</sub> weight of energy (High Word)		R
	0196h		Total CO <sub>2</sub> weight of energy (Low Word)		R
OPERATING HOUR	0198h	0~599999999Min	Operation time (High Word)		R
	0199h		Operation time (Low Word)		R
RUN HOUR	019Ah	0~599999999Min	Running time (High Word)		R
	019Bh		Running time (Low Word)		R

Parameter	Address	Range	Description	Default	Property
U1(U12).THD	029Fh	0.0~100.0%	U1(U12) total harmonic of voltage		R
U2(U23).THD	02A0h	0.0~100.0%	U2(U23) total harmonic of voltage		R
U3(U31).THD	02A1h	0.0~100.0%	U3(U31) total harmonic of voltage		R
UAVG.THd	02A2h	0.0~100.0%	Average total harmonic of voltage		R
I1.THd	02A3h	0.0~100.0%	I1 total harmonic of current		R
I2.THd	02A4h	0.0~100.0%	I2 total harmonic of current		R
I3.THd	02A5h	0.0~100.0%	I3 total harmonic of current		R
Iavg.THd	02A6h	0.0~100.0%	Average total harmonic of current		R

Max/Min values ( Code : 03h )

Parameter	Address	Range	Description	Default	Property	
U1.MAX	02A7h	0.0 ~ 1200000.0V	U1 Maximum phase voltage (High Word)		R	
	02A8h		U1 Maximum phase voltage (Low Word)		R	
Year	02A9h	2000~2099	Year		R	
Month	02AAh	1~12	Month		R	
Day	02ABh	1~31	Day		R	
Hour	02ACh	0~23	Hour		R	
Minute	02ADh	0~59	Minute		R	
Second	02AEh	0~59	Second		R	
U1.MIN	02AFh	0.0 ~ 1200000.0V	U1 Minimum phase voltage and time stamp		R	
	02B0h				R	
Year	02B1h	2000~2099			R	
Month	02B2h	1~12			R	
Day	02B3h	1~31			R	
Hour	02B4h	0~23			R	
Minute	02B5h	0~59			R	
Second	02B6h	0~59			R	
U2.MAX	02B7h	0.0 ~ 1200000.0V		U2 Maximum phase voltage and time stamp		R
	02B8h					R
Year	02B9h	2000~2099			R	
Month	02BAh	1~12			R	
Day	02BBh	1~31			R	
Hour	02BCh	0~23			R	
Minute	02BDh	0~59			R	
Second	02BEh	0~59			R	
U2.MIN	02BFh	0.0 ~ 1200000.0V	U2 Minimum phase voltage and time stamp			R
	02C0h					R
Year	02C1h	2000~2099			R	
Month	02C2h	1~12			R	
Day	02C3h	1~31			R	
Hour	02C4h	0~23			R	
Minute	02C5h	0~59			R	
Second	02C6h	0~59			R	
U3.MAX	02C7h	0.0 ~ 1200000.0V		U3 Maximum phase voltage and time stamp		R
	02C8h					R
Year	02C9h	2000~2099			R	
Month	02CAh	1~12			R	
Day	02CBh	1~31			R	
Hour	02CCh	0~23			R	
Minute	02CDh	0~59			R	
Second	02CEh	0~59			R	
U3.MIN	02CFh	0.0 ~ 1200000.0V	U3 Minimum phase voltage and time stamp			R
	02D0h					R
Year	02D1h	2000~2099			R	
Month	02D2h	1~12			R	
Day	02D3h	1~31			R	
Hour	02D4h	0~23			R	
Minute	02D5h	0~59			R	
Second	02D6h	0~59			R	
ULN.AVG.MAX	02D7h	0.0 ~ 1200000.0V		Maximum average phase voltage and time stamp		R
	02D8h					R
Year	02D9h	2000~2099			R	
Month	02DAh	1~12			R	
Day	02DBh	1~31			R	
Hour	02DCh	0~23			R	
Minute	02DDh	0~59			R	
Second	02DEh	0~59			R	
ULN.AVG.MIN	02DFh	0.0 ~ 1200000.0V	Minimum average phase voltage and time stamp			R
	02E0h					R
Year	02E1h	2000~2099			R	
Month	02E2h	1~12			R	
Day	02E3h	1~31			R	
Hour	02E4h	0~23			R	
Minute	02E5h	0~59			R	
Second	02E6h	0~59			R	

Parameter	Address	Range	Description	Default	Property	
U12.MAX	02E7h	0.0 ~ 1200000.0V	U12 Maximum line voltage and time stamp		R	
	02E8h				R	
Year	02E9h	2000~2099			R	
Month	02EAh	1~12			R	
Day	02EBh	1~31			R	
Hour	02ECh	0~23			R	
Minute	02EDh	0~59			R	
Second	02EEh	0~59			R	
U12.MIN	02EFh	0.0 ~ 1200000.0V		U12 Minimum line voltage and time stamp		R
	02F0h					R
Year	02F1h	2000~2099				R
Month	02F2h	1~12				R
Day	02F3h	1~31				R
Hour	02F4h	0~23				R
Minute	02F5h	0~59			R	
Second	02F6h	0~59			R	
U23.MAX	02F7h	0.0 ~ 1200000.0V	U23 Maximum line voltage and time stamp			R
	02F8h					R
Year	02F9h	2000~2099				R
Month	02FAh	1~12				R
Day	02FBh	1~31				R
Hour	02FCh	0~23				R
Minute	02FDh	0~59			R	
Second	02FEh	0~59			R	
U23.MIN	02FFh	0.0 ~ 1200000.0V		U23 Minimum line voltage and time stamp		R
	0300h					R
Year	0301h	2000~2099				R
Month	0302h	1~12				R
Day	0303h	1~31				R
Hour	0304h	0~23				R
Minute	0305h	0~59			R	
Second	0306h	0~59			R	
U31.MAX	0307h	0.0 ~ 1200000.0V	U31 Maximum line voltage and time stamp			R
	0308h					R
Year	0309h	2000~2099				R
Month	030Ah	1~12				R
Day	030Bh	1~31				R
Hour	030Ch	0~23				R
Minute	030Dh	0~59			R	
Second	030Eh	0~59			R	
U31.MIN	030Fh	0.0 ~ 1200000.0V		U31 Minimum line voltage and time stamp		R
	0310h					R
Year	0311h	2000~2099				R
Month	0312h	1~12				R
Day	0313h	1~31				R
Hour	0314h	0~23				R
Minute	0315h	0~59			R	
Second	0316h	0~59			R	
ULL.AVG.MAX	0317h	0.0 ~ 1200000.0V	Maximum average line voltage and time stamp			R
	0318h					R
Year	0319h	2000~2099				R
Month	031Ah	1~12				R
Day	031Bh	1~31				R
Hour	031Ch	0~23				R
Minute	031Dh	0~59			R	
Second	031Eh	0~59			R	
ULL.AVG.MIN	031Fh	0.0 ~ 1200000.0V		Minimum average line voltage and time stamp		R
	0320h					R
Year	0321h	2000~2099				R
Month	0322h	1~12				R
Day	0323h	1~31				R
Hour	0324h	0~23				R
Minute	0325h	0~59			R	
Second	0326h	0~59			R	

Parameter	Address	Range	Description	Default	Property		
I1.MAX	0327h	0.000~9999.000A	I1 maximum current and time stamp		R		
	0328h				R		
	Year			2000~2099		R	
	Month			032Ah	1~12		R
	Day			032Bh	1~31		R
	Hour			032Ch	0~23		R
	Minute			032Dh	0~59		R
	Second			032Eh	0~59		R
I1.MIN	032Fh	0.000~9999.000A	I1 minimum current and time stamp		R		
	0330h				R		
	Year			0331h	2000~2099		R
	Month			0332h	1~12		R
	Day			0333h	1~31		R
	Hour			0334h	0~23		R
	Minute			0335h	0~59		R
	Second			0336h	0~59		R
I2.MAX	0337h	0.000~9999.000A	I2 maximum current and time stamp		R		
	0338h				R		
	Year			0339h	2000~2099		R
	Month			033Ah	1~12		R
	Day			033Bh	1~31		R
	Hour			033Ch	0~23		R
	Minute			033Dh	0~59		R
	Second			033Eh	0~59		R
I2.MIN	033Fh	0.000~9999.000A	I2 minimum current and time stamp		R		
	0340h				R		
	Year			0341h	2000~2099		R
	Month			0342h	1~12		R
	Day			0343h	1~31		R
	Hour			0344h	0~23		R
	Minute			0345h	0~59		R
	Second			0346h	0~59		R
I3.MAX	0347h	0.000~9999.000A	I3 maximum current and time stamp		R		
	0348h				R		
	Year			0349h	2000~2099		R
	Month			034Ah	1~12		R
	Day			034Bh	1~31		R
	Hour			034Ch	0~23		R
	Minute			034Dh	0~59		R
	Second			034Eh	0~59		R
I3.MIN	034Fh	0.000~9999.000A	I3 minimum current and time stamp		R		
	0350h				R		
	Year			0351h	2000~2099		R
	Month			0352h	1~12		R
	Day			0353h	1~31		R
	Hour			0354h	0~23		R
	Minute			0355h	0~59		R
	Second			0356h	0~59		R
I.AVG.MAX	0357h	0.000~9999.000A	Maximum average current and time stamp		R		
	0358h				R		
	Year			0359h	2000~2099		R
	Month			035Ah	1~12		R
	Day			035Bh	1~31		R
	Hour			035Ch	0~23		R
	Minute			035Dh	0~59		R
	Second			035Eh	0~59		R
I.AVG.MIN	035Fh	0.000~9999.000A	Minimum average current and time stamp		R		
	0360h				R		
	Year			0361h	2000~2099		R
	Month			0362h	1~12		R
	Day			0363h	1~31		R
	Hour			0364h	0~23		R
	Minute			0365h	0~59		R
	Second			0366h	0~59		R

Parameter	Address	Range	Description	Default	Property	
P-1.MAX	0367h	-999999999~999999999W	P-1 maximum active power and time stamp		R	
	0368h				R	
Year	0369h	2000~2099			R	
Month	036Ah	1~12			R	
Day	036Bh	1~31			R	
Hour	036Ch	0~23			R	
Minute	036Dh	0~59			R	
Second	036Eh	0~59			R	
P-1.MIN	036Fh	-999999999~999999999W		P-1 minimum active power and time stamp		R
	0370h					R
Year	0371h	2000~2099			R	
Month	0372h	1~12			R	
Day	0373h	1~31			R	
Hour	0374h	0~23			R	
Minute	0375h	0~59			R	
Second	0376h	0~59			R	
P-2.MAX	0377h	-999999999~999999999W	P-2 maximum active power and time stamp			R
	0378h					R
Year	0379h	2000~2099			R	
Month	037Ah	1~12			R	
Day	037Bh	1~31			R	
Hour	037Ch	0~23			R	
Minute	037Dh	0~59			R	
Second	037Eh	0~59			R	
P-2.MIN	037Fh	-999999999~999999999W		P-2 minimum active power and time stamp		R
	0380h					R
Year	0381h	2000~2099			R	
Month	0382h	1~12			R	
Day	0383h	1~31			R	
Hour	0384h	0~23			R	
Minute	0385h	0~59			R	
Second	0386h	0~59			R	
P-3.MAX	0387h	-999999999~999999999W	P-3 maximum active power and time stamp			R
	0388h					R
Year	0389h	2000~2099			R	
Month	038Ah	1~12			R	
Day	038Bh	1~31			R	
Hour	038Ch	0~23			R	
Minute	038Dh	0~59			R	
Second	038Eh	0~59			R	
P-3.MIN	038Fh	-999999999~999999999W		P-3 minimum active power and time stamp		R
	0390h					R
Year	0391h	2000~2099			R	
Month	0392h	1~12			R	
Day	0393h	1~31			R	
Hour	0394h	0~23			R	
Minute	0395h	0~59			R	
Second	0396h	0~59			R	
P.SUM.MAX	0397h	-999999999~999999999W	Maximum total active power and time stamp			R
	0398h					R
Year	0399h	2000~2099			R	
Month	039Ah	1~12			R	
Day	039Bh	1~31			R	
Hour	039Ch	0~23			R	
Minute	039Dh	0~59			R	
Second	039Eh	0~59			R	
P.SUM.MIN	039Fh	-999999999~999999999W		Minimum total active power and time stamp		R
	03A0h					R
Year	03A1h	2000~2099			R	
Month	03A2h	1~12			R	
Day	03A3h	1~31			R	
Hour	03A4h	0~23			R	
Minute	03A5h	0~59			R	
Second	03A6h	0~59			R	

