



TMM-70

Multifunction Power Meter

Operation Manual

FM4 40A236 Rev.0



Description

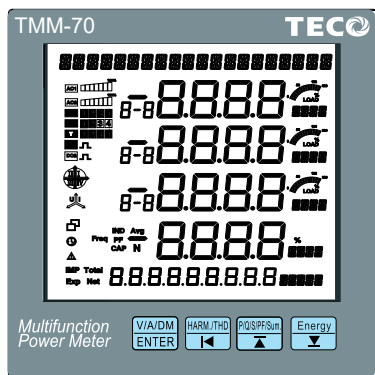
TMM-70 multifunction power analyzer provide high accuracy single phase and three-phase energy measuring and displaying, energy accumulating, power quality analysis, data logging and data communication.

TMM-70 series meters are able to measure bidirectional, four quadrants kWh and kVarh. It provides maximum/minimum records for power usage and power demand parameters.

Hardware standard built in a RS485 Modbus communication port , 4 Digital inputs, 2 Relayoutputs, LCM and 2 MB flash for data-logging.

In addition , also provide TOU , voltage and current THD, harmonics up to the 31st and auto wiring change via software.

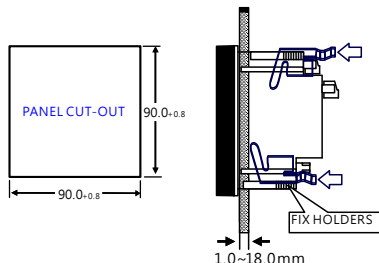
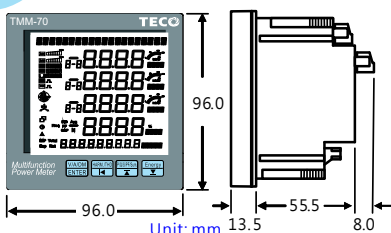
Panel description



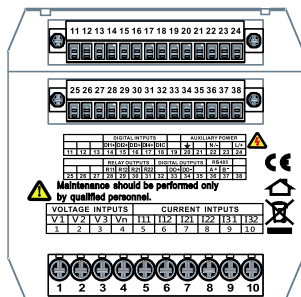
VIA/DM ENTER	Enter / Confirm Quickly index: Voltage / Current / Demand
HARM/THD 14	Shift input position / Press 2sec back to previous menu Quickly index: THD /Individual harmonic
PQS/PSum ▲	Up / Number increase Quickly index: Power parameters
Energy ▼	Down / Number decrease Quickly index: Energy parameters

Display	Description
Twenty digits in the top of display area	Display mode indication
Four line of digits in the metering area	Display metering data such as voltage, current, power, power factor, frequency, unbalance, etc.
Four line of digits in the metering area	Display metering data unit
Three line digits	1, 2, 3 for 3 phase ; 1-2, 2-3, 3-1 for 3 phase line to line
Nine and five digits	Display energy data and unit. Also display real time o'clock
Load rate	Display the percentage of load current to nominal current
1 2 3 4	ECI 1-4 indicator
1 2	Relay output 1- 2 indicator
	No icon :no pulse output With icon: icon blinks when sending pulse output
Four quadrant icon	Quadrant of the system power
Communication icon	No icon: no communication One icon: query sent or response received Two icon: query sent and response received
Logging icon	Data logging progress
Wiring change	Wiring changed
Load type IND CAP	IND : Inductive load CAP : Capacitive
Freq	For frequency
PF	For power factor
N	For neutral
IMP Total	IMP : import energy
Exp Net	EXP : export energy Total: absolute sum of Imp and Exp energy Net: algebraic sum of Imp and Exp energy

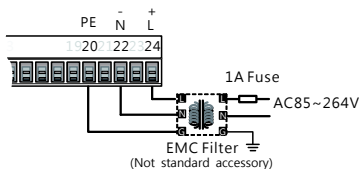
Dimensions & Installation



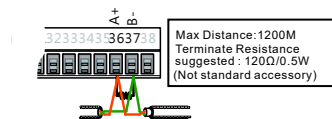
Terminal Block



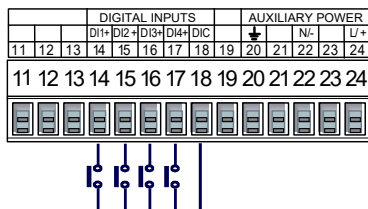
Power Connection



RS485 Communication port

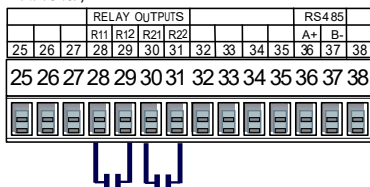


DigitalInput (DI)

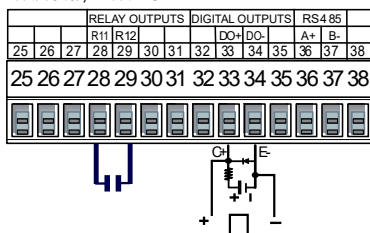


Relay Output(RO)/ Digital Output (DO)

2xRelay



1xRelay+ 1xDO

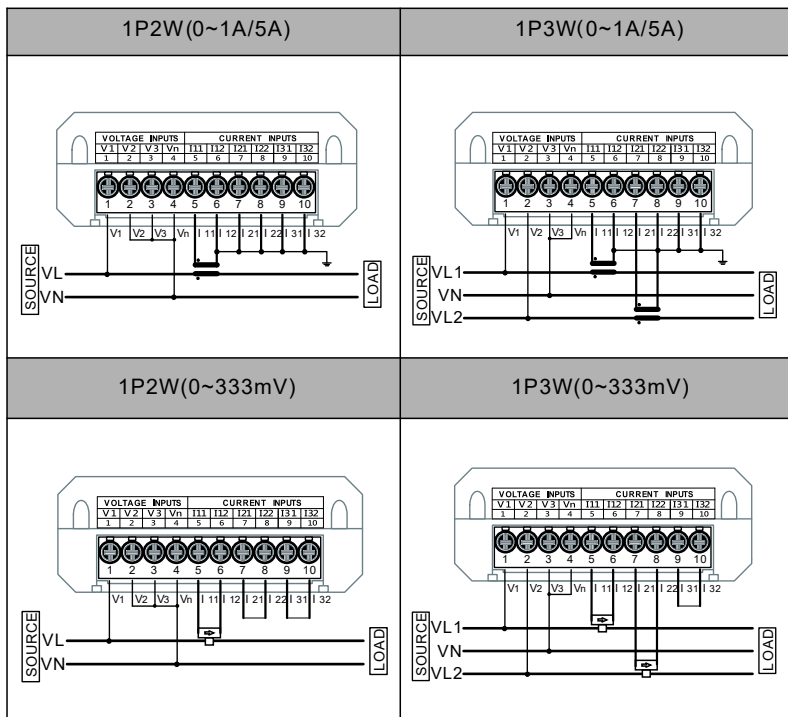


Terminal	Cable	Screw	Torque
1~10	AWG26~10/0.5~4.0mm ²	M3	8.0kgf.cm(Max)
11~38	AWG28~-16/0.5~1.5mm ²	M2	2.04kgf.cm(Max)

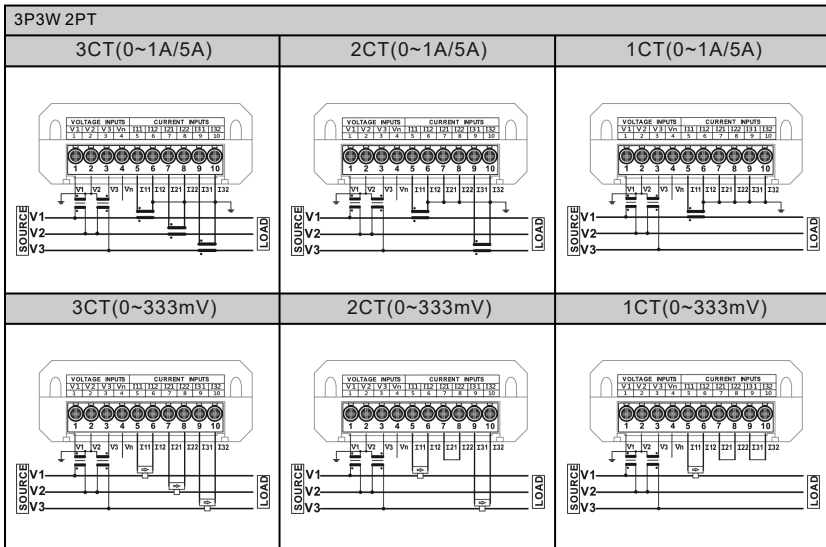
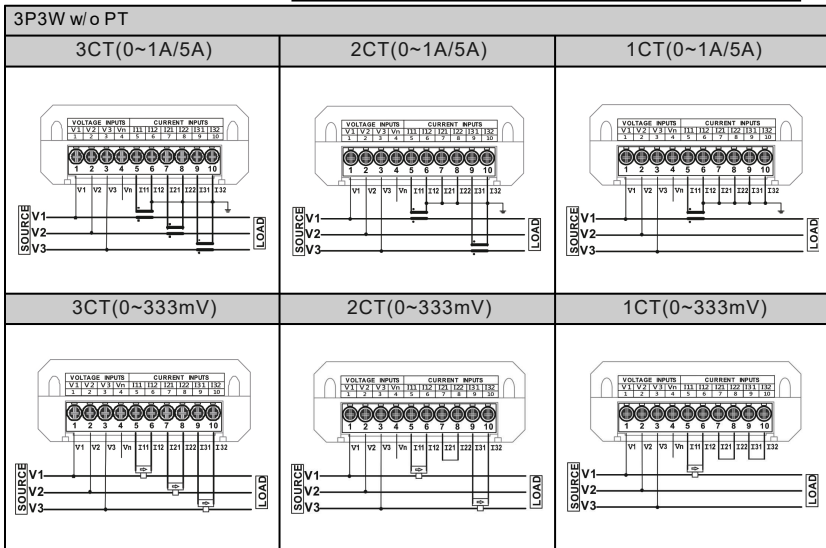
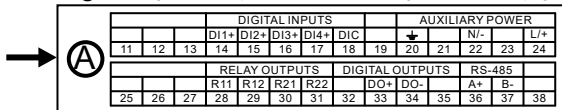
Voltage and current connection


Current input includes three signals, which are 1A, 5A and 333mV.

The mV of CT signal needs to be wired independently, and cannot be grounded or connected together with each other.

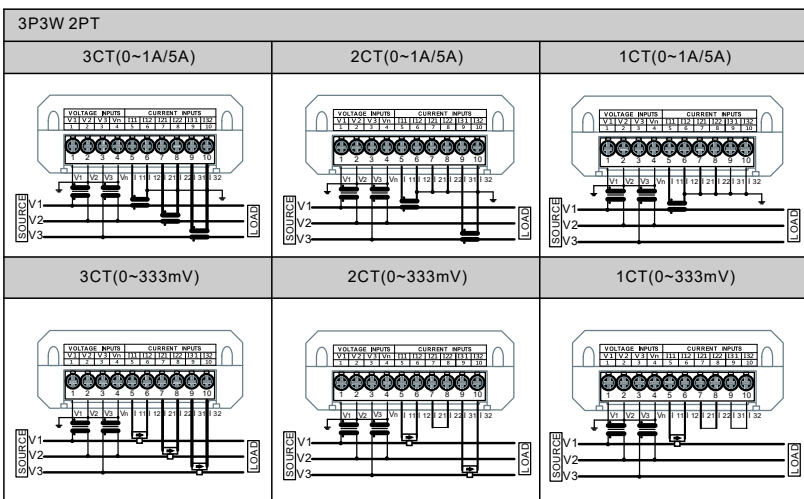
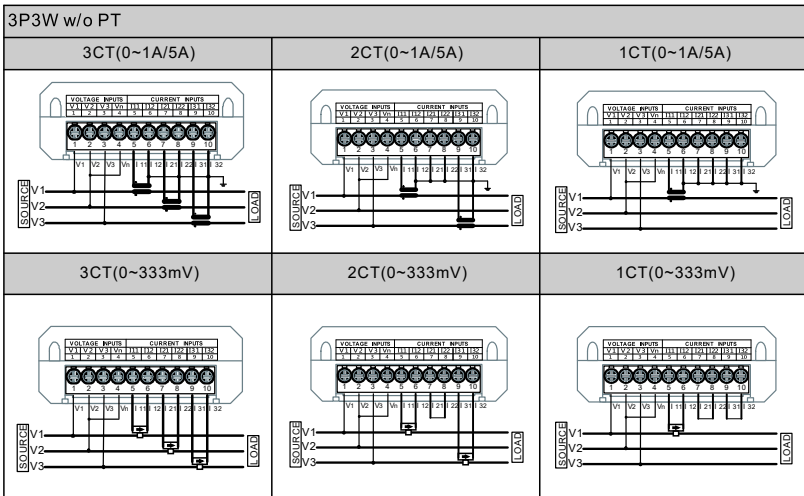


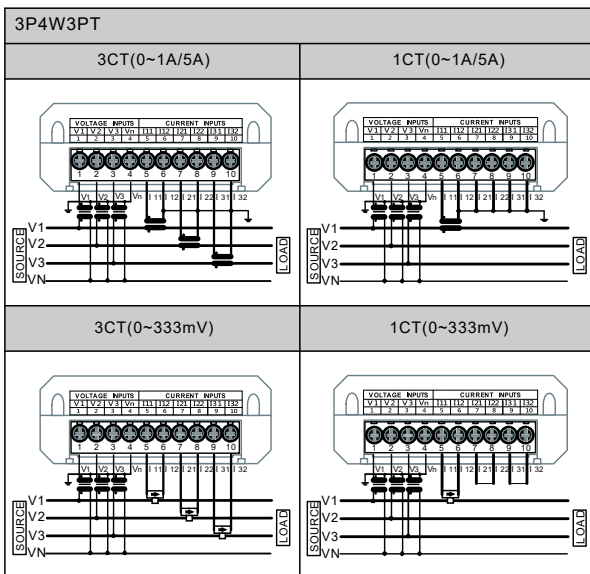
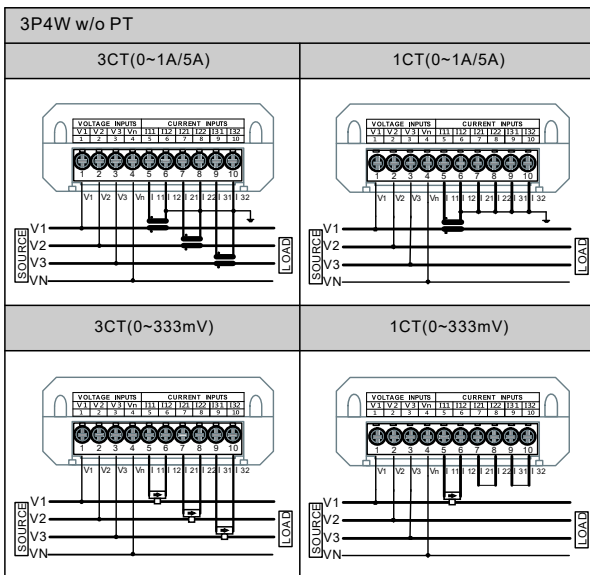
※When the pin label on the back is as shown **A** in the figure below, please refer to the wiring method on this page for 3P3W :



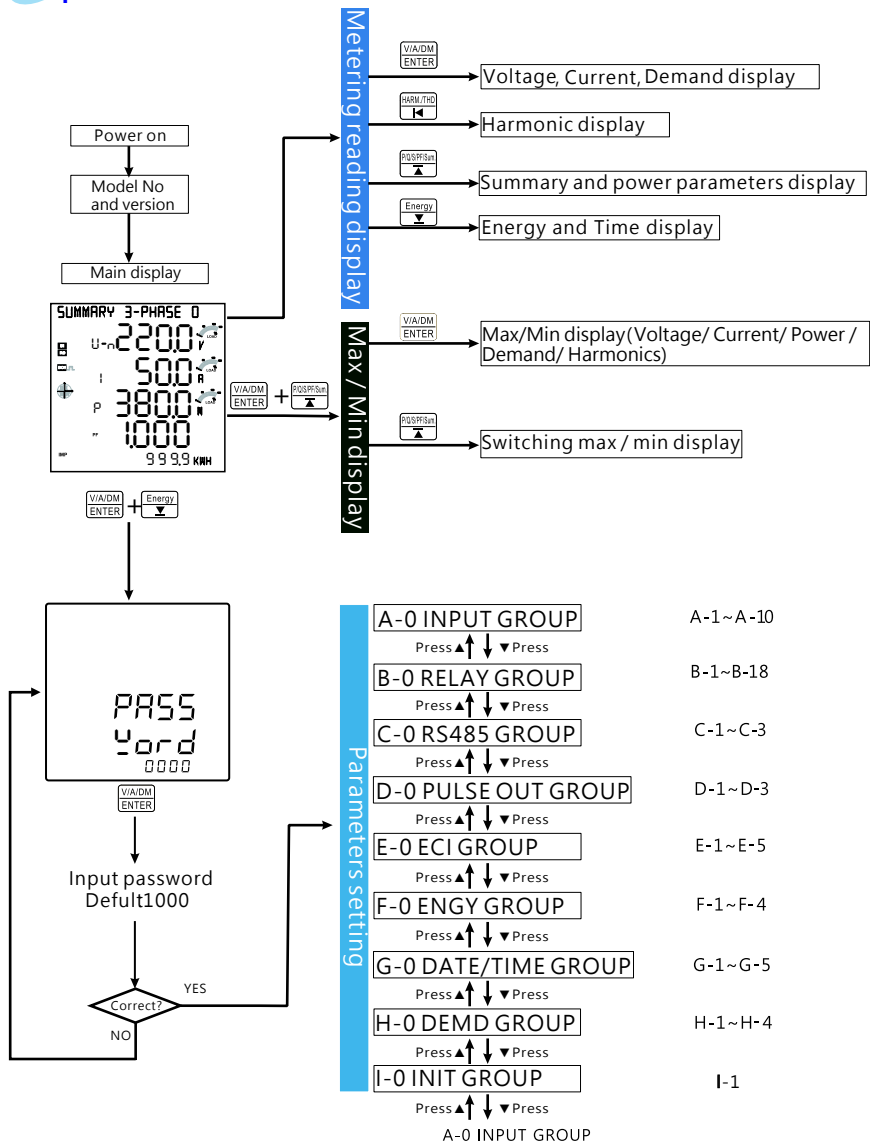
※When the pin label on the back isn't as shown  in the figure below, please refer to the wiring method on this page for 3P3W :

DIGITAL INPUTS										AUXILIARY POWER							
DI1+		DI2+		DI3+		DI4+		DIC		+		N/-		L/+			
11	12	13	14	15	16	17	18	19	20	21	22	23	24				
RELAY OUTPUTS				DIGITAL OUTPUTS				RS-485									
R11		R12		R21		R22		DO+		DO-		A+ B-					
25	26	27	28	29	30	31	32	33	34	35	36	37	38				



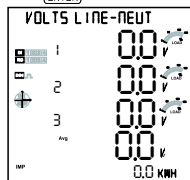


Operational flow chart

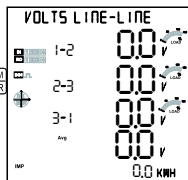


Voltage/Current/Demand display

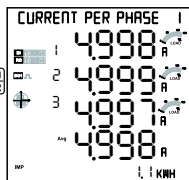
Press **VIA/DM**
ENTER



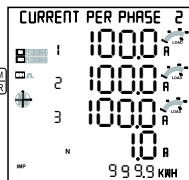
Each phase voltage & Average phase voltage



Each line voltage & Average line voltage



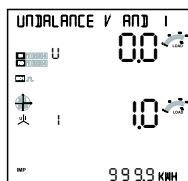
Current & Average current



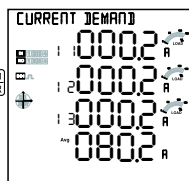
Current & Neutral Current

Back to Phase voltage & Average phase voltage

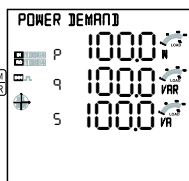
VIA/DM
ENTER



Voltage/Current unbalance



Current demand & Average current demand

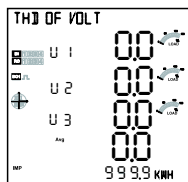


Power demand

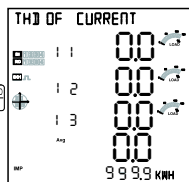
Total harmonic display

Press **HARM/THD**

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



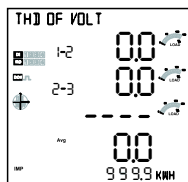
Each phase voltage harmonic & Average Phase voltage harmonic



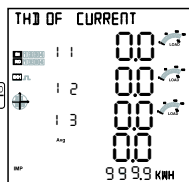
Current harmonic & Average current harmonic

HARM/THD Phase voltage individual harmonics

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



Each line voltage harmonic & Average line voltage harmonic



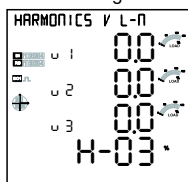
Current harmonic & Average current harmonic

HARM/THD Line voltage individual harmonics

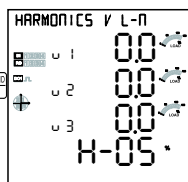
Individual harmonic display

Individual harmonic only display 3rd, 5th, 7th, 9th, 11th, 13th, 15th and the others read from RS485 communication

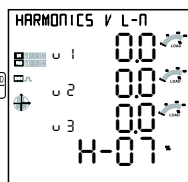
Phase voltage and current



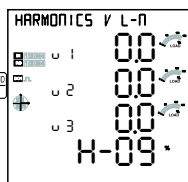
3rd phase voltage individual harmonics



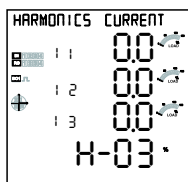
5th phase voltage individual harmonics



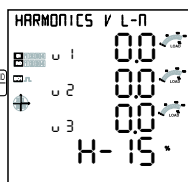
7th phase voltage individual harmonics



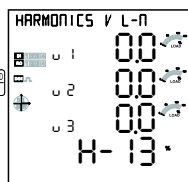
9th phase voltage individual harmonics



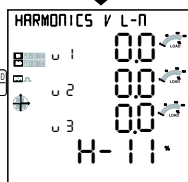
3rd current individual harmonics



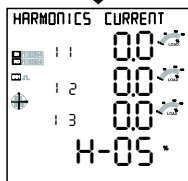
15th phase voltage individual harmonics



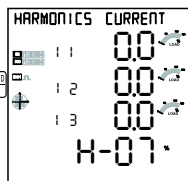
13th phase voltage individual harmonics



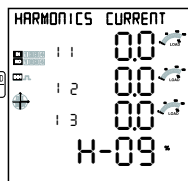
11th Phase voltage individual harmonics



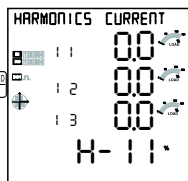
5th current individual harmonics



7th current individual harmonics

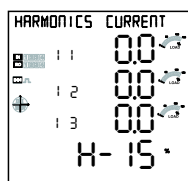


9th current individual harmonics

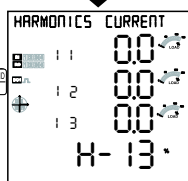


11th current individual harmonics

Back to phase voltage harmonic & Average Phase voltage harmonic



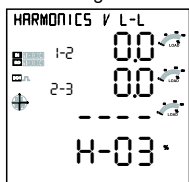
15th current individual harmonics



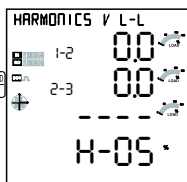
13th current individual harmonics

Individual harmonic display

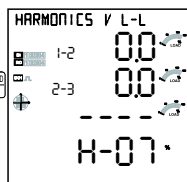
Line voltage and current



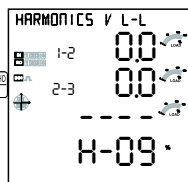
3rd line voltage individual harmonics



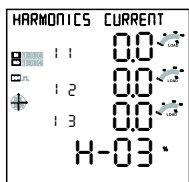
5th line voltage individual harmonics



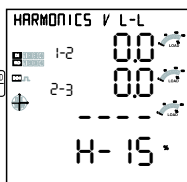
7th line voltage individual harmonics



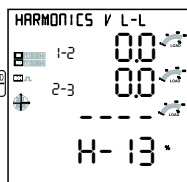
9th line voltage individual harmonics



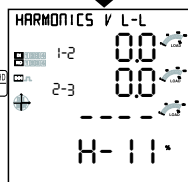
3rd current individual harmonics



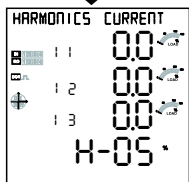
15th line voltage individual harmonics



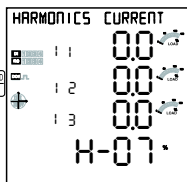
13th line voltage individual harmonics



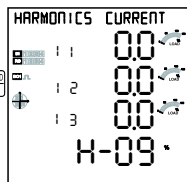
11th line voltage individual harmonics



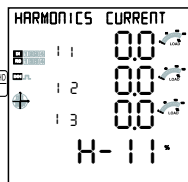
5th current individual harmonics



7th current individual harmonics

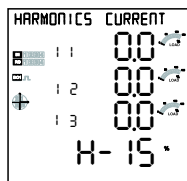


9th current individual harmonics

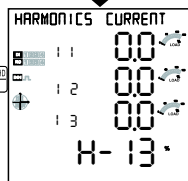


11th current individual harmonics

Back to line voltage harmonic
& Average line voltage harmonic



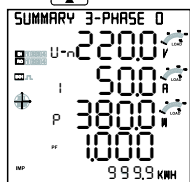
15th current individual harmonics



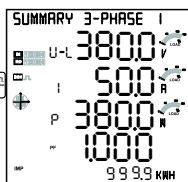
13th current individual harmonics

Summary and power parameters display

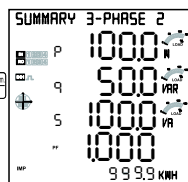
Press



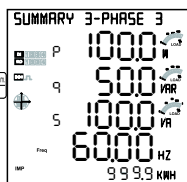
Summary-0
Phase voltage/ Current
/ Active power/ PF/
IMP active energy



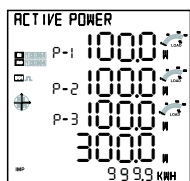
Summary-1
Line voltage/ Current
/ Active power/ PF/
IMP active energy



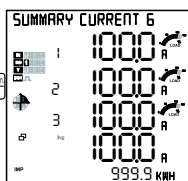
Summary-2
Active power/
Reactive power/
Apparent power/PF/
IMP active energy



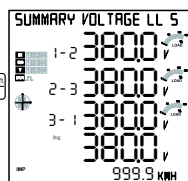
Summary-3
Active power/
Reactive power/
Apparent power/
Frequency/
IMP active energy



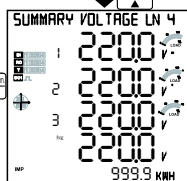
Each phase active power
Total active power/
IMP active energy



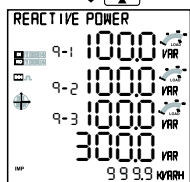
Summary-6
Current/
Average current/
IMP active energy



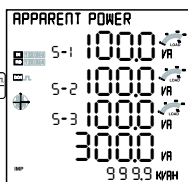
Summary-5
Each line voltage/
Average line voltage/
IMP active energy



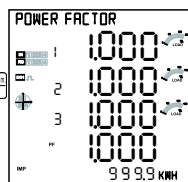
Summary-4
Each phase voltage/
Average phase voltage/
IMP active energy



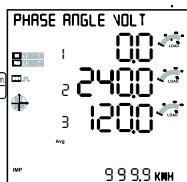
Each phase reactive power/
Total reactive power/
IMP reactive energy