Parameter	Address	Range	Description	Default	Property	
Q-1.MAX	03A7h	-999999999~999999999VAR	Q-1 maximum reactive power and time stamp		R	
	03A8h				R	
Year	03A9h	2000~2099			R	
Month	03AAh	1~12			R	
Day	03ABh	1~31			R	
Hour	03ACh	0~23			R	
Minute	03ADh	0~59			R	
Second	03AEh	0~59			R	
Q-1.MIN	03AFh	-999999999~999999999VAR		Q-1 minimum reactive power and time stamp		R
	03B0h					R
Year	03B1h	2000~2099			R	
Month	03B2h	1~12			R	
Day	03B3h	1~31			R	
Hour	03B4h	0~23			R	
Minute	03B5h	0~59			R	
Second	03B6h	0~59			R	
Q-2.MAX	03B7h	-999999999~999999999VAR	Q-2 maximum reactive power and time stamp			R
	03B8h					R
Year	03B9h	2000~2099			R	
Month	03BAh	1~12			R	
Day	03BBh	1~31			R	
Hour	03BCh	0~23			R	
Minute	03BDh	0~59			R	
Second	03BEh	0~59			R	
Q-2.MIN	03BFh	-999999999~999999999VAR		Q-2 minimum reactive power and time stamp		R
	03C0h					R
Year	03C1h	2000~2099			R	
Month	03C2h	1~12			R	
Day	03C3h	1~31			R	
Hour	03C4h	0~23			R	
Minute	03C5h	0~59			R	
Second	03C6h	0~59			R	
Q-3.MAX	03C7h	-999999999~999999999VAR	Q-3 maximum reactive power and time stamp			R
	03C8h					R
Year	03C9h	2000~2099			R	
Month	03CAh	1~12			R	
Day	03CBh	1~31			R	
Hour	03CCh	0~23			R	
Minute	03CDh	0~59			R	
Second	03CEh	0~59			R	
Q-3.MIN	03CFh	-999999999~999999999VAR		Q-3 minimum reactive power and time stamp		R
	03D0h					R
Year	03D1h	2000~2099			R	
Month	03D2h	1~12			R	
Day	03D3h	1~31			R	
Hour	03D4h	0~23			R	
Minute	03D5h	0~59			R	
Second	03D6h	0~59			R	
Q.SUM.MAX	03D7h	-999999999~999999999VAR	Maximum total reactive power and time stamp			R
	03D8h					R
Year	03D9h	2000~2099			R	
Month	03DAh	1~12			R	
Day	03DBh	1~31			R	
Hour	03DCh	0~23			R	
Minute	03DDh	0~59			R	
Second	03DEh	0~59			R	
Q.SUM.MIN	03DFh	-999999999~999999999VAR		Minimum total reactive power and time stamp		R
	03E0h					R
Year	03E1h	2000~2099			R	
Month	03E2h	1~12			R	
Day	03E3h	1~31			R	
Hour	03E4h	0~23			R	
Minute	03E5h	0~59			R	
Second	03E6h	0~59			R	

Parameter	Address	Range	Description	Default	Property	
S-1.MAX	03E7h	0~ 999999999VA	S-1 maximum apparent power and time stamp		R	
	03E8h				R	
Year	03E9h	2000~2099			R	
Month	03EAh	1~12			R	
Day	03EBh	1~31			R	
Hour	03ECh	0~23			R	
Minute	03EDh	0~59			R	
Second	03EEh	0~59			R	
S-1.MIN	03EFh	0~ 999999999VA		S-1 minimum apparent power and time stamp		R
	03F0h					R
Year	03F1h	2000~2099			R	
Month	03F2h	1~12			R	
Day	03F3h	1~31			R	
Hour	03F4h	0~23			R	
Minute	03F5h	0~59			R	
Second	03F6h	0~59			R	
S-2.MAX	03F7h	0~ 999999999VA	S-2 maximum apparent power and time stamp			R
	03F8h					R
Year	03F9h	2000~2099			R	
Month	03FAh	1~12			R	
Day	03FBh	1~31			R	
Hour	03FCh	0~23			R	
Minute	03FDh	0~59			R	
Second	03FEh	0~59			R	
S-2.MIN	03FFh	0~ 999999999VA		S-2 minimum apparent power and time stamp		R
	0400h					R
Year	0401h	2000~2099			R	
Month	0402h	1~12			R	
Day	0403h	1~31			R	
Hour	0404h	0~23			R	
Minute	0405h	0~59			R	
Second	0406h	0~59			R	
S-3.MAX	0407h	0~ 999999999VA	S-3 maximum apparent power and time stamp			R
	0408h					R
Year	0409h	2000~2099			R	
Month	040Ah	1~12			R	
Day	040Bh	1~31			R	
Hour	040Ch	0~23			R	
Minute	040Dh	0~59			R	
Second	040Eh	0~59			R	
S-3.MIN	040Fh	0~ 999999999VA		S-3 minimum apparent power and time stamp		R
	0410h					R
Year	0411h	2000~2099			R	
Month	0412h	1~12			R	
Day	0413h	1~31			R	
Hour	0414h	0~23			R	
Minute	0415h	0~59			R	
Second	0416h	0~59			R	
S.SUM.MAX	0417h	0~ 999999999VA	Maximum total apparent power and time stamp			R
	0418h					R
Year	0419h	2000~2099			R	
Month	041Ah	1~12			R	
Day	041Bh	1~31			R	
Hour	041Ch	0~23			R	
Minute	041Dh	0~59			R	
Second	041Eh	0~59			R	
S.SUM.MIN	041Fh	0~ 999999999VA		Minimum total apparent power and time stamp		R
	0420h					R
Year	0421h	2000~2099			R	
Month	0422h	1~12			R	
Day	0423h	1~31			R	
Hour	0424h	0~23			R	
Minute	0425h	0~59			R	
Second	0426h	0~59			R	

Parameter	Address	Range	Description	Default	Property
PF1.MAX	0427h	-1.000~1.000	PF1 maximum power factor and time stamp		R
Year	0428h	2000~2099			R
Month	0429h	1~12			R
Day	042Ah	1~31			R
Hour	042Bh	0~23			R
Minute	042Ch	0~59			R
Second	042Dh	0~59			R
PF1.MIN	042Eh	-1.000~1.000	PF1 minimum power factor and time stamp		R
Year	042Fh	2000~2099			R
Month	0430h	1~12			R
Day	0431h	1~31			R
Hour	0432h	0~23			R
Minute	0433h	0~59			R
Second	0434h	0~59			R
PF2.MAX	0435h	-1.000~1.000	PF2 maximum power factor and time stamp		R
Year	0436h	2000~2099			R
Month	0437h	1~12			R
Day	0438h	1~31			R
Hour	0439h	0~23			R
Minute	043Ah	0~59			R
Second	043Bh	0~59			R
PF2.MIN	043Ch	-1.000~1.000	PF2 minimum power factor and time stamp		R
Year	043Dh	2000~2099			R
Month	043Eh	1~12			R
Day	043Fh	1~31			R
Hour	0440h	0~23			R
Minute	0441h	0~59			R
Second	0442h	0~59			R
PF3.MAX	0443h	-1.000~1.000	PF3 maximum power factor and time stamp		R
Year	0444h	2000~2099			R
Month	0445h	1~12			R
Day	0446h	1~31			R
Hour	0447h	0~23			R
Minute	0448h	0~59			R
Second	0449h	0~59			R
PF3.MIN	044Ah	-1.000~1.000	PF3 minimum power factor and time stamp		R
Year	044Bh	2000~2099			R
Month	044Ch	1~12			R
Day	044Dh	1~31			R
Hour	044Eh	0~23			R
Minute	044Fh	0~59			R
Second	0450h	0~59			R
PF.AVG.MAX	0451h	-1.000~1.000	Maximum average power factor and time stamp		R
Year	0452h	2000~2099			R
Month	0453h	1~12			R
Day	0454h	1~31			R
Hour	0455h	0~23			R
Minute	0456h	0~59			R
Second	0457h	0~59			R
PF.AVG.MIN	0458h	-1.000~1.000	Minimum average power factor and time stamp		R
Year	0459h	2000~2099			R
Month	045Ah	1~12			R
Day	045Bh	1~31			R
Hour	045Ch	0~23			R
Minute	045Dh	0~59			R
Second	045Eh	0~59			R
FREQ.MAX	045Fh	45.00~65.00Hz	Maximum frequency and time stamp		R
Year	0460h	2000~2099			R
Month	0461h	1~12			R
Day	0462h	1~31			R
Hour	0463h	0~23			R
Minute	0464h	0~59			R
Second	0465h	0~59			R
FREQ.MIN	0466h	45.00~65.00Hz	Minimum frequency and time stamp		R
Year	0467h	2000~2099			R
Month	0468h	1~12			R
Day	0469h	1~31			R
Hour	046Ah	0~23			R
Minute	046Bh	0~59			R
Second	046Ch	0~59			R

Parameter	Address	Range	Description	Default	Property
U1(U12).THD.MAX	046Dh		U1(U12) maximum total harmonic distortion for voltage		R
Year	046Eh	2000~2099	Year		R
Month	046Fh	1~12	Month		R
Day	0470h	1~31	Day		R
Hour	0471h	0~23	Hour		R
Minute	0472h	0~59	Minute		R
Second	0473h	0~59	Second		R
U1(U12).THD.MIN	0474h		U1(U12) minimum total harmonic distortion for voltage and time stamp		R
Year	0475h	2000~2099			R
Month	0476h	1~12			R
Day	0477h	1~31			R
Hour	0478h	0~23			R
Minute	0479h	0~59			R
Second	047Ah	0~59			R
U2(U23).THD.MAX	047Bh		U2(U23) maximum total harmonic distortion for voltage and time stamp		R
Year	047Ch	2000~2099			R
Month	047Dh	1~12			R
Day	047Eh	1~31			R
Hour	047Fh	0~23			R
Minute	0480h	0~59			R
Second	0481h	0~59			R
U2(U23).THD.MIN	0482h		U2(U23) minimum total harmonic distortion for voltage and time stamp		R
Year	0483h	2000~2099			R
Month	0484h	1~12			R
Day	0485h	1~31			R
Hour	0486h	0~23			R
Minute	0487h	0~59			R
Second	0488h	0~59			R
U3(U31).THD.MAX	0489h		U3(U31) maximum total harmonic distortion for voltage and time stamp		R
Year	048Ah	2000~2099			R
Month	048Bh	1~12			R
Day	048Ch	1~31			R
Hour	048Dh	0~23			R
Minute	048Eh	0~59			R
Second	048Fh	0~59			R
U3(U31).THD.MIN	0490h		U3(U31) minimum total harmonic distortion for voltage and time stamp		R
Year	0491h	2000~2099			R
Month	0492h	1~12			R
Day	0493h	1~31			R
Hour	0494h	0~23			R
Minute	0495h	0~59			R
Second	0496h	0~59			R
UAVG.TH.D.MAX	0497h		Maximum average total harmonic distortion for voltage and time stamp		R
Year	0498h	2000~2099			R
Month	0499h	1~12			R
Day	049Ah	1~31			R
Hour	049Bh	0~23			R
Minute	049Ch	0~59			R
Second	049Dh	0~59			R
UAVG.TH.D.MIN	049Eh		Minimum average total harmonic distortion for voltage and time stamp		R
Year	049Fh	2000~2099			R
Month	04A0h	1~12			R
Day	04A1h	1~31			R
Hour	04A2h	0~23			R
Minute	04A3h	0~59			R
Second	04A4h	0~59			R
I1.TH.D.MAX	04A5h		I1 maximum total harmonic distortion for current and time stamp		R
Year	04A6h	2000~2099			R
Month	04A7h	1~12			R
Day	04A8h	1~31			R
Hour	04A9h	0~23			R
Minute	04AAh	0~59			R
Second	04ABh	0~59			R
I1.TH.D.MIN	04ACh		I1 minimum total harmonic distortion for current and time stamp		R
Year	04ADh	2000~2099			R
Month	04AEh	1~12			R
Day	04AFh	1~31			R
Hour	04B0h	0~23			R
Minute	04B1h	0~59			R
Second	04B2h	0~59			R

Parameter	Address	Range	Description	Default	Property
I2.THD.MAX	04B3h		I2 maximum total harmonic distortion for current and time stamp		R
Year	04B4h	2000~2099			R
Month	04B5h	1~12			R
Day	04B6h	1~31			R
Hour	04B7h	0~23			R
Minute	04B8h	0~59			R
Second	04B9h	0~59			R
I2.THD.MIN	04BAh		I2 minimum total harmonic distortion for current and time stamp		R
Year	04BBh	2000~2099			R
Month	04BCh	1~12			R
Day	04BDh	1~31			R
Hour	04BEh	0~23			R
Minute	04BFh	0~59			R
Second	04C0h	0~59			R
I3.THD.MAX	04C1h		I3 maximum total harmonic distortion for current and time stamp		R
Year	04C2h	2000~2099			R
Month	04C3h	1~12			R
Day	04C4h	1~31			R
Hour	04C5h	0~23			R
Minute	04C6h	0~59			R
Second	04C7h	0~59			R
I3.THD.MIN	04C8h		I3 minimum total harmonic distortion for current and time stamp		R
Year	04C9h	2000~2099			R
Month	04CAh	1~12			R
Day	04CBh	1~31			R
Hour	04CCh	0~23			R
Minute	04CDh	0~59			R
Second	04CEh	0~59			R
I AVG.THD.MAX	04CFh		Maximum average total harmonic distortion for current and time stamp		R
Year	04D0h	2000~2099			R
Month	04D1h	1~12			R
Day	04D2h	1~31			R
Hour	04D3h	0~23			R
Minute	04D4h	0~59			R
Second	04D5h	0~59			R
I AVG.THD.MIN	04D6h		Minimum average total harmonic distortion for current and time stamp		R
Year	04D7h	2000~2099			R
Month	04D8h	1~12			R
Day	04D9h	1~31			R
Hour	04DAh	0~23			R
Minute	04DBh	0~59			R
Second	04DCh	0~59			R