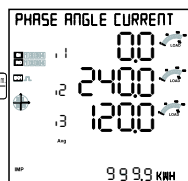
Each phase apparent power/
Total apparent power/
IMP apparent energy



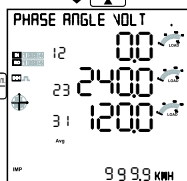
Each phase power factor/
Average power factor/
IMP apparent Energy



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



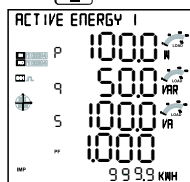
Current phase angle
I1-V1(V12)
I2-V1(V12)
I3-V1(V12)



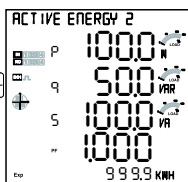
Line voltage angle
V12-V12
V23-V12
V31-V12

Back to Summary-0

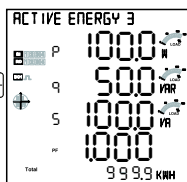
Energy and Time display

Press 

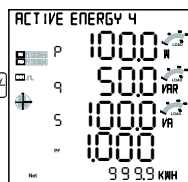
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
IMP active energy



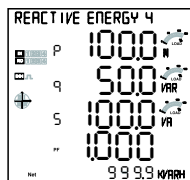
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
EXP active energy



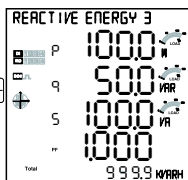
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Total active energy



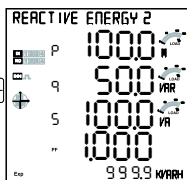
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Net active energy



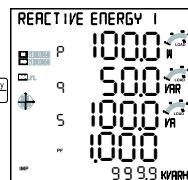
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Net reactive Energy



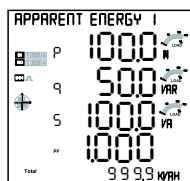
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Total reactive Energy



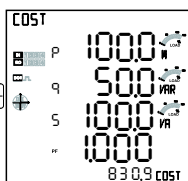
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
EXP reactive Energy



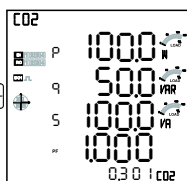
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
IMP reactive Energy



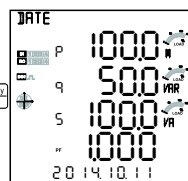
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Total apparent Energy



Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Total cost of energy



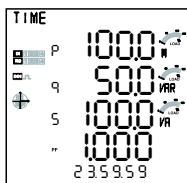
Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Total CO weight of energy



Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Date(Year/Month/Day)



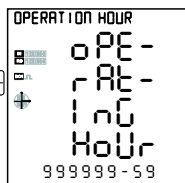
Next to Time



Total active power/
Total reactive power/
Total apparent power/
Power Factor/
Time(Hour.Minute.Second)



Remaining recording time



Operation time
Hour-Minute



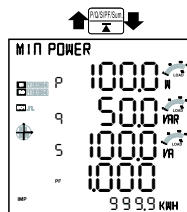
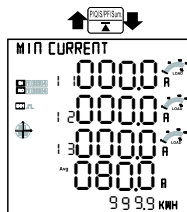
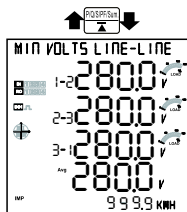
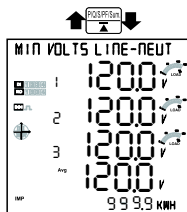
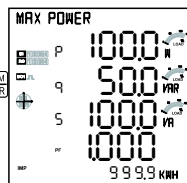
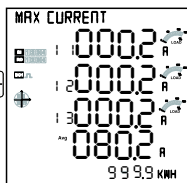
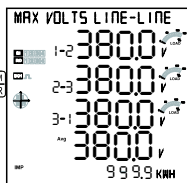
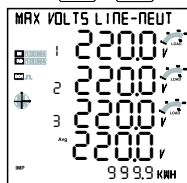
Running time
(Timer start at current of
secondary side > 1%)
Hour-Minute



Back to active energy-1

Max/Mindisplay

Press **VIA/DM** + **POS/PSH**



Each phase voltage &
Average phase voltage

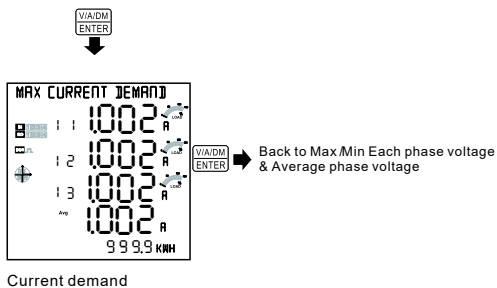
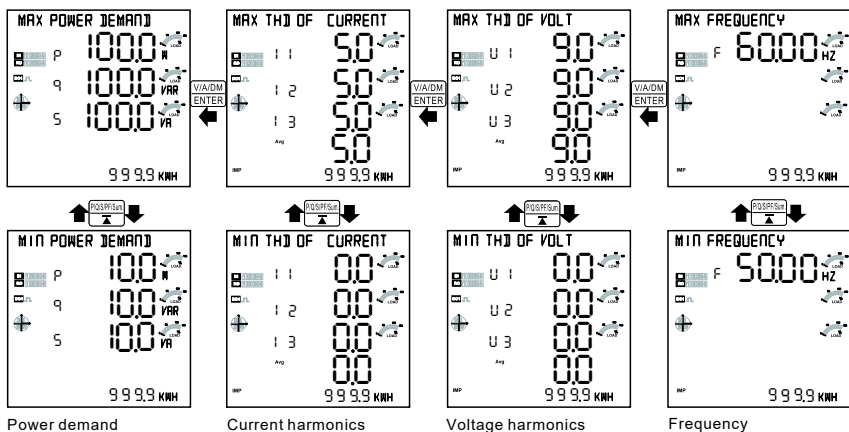
Each line voltage &
Average line voltage

Each phase current &
Average current

Total active power/
Total reactive power/
Total apparent power/
Power Factor/



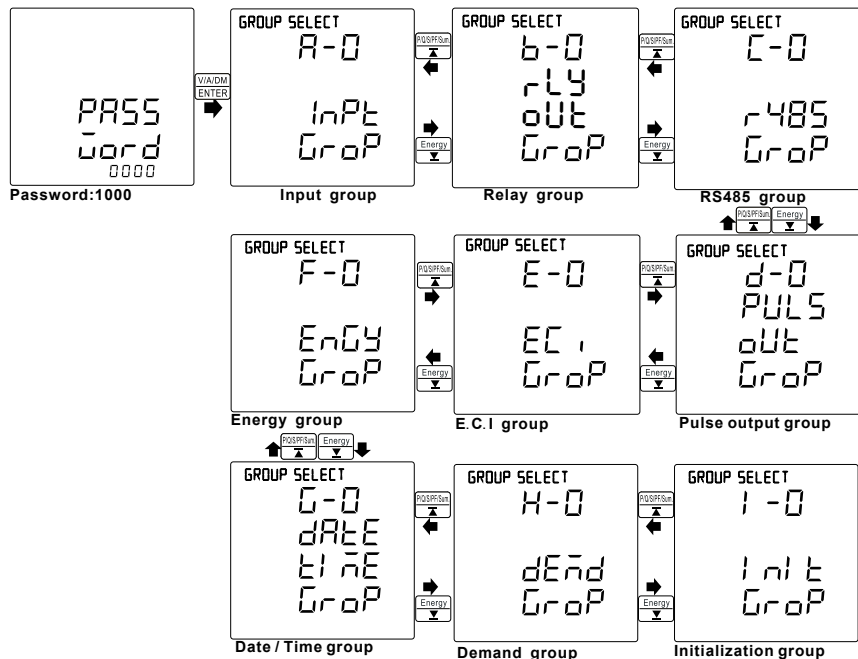
Next to Frequency



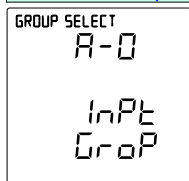
Parameters setting

VIA/DM **ENTER**: Into setting or confirm setting **PARAM/THD** **←**: Press 2 Sec back to previous menu or main display

Press **VIA/DM** **ENTER** + **Energy**

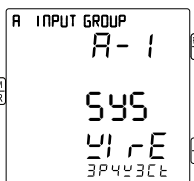


INPUT Group



Input group

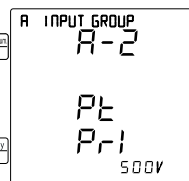
V/ADM
ENTER



System type:
1P2W / 1P3W / 3P3W1CT /
3P3W2CT / 3P3W3CT /
3P4W1CT / 3P4W3CT

POSHIn
↑

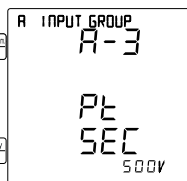
Energy
↓



Voltage setting of
primary side
100~1200000V

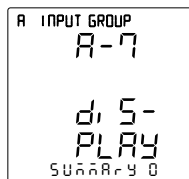
POSHIn
↑

Energy
↓

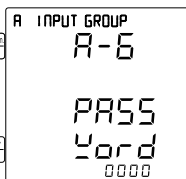


Voltage setting of
secondary side
50~500V

POSHIn Energy
↑ ↓



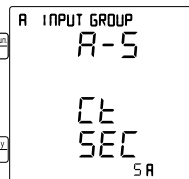
Main display select:
SUMMARY 0~6



Password modify:
0000~9999

POSHIn
↑

Energy
↓

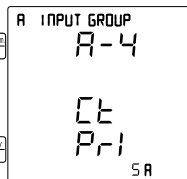


Current setting of
secondary side
5A/1A

※ 333mV and RC are read
only

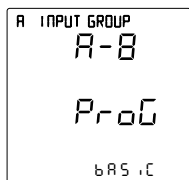
POSHIn
↑

Energy
↓



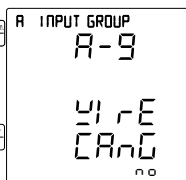
Current setting of primary side
5~9999A

POSHIn Energy
↑ ↓



Advanced function select
BASIC/ADVANCE

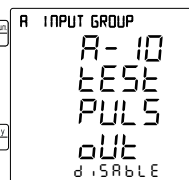
Energy
↓



Auto wiring Change:
YES/NO
Refer the next page

POSHIn
↑

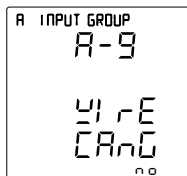
Energy
↓



Verification pulse output setting:
ENABLE/DISABLE
Pulse output format is
3200 pulse/1kWh,
50% Duty cycle

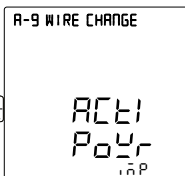
※ If A-8 set to BASIC, back to A-1

Auto wiring change



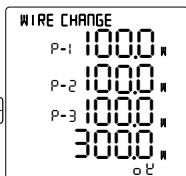
Wire change progress:
YES/NO

YES
VIA/ADM
ENTER



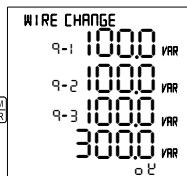
Select system input is
IMP/EXP

VIA/ADM
ENTER



Confirm active power values:
OK/NO

oE
VIA/ADM
ENTER



Confirm reactive power values:
OK/NO

VIA/ADM
ENTER

Auto wiring change condition limit :

3P4W-3CT : VN must be correct and $\theta < \pm 59^\circ$

3P4W-1CT : $\theta < \pm 59^\circ$

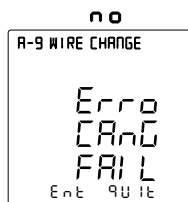
3P3W-2CT : V2 must be correct and $\theta < \pm 59^\circ$

3P3W-3CT : V2 must be correct and $\theta < \pm 59^\circ$

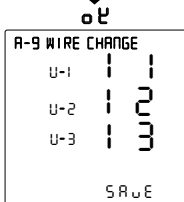
1P2W : VN must be correct and $\theta < \pm 59^\circ$

1P2W : $\theta < \pm 59^\circ$

3P3W-1CT: N/A



Wiring change failure
press Enter to Quit



Wiring change complete:
default/save/abort

RELAY Group

(Select 1RO+1DO · Without B-10~B-18)

GROUP SELECT

b-0

rly

OUT

Grp

Relayoutput group

VIA/DM
ENTER

RELAY 1 GROUP

b-1

rol

SLct

1RUG

Parameters of relay1 setting
(Refer to Table 1)

POS/Fin

Energy

RELAY 1 GROUP

b-2

rol

node

H,

Relay1 mode setting:
OFF / LO / HI / LO.HOLD /
HI.HOLD / RO

POS/Fin

Energy

RELAY 1 GROUP

b-3

rol

SP

1000A

Relay1 set point setting

POS/Fin Energy

RELAY 1 GROUP

b-7

rol

HY

0

Relay1Hysteresis setting
0-9999

POS/Fin

Energy

RELAY 1 GROUP

b-6

rol

St

dLAY

0.000

Relay1 start delay timesetting
0(M)00.0(S)-9(M)59.9(S)

POS/Fin

Energy

RELAY 1 GROUP

b-5

rol

St

bAnd

0

Relay1 start bandsetting
0-9999

POS/Fin

Energy

RELAY 1 GROUP

b-4

Prog

bAS.c

Relay1advanced function
setting select:
BASIC/ADVANCE

POS/Fin Energy

※ If B-4 set to BASIC · jump to B-10

RELAY 1 GROUP

b-8

rol

rd

0.000

Relay1 active delay time setting:
0(M)00.0(S)-9(M)59.9(S)

POS/Fin

Energy

RELAY 1 GROUP

b-9

rol

Fd

0.000

Relay1 delay off time setting:
0(M)00.0(S)-9(M)59.9(S)

POS/Fin

Energy

RELAY 2 GROUP

b-10

rol

SLct

1RUG

Parameters of relay2 setting
(Refer to Table 1)