MAX/MIN Values ( Code : 03h )

Parameter	Address	Range	Description	Default	Property	
P.DM.MAX	04DDh	-999999999~999999999W	Maximum total active power demand (High Word)		R	
	04DEh		Maximum total active power demand (Low Word)		R	
Year	04DFh	2000~2099	Year		R	
Month	04E0h	1~12	Month		R	
Day	04E1h	1~31	Day		R	
Hour	04E2h	0~23	Hour		R	
Minute	04E3h	0~59	Minute		R	
Second	04E4h	0~59	Second		R	
P.DM.MIN	04E5h	-999999999~999999999W	Minimum total active power demand and time stamp		R	
	04E6h				R	
Year	04E7h	2000~2099			R	
Month	04E8h	1~12			R	
Day	04E9h	1~31			R	
Hour	04EAh	0~23			R	
Minute	04EBh	0~59			R	
Second	04ECh	0~59			R	
Q.DM.MAX	04EDh	-999999999~999999999VAR		Maximum total reactive power demand and time stamp		R
	04EEh					R
Year	04EFh	2000~2099			R	
Month	04F0h	1~12			R	
Day	04F1h	1~31			R	
Hour	04F2h	0~23			R	
Minute	04F3h	0~59			R	
Second	04F4h	0~59			R	
Q.DM.MIN	04F5h	-999999999~999999999VAR	Minimum total reactive power demand and time stamp			R
	04F6h					R
Year	04F7h	2000~2099			R	
Month	04F8h	1~12			R	
Day	04F9h	1~31			R	
Hour	04FAh	0~23			R	
Minute	04FBh	0~59			R	
Second	04FCh	0~59			R	
S.DM.MAX	04FDh	0~999999999VA		Maximum total apparent power demand and time stamp		R
	04FEh					R
Year	04FFh	2000~2099			R	
Month	0500h	1~12			R	
Day	0501h	1~31			R	
Hour	0502h	0~23			R	
Minute	0503h	0~59			R	
Second	0504h	0~59			R	
S.DM.MIN	0505h	0~999999999VA	Minimum total apparent power demand and time stamp			R
	0506h					R
Year	0507h	2000~2099			R	
Month	0508h	1~12			R	
Day	0509h	1~31			R	
Hour	050Ah	0~23			R	
Minute	050Bh	0~59			R	
Second	050Ch	0~59			R	
I1.DM.MAX	050Dh	0.000~9999.999A		Maximum I1 current demand and time stamp		R
	050Eh					R
Year	050Fh	2000~2099			R	
Month	0510h	1~12			R	
Day	0511h	1~31			R	
Hour	0512h	0~23			R	
Minute	0513h	0~59			R	
Second	0514h	0~59			R	
I2.DM.MAX	0515h	0.000~9999.999A	Maximum I2 current demand and time stamp			R
	0516h					R
Year	0517h	2000~2099			R	
Month	0518h	1~12			R	
Day	0519h	1~31			R	
Hour	051Ah	0~23			R	
Minute	051Bh	0~59			R	
Second	051Ch	0~59			R	

Parameter	Address	Range	Description	Default	Property	
I3.DM.MAX	051Dh	0.000~9999.999A	Maximum I3 current demand and time stamp		R	
	051Eh				R	
Year	051Fh	2000~2099			R	
Month	0520h	1~12			R	
Day	0521h	1~31			R	
Hour	0522h	0~23			R	
Minute	0523h	0~59			R	
Second	0524h	0~59			R	
I.AVG.DM.MAX	0525h	0.000~9999.999A		Maximum average current demand and time stamp		R
	0526h					R
Year	0527h	2000~2099			R	
Month	0528h	1~12			R	
Day	0529h	1~31			R	
Hour	052Ah	0~23			R	
Minute	052Bh	0~59			R	
Second	052Ch	0~59			R	

Event logging data reading ( Code: 03h ):

Parameter	Address	Range	Description	Default	Property
Event Log last NO.	0600h	0~16	Last logging NO. 0: None 1~16: New number		R
Event Source 1	0601h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 1	0602h	0~1	Event status 0: Recover 1: Alert		R
Event Log 1 Parameter	0603h	0~35	Alarm item 0: FREQ 1: U1 2: U2 3: U3 4: ULN.AVG 5: U12 6: U23 7: U31 8: ULL.AVG 9: I1 10: I2 11: I3 12: I.AVG 13: IN 14: P-1 15: P-2 16: P-3 17: P.SUM 18: Q-1 19: Q-2 20: Q-3 21: Q.SUM 22: S-1 23: S-2 24: S-3 25: S.SUM 26: Pf1 27: PF2 28: PF3 29: PF.AVG 30: P.DM 31: Q.DM 32: S.DM 33: I.AVG.DM 34: Uunbl 35: Iunbl		R
Event Log 1 Value	0604h	According to item range	Alarm value (High Word)		R
	0605h		Alarm value (Low Word)		
Year	0606h	2000~2099	Year		R
Month	0607h	1~12	Month		R
Day	0608h	1~31	Day		R
Hour	0609h	0~23	Hour		R
Minute	060Ah	0~59	Minute		R
Second	060Bh	0~59	Second		R
Event Source 2	060Ch	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 2	060Dh	0~1	Event status 0: Recover 1: Alert		R
Event Log 2 Parameter	060Eh	0~35	Refer to Log1		R
Event Log 2 Value	060Fh	According to item range	Alarm value (High Word)		R
	0610h		Alarm value (Low Word)		
Year	0611h	2000~2099	Year		R
Month	0612h	1~12	Month		R
Day	0613h	1~31	Day		R
Hour	0614h	0~23	Hour		R
Minute	0615h	0~59	Minute		R
Second	0616h	0~59	Second		R
Event Source 2	060Ch	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 2	060Dh	0~1	Event status 0: Recover 1: Alert		R
Event Log 2 Parameter	060Eh	0~35	Refer to Log1		R
Event Log 2 Value	060Fh	According to item range	Alarm value (High Word)		R
	0610h		Alarm value (Low Word)		
Year	0611h	2000~2099	Year		R
Month	0612h	1~12	Month		R
Day	0613h	1~31	Day		R
Hour	0614h	0~23	Hour		R
Minute	0615h	0~59	Minute		R
Second	0616h	0~59	Second		R
Event Source 3	0617h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 3	0618h	0~1	Event status 0: Recover 1: Alert		R
Event Log 3 Parameter	0619h	0~35	Refer to Log1		R
Event Log 3 Value	061Ah	According to item range	Alarm value (High Word)		R
	061Bh		Alarm value (Low Word)		
Year	061Ch	2000~2099	Year		R
Month	061Dh	1~12	Month		R
Day	061Eh	1~31	Day		R
Hour	061Fh	0~23	Hour		R
Minute	0620h	0~59	Minute		R
Second	0621h	0~59	Second		R
Event Source 4	0622h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 4	0623h	0~1	Event status 0: Recover 1: Alert		R
Event Log 4 Parameter	0624h	0~35	Refer to Log1		R
Event Log 4 Value	0625h	According to item range	Alarm value (High Word)		R
	0626h		Alarm value (Low Word)		
Year	0627h	2000~2099	Year		R
Month	0628h	1~12	Month		R
Day	0629h	1~31	Day		R
Hour	062Ah	0~23	Hour		R
Minute	062Bh	0~59	Minute		R
Second	062Ch	0~59	Second		R

Parameter	Address	Range	Description	Default	Property
Event Source 5	062Dh	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 5	062Eh	0~1	Event status 0: Recover 1: Alert		R
Event Log 5 Parameter	062Fh	0~35	Refer to Log1		R
Event Log 5 Value	0630h	According to item range	Alarm value (High Word)		R
	0631h		Alarm value (Low Word)		R
Year	0632h	2000~2099	Year		R
Month	0633h	1~12	Month		R
Day	0634h	1~31	Day		R
Hour	0635h	0~23	Hour		R
Minute	0636h	0~59	Minute		R
Second	0637h	0~59	Second		R
Event Source 6	0638h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 6	0639h	0~1	Event status 0: Recover 1: Alert		R
Event Log 6 Parameter	063Ah	0~35	Refer to Log1		R
Event Log 6 Value	063Bh	According to item range	Alarm value (High Word)		R
	063Ch		Alarm value (Low Word)		R
Year	063Dh	2000~2099	Year		R
Month	063Eh	1~12	Month		R
Day	063Fh	1~31	Day		R
Hour	0640h	0~23	Hour		R
Minute	0641h	0~59	Minute		R
Second	0642h	0~59	Second		R
Event Source 7	0643h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 7	0644h	0~1	Event status 0: Recover 1: Alert		R
Event Log 7 Parameter	0645h	0~35	Refer to Log1		R
Event Log 7 Value	0646h	According to item range	Alarm value (High Word)		R
	0647h		Alarm value (Low Word)		R
Year	0648h	2000~2099	Year		R
Month	0649h	1~12	Month		R
Day	064Ah	1~31	Day		R
Hour	064Bh	0~23	Hour		R
Minute	064Ch	0~59	Minute		R
Second	064Dh	0~59	Second		R
Event Source 8	064Eh	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 8	064Fh	0~1	Event status 0: Recover 1: Alert		R
Event Log 8 Parameter	0650h	0~35	Refer to Log1		R
Event Log 8 Value	0651h	According to item range	Alarm value (High Word)		R
	0652h		Alarm value (Low Word)		R
Year	0653h	2000~2099	Year		R
Month	0654h	1~12	Month		R
Day	0655h	1~31	Day		R
Hour	0656h	0~23	Hour		R
Minute	0657h	0~59	Minute		R
Second	0658h	0~59	Second		R
Event Source 9	0659h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 9	065Ah	0~1	Event status 0: Recover 1: Alert		R
Event Log 9 Parameter	065Bh	0~35	Refer to Log1		R
Event Log 9 Value	065Ch	According to item range	Alarm value (High Word)		R
	065Dh		Alarm value (Low Word)		R
Year	065Eh	2000~2099	Year		R
Month	065Fh	1~12	Month		R
Day	0660h	1~31	Day		R
Hour	0661h	0~23	Hour		R
Minute	0662h	0~59	Minute		R
Second	0663h	0~59	Second		R

Parameter	Address	Range	Description	Default	Property
Event Source 10	0664h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 10	0665h	0~1	Event status 0: Recover 1: Alert		R
Event Log 10 Parameter	0666h	0~35	Refer to Log1		R
Event Log 10 Value	0667h	According to item range	Alarm value (High Word)		R
	0668h		Alarm value (Low Word)		R
Year	0669h	2000~2099	Year		R
Month	066Ah	1~12	Month		R
Day	066Bh	1~31	Day		R
Hour	066Ch	0~23	Hour		R
Minute	066Dh	0~59	Minute		R
Second	066Eh	0~59	Second		R
Event Source 11	066Fh	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 11	0670h	0~1	Event status 0: Recover 1: Alert		R
Event Log 11 Parameter	0671h	0~35	Refer to Log1		R
Event Log 11 Value	0672h	According to item range	Alarm value (High Word)		R
	0673h		Alarm value (Low Word)		R
Year	0674h	2000~2099	Year		R
Month	0675h	1~12	Month		R
Day	0676h	1~31	Day		R
Hour	0677h	0~23	Hour		R
Minute	0678h	0~59	Minute		R
Second	0679h	0~59	Second		R
Event Source 12	067Ah	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 12	067Bh	0~1	Event status 0: Recover 1: Alert		R
Event Log 12 Parameter	067Ch	0~35	Refer to Log1		R
Event Log 12 Value	067Dh	According to item range	Alarm value (High Word)		R
	067Eh		Alarm value (Low Word)		R
Year	067Fh	2000~2099	Year		R
Month	0680h	1~12	Month		R
Day	0681h	1~31	Day		R
Hour	0682h	0~23	Hour		R
Minute	0683h	0~59	Minute		R
Second	0684h	0~59	Second		R
Event Source 13	0685h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 13	0686h	0~1	Event status 0: Recover 1: Alert		R
Event Log 13 Parameter	0687h	0~35	Refer to Log1		R
Event Log 13 Value	0688h	According to item range	Alarm value (High Word)		R
	0689h		Alarm value (Low Word)		R
Year	068Ah	2000~2099	Year		R
Month	068Bh	1~12	Month		R
Day	068Ch	1~31	Day		R
Hour	068Dh	0~23	Hour		R
Minute	068Eh	0~59	Minute		R
Second	068Fh	0~59	Second		R
Event Source 14	0690h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 14	0691h	0~1	Event status 0: Recover 1: Alert		R
Event Log 14 Parameter	0692h	0~35	Refer to Log1		R
Event Log 14 Value	0693h	According to item range	Alarm value (High Word)		R
	0694h		Alarm value (Low Word)		R
Year	0695h	2000~2099	Year		R
Month	0696h	1~12	Month		R
Day	0697h	1~31	Day		R
Hour	0698h	0~23	Hour		R
Minute	0699h	0~59	Minute		R
Second	069Ah	0~59	Second		R

Parameter	Address	Range	Description	Default	Property
Event Source 15	069Bh	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 15	069Ch	0~1	Event status 0: Recover 1: Alert		R
Event Log 15 Parameter	069Dh	0~35	Refer to Log1		R
Event Log 15 Value	069Eh	According to item range	Alarm value (High Word)		R
	069Fh		Alarm value (Low Word)		R
Year	06A0h	2000~2099	Year		R
Month	06A1h	1~12	Month		R
Day	06A2h	1~31	Day		R
Hour	06A3h	0~23	Hour		R
Minute	06A4h	0~59	Minute		R
Second	06A5h	0~59	Second		R
Event Source 16	06A6h	1~16	Event trigger source 1~16: Event Setting NO. 1~16		R
Event Status 16	06A7h	0~1	Event status 0: Recover 1: Alert		R
Event Log 16 Parameter	06A8h	0~35	Refer to Log1		R
Event Log 16 Value	06A9h	According to item range	Alarm value (High Word)		R
	06AAh		Alarm value (Low Word)		R
Year	06ABh	2000~2099	Year		R
Month	06ACh	1~12	Month		R
Day	06ADh	1~31	Day		R
Hour	06AEh	0~23	Hour		R
Minute	06AFh	0~59	Minute		R
Second	06B0h	0~59	Second		R

### Phase angle data reading ( Code : 03h )

Parameter	Address	Range	Description	Default	Property
Phasor Diagram V2 lag V1	0700h	0~360.0	Phasor Diagram V2 lag V1		R
Phasor Diagram V3 lag V1	0701h	0~360.0	Phasor Diagram V3 lag V1		R
Phasor Diagram I1 lag V1	0702h	0~360.0	Phasor Diagram I1 lag V1		R
Phasor Diagram I2 lag V1	0703h	0~360.0	Phasor Diagram I2 lag V1		R
Phasor Diagram I3 lag V1	0704h	0~360.0	Phasor Diagram I3 lag V1		R
Phasor Diagram V23 lag V12	0705h	0~360.0	Phasor Diagram V23 lag V12		R
Phasor Diagram V31 lag V12	0706h	0~360.0	Phasor Diagram V31 lag V12		R
Phasor Diagram I1 lag V12	0707h	0~360.0	Phasor Diagram I1 lag V12		R
Phasor Diagram I2 lag V12	0708h	0~360.0	Phasor Diagram I2 lag V12		R
Phasor Diagram I3 lag V12	0709h	0~360.0	Phasor Diagram I3 lag V12		R

### Logging data reading( Code: 03h , 06h )

Parameter	Address	Range	Description	Default	Property
Log.Word.Num	4000h		Data length of record value		R
Log.Unread.Num	4001h		Number of unread datas		R
Log.Read	4002h		Reply 0020h if data empty		R
Log.Read Status	4003h	0~2	Reading Status feedback code: 0: Clear logging data(Read and write indicators are equal) 1: Abort this time read (The next time will read from the last unread items) 2: Read success		W

# Logging setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
Log.Source	4010h	0~1	Data recording source 0: recording manually 1: recording by schedule		R
Log.Time.Set	4011h	1~32767	Recording interval time	15	R/W
Log.Time.Unit	4012h	0~3	Unit of interval time 0: sec 1: min 2: hour 3: day	1	R/W
Start.Year	4013h	2000~2099	Date and time for start	2024	R/W
Start.Month	4014h	1~12		1	R/W
Start.Day	4015h	1~31		1	R/W
Start.Hour	4016h	0~23		0	R/W
Start.Minute	4017h	0~59		0	R/W
Start.Second	4018h	0~59		0	R/W
Stop.Year	4019h	2000~2099	Date and time for start	2024	R/W
Stop.Month	401Ah	1~12		1	R/W
Stop.Day	401Bh	1~31		1	R/W
Stop.Hour	401Ch	0~23		0	R/W
Stop.Minute	401Dh	0~59		0	R/W
Stop.Second	401Eh	0~59		0	R/W
Log.Start.Set	401Fh	0~1	Recording manually 0: Disable 1: Enable	0	R/W
Log.Para 01	4020h	0~96	parameter code :	0	R/W
Log.Para 02	4021h		0: NONE 1: FREQ 2: U1 3: U2 4: U3	0	R/W
Log.Para 03	4022h		5: ULN.AVG 6: U12 7: U23 8: U31 9: ULL.AVG	0	R/W
Log.Para 04	4023h		10: I1 11: I2 12: I3 13: I.AVG 14: IN	0	R/W
Log.Para 05	4024h		15: P-1 16: P-2 17: P-3 18: P.SUM 19: Q-1	0	R/W
Log.Para 06	4025h		20: Q-2 21: Q-3 22: Q.SUM 23: S-1 24: S-2	0	R/W
Log.Para 07	4026h		25: S-3 26: S.SUM 27: PF1 28: PF2 29: PF3	0	R/W
Log.Para 08	4027h		30: PF.AVG 31: Uunbl 32: Iunbl 33: Load Type 34: P.DM.	0	R/W
Log.Para 09	4028h		35: Q.DM. 36: S.DM. 37: I1.DM. 38: I2.DM. 39: I3.DM.	0	R/W
Log.Para 10	4029h		40: I.AVG.DM. 41: AE.IMP 42: AE.Exp 43: RE.IMP	0	R/W
Log.Para 11	402Ah		44: RE.EXP 45: SE.Total 46: U1(U12).THD	0	R/W
Log.Para 12	402Bh		47: U2(U23).THD 48: U3(U31).THD 49: UAVG.TH	0	R/W
Log.Para 13	402Ch		50: I1.TH	0	R/W
Log.Para 14	402Dh		51: I2.TH	0	R/W
Log.Para 15	402Eh		52: I3.TH	0	R/W
Log.Para 16	402Fh		53: IAVG.TH	0	R/W
Log.Para 17	4030h		54: Phasor Diagram V2 lag V1	0	R/W
Log.Para 18	4031h		55: Phasor Diagram V3 lag V1	0	R/W
Log.Para 19	4032h		56: Phasor Diagram I1 lag V1	0	R/W
Log.Para 20	4033h		57: Phasor Diagram I2 lag V1	0	R/W
Log.Para 21	4034h		58: Phasor Diagram I3 lag V1	0	R/W
Log.Para 22	4035h		59: Phasor Diagram V23 lag V12	0	R/W
Log.Para 23	4036h		60: Phasor Diagram V31 lag V12	0	R/W
Log.Para 24	4037h		61: Phasor Diagram I1 lag V12	0	R/W
Log.Para 25	4038h		62: Phasor Diagram I2 lag V12	0	R/W
Log.Para 26	4039h		63: Phasor Diagram I3 lag V12	0	R/W
Log.Para 27	403Ah		64: U1(U12).THD.MAX 65: U1(U12).THD.MIN	0	R/W
Log.Para 28	403Bh		66: U2(U23).THD.MAX 67: U2(U23).THD.MIN	0	R/W
Log.Para 29	403Ch		68: U3(U31).THD.MAX 69: U3(U31).THD.MIN	0	R/W
Log.Para 30	403Dh		70: UAVG.TH	0	R/W
Log.Para 31	403Eh	71: UAVG.TH	0	R/W	
Log.Para 32	403Fh	72: I1.TH	0	R/W	
Log.Para 33	4040h	73: I1.TH	0	R/W	
Log.Para 34	4041h	74: I2.TH	0	R/W	
Log.Para 35	4042h	75: I2.TH	0	R/W	
Log.Para 36	4043h	76: I3.TH	0	R/W	
Log.Para 37	4044h	77: I3.TH	0	R/W	
Log.Para 38	4045h	78: IAVG.TH	0	R/W	
Log.Para 39	4046h	79: IAVG.TH	0	R/W	
Log.Para 40	4047h	80: P.DM	0	R/W	
Log.Para 41	4048h	81: P.DM	0	R/W	
Log.Para 42	4049h	82: Q.DM	0	R/W	
Log.Para 43	404Ah	83: Q.DM	0	R/W	
Log.Para 44	404Bh	84: S.DM	0	R/W	
Log.Para 45	404Ch	85: S.DM	0	R/W	
Log.Para 46	404Dh	86: I1.DM	0	R/W	
Log.Para 47	404Eh	87: I2.DM	0	R/W	
Log.Para 48	404Fh	88: I3.DM	0	R/W	
Log.Para 49	4050h	89: I.AVG.DM	0	R/W	
Log.Para 50	4051h	90: Max U1 91: Max U2 92: Max U3	0	R/W	
		93: Max U12 94: Max U23 95: Max U31	0	R/W	
		96: KWH Total	0	R/W	

- ※The starting time of the recording interval is divided into scheduled time and manual startup time according to the startup source.
- ※The schedule start recording time must be later than the current time when the user setup system to be valid.
- ※After the recording is started, if the meter is powered off and then restored, it will continue to record according to the original recording method.
- ※To end schedule recording, you can set the stop recording time, or you can set manual recording to stop to end the schedule recording function.

User define setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
U.DF01P	5000h	0130h~0177h 0181h~019Bh 029Fh~02A6h 0700h~0709h	Values from 1~20 parameter assignment	0130h	R/W
U.DF02P	5001h			0131h	R/W
U.DF03P	5002h			0132h	R/W
U.DF04P	5003h			0133h	R/W
U.DF05P	5004h			0134h	R/W
U.DF06P	5005h			0135h	R/W
U.DF07P	5006h			0136h	R/W
U.DF08P	5007h			0137h	R/W
U.DF09P	5008h			0138h	R/W
U.DF10P	5009h			0139h	R/W
U.DF11P	500Ah			013Ah	R/W
U.DF12P	500Bh			013Bh	R/W
U.DF13P	500Ch			013Ch	R/W
U.DF14P	500Dh			013Dh	R/W
U.DF15P	500Eh			013Eh	R/W
U.DF16P	500Fh			013Fh	R/W
U.DF17P	5010h			0140h	R/W
U.DF18P	5011h			0141h	R/W
U.DF19P	5012h			0142h	R/W
U.DF20P	5013h			0143h	R/W
U.DF01V	5014h		Values from 1~20 parameter address for user assign		R
U.DF02V	5015h				R
U.DF03V	5016h				R
U.DF04V	5017h				R
U.DF05V	5018h				R
U.DF06V	5019h				R
U.DF07V	501Ah				R
U.DF08V	501Bh				R
U.DF09V	501Ch				R
U.DF10V	501Dh				R
U.DF11V	501Eh				R
U.DF12V	501Fh				R
U.DF13V	5020h				R
U.DF14V	5021h				R
U.DF15V	5022h				R
U.DF16V	5023h				R
U.DF17V	5024h				R
U.DF18V	5025h				R
U.DF19V	5026h				R
U.DF20V	5027h				R

Current month TOU energy ( Code : 03h )