POS/Fin

Energy

RELAY 2 GROUP

b-11

rol

node

H,

Relay2 mode setting:
OFF / LO / HI / LO.HOLD /
HI.HOLD / RO

POS/Fin

Next Page B14~B18
※ If B-13 set to BASIC · back to B-1

Energy

RELAY 2 GROUP

b-13

Prog

bAS.c

Relay2 advanced function
setting select:
BASIC/ADVANCE

POS/Fin

Energy

RELAY 2 GROUP

b-12

rol

SP

2000A

Relay2 set point setting

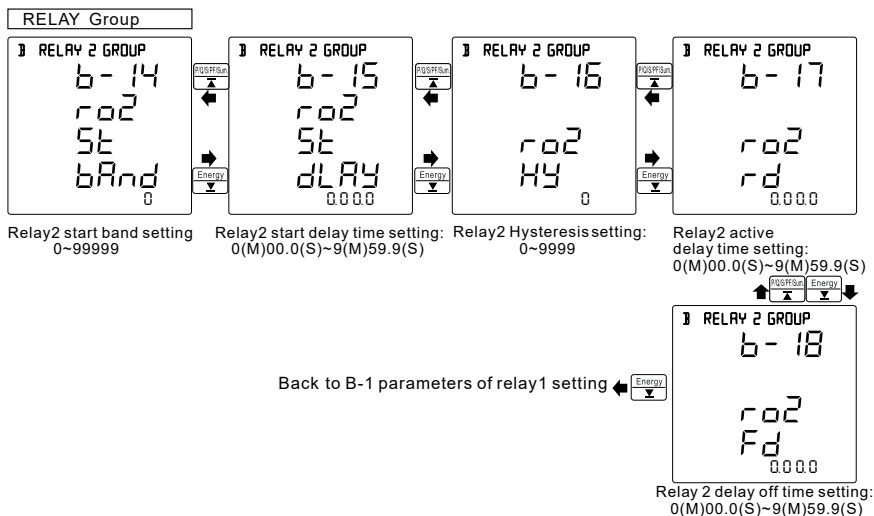
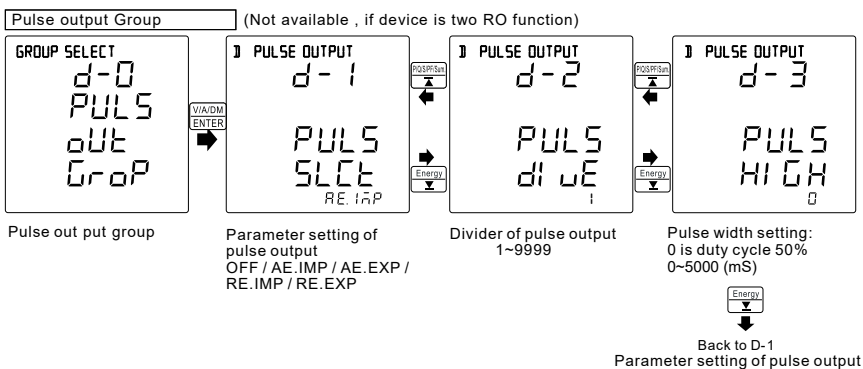
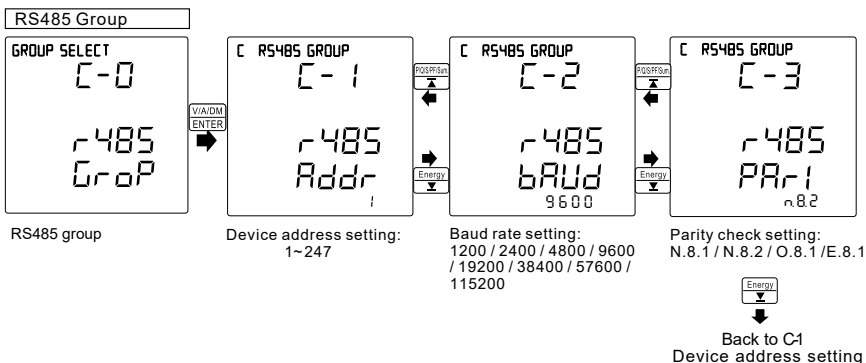
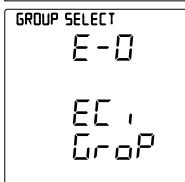


Table 1: parameters of relay

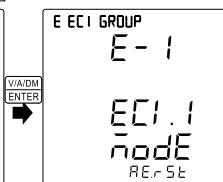
	1P2W	1P3W	3P3W1CT	3P3W2CT	3P3W3CT	3P4W1CT	3P4W3CT	Range
0:FREQ	✓	✓	✓	✓	✓	✓	✓	45.00~65.00Hz
1:U1	✓	✓				✓	✓	0.0~1200000.0V
2:U2		✓				✓	✓	0.0~1200000.0V
3:U3						✓	✓	0.0~1200000.0V
4:ULN AVG	✓	✓	✓	✓	✓	✓	✓	0.0~1200000.0V
5:U12		✓	✓	✓	✓	✓	✓	0.0~1200000.0V
6:U23			✓	✓	✓	✓	✓	0.0~1200000.0V
7:U31			✓	✓	✓	✓	✓	0.0~1200000.0V
8:ULL AVG		✓	✓	✓	✓	✓	✓	0.0~1200000.0V
9:11	✓	✓	✓	✓	✓	✓	✓	0.000~9999.999A
10:12		✓	✓	✓	✓	✓	✓	0.000~9999.999A
11:13			✓	✓	✓	✓	✓	0.000~9999.999A
12:I AVG	✓	✓	✓	✓	✓	✓	✓	0.000~9999.999A
13:I _n			✓	✓	✓	✓	✓	0.000~9999.999A
14:P-1	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kW
15:P-2		✓					✓	-199999.999~999999.999kW
16:P-3							✓	-199999.999~999999.999kW
17:P SUM	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kW
18:Q-1	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVAR
19:Q-2		✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVAR
20:Q-3			✓	✓	✓	✓	✓	-199999.999~999999.999kVAR
21:Q SUM	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVAR
22:S-1	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVA
23:S-2		✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVA
24:S-3			✓	✓	✓	✓	✓	-199999.999~999999.999kVA
25:S SUM	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVA
26:PF1	✓	✓				✓	✓	-1.000~1.000
27:PF2							✓	-1.000~1.000
28:PF3							✓	-1.000~1.000
29:PF AVG	✓	✓	✓	✓	✓	✓	✓	-1.000~1.000
30:P DM	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kW
31:Q DM	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVAR
32:S DM	✓	✓	✓	✓	✓	✓	✓	-199999.999~999999.999kVA
33:I AVG DM	✓	✓	✓	✓	✓	✓	✓	0.000~9999.999A
34:Uunbl	✓	✓	✓	✓	✓	✓	✓	0~300.0%
35:Iunbl	✓	✓	✓	✓	✓	✓	✓	0~300.0%



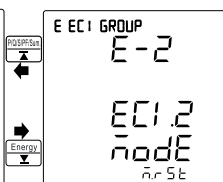
E.C.I Group



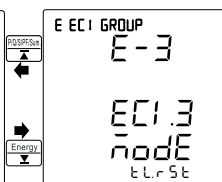
External control input Group



E.C.I 1 function setting:
AE.RST / RE.RST /
TL.RST / M.RST /
RY.RST / DM.RST /
M.DM.RST / DI

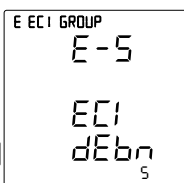


E.C.I 2 function setting

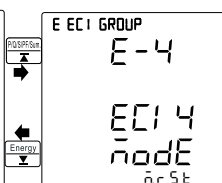


E.C.I 3 function setting

Back to E-1
E.C.I 1 function setting

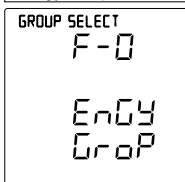


E.C.I debouncing time setting:
5~99(x8mS)

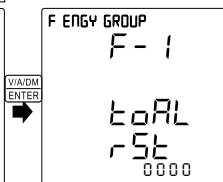


E.C.I 4 function setting

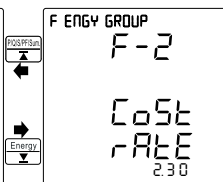
EnergyGroup



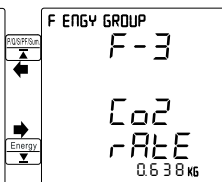
Energy Group



Reset active and
reactive energy
Input password:2100

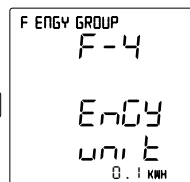


Total cost of energy
00.00~99.99 (Per /kWh)



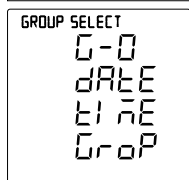
Total CO₂ weight of energy
00.000~80.000kg(Per /kWh)

Back to F-1
Reset active and reactive energy

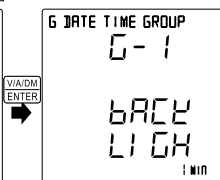


Energy unit
0.0001kWh / 0.001kWh
0.01kWh / 0.1kWh / 1kWh
/ 0.01MWh / 0.1MWh

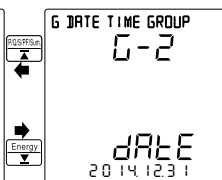
Date Time Group



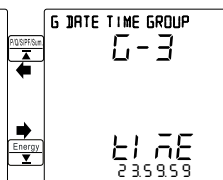
Date / Time Group



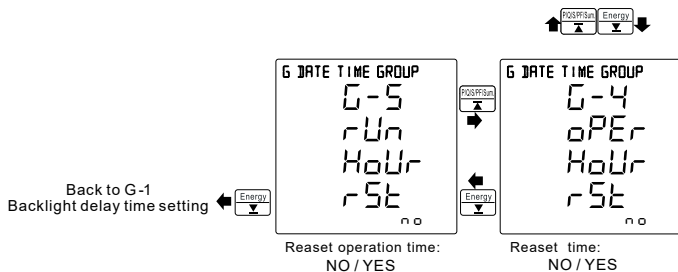
LCM backlight delay time setting: 0~15Min, 0 is always ON



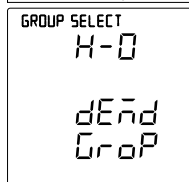
Date setting: 2000.01.01~2099.12.31



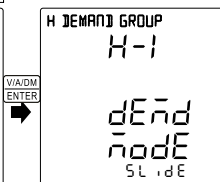
Time setting: 00.00.00~23.59.59



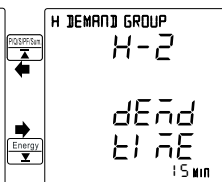
Demand Group



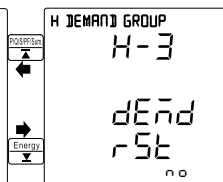
Demand Group



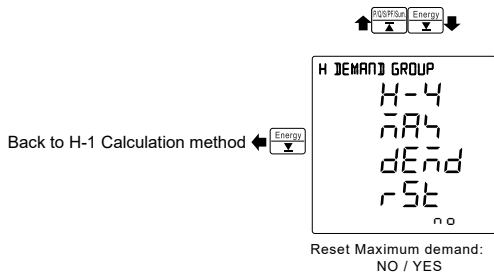
Calculation method:
SLIDE / FIX

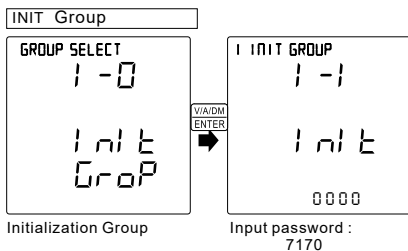


Demand interval time setting:
1~60Min



Reset demand:
NO / YES





RS485 communication table

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

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	0006	0~6	Main summary display select 0: SUMMARY 3-PHASE 0 1: SUMMARY 3-PHASE 1 2: SUMMARY 3-PHASE 2 3: SUMMARY 3-PHASE 3 4: SUMMARY VOLTAGE LN 4 5: SUMMARY VOLTAGE LL 5 6: SUMMARY CURRENT 6	0	R/W
TEST PULSE	0007h	0~1	Verification pulse output 0:Disable 1:Enable	0	R/W
MAX-MIN RST	0008h	0~1	Reset all max/ min values 0:NO 1:YES	0	R/W
CT SEC	0009h	0~3	CT secondary side current (333mV and RC are read only) 0:5A 1:1A 2:333mV 3:RC	0	R/W
Data Format	000Ah	0~3	bit0: Floating data bit1: Integer data 0: Big-Endian 1: Little-Endian	0	R/W

Parameter	Address	Range	Description	Default	Property
RO1 SLCT	000Fh	0~35	Parameters of Relay 1 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: U.unbl 35: I.unbl	12	R/W
RO1 MODE	0010h	0~5	Function mode of Relay1 0:OFF 1:LO 2:HI 3:LO.HOLD 4:HI.HOLD 5:RO	2	R/W
RO1 SP	0011h	Depand on parameter range	Active set point of Relay1 (High Word)	1000	R/W
	0012h		Active set point of Relay1 (Low Word)		R/W
RO1 ST BAND	0013h	0~9999	Relay1 start band setting	0	R/W
RO1 ST DELAY	0014h	0000~5999 (× 0.1second)	Relay1 start delay time setting	0	R/W
RO1 HY	0015h	0~9999	Relay1 hysteresissetting	0	R/W
RO1 RD	0016h	0000~5999 (× 0.1second)	Relay1 active delay time setting	0	R/W
RO1 FD	0017h	0000~5999 (× 0.1second)	Relay1 delay off time setting	0	R/W
RO2 SLCT	0018h	0~35	Relay 2 setting (same as Relay1)	12	R/W
RO2 MODE	0019h	0~5		2	R/W
RO2 SP	001Ah	Depand on parameter range		2000	R/W
	001Bh				R/W
RO2 ST BAND	001Ch	0~9999		0	R/W
RO2 ST DELAY	001Dh	0000~5999 (× 0.1 second)		0	R/W
RO2 HY	001Eh	0~9999		0	R/W
RO2 RD	001Fh	0000~5999 (× 0.1 second)		0	R/W
RO2 FD	0020h	0000~5999 (× 0.1 second)		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	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 out 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	0~500(mS)	Pulse width setting; 0 is duty cycle 50%	0	R/W