Parameter	Address	Range	Description	Default	Property
Ep-IMP(sharp)	6000h	0.0~99999999.9kWh	Import active energy (sharp) (High Word)	0	R
	6001h		Import active energy (sharp) (Low Word)	0	R
Ep-Exp(sharp)	6002h	0.0~99999999.9kWh	Export active energy (sharp) (High Word)	0	R
	6003h		Export active energy (sharp) (Low Word)	0	R
Eq-IMP(sharp)	6004h	0.0~99999999.9kVARh	Import reactive energy (sharp) (High Word)	0	R
	6005h		Import reactive energy (sharp) (Low Word)	0	R
Eq-Exp(sharp)	6006h	0.0~99999999.9kVARh	Export reactive energy (sharp) (High Word)	0	R
	6007h		Export reactive energy (sharp) (Low Word)	0	R
Es(sharp)	6008h	0.0~99999999.9kVAh	Apparent energy (sharp) (High Word)	0	R
	6009h		Apparent energy (sharp) (Low Word)	0	R
Ep-IMP(peak)	600Ah	0.0~99999999.9kWh	Import active energy (peak) (High Word)	0	R
	600Bh		Import active energy (peak) (Low Word)	0	R
Ep-Exp(peak)	600Ch	0.0~99999999.9kWh	Export active energy (peak) (High Word)	0	R
	600Dh		Export active energy (peak) (Low Word)	0	R
Eq-IMP(peak)	600Eh	0.0~99999999.9kVARh	Import reactive energy (peak) (High Word)	0	R
	600Fh		Import reactive energy (peak) (Low Word)	0	R
Eq-Exp(peak)	6010h	0.0~99999999.9kVARh	Export reactive energy (peak) (High Word)	0	R
	6011h		Export reactive energy (peak) (Low Word)	0	R
Es(peak)	6012h	0.0~99999999.9kVAh	Apparent energy (peak) (High Word)	0	R
	6013h		Apparent energy (peak) (Low Word)	0	R
Ep-IMP(valley)	6014h	0.0~99999999.9kWh	Import active energy (valley) (High Word)	0	R
	6015h		Import active energy (valley) (Low Word)	0	R
Ep-Exp(valley)	6016h	0.0~99999999.9kWh	Export active energy (valley) (High Word)	0	R
	6017h		Export active energy (valley) (Low Word)	0	R
Eq-IMP(valley)	6018h	0.0~99999999.9kVARh	Import reactive energy (valley) (High Word)	0	R
	6019h		Import reactive energy (valley) (Low Word)	0	R
Eq-Exp(valley)	601Ah	0.0~99999999.9kVARh	Export reactive energy (valley) (High Word)	0	R
	601Bh		Export reactive energy (valley) (Low Word)	0	R
Es(valley)	601Ch	0.0~99999999.9kVAh	Apparent energy (valley) (High Word)	0	R
	601Dh		Apparent energy (valley) (Low Word)	0	R
Ep-IMP(normal)	601Eh	0.0~99999999.9kWh	Import active energy (normal) (High Word)	0	R
	601Fh		Import active energy (normal) (Low Word)	0	R
Ep-Exp(normal)	6020h	0.0~99999999.9kWh	Export active energy (normal) (High Word)	0	R
	6021h		Export active energy (normal) (Low Word)	0	R
Eq-IMP(normal)	6022h	0.0~99999999.9kVARh	Import reactive energy (normal) (High Word)	0	R
	6023h		Import reactive energy (normal) (Low Word)	0	R
Eq-Exp(normal)	6024h	0.0~99999999.9kVARh	Export reactive energy (normal) (High Word)	0	R
	6025h		Export reactive energy (normal) (Low Word)	0	R
Es(normal)	6026h	0.0~99999999.9kVAh	Apparent energy (normal) (High Word)	0	R
	6027h		Apparent energy (normal) (Low Word)	0	R
Ep-IMP(sum)	6028h	0.0~99999999.9kWh	Import active energy (sum) (High Word)	0	R
	6029h		Import active energy (sum) (Low Word)	0	R
Ep-Exp(sum)	602Ah	0.0~99999999.9kWh	Export active energy (sum) (High Word)	0	R
	602Bh		Export active energy (sum) (Low Word)	0	R
Eq-IMP(sum)	602Ch	0.0~99999999.9kVARh	Import reactive energy (sum) (High Word)	0	R
	602Dh		Import reactive energy (sum) (Low Word)	0	R
Eq-Exp(sum)	602Eh	0.0~99999999.9kVARh	Export reactive energy (sum) (High Word)	0	R
	602Fh		Export reactive energy (sum) (Low Word)	0	R
Es(sum)	6030h	0.0~99999999.9kVAh	Apparent energy (sum) (High Word)	0	R
	6031h		Apparent energy (sum) (Low Word)	0	R

Last month TOU energy ( Code : 03h )

Parameter	Address	Range	Description	Default	Property
Ep-IMP(sharp)	6032h	0.0~99999999.9kWh	Import active energy (sharp) (High Word)	0	R
	6033h		Import active energy (sharp) (Low Word)	0	R
Ep-Exp(sharp)	6034h	0.0~99999999.9kWh	Export active energy (sharp) (High Word)	0	R
	6035h		Export active energy (sharp) (Low Word)	0	R
Eq-IMP(sharp)	6036h	0.0~99999999.9kVARh	Import reactive energy (sharp) (High Word)	0	R
	6037h		Import reactive energy (sharp) (Low Word)	0	R
Eq-Exp(sharp)	6038h	0.0~99999999.9kVARh	Export reactive energy (sharp) (High Word)	0	R
	6039h		Export reactive energy (sharp) (Low Word)	0	R
Es(sharp)	603Ah	0.0~99999999.9kVAh	Apparent energy (sharp) (High Word)	0	R
	603Bh		Apparent energy (sharp) (Low Word)	0	R
Ep-IMP(peak)	603Ch	0.0~99999999.9kWh	Import active energy (peak) (High Word)	0	R
	603Dh		Import active energy (peak) (Low Word)	0	R
Ep-Exp(peak)	603Eh	0.0~99999999.9kWh	Export active energy (peak) (High Word)	0	R
	603Fh		Export active energy (peak) (Low Word)	0	R
Eq-IMP(peak)	6040h	0.0~99999999.9kVARh	Import reactive energy (peak) (High Word)	0	R
	6041h		Import reactive energy (peak) (Low Word)	0	R
Eq-Exp(peak)	6042h	0.0~99999999.9kVARh	Export reactive energy (peak) (High Word)	0	R
	6043h		Export reactive energy (peak) (Low Word)	0	R
Es(peak)	6044h	0.0~99999999.9kVAh	Apparent energy (peak) (High Word)	0	R
	6045h		Apparent energy (peak) (Low Word)	0	R
Ep-IMP(valley)	6046h	0.0~99999999.9kWh	Import active energy (valley) (High Word)	0	R
	6047h		Import active energy (valley) (Low Word)	0	R
Ep-Exp(valley)	6048h	0.0~99999999.9kWh	Export active energy (valley) (High Word)	0	R
	6049h		Export active energy (valley) (Low Word)	0	R
Eq-IMP(valley)	604Ah	0.0~99999999.9kVARh	Import reactive energy (valley) (High Word)	0	R
	604Bh		Import reactive energy (valley) (Low Word)	0	R
Eq-Exp(valley)	604Ch	0.0~99999999.9kVARh	Export reactive energy (valley) (High Word)	0	R
	604Dh		Export reactive energy (valley) (Low Word)	0	R
Es(valley)	604Eh	0.0~99999999.9kVAh	Apparent energy (valley) (High Word)	0	R
	604Fh		Apparent energy (valley) (Low Word)	0	R
Ep-IMP(normal)	6050h	0.0~99999999.9kWh	Import active energy (normal) (High Word)	0	R
	6051h		Import active energy (normal) (Low Word)	0	R
Ep-Exp(normal)	6052h	0.0~99999999.9kWh	Export active energy (normal) (High Word)	0	R
	6053h		Export active energy (normal) (Low Word)	0	R
Eq-IMP(normal)	6054h	0.0~99999999.9kVARh	Import reactive energy (normal) (High Word)	0	R
	6055h		Import reactive energy (normal) (Low Word)	0	R
Eq-Exp(normal)	6056h	0.0~99999999.9kVARh	Export reactive energy (normal) (High Word)	0	R
	6057h		Export reactive energy (normal) (Low Word)	0	R
Es(normal)	6058h	0.0~99999999.9kVAh	Apparent energy (normal) (High Word)	0	R
	6059h		Apparent energy (normal) (Low Word)	0	R
Ep-IMP(sum)	605Ah	0.0~99999999.9kWh	Import active energy (sum) (High Word)	0	R
	605Bh		Import active energy (sum) (Low Word)	0	R
Ep-Exp(sum)	605Ch	0.0~99999999.9kWh	Export active energy (sum) (High Word)	0	R
	605Dh		Export active energy (sum) (Low Word)	0	R
Eq-IMP(sum)	605EH	0.0~99999999.9kVARh	Import reactive energy (sum) (High Word)	0	R
	605Fh		Import reactive energy (sum) (Low Word)	0	R
Eq-Exp(sum)	6060h	0.0~99999999.9kVARh	Export reactive energy (sum) (High Word)	0	R
	6061h		Export reactive energy (sum) (Low Word)	0	R
Es(sum)	6062h	0.0~99999999.9kVAh	Apparent energy (sum) (High Word)	0	R
	6063h		Apparent energy (sum) (Low Word)	0	R

Maximum TOU energy demand ( Code : 03h )

Parameter	Address	Range	Description	Default	Property	
P.DM.MAX(sharp)	6064h	-999999999~999999999W	Maximum total active power demand (sharp) (High Word)	0	R	
	6065h		Maximum total active power demand (sharp) (Low Word)	0	R	
Year	6066h	2000~2099	Year	2015	R	
Month	6067h	1~12	Month	1	R	
Day	6068h	1~31	Day	1	R	
Hour	6069h	0~23	Hour	0	R	
Minute	606Ah	0~59	Minute	0	R	
Second	606Bh	0~59	Second	0	R	
Q.DM.MAX(sharp)	606Ch	-999999999~999999999VAR	Maximum total reactive power demand (sharp) and time stamp	0	R	
	606Dh			0	R	
Year	606Eh	2000~2099		2015	R	
Month	606Fh	1~12		1	R	
Day	6070h	1~31		1	R	
Hour	6071h	0~23		0	R	
Minute	6072h	0~59		0	R	
Second	6073h	0~59		0	R	
S.DM.MAX(sharp)	6074h	0~999999999VA		Maximum total apparent power demand (sharp) and time stamp	0	R
	6075h				0	R
Year	6076h	2000~2099	2015		R	
Month	6077h	1~12	1		R	
Day	6078h	1~31	1		R	
Hour	6079h	0~23	0		R	
Minute	607Ah	0~59	0		R	
Second	607Bh	0~59	0		R	
I1.DM.MAX(sharp)	607Ch	0.000~9999.999A	Maximum I1 current demand (sharp) and time stamp		0	R
	607Dh				0	R
Year	607Eh	2000~2099		2015	R	
Month	607Fh	1~12		1	R	
Day	6080h	1~31		1	R	
Hour	6081h	0~23		0	R	
Minute	6082h	0~59		0	R	
Second	6083h	0~59		0	R	
I2.DM.MAX(sharp)	6084h	0.000~9999.999A		Maximum I2 current demand (sharp) and time stamp	0	R
	6085h				0	R
Year	6086h	2000~2099	2015		R	
Month	6087h	1~12	1		R	
Day	6088h	1~31	1		R	
Hour	6089h	0~23	0		R	
Minute	608Ah	0~59	0		R	
Second	608Bh	0~59	0		R	
I3.DM.MAX(sharp)	608Ch	0.000~9999.999A	Maximum I3 current demand (sharp) and time stamp		0	R
	608Dh				0	R
Year	608Eh	2000~2099		2015	R	
Month	608Fh	1~12		1	R	
Day	6090h	1~31		1	R	
Hour	6091h	0~23		0	R	
Minute	6092h	0~59		0	R	
Second	6093h	0~59		0	R	
I.AVG.DM.MAX (sharp)	6094h	0.000~9999.999A		Maximum average current demand (sharp) and time stamp	0	R
	6095h				0	R
Year	6096h	2000~2099	2015		R	
Month	6097h	1~12	1		R	
Day	6098h	1~31	1		R	
Hour	6099h	0~23	0		R	
Minute	609Ah	0~59	0		R	
Second	609Bh	0~59	0		R	
P.DM.MAX(peak)	609Ch	-999999999~999999999W	Maximum total active power demand (peak) and time stamp		0	R
	609Dh				0	R
Year	609Eh	2000~2099		2015	R	
Month	609Fh	1~12		1	R	
Day	60A0h	1~31		1	R	
Hour	60A1h	0~23		0	R	
Minute	60A2h	0~59		0	R	
Second	60A3h	0~59		0	R	

Parameter	Address	Range	Description	Default	Property	
Q.DM.MAX(peak)	60A4h	-999999999~999999999VAR	Maximum total reactive power demand (peak) and time stamp	0	R	
	60A5h			0	R	
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
S.DM.MAX(peak)	60ACh	0~999999999VA		Maximum total apparent power demand (peak) and time stamp	0	R
	60ADh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			
I1.DM.MAX(peak)	60B4h	0.000~9999.999A	Maximum I1 current demand (peak) and time stamp		0	R
	60B5h				0	R
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
I2.DM.MAX(peak)	60BCh	0.000~9999.999A		Maximum I2 current demand (peak) and time stamp	0	R
	60BDh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			
I3.DM.MAX(peak)	60C4h	0.000~9999.999A	Maximum I3 current demand (peak) and time stamp		0	R
	60C5h				0	R
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
IAVG.DM.MAX(peak)	60CCh	0.000~9999.999A		Maximum average current demand (peak) and time stamp	0	R
	60CDh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			
P.DM.MAX(valley)	60D4h	-999999999~999999999W	Maximum total active power demand (valley) and time stamp		0	R
	60D5h				0	R
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
Q.DM.MAX(valley)	60DCh	-999999999~999999999VAR		Maximum total reactive power demand (valley) and time stamp	0	R
	60DDh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			