External control input setting

Parameter	Address	Range	Description	Default	Property
ECI.1 MODE	003Dh	0~7	ECI 1 function 0:AE.RST 1:RE.RST 2:TL.RST 3:M.RST 4:RY.RST 5:DM.RST 6:M.DM.RSR 7:DI	0	R/W
ECI.2 MODE	003Eh	0~7	ECI 2 function 0:AE.RST 1:RE.RST 2:TL.RST 3:M.RST 4:RY.RST 5:DM.RST 6:M.DM.RSR 7:DI	1	R/W
ECI.3 MODE	003Fh	0~7	ECI 3 function 0:AE.RST 1:RE.RST 2:TL.RST 3:M.RST 4:RY.RST 5:DM.RST 6:M.DM.RSR 7:DI	2	R/W
ECI.4 MODE	0040h	0~7	ECI 4 function 0:AE.RST 1:RE.RST 2:TL.RST 3:M.RST 4:RY.RST 5:DM.RST 6:M.DM.RSR 7:DI	3	R/W
ECI DEBN	0041h	0~99 (× 8mS)	ECI debouncing time	5	R/W

Energy setting

Parameter	Address	Range	Description	Default	Property
TOAL RST	0048h	0~1	Reset Active, Reactive, Apparent energy, COST and CO ₂ values 0:NO 1:YES	0	R/W
COST RATE	0049h	00.00~99.99	Rate setting of energy fee per kWh	230	R/W
CO ₂ RATE	004Ah	00.000~60.000kg	Rate setting of CO ₂ weight per kWh	638	R/W
ENERGY UNIT	004Bh	0~6	Energy unit setting: 0:0.0001kWh 1:0.001kWh 2:0.01kWh 3:0.1kWh 4:1kWh 5:0.01MWh 6:0.1MWh	3	R/W
RESERVED	004Ch		Reserved	0	R
RESERVED	004Dh		Reserved	0	R

Date & 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	2014	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	0~1	Reset operation time 0:NO 1:YES	0	R/W
RUN HOUR RST	0056h	0~1	Reset running time 0:NO 1:YES	0	R/W

Demand setting

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

Initialization setting

Parameter	Address	Range	Description	Default	Property
INIT	0062h	0000~9999	Initialization code:7170	0	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	Logging enable of each channel 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:U13 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	0	R/W
Event Log ch 1 Compare	0083h	0~2	Compare condition 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	0	R/W
Event Log ch 2 Compare	0088h	0~2	Compare condition 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	0	R/W
Event Log ch 3 Compare	008Dh	0~2	Compare condition 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	0	R/W

Parameter	Address	Range	Description	Default	Property
Event Log ch 4 Compare	0092h	0~2	Compare condition 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	0	R/W
Event Log ch 5 Compare	0097h	0~2	Compare condition 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	0	R/W
Event Log ch 6 Compare	009Ch	0~2	Compare condition 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	0	R/W
Event Log ch 7 Compare	00A1h	0~2	Compare condition 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	0	R/W
Event Log ch 8 Compare	00A6h	0~2	Compare condition 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	0	R/W
Event Log ch 9 Compare	00ABh	0~2	Compare condition 0:more than(>) 1:equal(=) 2:less than(<)	0	R/W
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	0	R/W
Event Log ch 10 Compare	00B0h	0~2	Compare condition 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)		

Parameter	Address	Range	Description	Default	Property
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	0	R/W
Event Log ch 11 Compare	00B5h	0~2	Compare condition 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	0	R/W
Event Log ch 12 Compare	00BAh	0~2	Compare condition 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	0	R/W
Event Log ch 13 Compare	00BFh	0~2	Compare condition 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	0	R/W
Event Log ch 14 Compare	00C4h	0~2	Compare condition 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	0	R/W
Event Log ch 15 Compare	00C9h	0~2	Compare condition 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	0	R/W
Event Log ch 16 Compare	00CEh	0~2	Compare condition 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
Event Log Clear	00D2h	0 or 55h	Clear all event logs (0:None 55h:Reset)	0	R/W

External control input setting (Code : 02h)

Parameter	Address	Range	Description	Default	Property
ECl.1 STATUS	0000h		ECl 1 input status 0:untriged 1: triged		R
ECl.2 STATUS	0001h		ECl 2 input status 0:untriged 1: triged		R
ECl.3 STATUS	0002h		ECl 3 input status 0:untriged 1: triged		R
ECl.4 STATUS	0003h		ECl 4 input status 0:untriged 1: triged		R

Relay status and control(Code : 01h, 05h)

Parameter	Address	Range	Description	Default	Property
RO1 STATUS & CONTROL	0000h		Relay 1 status and control 0:Relay off 1: Relay on		R/W
RO2 STATUS & CONTROL	0001h		Relay 2 status and control 0:Relay off 1: Relay on		RW

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 phase 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

Parameter	Address	Range	Description	Default	Property
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
AE-IMP	0181h	0.0~99999999.9kWh	Import active energy(High Word)		R
	0182h		Import active energy(Low Word)		R
AE-EXP	0183h	0.0~99999999.9kWh	Export active energy(High Word)		R
	0184h		Export active energy(Low Word)		R
AE-Total	0185h	0.0~99999999.9kWh	Total active energy(High Word)		R
	0186h		Total active energy(Low Word)		R
AE-Net	0187h	-9999999.9~99999999.9kWh	Net active energy(High Word)		R
	0188h		Net active energy(Low Word)		R
RE-IMP	0189h	0.0~99999999.9kVARh	Import reactive energy(High Word)		R
	018Ah		Import reactive energy(Low Word)		R
RE-Exp	018Bh	0.0~99999999.9kVARh	Export reactive energy(High Word)		R
	018Ch		Export reactive energy(Low Word)		R
RE-Total	018Dh	0.0~99999999.9kVARh	Total reactive energy(High Word)		R
	018Eh		Total reactive energy(Low Word)		R
RE-Net	018Fh	-9999999.9~99999999.9kVARh	Net reactive energy(High Word)		R
	0190h		Net reactive energy(Low Word)		R
SE-Total	0191h	0.0~99999999.9kVAh	Total apparent energy(High Word)		R
	0192h		Total apparent energy(Low Word)		R
COST	0193h	0.00~99999999.99	Total cost of energy (High Word)		R
	0194h		Total cost of energy(Low Word)		R
CO ₂	0195h	0.000~999999.999kg	Total CO ₂ weight of energy(High Word)		R
	0196h		Total CO ₂ weight of energy(Low Word)		R
RR TIME	0197h	0~65535Min	Remaining recording time		R
OPERATING HOUR	0198h	0~59999999Min	Operation time(High Word)		R
	0199h		Operation time(Low Word)		R
RUN HOUR	019Ah	0~59999999Min	Running time(High Word)		R
	019Bh		Running time(Low Word)		R

Individual harmonic of voltage and current reading

Parameter	Address	Range	Description	Default	Property
U1(U12).HD2	01A3h	0.0~100.0%	2nd to 31st individual harmonics of U1(U12)		R
U1(U12).HD3	01A4h	0.0~100.0%			R
U1(U12).HD4	01A5h	0.0~100.0%			R
U1(U12).HD5	01A6h	0.0~100.0%			R
U1(U12).HD6	01A7h	0.0~100.0%			R
U1(U12).HD7	01A8h	0.0~100.0%			R
U1(U12).HD8	01A9h	0.0~100.0%			R
U1(U12).HD9	01AAh	0.0~100.0%			R
U1(U12).HD10	01ABh	0.0~100.0%			R
U1(U12).HD11	01ACh	0.0~100.0%			R
U1(U12).HD12	01ADh	0.0~100.0%			R
U1(U12).HD13	01AEh	0.0~100.0%			R
U1(U12).HD14	01AFh	0.0~100.0%			R
U1(U12).HD15	01B0h	0.0~100.0%			R
U1(U12).HD16	01B1h	0.0~100.0%			R
U1(U12).HD17	01B2h	0.0~100.0%			R
U1(U12).HD18	01B3h	0.0~100.0%			R
U1(U12).HD19	01B4h	0.0~100.0%			R
U1(U12).HD20	01B5h	0.0~100.0%			R
U1(U12).HD21	01B6h	0.0~100.0%			R
U1(U12).HD22	01B7h	0.0~100.0%			R
U1(U12).HD23	01B8h	0.0~100.0%			R
U1(U12).HD24	01B9h	0.0~100.0%			R
U1(U12).HD25	01BAh	0.0~100.0%			R
U1(U12).HD26	01BBh	0.0~100.0%			R
U1(U12).HD27	01BCh	0.0~100.0%			R
U1(U12).HD28	01BDh	0.0~100.0%			R
U1(U12).HD29	01BEh	0.0~100.0%			R
U1(U12).HD30	01BFh	0.0~100.0%			R
U1(U12).HD31	01C0h	0.0~100.0%			R
U1(U12).HD.Odd	01C1h	0.0~100.0%		Odd HD of U1(U12)	
U1(U12).HD.Even	01C2h	0.0~100.0%	Even HD of U1(U12)		R
U1(U12).CF	01C3h	0.000~65.535	Crest Factor of U1(U12)		R
U1(U12).THFF	01C4h	0.0~100.0%	THFF of U1(U12)		R
RESERVED	01C5h		Reserved		R
RESERVED	01C6h		Reserved		R
RESERVED	01C7h		Reserved		R
RESERVED	01C8h		Reserved		R
RESERVED	01C9h		Reserved		R
RESERVED	01CAh		Reserved		R
RESERVED	01CBh		Reserved		R
RESERVED	01CCh		Reserved		R

Parameter	Address	Range	Description	Default	Property
U2(U23).HD2	01CDh	0.0~100.0%			R
U2(U23).HD3	01CEh	0.0~100.0%			R
U2(U23).HD4	01CFh	0.0~100.0%			R
U2(U23).HD5	01D0h	0.0~100.0%			R
U2(U23).HD6	01D1h	0.0~100.0%			R
U2(U23).HD7	01D2h	0.0~100.0%			R
U2(U23).HD8	01D3h	0.0~100.0%			R
U2(U23).HD9	01D4h	0.0~100.0%			R
U2(U23).HD10	01D5h	0.0~100.0%			R
U2(U23).HD11	01D6h	0.0~100.0%			R
U2(U23).HD12	01D7h	0.0~100.0%			R
U2(U23).HD13	01D8h	0.0~100.0%			R
U2(U23).HD14	01D9h	0.0~100.0%			R
U2(U23).HD15	01DAh	0.0~100.0%			R
U2(U23).HD16	01DBh	0.0~100.0%			R
U2(U23).HD17	01DCh	0.0~100.0%	2nd to 31st individual harmonics of U2(U23)		R
U2(U23).HD18	01DDh	0.0~100.0%			R
U2(U23).HD19	01DEh	0.0~100.0%			R
U2(U23).HD20	01DFh	0.0~100.0%			R
U2(U23).HD21	01E0h	0.0~100.0%			R
U2(U23).HD22	01E1h	0.0~100.0%			R
U2(U23).HD23	01E2h	0.0~100.0%			R
U2(U23).HD24	01E3h	0.0~100.0%			R
U2(U23).HD25	01E4h	0.0~100.0%			R
U2(U23).HD26	01E5h	0.0~100.0%			R
U2(U23).HD27	01E6h	0.0~100.0%			R
U2(U23).HD28	01E7h	0.0~100.0%			R
U2(U23).HD29	01E8h	0.0~100.0%			R
U2(U23).HD30	01E9h	0.0~100.0%			R
U2(U23).HD31	01EAh	0.0~100.0%			R
U2(U23).HD.Odd	01EBh	0.0~100.0%	Odd HD of U2(U23)		R
U2(U23).HD.Even	01ECh	0.0~100.0%	Even HD of U2(U23)		R
U2(U23).CF	01EDh	0.000~65.535	Crest factor of U2(U23)		R
U2(U23).THFF	01EEh	0.0~100.0%	THFF of U2(U23)		R
RESERVED	01EFh		Reserved		R
RESERVED	01F0h		Reserved		R
RESERVED	01F1h		Reserved		R
RESERVED	01F2h		Reserved		R
RESERVED	01F3h		Reserved		R
RESERVED	01F4h		Reserved		R
RESERVED	01F5h		Reserved		R
RESERVED	01F6h		Reserved		R

Parameter	Address	Range	Description	Default	Property
U3(U31).HD2	01F7h	0.0~100.0%			R
U3(U31).HD3	01F8h	0.0~100.0%			R
U3(U31).HD4	01F9h	0.0~100.0%			R
U3(U31).HD5	01FAh	0.0~100.0%			R
U3(U31).HD6	01FBh	0.0~100.0%			R
U3(U31).HD7	01FCh	0.0~100.0%			R
U3(U31).HD8	01FDh	0.0~100.0%			R
U3(U31).HD9	01FEh	0.0~100.0%			R
U3(U31).HD10	01FFh	0.0~100.0%			R
U3(U31).HD11	0200h	0.0~100.0%			R
U3(U31).HD12	0201h	0.0~100.0%			R
U3(U31).HD13	0202h	0.0~100.0%			R
U3(U31).HD14	0203h	0.0~100.0%			R
U3(U31).HD15	0204h	0.0~100.0%			R
U3(U31).HD16	0205h	0.0~100.0%			R
U3(U31).HD17	0206h	0.0~100.0%	2nd to 31st individual harmonics of U3(U31)		R
U3(U31).HD18	0207h	0.0~100.0%			R
U3(U31).HD19	0208h	0.0~100.0%			R
U3(U31).HD20	0209h	0.0~100.0%			R
U3(U31).HD21	020Ah	0.0~100.0%			R
U3(U31).HD22	020Bh	0.0~100.0%			R
U3(U31).HD23	020Ch	0.0~100.0%			R
U3(U31).HD24	020Dh	0.0~100.0%			R
U3(U31).HD25	020Eh	0.0~100.0%			R
U3(U31).HD26	020Fh	0.0~100.0%			R
U3(U31).HD27	0210h	0.0~100.0%			R
U3(U31).HD28	0211h	0.0~100.0%			R
U3(U31).HD29	0212h	0.0~100.0%			R
U3(U31).HD30	0213h	0.0~100.0%			R
U3(U31).HD31	0214h	0.0~100.0%			R
U3(U31).HD.Odd	0215h	0.0~100.0%	Odd HD of U3(U31)		R
U3(U31).HD.Even	0216h	0.0~100.0%	Even HD of U3(U31)		R
U3(U31).CF	0217h	0.000~65.535	Crest factor of U3(U31)		R
U3(U31).THFF	0218h	0.0~100.0%	THFF of U3(U31)		R
RESERVED	0219h		Reserved		R
RESERVED	021Ah		Reserved		R
RESERVED	021Bh		Reserved		R
RESERVED	021Ch		Reserved		R
RESERVED	021Dh		Reserved		R
RESERVED	021Eh		Reserved		R
RESERVED	021Fh		Reserved		R
RESERVED	0220h		Reserved		R

Parameter	Address	Range	Description	Default	Property
I1.HD2	0221h	0.0~100.0%			R
I1.HD3	0222h	0.0~100.0%			R
I1.HD4	0223h	0.0~100.0%			R
I1.HD5	0224h	0.0~100.0%			R
I1.HD6	0225h	0.0~100.0%			R
I1.HD7	0226h	0.0~100.0%			R
I1.HD8	0227h	0.0~100.0%			R
I1.HD9	0228h	0.0~100.0%			R
I1.HD10	0229h	0.0~100.0%			R
I1.HD11	022Ah	0.0~100.0%			R
I1.HD12	022Bh	0.0~100.0%			R
I1.HD13	022Ch	0.0~100.0%			R
I1.HD14	022Dh	0.0~100.0%			R
I1.HD15	022Eh	0.0~100.0%			R
I1.HD16	022Fh	0.0~100.0%	2nd to 31st individual harmonics of I1		R
I1.HD17	0230h	0.0~100.0%			R
I1.HD18	0231h	0.0~100.0%			R
I1.HD19	0232h	0.0~100.0%			R
I1.HD20	0233h	0.0~100.0%			R
I1.HD21	0234h	0.0~100.0%			R
I1.HD22	0235h	0.0~100.0%			R
I1.HD23	0236h	0.0~100.0%			R
I1.HD24	0237h	0.0~100.0%			R
I1.HD25	0238h	0.0~100.0%			R
I1.HD26	0239h	0.0~100.0%			R
I1.HD27	023Ah	0.0~100.0%			R
I1.HD28	023Bh	0.0~100.0%			R
I1.HD29	023Ch	0.0~100.0%			R
I1.HD30	023Dh	0.0~100.0%			R
I1.HD31	023Eh	0.0~100.0%			R
I1.HD.Odd	023Fh	0.0~100.0%	Odd HD of I1		R
I1.HD.Even	0240h	0.0~100.0%	Even HD of I1		R
I1.KF	0241h	0.0~6553.5	K Factor of I1		R
RESERVED	0242h		Reserved		R
RESERVED	0243h		Reserved		R
RESERVED	0244h		Reserved		R
RESERVED	0245h		Reserved		R
RESERVED	0246h		Reserved		R
RESERVED	0247h		Reserved		R
RESERVED	0248h		Reserved		R
RESERVED	0249h		Reserved		R
RESERVED	024Ah		Reserved		R

Parameter	Address	Range	Description	Default	Property
I2.HD2	024Bh	0.0~100.0%	2nd to 31st individual harmonics of I2		R
I2.HD3	024Ch	0.0~100.0%			R
I2.HD4	024Dh	0.0~100.0%			R
I2.HD5	024Eh	0.0~100.0%			R
I2.HD6	024Fh	0.0~100.0%			R
I2.HD7	0250h	0.0~100.0%			R
I2.HD8	0251h	0.0~100.0%			R
I2.HD9	0252h	0.0~100.0%			R
I2.HD10	0253h	0.0~100.0%			R
I2.HD11	0254h	0.0~100.0%			R
I2.HD12	0255h	0.0~100.0%			R
I2.HD13	0256h	0.0~100.0%			R
I2.HD14	0257h	0.0~100.0%			R
I2.HD15	0258h	0.0~100.0%			R
I2.HD16	0259h	0.0~100.0%			R
I2.HD17	025Ah	0.0~100.0%			R
I2.HD18	025Bh	0.0~100.0%			R
I2.HD19	025Ch	0.0~100.0%			R
I2.HD20	025Dh	0.0~100.0%			R
I2.HD21	025Eh	0.0~100.0%			R
I2.HD22	025Fh	0.0~100.0%			R
I2.HD23	0260h	0.0~100.0%			R
I2.HD24	0261h	0.0~100.0%			R
I2.HD25	0262h	0.0~100.0%			R
I2.HD26	0263h	0.0~100.0%			R
I2.HD27	0264h	0.0~100.0%			R
I2.HD28	0265h	0.0~100.0%			R
I2.HD29	0266h	0.0~100.0%			R
I2.HD30	0267h	0.0~100.0%			R
I2.HD31	0268h	0.0~100.0%			R
I2.HD.Odd	0269h	0.0~100.0%		Odd HD of I2	
I2.HD.Even	026Ah	0.0~100.0%	Even HD of I2		R
I2.KF	026Bh	0.0~6553.5	K Factor of I2		R
RESERVED	026Ch		Reserved		R
RESERVED	026Dh		Reserved		R
RESERVED	026Eh		Reserved		R
RESERVED	026Fh		Reserved		R
RESERVED	0270h		Reserved		R
RESERVED	0271h		Reserved		R
RESERVED	0272h		Reserved		R
RESERVED	0273h		Reserved		R
RESERVED	0274h		Reserved		R

Parameter	Address	Range	Description	Default	Property
I3.HD2	0275h	0.0~100.0%	2nd to 31st individual harmonics of I3		R
I3.HD3	0276h	0.0~100.0%			R
I3.HD4	0277h	0.0~100.0%			R
I3.HD5	0278h	0.0~100.0%			R
I3.HD6	0279h	0.0~100.0%			R
I3.HD7	027Ah	0.0~100.0%			R
I3.HD8	027Bh	0.0~100.0%			R
I3.HD9	027Ch	0.0~100.0%			R
I3.HD10	027Dh	0.0~100.0%			R
I3.HD11	027Eh	0.0~100.0%			R
I3.HD12	027Fh	0.0~100.0%			R
I3.HD13	0280h	0.0~100.0%			R
I3.HD14	0281h	0.0~100.0%			R
I3.HD15	0282h	0.0~100.0%			R
I3.HD16	0283h	0.0~100.0%			R
I3.HD17	0284h	0.0~100.0%			R
I3.HD18	0285h	0.0~100.0%			R
I3.HD19	0286h	0.0~100.0%			R
I3.HD20	0287h	0.0~100.0%			R
I3.HD21	0288h	0.0~100.0%			R
I3.HD22	0289h	0.0~100.0%			R
I3.HD23	028Ah	0.0~100.0%			R
I3.HD24	028Bh	0.0~100.0%			R
I3.HD25	028Ch	0.0~100.0%			R
I3.HD26	028Dh	0.0~100.0%			R
I3.HD27	028Eh	0.0~100.0%			R
I3.HD28	028Fh	0.0~100.0%			R
I3.HD29	0290h	0.0~100.0%			R
I3.HD30	0291h	0.0~100.0%			R
I3.HD31	0292h	0.0~100.0%			R
I3.HD.Odd	0293h	0.0~100.0%		Odd HD of I3	
I3.HD.Even	0294h	0.0~100.0%	Even HD of I3		R
I3.KF	0295h	0.0~6553.5	K Factor of I3		R
RESERVED	0296h		Reserved		R
RESERVED	0297h		Reserved		R
RESERVED	0298h		Reserved		R
RESERVED	0299h		Reserved		R
RESERVED	029Ah		Reserved		R
RESERVED	029Bh		Reserved		R
RESERVED	029Ch		Reserved		R
RESERVED	029Dh		Reserved		R
RESERVED	029Eh		Reserved		R

THD of voltage and current reading

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

Parameter	Address	Range	Description	Default	Property	
U1.MAX	02A7h	0.0~1200000.0V	U1 Maximum phase voltage	(High Word)	R	
	02A8h			(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 0329h			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	
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		
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	
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		
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	
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		
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	
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

Parameter	Address	Range	Description	Default	Property
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

MAX/MIN Values

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

Parameter	Address	Range	Description	Default	Property
UAVG.THD.MAX	0497h		Maximum averagetotal 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.THD.MIN	049Eh		Minimum averagetotal 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.THD.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.THD.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
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

MAX/MIN Values

Parameter	Address	Range	Description	Default	Property
I.AVG. THD. MAX	04CFh		Maximum average total harmonic distortion for current		R
Year	04D0h	2000~2099	Year		R
Month	04D1h	1~12	Month		R
Day	04D2h	1~31	Day		R
Hour	04D3h	0~23	Hour		R
Minute	04D4h	0~59	Minute		R
Second	04D5h	0~59	Second		R
I.AVG. THD. MIN	04D6h				R
Year	04D7h	2000~2099			R
Month	04D8h	1~12			R
Day	04D9h	1~31	Minimum average total harmonic distortion for current and time stamp		R
Hour	04DAh	0~23			R
Minute	04DBh	0~59			R
Second	04DCh	0~59			R
P.DM. MAX	04DDh	-999999999~999999999W			R
	04DEh				R
Year	04DFh	2000~2099			R
Month	04E0h	1~12			R
Day	04E1h	1~31	Maximum total active power demand and time stamp		R
Hour	04E2h	0~23			R
Minute	04E3h	0~59			R
Second	04E4h	0~59			R
Q.DM. MAX	04E5h	-999999999~999999999VAR			R
	04E6h				R
Year	04E7h	2000~2099			R
Month	04E8h	1~12			R
Day	04E9h	1~31	Maximum total reactive power demand and time stamp		R
Hour	04EAh	0~23			R
Minute	04EBh	0~59			R
Second	04ECh	0~59			R
S.DM. MAX	04EDh	0 ~ 999999999VA			R
	04EEh				R
Year	04EFh	2000~2099			R
Month	04F0h	1~12	Maximum total apparent power demand and time stamp		R
Day	04F1h	1~31			R
Hour	04F2h	0~23			R
Minute	04F3h	0~59			R
Second	04F4h	0~59			R
I1.DM. MAX	04F5h	0.000~9999.999A			R
	04F6h				R
Year	04F7h	2000~2099			R
Month	04F8h	1~12	Maximum I1 current demand and time stamp		R
Day	04F9h	1~31			R
Hour	04FAh	0~23			R
Minute	04FBh	0~59			R
Second	04FCh	0~59			R
I2.DM. MAX	04FDh	0.000~9999.999A			R
	04FEh				R
Year	04FFh	2000~2099			R
Month	0500h	1~12	Maximum I2 current demand and time stamp		R
Day	0501h	1~31			R
Hour	0502h	0~23			R
Minute	0503h	0~59			R
Second	0504h	0~59			R
I3.DM. MAX	0505h	0.000~9999.999A			R
	0506h				R
Year	0507h	2000~2099			R
Month	0508h	1~12	Maximum I3 current demand and time stamp		R
Day	0509h	1~31			R
Hour	050Ah	0~23			R
Minute	050Bh	0~59			R
Second	050Ch	0~59			R

Parameter	Address	Range	Description	Default	Property
I.AVG.DM.MAX	050Dh	0.000~9999.999A	Maximum average current demand and time stamp		R
	050Eh				
Year	050Fh	2000~2099			
Month	0510h	1~12			
Day	0511h	1~31			
Hour	0512h	0~23			
Minute	0513h	0~59			
Second	0514h	0~59			
P.DM.MIN	0515h	-999999999~999999999W			
	0516h				
Year	0517h	2000~2099			
Month	0518h	1~12			
Day	0519h	1~31			
Hour	051Ah	0~23			
Minute	051Bh	0~59			
Second	051Ch	0~59			
Q.DM.MIN	051Dh	-999999999~999999999VAR	Minimum total reactive power demand and time stamp		R
	051Eh				
Year	051Fh	2000~2099			
Month	0520h	1~12			
Day	0521h	1~31			
Hour	0522h	0~23			
Minute	0523h	0~59			
Second	0524h	0~59			
S.DM.MIN	0525h	0 ~ 999999999VA			
	0526h				
Year	0527h	2000~2099			
Month	0528h	1~12			
Day	0529h	1~31			
Hour	052Ah	0~23			
Minute	052Bh	0~59			
Second	052Ch	0~59			

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 Log 1					
Event Source 1	0601h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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: P 1 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 0605h	According to item range	Alarm value(High Word) Alarm value(Low Word)		R
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 Log 2					
Event Source 2	060Ch	1~18	Event trigger source 1~16:Event Setting NO.1~16 17~18:Relay Setting NO.1~2		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 0610h	According to item range	Alarm value(High Word) Alarm value(Low Word)		R
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 Log 3					
Event Source 3	0617h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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 061Bh	According to item range	Alarm value(High Word) Alarm value(Low Word)		R
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

Parameter	Address	Range	Description	Default	Property
Event Log 4					
Event Source 4	0622h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		R
Event Status 4	0623h	0~1	Event status 0:Recover 1:Alert		R
Event Log 4 Parameter	0624h	0~35	Refer to Log 1		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
Event Log 5					
Event Source 5	062Dh	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		R
Event Status 5	062Eh	0~1	Event status 0:Recover 1:Alert		R
Event Log 5 Parameter	062Fh	0~35	Refer to Log 1		R
Event Log 5 Value	0630h	According to item range	Alarm value(High Word)		R
	0631h		Alarm value(Low Word)		
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 Log 6					
Event Source 6	0638h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		R
Event Status 6	0639h	0~1	Event status 0:Recover 1:Alert		R
Event Log 6 Parameter	063Ah	0~35	Refer to Log 1		R
Event Log 6 Value	063Bh	According to item range	Alarm value(High Word)		R
	063Ch		Alarm value(Low Word)		
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 Log 7					
Event Source 7	0643h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		R
Event Status 7	0644h	0~1	Event status 0:Recover 1:Alert		R
Event Log 7 Parameter	0645h	0~35	Refer to Log 1		R
Event Log 7 Value	0646h	According to item range	Alarm value(High Word)		R
	0647h		Alarm value(Low Word)		
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