Parameter	Address	Range	Description	Default	Property	
S.DM.MAX(valley)	60E4h	0~999999999VA	Maximum total apparent power demand (valley) and time stamp	0	R	
	60E5h			0	R	
Year	60E6h	2000~2099		2015	R	
Month	60E7h	1~12		1	R	
Day	60E8h	1~31		1	R	
Hour	60E9h	0~23		0	R	
Minute	60EAh	0~59		0	R	
Second	60EBh	0~59		0	R	
I1.DM.MAX(valley)	60ECh	0.000~9999.999A		Maximum I1 current demand (valley) and time stamp	0	R
	60EDh				0	R
Year	60EEh	2000~2099	2015		R	
Month	60EFh	1~12	1		R	
Day	60F0h	1~31	1		R	
Hour	60F1h	0~23	0		R	
Minute	60F2h	0~59	0		R	
Second	60F3h	0~59	0		R	
I2.DM.MAX(valley)	60F4h	0.000~9999.999A	Maximum I2 current demand (valley) and time stamp		0	R
	60F5h				0	R
Year	60F6h	2000~2099		2015	R	
Month	60F7h	1~12		1	R	
Day	60F8h	1~31		1	R	
Hour	60F9h	0~23		0	R	
Minute	60FAh	0~59		0	R	
Second	60FBh	0~59		0	R	
I3.DM.MAX(valley)	60FCh	0.000~9999.999A		Maximum I3 current demand (valley) and time stamp	0	R
	60FDh				0	R
Year	60FEh	2000~2099	2015		R	
Month	60FFh	1~12	1		R	
Day	6100h	1~31	1		R	
Hour	6101h	0~23	0		R	
Minute	6102h	0~59	0		R	
Second	6103h	0~59	0		R	
IAVG.DM.MAX (valley)	6104h	0.000~9999.999A	Maximum average current demand (valley) and time stamp		0	R
	6105h				0	R
Year	6106h	2000~2099		2015	R	
Month	6107h	1~12		1	R	
Day	6108h	1~31		1	R	
Hour	6109h	0~23		0	R	
Minute	610Ah	0~59		0	R	
Second	610Bh	0~59		0	R	
P.DM.MAX(normal)	610Ch	-999999999~999999999W		Maximum total active power demand (normal) and time stamp	0	R
	610Dh				0	R
Year	610Eh	2000~2099	2015		R	
Month	610Fh	1~12	1		R	
Day	6110h	1~31	1		R	
Hour	6111h	0~23	0		R	
Minute	6112h	0~59	0		R	
Second	6113h	0~59	0		R	
Q.DM.MAX(normal)	6114h	-999999999~999999999VAR	Maximum total reactive power demand (normal) and time stamp		0	R
	6115h				0	R
Year	6116h	2000~2099		2015	R	
Month	6117h	1~12		1	R	
Day	6118h	1~31		1	R	
Hour	6119h	0~23		0	R	
Minute	611Ah	0~59		0	R	
Second	611Bh	0~59		0	R	
S.DM.MAX(normal)	611Ch	0~999999999VA		Maximum total apparent power demand (normal) and time stamp	0	R
	611Dh				0	R
Year	611Eh	2000~2099	2015		R	
Month	611Fh	1~12	1		R	
Day	6120h	1~31	1		R	
Hour	6121h	0~23	0		R	
Minute	6122h	0~59	0		R	
Second	6123h	0~59	0		R	

Parameter	Address	Range	Description	Default	Property	
I1.DM.MAX (normal)	6124h	0.000~9999.999A	Maximum I1 current demand (normal) and time stamp	0	R	
	6125h			0	R	
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
I2.DM.MAX (normal)	612Ch	0.000~9999.999A		Maximum I2 current demand (normal) and time stamp	0	R
	612Dh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			
I3.DM.MAX (normal)	6134h	0.000~9999.999A	Maximum I3 current demand (normal) and time stamp		0	R
	6135h				0	R
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
I.AVG.DM.MAX (normal)	613Ch	0.000~9999.999A		Maximum average current demand (normal) and time stamp	0	R
	613Dh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			
P.DM.MAX(sum)	6144h	-999999999~999999999W	Maximum total active power demand (sum) and time stamp		0	R
	6145h				0	R
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
Q.DM.MAX(sum)	614Ch	-999999999~999999999VAR		Maximum total reactive power demand (sum) and time stamp	0	R
	614Dh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			
S.DM.MAX(sum)	6154h	0~999999999VA	Maximum total apparent power demand (sum) and time stamp		0	R
	6155h				0	R
Year	2000~2099	2015		R		
Month	1~12	1		R		
Day	1~31	1		R		
Hour	0~23	0		R		
Minute	0~59	0		R		
Second	0~59	0		R		
I1.DM.MAX(sum)	615Ch	0.000~9999.999A		Maximum I1 current demand (sum) and time stamp	0	R
	615Dh				0	R
Year	2000~2099	2015	R			
Month	1~12	1	R			
Day	1~31	1	R			
Hour	0~23	0	R			
Minute	0~59	0	R			
Second	0~59	0	R			

Parameter	Address	Range	Description	Default	Property	
I2.DM.MAX(sum)	6164h	0.000~9999.999A	Maximum I2 current demand (sum) and time stamp	0	R	
	6165h			0	R	
	Year			2000~2099	2015	R
	Month			1~12	1	R
	Day			1~31	1	R
	Hour			0~23	0	R
	Minute			0~59	0	R
	Second			0~59	0	R
I3.DM.MAX(sum)	616Ch	0.000~9999.999A	Maximum I3 current demand (sum) and time stamp	0	R	
	616Dh			0	R	
	Year			2000~2099	2015	R
	Month			1~12	1	R
	Day			1~31	1	R
	Hour			0~23	0	R
	Minute			0~59	0	R
	Second			0~59	0	R
I.AVG.DM.MAX (sum)	6174h	0.000~9999.999A	Maximum average current demand (sum) and time stamp	0	R	
	6175h			0	R	
	Year			2000~2099	2015	R
	Month			1~12	1	R
	Day			1~31	1	R
	Hour			0~23	0	R
	Minute			0~59	0	R
	Second			0~59	0	R
Max DM Clear	617Ch	0 or 55h	0: None 55h: Reset	0	W	

### TOU parameter setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
Time zone	617Dh	1~4	Number of time zone	1	R/W
Time table	617Eh	1~8	Number of time table	1	R/W
Time table of Saturday	617Fh	1~8	Number of Saturday using time table	1	R/W
Time table of Sunday	6180h	1~8	Number of Sunday using time table	1	R/W
TOU enable	6181h	0~1	0: disable 1: enable	0	R/W
Initialization of TOU	6182h	0~1	0: disable 1: enable	0	R/W
Calculation of TOU	6183h	0~1	0: end of month 1: setting day	0	R/W
Date and time of calculation	6184h	1~31	Day	1	R/W
	6185h	0~23	Hour	0	R/W
	6186h	0~59	Minute	0	R/W
	6187h	0~59	Second	0	R/W
Error code	6188h	Refer to right	0: The setting of parameter is correct; if any error occurs , the TOU function will be stop execute 1: The date setting of the time zone is not a close cycle 2: The time table setting of the time zone is greater than number of time table 4: Year setting of multi-years error or greater than 5 years ;The time table setting of the multi-years is greater than number of time table 8: The time setting of the time interval is not a close cycle 16: The time table setting of the weekly rest is greater than number of time table 32: The time table setting of the single year holiday is greater than number of time table		R

### Time zone setting parameters of TOU ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
1st time zone setting	6189h	1~12	Month	1	R/W
	618Ah	1~31	Day	1	
	618Bh	1~8	Time table of the 1st time zone	1	
2nd time zone setting	618Ch	1~12	Month	12	R/W
	618Dh	1~31	Day	31	
	618Eh	1~8	Time table of the 2nd time zone	1	
3rd time zone setting	618Fh	1~12	Month	12	R/W
	6190h	1~31	Day	31	
	6191h	1~8	Time table of the 3rd time zone	1	
4th time zone setting	6192h	1~12	Month	12	R/W
	6193h	1~31	Day	31	
	6194h	1~8	Time table of the 4th time zone	1	

Time table parameter of TOU ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
Time interval of 1st time table setting	6195h	1~8	Number of time interval in the 1st time table	1	R/W
	6196h	0~23	1st time interval of the 1st time table(hour)	0	R/W
	6197h	0~59	1st time interval of the 1st time table(minute)	0	
	6198h	0~3	1st time interval fee of the 1st time table 0: sharp 1: peak 2: valley 3: normal	0	
	6199h	0~23	2nd time interval and fee of the 1st time table	23	R/W
	619Ah	0~59		59	
	619Bh	0~3		0	
	619Ch	0~23	3rd time interval and fee of the 1st time table	23	R/W
	619Dh	0~59		59	
	619Eh	0~3		0	
	619Fh	0~23	4th time interval and fee of the 1st time table	23	R/W
	61A0h	0~59		59	
	61A1h	0~3		0	
	61A2h	0~23	5th time interval and fee of the 1st time table	23	R/W
	61A3h	0~59		59	
	61A4h	0~3		0	
	61A5h	0~23	6 th time interval and fee of the 1st time table	23	R/W
	61A6h	0~59		59	
	61A7h	0~3		0	
	61A8h	0~23	7th time interval and fee of the 1st time table	23	R/W
	61A9h	0~59		59	
	61AAh	0~3		0	
	61ABh	0~23	8th time interval and fee of the 1st time table	23	R/W
	61ACh	0~59		59	
61ADh	0~3	0			
Time interval of 2nd time table setting	61AEh	1~8	1st~8th time interval and fee of the 2nd time table	1	R/W
	61AFh	0~23		0	R/W
	61B0h	0~59		0	
	61B1h	0~3		0	
	61B2h	0~23		23	
	61B3h	0~59		59	
	61B4h	0~3		0	R/W
	61B5h	0~23		23	
	61B6h	0~59		59	
	61B7h	0~3		0	R/W
	61B8h	0~23		23	
	61B9h	0~59		59	
	61BAh	0~3		0	R/W
	61BBh	0~23		23	
	61BCh	0~59		59	
	61BDh	0~3		0	R/W
	61BEh	0~23		23	
	61BFh	0~59		59	
	61C0h	0~3		0	R/W
	61C1h	0~23		23	
	61C2h	0~59		59	
	61C3h	0~3		0	R/W
	61C4h	0~23		23	
	61C5h	0~59		59	
61C6h	0~3	0	R/W		
61C7h	1~8	1			
61C8h	0~23	0			
Time interval of 3rd time table setting	61C9h	0~59	1st~8th time interval and fee of the 3rd time table	0	R/W
	61CAh	0~3		0	R/W
	61CBh	0~23		23	
	61CCh	0~59		59	
	61CDh	0~3		0	
	61CEh	0~23		23	
	61CFh	0~59		59	R/W
	61D0h	0~3		0	
	61D1h	0~23		23	
	61D2h	0~59		59	R/W
	61D3h	0~3		0	

Parameter	Address	Range	Description	Default	Property
Time interval of 3rd time table setting	61D4h	0~23	1st~8th time interval and fee of the 3rd time table	23	R/W
	61D5h	0~59		59	
	61D6h	0~3		0	
	61D7h	0~23		23	R/W
	61D8h	0~59		59	
	61D9h	0~3		0	
	61DAh	0~23		23	R/W
	61DBh	0~59		59	
	61DCh	0~3		0	
	61DDh	0~23		23	R/W
	61DEh	0~59		59	
61DFh	0~3	0			
Time interval of 4th time table setting	61E0h	1~8	1st~8th time interval and fee of the 4th time table	1	R/W
	61E1h	0~23		0	R/W
	61E2h	0~59		0	
	61E3h	0~3		0	
	61E4h	0~23		23	R/W
	61E5h	0~59		59	
	61E6h	0~3		0	
	61E7h	0~23		23	R/W
	61E8h	0~59		59	
	61E9h	0~3		0	
	61EAh	0~23		23	R/W
	61EBh	0~59		59	
	61ECh	0~3		0	
	61EDh	0~23		23	R/W
	61EEh	0~59		59	
	61EFh	0~3		0	
	61F0h	0~23		23	R/W
	61F1h	0~59		59	
	61F2h	0~3		0	
	61F3h	0~23		23	R/W
61F4h	0~59	59			
61F5h	0~3	0			
61F6h	0~23	23	R/W		
61F7h	0~59	59			
61F8h	0~3	0			
Time interval of 5th time table setting	61F9h	1~8	1st~8th time interval and fee of the 5th time table	1	R/W
	61FAh	0~23		0	R/W
	61FBh	0~59		0	
	61FCh	0~3		0	
	61FDh	0~23		23	R/W
	61FEh	0~59		59	
	61FFh	0~3		0	
	6200h	0~23		23	R/W
	6201h	0~59		59	
	6202h	0~3		0	
	6203h	0~23		23	R/W
	6204h	0~59		59	
	6205h	0~3		0	
	6206h	0~23		23	R/W
	6207h	0~59		59	
	6208h	0~3		0	
	6209h	0~23		23	R/W
	620Ah	0~59		59	
	620Bh	0~3		0	
	620Ch	0~23		23	R/W
620Dh	0~59	59			
620Eh	0~3	0			
620Fh	0~23	23	R/W		
6210h	0~59	59			
6211h	0~3	0			

Parameter	Address	Range	Description	Default	Property
Time interval of 6th time table setting	6212h	1~8	1st~8th time interval and fee of the 6th time table	1	R/W
	6213h	0~23		0	R/W
	6214h	0~59		0	
	6215h	0~3		0	
	6216h	0~23		23	R/W
	6217h	0~59		59	
	6218h	0~3		0	
	6219h	0~23		23	R/W
	621Ah	0~59		59	
	621Bh	0~3		0	
	621Ch	0~23		23	R/W
	621Dh	0~59		59	
	621Eh	0~3		0	
	621Fh	0~23		23	R/W
	6220h	0~59		59	
	6221h	0~3		0	
	6222h	0~23		23	R/W
	6223h	0~59		59	
	6224h	0~3		0	
	6225h	0~23		23	R/W
6226h	0~59	59			
6227h	0~3	0			
6228h	0~23	23	R/W		
6229h	0~59	59			
622Ah	0~3	0			
Time interval of 7th time table setting	622Bh	1~8	1st~8th time interval and fee of the 7th time table	1	R/W
	622Ch	0~23		0	R/W
	622Dh	0~59		0	
	622Eh	0~3		0	
	622Fh	0~23		23	R/W
	6230h	0~59		59	
	6231h	0~3		0	
	6232h	0~23		23	R/W
	6233h	0~59		59	
	6234h	0~3		0	
	6235h	0~23		23	R/W
	6236h	0~59		59	
	6237h	0~3		0	
	6238h	0~23		23	R/W
	6239h	0~59		59	
	623Ah	0~3		0	
	623Bh	0~23		23	R/W
	623Ch	0~59		59	
	623Dh	0~3		0	
	623Eh	0~23		23	R/W
623Fh	0~59	59			
6240h	0~3	0			
6241h	0~23	23	R/W		
6242h	0~59	59			
6243h	0~3	0			
Time interval of 8th time table setting	6244h	1~8	1st~8th time interval and fee of the 8th time table	1	R/W
	6245h	0~23		0	R/W
	6246h	0~59		0	
	6247h	0~3		0	
	6248h	0~23		23	R/W
	6249h	0~59		59	
	624Ah	0~3		0	
	624Bh	0~23		23	R/W
	624Ch	0~59		59	
	624Dh	0~3		0	
	624Eh	0~23		23	R/W
	624Fh	0~59		59	
6250h	0~3	0			

Parameter	Address	Range	Description	Default	Property
Time interval of 8th time table setting	6251h	0~23	1st~8th time interval and fee of the 8th time table	23	R/W
	6252h	0~59		59	
	6253h	0~3		0	
	6254h	0~23		23	R/W
	6255h	0~59		59	
	6256h	0~3		0	R/W
	6257h	0~23		23	
	6258h	0~59		59	
	6259h	0~3		0	R/W
	625Ah	0~23		23	
	625Bh	0~59		59	
	625Ch	0~3		0	

Special day parameter of TOU ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
Multi-years	625Dh	0~1	0: disable 1: enable	1	R/W
	625Eh	2000~2099	Start year of multi-years( $1 < (\text{End year} - \text{Start year}) + 1 \leq 5$ )	2015	R/W
	625Fh	2000~2099	End year of multi-years	2015	R/W
Number of holiday	6260h	0~20	Number of holiday in a year	0	R/W
1st holiday	6261h	1~12	Date of the1st holiday (month)	1	R/W
	6262h	1~31	Date of the1st holiday (Day)	1	
	6263h	1~8	Time table of the1 st holiday	1	
2nd holiday	6264h	1~12	Date and the time table of the 2nd holiday	1	R/W
	6265h	1~31		1	
	6266h	1~8		1	
3rd holiday	6267h	1~12	Date and the time table of the 3rd holiday	1	R/W
	6268h	1~31		1	
	6269h	1~8		1	
4th holiday	626Ah	1~12	Date and the time table of the 4th holiday	1	R/W
	626Bh	1~31		1	
	626Ch	1~8		1	
5th holiday	626Dh	1~12	Date and the time table of the 5th holiday	1	R/W
	626Eh	1~31		1	
	626Fh	1~8		1	
6th holiday	6270h	1~12	Date and the time table of the 6th holiday	1	R/W
	6271h	1~31		1	
	6272h	1~8		1	
7th holiday	6273h	1~12	Date and the time table of the 7th holiday	1	R/W
	6274h	1~31		1	
	6275h	1~8		1	
8th holiday	6276h	1~12	Date and the time table of the 8th holiday	1	R/W
	6277h	1~31		1	
	6278h	1~8		1	
9th holiday	6279h	1~12	Date and the time table of the 9th holiday	1	R/W
	627Ah	1~31		1	
	627Bh	1~8		1	
10th holiday	627Ch	1~12	Date and the time table of the 10th holiday	1	R/W
	627Dh	1~31		1	
	627Eh	1~8		1	
11th holiday	627Fh	1~12	Date and the time table of the 11th holiday	1	R/W
	6280h	1~31		1	
	6281h	1~8		1	
12th holiday	6282h	1~12	Date and the time table of the 12th holiday	1	R/W
	6283h	1~31		1	
	6284h	1~8		1	
13th holiday	6285h	1~12	Date and the time table of the 13th holiday	1	R/W
	6286h	1~31		1	
	6287h	1~8		1	
14th holiday	6288h	1~12	Date and the time table of the 14th holiday	1	R/W
	6289h	1~31		1	
	628Ah	1~8		1	
15th holiday	628Bh	1~12	Date and the time table of the 15th holiday	1	R/W
	628Ch	1~31		1	
	628Dh	1~8		1	
16th holiday	628Eh	1~12	Date and the time table of the 16th holiday	1	R/W
	628Fh	1~31		1	
	6290h	1~8		1	
17th holiday	6291h	1~12	Date and the time table of the 17th holiday	1	R/W
	6292h	1~31		1	
	6293h	1~8		1	
18th holiday	6294h	1~12	Date and the time table of the 18th holiday	1	R/W
	6295h	1~31		1	
	6296h	1~8		1	
19th holiday	6297h	1~12	Date and the time table of the 19th holiday	1	R/W
	6298h	1~31		1	
	6299h	1~8		1	
20th holiday	629Ah	1~12	Date and the time table of the 20th holiday	1	R/W
	629Bh	1~31		1	
	629Ch	1~8		1	

The 1st year holiday setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
1st year	629Dh	2000~2099	Setup of 1st year	2015	R/W
Number of holiday	629Eh	0~20	Number of holiday for the 1st year	0	R/W
1st holiday	629Fh	1~12	Date of the 1st holiday (month)	1	R/W
	62A0h	1~31	Date of the 1st holiday (day)	1	
	62A1h	1~8	Time table of the 1st holiday	1	
2nd holiday	62A2h	1~12	Date and the time table of the 2nd holiday	1	R/W
	62A3h	1~31		1	
	62A4h	1~8		1	
3rd holiday	62A5h	1~12	Date and the time table of the 3rd holiday	1	R/W
	62A6h	1~31		1	
	62A7h	1~8		1	
4th holiday	62A8h	1~12	Date and the time table of the 4th holiday	1	R/W
	62A9h	1~31		1	
	62AAh	1~8		1	
5th holiday	62ABh	1~12	Date and the time table of the 5th holiday	1	R/W
	62ACh	1~31		1	
	62ADh	1~8		1	
6th holiday	62AEh	1~12	Date and the time table of the 6th holiday	1	R/W
	62AFh	1~31		1	
	62B0h	1~8		1	
7th holiday	62B1h	1~12	Date and the time table of the 7th holiday	1	R/W
	62B2h	1~31		1	
	62B3h	1~8		1	
8th holiday	62B4h	1~12	Date and the time table of the 8th holiday	1	R/W
	62B5h	1~31		1	
	62B6h	1~8		1	
9th holiday	62B7h	1~12	Date and the time table of the 9th holiday	1	R/W
	62B8h	1~31		1	
	62B9h	1~8		1	
10th holiday	62BAh	1~12	Date and the time table of the 10th holiday	1	R/W
	62BBh	1~31		1	
	62BCh	1~8		1	
11th holiday	62BDh	1~12	Date and the time table of the 11th holiday	1	R/W
	62BEh	1~31		1	
	62BFh	1~8		1	
12th holiday	62C0h	1~12	Date and the time table of the 12th holiday	1	R/W
	62C1h	1~31		1	
	62C2h	1~8		1	
13th holiday	62C3h	1~12	Date and the time table of the 13th holiday	1	R/W
	62C4h	1~31		1	
	62C5h	1~8		1	
14th holiday	62C6h	1~12	Date and the time table of the 14th holiday	1	R/W
	62C7h	1~31		1	
	62C8h	1~8		1	
15th holiday	62C9h	1~12	Date and the time table of the 15th holiday	1	R/W
	62CAh	1~31		1	
	62CBh	1~8		1	
16th holiday	62CCh	1~12	Date and the time table of the 16th holiday	1	R/W
	62CDh	1~31		1	
	62CEh	1~8		1	
17th holiday	62CFh	1~12	Date and the time table of the 17th holiday	1	R/W
	62D0h	1~31		1	
	62D1h	1~8		1	
18th holiday	62D2h	1~12	Date and the time table of the 18th holiday	1	R/W
	62D3h	1~31		1	
	62D4h	1~8		1	
19th holiday	62D5h	1~12	Date and the time table of the 19th holiday	1	R/W
	62D6h	1~31		1	
	62D7h	1~8		1	
20th holiday	62D8h	1~12	Date and the time table of the 20th holiday	1	R/W
	62D9h	1~31		1	
	62DAh	1~8		1	

The 2nd year holiday setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
2nd year	62DBh	2000~2099	Parameters setting of 2nd year holidays	2015	R/W
Number of holiday	62DCh	0~20		0	R/W
1st holiday	62DDh	1~12		1	R/W
	62DEh	1~31		1	
	62DFh	1~8		1	
2nd holiday	62E0h	1~12		1	R/W
	62E1h	1~31		1	
	62E2h	1~8		1	
3rd holiday	62E3h	1~12		1	R/W
	62E4h	1~31		1	
	62E5h	1~8		1	
4th holiday	62E6h	1~12		1	R/W
	62E7h	1~31		1	
	62E8h	1~8		1	
5th holiday	62E9h	1~12		1	R/W
	62EAh	1~31		1	
	62EBh	1~8		1	
6th holiday	62ECh	1~12		1	R/W
	62EDh	1~31		1	
	62EEh	1~8		1	
7th holiday	62EFh	1~12		1	R/W
	62F0h	1~31		1	
	62F1h	1~8		1	
8th holiday	62F2h	1~12		1	R/W
	62F3h	1~31		1	
	62F4h	1~8		1	
9th holiday	62F5h	1~12		1	R/W
	62F6h	1~31		1	
	62F7h	1~8		1	
10th holiday	62F8h	1~12		1	R/W
	62F9h	1~31		1	
	62FAh	1~8		1	
11th holiday	62FBh	1~12		1	R/W
	62FCh	1~31		1	
	62FDh	1~8		1	
12th holiday	62FEh	1~12		1	R/W
	62FFh	1~31		1	
	6300h	1~8		1	
13th holiday	6301h	1~12		1	R/W
	6302h	1~31		1	
	6303h	1~8	1		
14th holiday	6304h	1~12	1	R/W	
	6305h	1~31	1		
	6306h	1~8	1		
15th holiday	6307h	1~12	1	R/W	
	6308h	1~31	1		
	6309h	1~8	1		
16th holiday	630Ah	1~12	1	R/W	
	630Bh	1~31	1		
	630Ch	1~8	1		
17th holiday	630Dh	1~12	1	R/W	
	630Eh	1~31	1		
	630Fh	1~8	1		
18th holiday	6310h	1~12	1	R/W	
	6311h	1~31	1		
	6312h	1~8	1		
19th holiday	6313h	1~12	1	R/W	
	6314h	1~31	1		
	6315h	1~8	1		
20th holiday	6316h	1~12	1	R/W	
	6317h	1~31	1		
	6318h	1~8	1		