Parameter	Address	Range	Description	Default	Property
Event Log 8					
Event Source 8	064Eh	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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 Log 9					
Event Source 9	0659h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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
Event Log 10					
Event Source 10	0664h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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 Log 11					
Event Source 11	066Fh	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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

Parameter	Address	Range	Description	Default	Property
Event Log 12					
Event Source 12	067Ah	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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 Log 13					
Event Source 13	0685h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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 Log 14					
Event Source 14	0690h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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
Event Log 15					
Event Source 15	069Bh	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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

Parameter	Address	Range	Description	Default	Property
Event Log 16					
Event Source 16	06A6h	1~18	Event trigger source 1~16:Event Setting NO. 1~16 17~18:Relay Setting NO. 1~2		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)		
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 , 10h)

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 (Index reset) 1: Abort this time read (Index will not any shift) 2: Read success (Index will shift to current position)		W

※ Logging data format description

Request:

Address	Code	Starting Reg		Byte count		CRC	
		Hi	Lo	Hi	Lo	Lo	Hi
01h	03h	40h	02h	xxh	xxh	xxh	xxh

Byte count: Read from 4000h

Response:

Address	Code	Byte count	Year		Month		Day		Hour		Minute		Second		Values	CRC	
			Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo		Hi	
01h	03h	xxh	07h	FDh	00h	0Ch	00h	01h	00h	0Dh	00h	19h	00h	2Ah	xxh	xxh

Date: 07DFh=>2015 000Ch=>12 0001h=>01

Time: 000Dh=>13 0019h=>25 002Ah=>42

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

Parameter	Address	Range	Description	Default	Property
Log.Para.SLCT	4010h	0~1	0:All parameters 1:Assign parameter	0	R/W
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	2014	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 stop	2014	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 enable 0:Disable 1:Enable	0	R/W

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

Parameter	Address	Range	Description	Default	Property
Log.Para 01	4020h	See Table A~Table D	parameter code : 0: NONE 1: FREQ 2: U1 3: U2 4: U3 5: ULN.AVG 6: U12 7: U23 8: U31 9: ULL.AVG 10: I1 11: I2 12: I3 13: I.AVG 14: IN 15: P-1 16: P-2 17: P-3 18: P.SUM 19: Q-1 20: Q-2 21: Q-3 22: Q.SUM 23: S-1 24: S-2 25: S-3 26: S.SUM 27: PF1 28: PF2 29: PF3 30: PF.AVG 31: AE-IMP 32: AE-Exp 33: RE-IMP 34: RE-Exp 35: SE-Total 36: U1(U12).THD.MAX 37: U1(U12).THD.MIN 38: U2(U23).THD.MAX 39: U2(U23).THD.MIN 40: U3(U31).THD.MAX 41: U3(U31).THD.MIN 42: U.AVG.TH.D.MAX 43: U.AVG.TH.D.MIN 44: I1.TH.D.MAX 45: I1.TH.D.MIN 46: I2.TH.D.MAX 47: I2.TH.D.MIN 48: I3.TH.D.MAX 49: I3.TH.D.MIN 50: I.AVG.TH.D.MAX 51: I.AVG.TH.D.MIN 52: P.DM.MAX 53: Q.DM.MAX 54: S.DM.MAX 55: I1.DM.MAX 56: I2.DM.MAX 57: I3.DM.MAX 58: I.AVG.DM.MAX 59: P.DM.MIN 60: Q.DM.MIN 61: S.DM.MIN The need to record parameters register code put in this field , and enable logging function, it will be in accordance with the order of regular records		R/W
Log.Para 02	4021h			R/W	
Log.Para 03	4022h			R/W	
Log.Para 04	4023h			R/W	
Log.Para 05	4024h			R/W	
Log.Para 06	4025h			R/W	
Log.Para 07	4026h			R/W	
Log.Para 08	4027h			R/W	
Log.Para 09	4028h			R/W	
Log.Para 10	4029h			R/W	
Log.Para 11	402Ah			R/W	
Log.Para 12	402Bh			R/W	
Log.Para 13	402Ch			R/W	
Log.Para14	402Dh			R/W	
Log.Para 15	402Eh			R/W	
Log.Para 16	402Fh			R/W	
Log.Para 17	4030h			R/W	
Log.Para 18	4031h			R/W	
Log.Para19	4032h			R/W	
Log.Para 20	4033h			R/W	
Log.Para 21	4034h			R/W	
Log.Para 22	4035h			R/W	
Log.Para 23	4036h			R/W	
Log.Para 24	4037h			R/W	
Log.Para 25	4038h			R/W	
Log.Para 26	4039h			R/W	
Log.Para 27	403Ah			R/W	
Log.Para 28	403Bh			R/W	
Log.Para 29	403Ch			R/W	
Log.Para 30	403Dh			R/W	
Log.Para31	403Eh			R/W	
Log.Para 32	403Fh			R/W	
Log.Para 33	4040h			R/W	
Log.Para 34	4041h			R/W	
Log.Para 35	4042h			R/W	
Log.Para 36	4043h			R/W	
Log.Para 37	4044h			R/W	
Log.Para 38	4045h			R/W	
Log.Para 39	4046h			R/W	
Log.Para 40	4047h			R/W	
Log.Para 41	4048h			R/W	
Log.Para 42	4049h			R/W	
Log.Para 43	404Ah			R/W	
Log.Para 44	404Bh			R/W	
Log.Para 45	404Ch			R/W	
Log.Para 46	404Dh			R/W	
Log.Para 47	404Eh			R/W	
Log.Para 48	404Fh			R/W	
Log.Para 49	4050h			R/W	
Log.Para 50	4051h			R/W	
Log.Para 51	4052h			R/W	
Log.Para 52	4053h			R/W	
Log.Para 53	4054h			R/W	
Log.Para 54	4055h			R/W	
Log.Para 55	4056h			R/W	
Log.Para 56	4057h			R/W	
Log.Para 57	4058h			R/W	
Log.Para 58	4059h			R/W	
Log.Para 59	405Ah			R/W	
Log.Para 60	405Bh			R/W	
Log.Para 61	405Ch			R/W	

Default parameters are available items for different metering system type

Append : Table A

Address	1P2W		1P3W		Individual choice Default
	Default parameters		Default parameters		
	CPM-71	CPM-72/73	CPM-71	CPM-72/73	
4020h	1(FREQ)	1(FREQ)	1(FREQ)	1(FREQ)	0
4021h	2(U1)	2(U1)	3(U2)	3(U2)	0
4022h	5(ULN.AVG)	5(ULN.AVG)	4(U3)	4(U3)	0
4023h	10(I1)	10(I1)	5(ULN.AVG)	5(ULN.AVG)	0
4024h	13(I.AVG)	13(I.AVG)	6(U12)	6(U12)	0
4025h	15(P-1)	15(P-1)	9(ULL.AVG)	9(ULL.AVG)	0
4026h	18(P.SUM)	18(P.SUM)	10(I1)	10(I1)	0
4027h	19(Q-1)	19(Q-1)	11(I2)	11(I2)	0
4028h	22(Q.SUM)	22(Q.SUM)	13(I.AVG)	13(I.AVG)	0
4029h	23(S-1)	23(S-1)	15(P-1)	15(P-1)	0
402Ah	26(S.SUM)	26(S.SUM)	16(P-2)	16(P-2)	0
402Bh	27(PF1)	27(PF1)	18(P.SUM)	18(P.SUM)	0
402Ch	30(PF.AVG)	30(PF.AVG)	19(Q-1)	19(Q-1)	0
402Dh	31(AE-IMP)	31(AE-IMP)	20(Q-2)	20(Q-2)	0
402Eh	32(AE-Exp)	32(AE-Exp)	22(Q.SUM)	22(Q.SUM)	0
402Fh	33(RE-IMP)	33(RE-IMP)	23(S-1)	23(S-1)	0
4030h	34(RE-Exp)	34(RE-Exp)	24(S-2)	24(S-2)	0
4031h	35(SE-Total)	35(SE-Total)	26(S.SUM)	26(S.SUM)	0
4032h	36(U1(U12),THD,MAX)	36(U1(U12),THD,MAX)	27(PF1)	27(PF1)	0
4033h	37(U1(U12),THD,MIN)	37(U1(U12),THD,MIN)	28(PF2)	28(PF2)	0
4034h	42(UAVG,THD,MAX)	42(UAVG,THD,MAX)	30(PF.AVG)	30(PF.AVG)	0
4035h	43(UAVG,THD,MIN)	43(UAVG,THD,MIN)	31(AE-IMP)	31(AE-IMP)	0
4036h	44(I1,THD,MAX)	44(I1,THD,MAX)	32(AE-Exp)	32(AE-Exp)	0
4037h	45(I1,THD,MIN)	45(I1,THD,MIN)	33(RE-IMP)	33(RE-IMP)	0
4038h	50(IAVG,THD,MAX)	50(IAVG,THD,MAX)	34(RE-Exp)	34(RE-Exp)	0
4039h	51(IAVG,THD,MIN)	51(IAVG,THD,MIN)	35(SE-Total)	35(SE-Total)	0
403Ah		52(P,DM,MAX)	36(U1(U12),THD,MAX)	36(U1(U12),THD,MAX)	0
403Bh		53(Q,DM,MAX)	37(U1(U12),THD,MIN)	37(U1(U12),THD,MIN)	0
403Ch		54(S,DM,MAX)	38(U2(U23),THD,MAX)	38(U2(U23),THD,MAX)	0
403Dh		55(I1,DM,MAX)	39(U2(U23),THD,MIN)	39(U2(U23),THD,MIN)	0
403Eh		58(I,AVG,DM,MAX)	42(UAVG,THD,MAX)	42(UAVG,THD,MAX)	0
403Fh		59(P,DM,MIN)	43(UAVG,THD,MIN)	43(UAVG,THD,MIN)	0
4040h		60(Q,DM,MIN)	44(I1,THD,MAX)	44(I1,THD,MAX)	0
4041h		61(S,DM,MIN)	45(I1,THD,MIN)	45(I1,THD,MIN)	0
4042h			46(I2,THD,MAX)	46(I2,THD,MAX)	0
4043h			47(I2,THD,MIN)	47(I2,THD,MIN)	0
4044h			50(IAVG,THD,MAX)	50(IAVG,THD,MAX)	0
4045h			51(IAVG,THD,MIN)	51(IAVG,THD,MIN)	0
4046h			52(P,DM,MAX)	52(P,DM,MAX)	0
4047h			53(Q,DM,MAX)	53(Q,DM,MAX)	0
4048h			54(S,DM,MAX)	54(S,DM,MAX)	0
4049h	0		55(I1,DM,MAX)	55(I1,DM,MAX)	0
404Ah			56(I2,DM,MAX)	56(I2,DM,MAX)	0
404Bh			58(L,AVG,DM,MAX)	58(L,AVG,DM,MAX)	0
404Ch		0	59(P,DM,MIN)	59(P,DM,MIN)	0
404Dh			60(Q,DM,MIN)	60(Q,DM,MIN)	0
404Eh			61(S,DM,MIN)	61(S,DM,MIN)	0
404Fh					0
4050h					0
4051h					0
4052h					0
4053h				0	0
4054h					0
4055h					0
4056h					0
4057h					0
4058h					0
4059h					0
405Ah					0
405Bh					0
405Ch					0

Append : Table B

Address	3P3W1CT		3P3W2CT		Individual choice Default
	Default parameters		Default parameters		
	CPM-71	CPM-72/73	CPM-71	CPM-72/73	
4020h	1(FREQ)	1(FREQ)	1(FREQ)	1(FREQ)	0
4021h	6(U12)	6(U12)	6(U12)	6(U12)	0
4022h	7(U23)	7(U23)	7(U23)	7(U23)	0
4023h	8(U31)	8(U31)	8(U31)	8(U31)	0
4024h	9(ULL.AVG)	9(ULL.AVG)	9(ULL.AVG)	9(ULL.AVG)	0
4025h	10(I1)	10(I1)	10(I1)	10(I1)	0
4026h	13(I.AVG)	13(I.AVG)	11(I2)	11(I2)	0
4027h	18(P.SUM)	18(P.SUM)	12(I3)	12(I3)	0
4028h	22(Q.SUM)	22(Q.SUM)	13(I.AVG)	13(I.AVG)	0
4029h	26(S.SUM)	26(S.SUM)	18(P.SUM)	18(P.SUM)	0
402Ah	30(PF.AVG)	30(PF.AVG)	22(Q.SUM)	22(Q.SUM)	0
402Bh	31(AE-IMP)	31(AE-IMP)	26(S.SUM)	26(S.SUM)	0
402Ch	32(AE-Exp)	32(AE-Exp)	30(PF.AVG)	30(PF.AVG)	0
402Dh	33(RE-IMP)	33(RE-IMP)	31(AE-IMP)	31(AE-IMP)	0
402Eh	34(RE-Exp)	34(RE-Exp)	32(AE-Exp)	32(AE-Exp)	0
402Fh	35(SE-Total)	35(SE-Total)	33(RE-IMP)	33(RE-IMP)	0
4030h	36(U1(U12),THD.MAX)	36(U1(U12),THD.MAX)	34(RE-Exp)	34(RE-Exp)	0
4031h	37(U1(U12),THD.MIN)	37(U1(U12),THD.MIN)	35(SE-Total)	35(SE-Total)	0
4032h	38(U2(U23),THD.MAX)	38(U2(U23),THD.MAX)	36(U1(U12),THD.MAX)	36(U1(U12),THD.MAX)	0
4033h	39(U2(U23),THD.MIN)	39(U2(U23),THD.MIN)	37(U1(U12),THD.MIN)	37(U1(U12),THD.MIN)	0
4034h	42(UAVG,THD.MAX)	42(UAVG,THD.MAX)	38(U2(U23),THD.MAX)	38(U2(U23),THD.MAX)	0
4035h	43(UAVG,THD.MIN)	43(UAVG,THD.MIN)	39(U2(U23),THD.MIN)	39(U2(U23),THD.MIN)	0
4036h	44(I1,THD.MAX)	44(I1,THD.MAX)	42(UAVG,THD.MAX)	42(UAVG,THD.MAX)	0
4037h	45(I1,THD.MIN)	45(I1,THD.MIN)	43(UAVG,THD.MIN)	43(UAVG,THD.MIN)	0
4038h	50(IAVG,THD.MAX)	50(IAVG,THD.MAX)	44(I1,THD.MAX)	44(I1,THD.MAX)	0
4039h	51(IAVG,THD.MIN)	51(IAVG,THD.MIN)	45(I1,THD.MIN)	45(I1,THD.MIN)	0
403Ah		52(P.DM.MAX)	48(I3,THD.MAX)	48(I3,THD.MAX)	0
403Bh		53(Q.DM.MAX)	49(I3,THD.MIN)	49(I3,THD.MIN)	0
403Ch		54(S.DM.MAX)	50(IAVG,THD.MAX)	50(IAVG,THD.MAX)	0
403Dh		55(I1,DM.MAX)	51(IAVG,THD.MIN)	51(IAVG,THD.MIN)	0
403Eh		58(I.AVG,DM.MAX)		52(P.DM.MAX)	0
403Fh		59(P.DM.MIN)		53(Q.DM.MAX)	0
4040h		60(Q.DM.MIN)		54(S.DM.MAX)	0
4041h		61(S.DM.MIN)		55(I1,DM.MAX)	0
4042h				56(I2,DM.MAX)	0
4043h				57(I3,DM.MAX)	0
4044h				58(I.AVG,DM.MAX)	0
4045h				59(P.DM,MIN)	0
4046h				60(Q.DM,MIN)	0
4047h				61(S.DM,MIN)	0
4048h					0
4049h	0				0
404Ah					0
404Bh			0		0
404Ch		0			0
404Dh					0
404Eh					0
404Fh				0	0
4050h					0
4051h					0
4052h					0
4053h					0
4054h					0
4055h					0
4056h					0
4057h					0
4058h					0
4059h					0
405Ah					0
405Bh					0
405Ch					0