The 3rd year holiday setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
3rd year	6319h	2000~2099	Parameters setting of 3rd year holidays	2015	R/W
Number of holiday	631Ah	0~20		0	R/W
1st holiday	631Bh	1~12		1	R/W
	631Ch	1~31		1	
2nd holiday	631Dh	1~8		1	R/W
	631Eh	1~12		1	
	631Fh	1~31		1	
3rd holiday	6320h	1~8		1	R/W
	6321h	1~12		1	
	6322h	1~31		1	
4th holiday	6323h	1~8		1	R/W
	6324h	1~12		1	
	6325h	1~31		1	
5th holiday	6326h	1~8		1	R/W
	6327h	1~12		1	
	6328h	1~31		1	
6th holiday	6329h	1~8		1	R/W
	632Ah	1~12		1	
	632Bh	1~31		1	
7th holiday	632Ch	1~8		1	R/W
	632Dh	1~12		1	
	632Eh	1~31		1	
8th holiday	632Fh	1~8		1	R/W
	6330h	1~12		1	
	6331h	1~31		1	
9th holiday	6332h	1~8		1	R/W
	6333h	1~12		1	
	6334h	1~31		1	
10th holiday	6335h	1~8		1	R/W
	6336h	1~12		1	
	6337h	1~31		1	
11th holiday	6338h	1~8		1	R/W
	6339h	1~12		1	
	633Ah	1~31		1	
12th holiday	633Bh	1~8		1	R/W
	633Ch	1~12		1	
	633Dh	1~31		1	
13th holiday	633Eh	1~8		1	R/W
	633Fh	1~12		1	
	6340h	1~31		1	
14th holiday	6341h	1~8	1	R/W	
	6342h	1~12	1		
	6343h	1~31	1		
15th holiday	6344h	1~8	1	R/W	
	6345h	1~12	1		
	6346h	1~31	1		
16th holiday	6347h	1~8	1	R/W	
	6348h	1~12	1		
	6349h	1~31	1		
17th holiday	634Ah	1~8	1	R/W	
	634Bh	1~12	1		
	634Ch	1~31	1		
18th holiday	634Dh	1~8	1	R/W	
	634Eh	1~12	1		
	634Fh	1~31	1		
19th holiday	6350h	1~8	1	R/W	
	6351h	1~12	1		
	6352h	1~31	1		
20th holiday	6353h	1~8	1	R/W	
	6354h	1~12	1		
	6355h	1~31	1		
	6356h	1~8	1		

The 4th year holiday setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
4th year	6357h	2000~2099	Parameters setting of 4th year holidays	2015	R/W
Number of holiday	6358h	0~20		0	R/W
1st holiday	6359h	1~12		1	R/W
	635Ah	1~31		1	
2nd holiday	635Bh	1~8		1	R/W
	635Ch	1~12		1	
	635Dh	1~31		1	
3rd holiday	635Eh	1~8		1	R/W
	635Fh	1~12		1	
	6360h	1~31		1	
4th holiday	6361h	1~8		1	R/W
	6362h	1~12		1	
	6363h	1~31		1	
5th holiday	6364h	1~8		1	R/W
	6365h	1~12		1	
	6366h	1~31		1	
6th holiday	6367h	1~8		1	R/W
	6368h	1~12		1	
	6369h	1~31		1	
7th holiday	636Ah	1~8		1	R/W
	636Bh	1~12		1	
	636Ch	1~31		1	
8th holiday	636Dh	1~8		1	R/W
	636Eh	1~12		1	
	636Fh	1~31		1	
9th holiday	6370h	1~8		1	R/W
	6371h	1~12		1	
	6372h	1~31		1	
10th holiday	6373h	1~8		1	R/W
	6374h	1~12		1	
	6375h	1~31		1	
11th holiday	6376h	1~8		1	R/W
	6377h	1~12		1	
	6378h	1~31		1	
12th holiday	6379h	1~8		1	R/W
	637Ah	1~12		1	
	637Bh	1~31		1	
13th holiday	637Ch	1~8		1	R/W
	637Dh	1~12		1	
	637Eh	1~31		1	
14th holiday	637Fh	1~8	1	R/W	
	6380h	1~12	1		
	6381h	1~31	1		
15th holiday	6382h	1~8	1	R/W	
	6383h	1~12	1		
	6384h	1~31	1		
16th holiday	6385h	1~8	1	R/W	
	6386h	1~12	1		
	6387h	1~31	1		
17th holiday	6388h	1~8	1	R/W	
	6389h	1~12	1		
	638Ah	1~31	1		
18th holiday	638Bh	1~8	1	R/W	
	638Ch	1~12	1		
	638Dh	1~31	1		
19th holiday	638Eh	1~8	1	R/W	
	638Fh	1~12	1		
	6390h	1~31	1		
20th holiday	6391h	1~8	1	R/W	
	6392h	1~12	1		
	6393h	1~31	1		
	6394h	1~8	1		

The 5th year holiday setting ( Code : 03h , 06h , 10h )

Parameter	Address	Range	Description	Default	Property
5th year	6395h	2000~2099	Parameters setting of 5th year holidays	2015	R/W
Number of holiday	6396h	0~20		0	R/W
1st holiday	6397h	1~12		1	R/W
	6398h	1~31		1	
	6399h	1~8		1	
2nd holiday	639Ah	1~12		1	R/W
	639Bh	1~31		1	
	639Ch	1~8		1	
3rd holiday	639Dh	1~12		1	R/W
	639Eh	1~31		1	
	639Fh	1~8		1	
4th holiday	63A0h	1~12		1	R/W
	63A1h	1~31		1	
	63A2h	1~8		1	
5th holiday	63A3h	1~12		1	R/W
	63A4h	1~31		1	
	63A5h	1~8		1	
6th holiday	63A6h	1~12		1	R/W
	63A7h	1~31		1	
	63A8h	1~8		1	
7th holiday	63A9h	1~12		1	R/W
	63AAh	1~31		1	
	63ABh	1~8		1	
8th holiday	63ACh	1~12		1	R/W
	63ADh	1~31		1	
	63AEh	1~8		1	
9th holiday	63AFh	1~12		1	R/W
	63B0h	1~31		1	
	63B1h	1~8		1	
10th holiday	63B2h	1~12		1	R/W
	63B3h	1~31		1	
	63B4h	1~8		1	
11th holiday	63B5h	1~12		1	R/W
	63B6h	1~31		1	
	63B7h	1~8		1	
12th holiday	63B8h	1~12		1	R/W
	63B9h	1~31		1	
	63BAh	1~8		1	
13th holiday	63BBh	1~12		1	R/W
	63BCh	1~31		1	
	63BDh	1~8	1		
14th holiday	63BEh	1~12	1	R/W	
	63BFh	1~31	1		
	63C0h	1~8	1		
15th holiday	63C1h	1~12	1	R/W	
	63C2h	1~31	1		
	63C3h	1~8	1		
16th holiday	63C4h	1~12	1	R/W	
	63C5h	1~31	1		
	63C6h	1~8	1		
17th holiday	63C7h	1~12	1	R/W	
	63C8h	1~31	1		
	63C9h	1~8	1		
18th holiday	63CAh	1~12	1	R/W	
	63CBh	1~31	1		
	63CCh	1~8	1		
19th holiday	63CDh	1~12	1	R/W	
	63CEh	1~31	1		
	63CFh	1~8	1		
20th holiday	63D0h	1~12	1	R/W	
	63D1h	1~31	1		
	63D2h	1~8	1		

Floating data ( Code : 03h )

Parameter	Address	Range	Description	Default	Property
FREQ	7000h	45.00~65.00Hz	Frequency		R
	7001h				
U1	7002h	0.0 ~1200000.0V	Phase1 voltage		R
	7003h				
U2	7004h	0.0 ~1200000.0V	Phase2 voltage		R
	7005h				
U3	7006h	0.0 ~1200000.0V	Phase3 voltage		R
	7007h				
ULN.AVG	7008h	0.0 ~1200000.0V	Average phase voltage		R
	7009h				
U12	700Ah	0.0 ~1200000.0V	Phase1 line voltage		R
	700Bh				
U23	700Ch	0.0 ~1200000.0V	Phase2 line voltage		R
	700Dh				
U31	700Eh	0.0 ~1200000.0V	Phase3 line voltage		R
	700Fh				
ULL.AVG	7010h	0.0 ~1200000.0V	Average line voltage		R
	7011h				
I1	7012h	0.000~9999.000A	I1 current		R
	7013h				
I2	7014h	0.000~9999.000A	I2 current		R
	7015h				
I3	7016h	0.000~9999.000A	I3 current		R
	7017h				
I.AVG	7018h	0.000~9999.000A	Average current		R
	7019h				
IN	701Ah	0.000~9999.000A	Neutral current		R
	701Bh				
P-1	701Ch	-999999999~999999999W	Phase1 active power		R
	701Dh				
P-2	701Eh	-999999999~999999999W	Phase2 active power		R
	701Fh				
P-3	7020h	-999999999~999999999W	Phase3 active power		R
	7021h				
P.SUM	7022h	-999999999~999999999W	Total active power		R
	7023h				
Q-1	7024h	-999999999~999999999VAR	Phase1 reactive power		R
	7025h				
Q-2	7026h	-999999999~999999999VAR	Phase2 reactive power		R
	7027h				
Q-3	7028h	-999999999~999999999VAR	Phase3 reactive power		R
	7029h				
Q.SUM	702Ah	-999999999~999999999VAR	Total reactive power		R
	702Bh				
S-1	702Ch	0~999999999VA	Phase1 apparent power		R
	702Dh				
S-2	702Eh	0~999999999VA	Phase2 apparent power		R
	702Fh				
S-3	7030h	0~999999999VA	Phase3 apparent power		R
	7031h				
S.SUM	7032h	0~999999999VA	Total apparent power		R
	7033h				
PF1	7034h	-0.020~-/+1.000~0.020	Phase1 power factor		R
	7035h				
PF2	7036h	-0.020~-/+1.000~0.020	Phase2 power factor		R
	7037h				
PF3	7038h	-0.020~-/+1.000~0.020	Phase3 power factor		R
	7039h				
PF.AVG	703Ah	-0.020~-/+1.000~0.020	Average power factor		R
	703Bh				
Uunbl	703Ch	0~300.0%	Voltage unbalance		R
	703Dh				
Iunbl	703Eh	0~300.0%	Current unbalance		R
	703Fh				

Parameter	Address	Range	Description	Default	Property
P.DM.	7042h	-999999999~999999999W	Total active power demand		R
	7043h				
Q.DM.	7044h	-999999999~999999999VAR	Total reactive power demand		R
	7045h				
S.DM.	7046h	0~999999999VA	Total apparent power demand		R
	7047h				
I1.DM.	7048h	0.000~9999.999A	I1 current demand		R
	7049h				
I2.DM.	704Ah	0.000~9999.999A	I2 current demand		R
	704Bh				
I3.DM.	704Ch	0.000~9999.999A	I3 current demand		R
	704Dh				
I.AVG.DM.	704Eh	0.000~9999.999A	I3 current demand		R
	704Fh				
U1(U12).THD	7050h	0.0~100.0%	U1(U12) total harmonic of voltage		R
	7051h				
U2(U23).THD	7052h	0.0~100.0%	U2(U23) total harmonic of voltage		R
	7053h				
U3(U31).THD	7054h	0.0~100.0%	U3(U31) total harmonic of voltage		R
	7055h				
UAVG.THd	7056h	0.0~100.0%	Average total harmonic of voltage		R
	7057h				
I1.THd	7058h	0.0~100.0%	I1 total harmonic of current		R
	7059h				
I2.THd	705Ah	0.0~100.0%	I2 total harmonic of current		R
	705Bh				
I3.THd	705Ch	0.0~100.0%	I3 total harmonic of current		R
	705Dh				
IAVG.THd	705Eh	0.0~100.0%	Average total harmonic of current		R
	705Fh				
kWh-IMP	7060h	0.0~9999999.9kWh	Import active energy		R
	7061h				
kWh-Exp	7062h	0.0~9999999.9kWh	Export active energy		R
	7063h				
kWh-Total	7064h	0.0~9999999.9kWh	Export active energy		R
	7065h				
kWh-Net	7066h	-999999.9~9999999.9kWh	Net active energy		R
	7067h				
kVARh-IMP	7068h	0.0~9999999.9kVARh	Import reactive energy		R
	7069h				
kVARh-Exp	706Ah	0.0~9999999.9kVARh	Export reactive energy		R
	706Bh				
kVARh-Total	706Ch	0.0~9999999.9kVARh	Total reactive energy		R
	706Dh				
kVARh-Net	706Eh	-999999.9~9999999.9kVARh	Net reactive energy		R
	706Fh				
kVAh-Total	7070h	0.0~9999999.9kVAh	Total apparent energy		R
	7071h				
CO <sub>2</sub>	7072h	0.000~99999.999kg	Total CO <sub>2</sub> weight of energy		R
	7073h				