Append : Table C

Address	3P3W3CT		Individual choice Default
	Default parameters		
	CPM-71	CPM-72/73	
4020h	1(FREQ)	1(FREQ)	0
4021h	6(U12)	6(U12)	0
4022h	7(U23)	7(U23)	0
4023h	8(U31)	8(U31)	0
4024h	9(ULL.AVG)	9(ULL.AVG)	0
4025h	10(I1)	10(I1)	0
4026h	11(I2)	11(I2)	0
4027h	12(I3)	12(I3)	0
4028h	13(I.AVG)	13(I.AVG)	0
4029h	18(P.SUM)	18(P.SUM)	0
402Ah	22(Q.SUM)	22(Q.SUM)	0
402Bh	26(S.SUM)	26(S.SUM)	0
402Ch	30(PF.AVG)	30(PF.AVG)	0
402Dh	31(AE-IMP)	31(AE-IMP)	0
402Eh	32(AE-Exp)	32(AE-Exp)	0
402Fh	33(RE-IMP)	33(RE-IMP)	0
4030h	34(RE-Exp)	34(RE-Exp)	0
4031h	35(SE-Total)	35(SE-Total)	0
4032h	36(U1(U12).THD.MAX)	36(U1(U12).THD.MAX)	0
4033h	37(U1(U12).THD.MIN)	37(U1(U12).THD.MIN)	0
4034h	38(U2(U23).THD.MAX)	38(U2(U23).THD.MAX)	0
4035h	39(U2(U23).THD.MIN)	39(U2(U23).THD.MIN)	0
4036h	42(UAVG.THD.MAX)	42(UAVG.THD.MAX)	0
4037h	43(UAVG.THD.MIN)	43(UAVG.THD.MIN)	0
4038h	44(I1.THD.MAX)	44(I1.THD.MAX)	0
4039h	45(I1.THD.MIN)	45(I1.THD.MIN)	0
403Ah	46(I2.THD.MAX)	46(I2.THD.MAX)	0
403Bh	47(I2.THD.MIN)	47(I2.THD.MIN)	0
403Ch	48(I3.THD.MAX)	48(I3.THD.MAX)	0
403Dh	49(I3.THD.MIN)	49(I3.THD.MIN)	0
403Eh	50(IAVG.THD.MAX)	50(IAVG.THD.MAX)	0
403Fh	51(IAVG.THD.MIN)	51(IAVG.THD.MIN)	0
4040h		52(P.DM.MAX)	0
4041h		53(Q.DM.MAX)	0
4042h		54(S.DM.MAX)	0
4043h		55(I1.DM.MAX)	0
4044h		56(I2.DM.MAX)	0
4045h		57(I3.DM.MAX)	0
4046h		58(I.AVG.DM.MAX)	0
4047h		59(P.DM.MIN)	0
4048h		60(Q.DM.MIN)	0
4049h		61(S.DM.MIN)	0
404Ah			0
404Bh			0
404Ch			0
404Dh	0		0
404Eh			0
404Fh			0
4050h		0	0
4051h			0
4052h			0
4053h			0
4054h			0
4055h			0
4056h			0
4057h			0
4058h			0
4059h			0
405Ah			0
405Bh			0
405Ch			0

Append : Table D

Address	3P4W1CT		3P4W3CT		Individual choice Default
	Default parameters		Default parameters		
	CPM-71	CPM-72/73	CPM-71	CPM-72/73	
4020h	1(FREQ)	1(FREQ)	1(FREQ)	1(FREQ)	0
4021h	2(U1)	2(U1)	2(U1)	2(U1)	0
4022h	3(U2)	3(U2)	3(U2)	3(U2)	0
4023h	4(U3)	4(U3)	4(U3)	4(U3)	0
4024h	5(ULN.AVG)	5(ULN.AVG)	5(ULN.AVG)	5(ULN.AVG)	0
4025h	6(U12)	6(U12)	6(U12)	6(U12)	0
4026h	7(U23)	7(U23)	7(U23)	7(U23)	0
4027h	8(U31)	8(U31)	8(U31)	8(U31)	0
4028h	9(ULL.AVG)	9(ULL.AVG)	9(ULL.AVG)	9(ULL.AVG)	0
4029h	10(I1)	10(I1)	10(I1)	10(I1)	0
402Ah	13(I.AVG)	13(I.AVG)	11(I2)	11(I2)	0
402Bh	15(P-1)	15(P-1)	12(I3)	12(I3)	0
402Ch	18(P.SUM)	18(P.SUM)	13(L.AVG)	13(L.AVG)	0
402Dh	19(Q-1)	19(Q-1)	14(IN)	14(IN)	0
402Eh	22(Q.SUM)	22(Q.SUM)	15(P-1)	15(P-1)	0
402Fh	23(S-1)	23(S-1)	16(P-2)	16(P-2)	0
4030h	26(S.SUM)	26(S.SUM)	17(P-3)	17(P-3)	0
4031h	27(PF1)	27(PF1)	18(P.SUM)	18(P.SUM)	0
4032h	30(PF.AVG)	30(PF.AVG)	19(Q-1)	19(Q-1)	0
4033h	31(AE-IMP)	31(AE-IMP)	20(Q-2)	20(Q-2)	0
4034h	32(AE-Exp)	32(AE-Exp)	21(Q-3)	21(Q-3)	0
4035h	33(RE-IMP)	33(RE-IMP)	22(Q.SUM)	22(Q.SUM)	0
4036h	34(RE-Exp)	34(RE-Exp)	23(S-1)	23(S-1)	0
4037h	35(SE-Total)	35(SE-Total)	24(S-2)	24(S-2)	0
4038h	36(U1(U12).THD.MAX)	36(U1(U12).THD.MAX)	25(S-3)	25(S-3)	0
4039h	37(U1(U12).THD.MIN)	37(U1(U12).THD.MIN)	26(S.SUM)	26(S.SUM)	0
403Ah	38(U2(U23).THD.MAX)	38(U2(U23).THD.MAX)	27(PF1)	27(PF1)	0
403Bh	39(U2(U23).THD.MIN)	39(U2(U23).THD.MIN)	28(PF2)	28(PF2)	0
403Ch	40(U3(U31).THD.MAX)	40(U3(U31).THD.MAX)	29(PF3)	29(PF3)	0
403Dh	41(U3(U31).THD.MIN)	41(U3(U31).THD.MIN)	30(PF.AVG)	30(PF.AVG)	0
403Eh	42(UAVG.TH.D.MAX)	42(UAVG.TH.D.MAX)	31(AE-IMP)	31(AE-IMP)	0
403Fh	43(UAVG.TH.D.MIN)	43(UAVG.TH.D.MIN)	32(AE-Exp)	32(AE-Exp)	0
4040h	44(I1.TH.D.MAX)	44(I1.TH.D.MAX)	33(RE-IMP)	33(RE-IMP)	0
4041h	45(I1.TH.D.MIN)	45(I1.TH.D.MIN)	34(RE-Exp)	34(RE-Exp)	0
4042h	50(IAVG.TH.D.MAX)	50(IAVG.TH.D.MAX)	35(SE-Total)	35(SE-Total)	0
4043h	51(IAVG.TH.D.MIN)	51(IAVG.TH.D.MIN)	36(U1(U12).THD.MAX)	36(U1(U12).THD.MAX)	0
4044h		52(P.DM.MAX)	37(U1(U12).THD.MIN)	37(U1(U12).THD.MIN)	0
4045h		53(Q.DM.MAX)	38(U2(U23).THD.MAX)	38(U2(U23).THD.MAX)	0
4046h		54(S.DM.MAX)	39(U2(U23).THD.MIN)	39(U2(U23).THD.MIN)	0
4047h		55(I1.DM.MAX)	40(U3(U31).THD.MAX)	40(U3(U31).THD.MAX)	0
4048h		58(I1.AVG.DM.MAX)	41(U3(U31).THD.MIN)	41(U3(U31).THD.MIN)	0
4049h		59(P.DM.MIN)	42(UAVG.TH.D.MAX)	42(UAVG.TH.D.MAX)	0
404Ah		60(Q.DM.MIN)	43(UAVG.TH.D.MIN)	43(UAVG.TH.D.MIN)	0
404Bh		61(S.DM.MIN)	44(I1.TH.D.MAX)	44(I1.TH.D.MAX)	0
404Ch			45(I1.TH.D.MIN)	45(I1.TH.D.MIN)	0
404Dh			46(I2.TH.D.MAX)	46(I2.TH.D.MAX)	0
404Eh			47(I2.TH.D.MIN)	47(I2.TH.D.MIN)	0
404Fh	0		48(I3.TH.D.MAX)	48(I3.TH.D.MAX)	0
4050h			49(I3.TH.D.MIN)	49(I3.TH.D.MIN)	0
4051h		0	50(IAVG.TH.D.MAX)	50(IAVG.TH.D.MAX)	0
4052h			51(IAVG.TH.D.MIN)	51(IAVG.TH.D.MIN)	0
4053h			52(P.DM.MAX)	52(P.DM.MAX)	0
4054h			53(Q.DM.MAX)	53(Q.DM.MAX)	0
4055h			54(S.DM.MAX)	54(S.DM.MAX)	0
4056h			55(I1.DM.MAX)	55(I1.DM.MAX)	0
4057h			56(I2.DM.MAX)	56(I2.DM.MAX)	0
4058h			57(I3.DM.MAX)	57(I3.DM.MAX)	0
4059h			58(I1.AVG.DM.MAX)	58(I1.AVG.DM.MAX)	0
405Ah			59(P.DM.MIN)	59(P.DM.MIN)	0
405Bh			60(Q.DM.MIN)	60(Q.DM.MIN)	0
405Ch			61(S.DM.MIN)	61(S.DM.MIN)	0

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

User define field function description:

This function is let users to read the value of the parameters of what to be read at once time. Will be read of the parameters register code fill in 5000h ~ 5013h then can read the value of the parameters from 5014h ~ 5027h

For example:

If 0131h write to 5000h (High word register of U1 phase voltage) , and0132h write to 5001h (Low word register of U1 phase voltage)
Read 5014h and 5015h are value of U1 phase voltage .

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			(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	60A6h	2000-2099		2015	R	
Month	60A7h	1-12		1	R	
Day	60A8h	1-31		1	R	
Hour	60A9h	0-23		0	R	
Minute	60AAh	0-59		0	R	
Second	60ABh	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	60AEh	2000-2099	2015		R	
Month	60AFh	1-12	1		R	
Day	60B0h	1-31	1		R	
Hour	60B1h	0-23	0		R	
Minute	60B2h	0-59	0		R	
Second	60B3h	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	60B6h	2000-2099		2015	R	
Month	60B7h	1-12		1	R	
Day	60B8h	1-31		1	R	
Hour	60B9h	0-23		0	R	
Minute	60BAh	0-59		0	R	
Second	60BBh	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	60BEh	2000-2099	2015		R	
Month	60BFh	1-12	1		R	
Day	60C0h	1-31	1		R	
Hour	60C1h	0-23	0		R	
Minute	60C2h	0-59	0		R	
Second	60C3h	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	60C6h	2000-2099		2015	R	
Month	60C7h	1-12		1	R	
Day	60C8h	1-31		1	R	
Hour	60C9h	0-23		0	R	
Minute	60CAh	0-59		0	R	
Second	60CBh	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	60CEh	2000-2099	2015		R	
Month	60CFh	1-12	1		R	
Day	60D0h	1-31	1		R	
Hour	60D1h	0-23	0		R	
Minute	60D2h	0-59	0		R	
Second	60D3h	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	60D6h	2000-2099		2015	R	
Month	60D7h	1-12		1	R	
Day	60D8h	1-31		1	R	
Hour	60D9h	0-23		0	R	
Minute	60DAh	0-59		0	R	
Second	60DBh	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	60DEh	2000-2099	2015		R	
Month	60DFh	1-12	1		R	
Day	60E0h	1-31	1		R	
Hour	60E1h	0-23	0		R	
Minute	60E2h	0-59	0		R	
Second	60E3h	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 6126h			2000~2099	2015	R
	Month 6127h			1~12	1	R
	Day 6128h			1~31	1	R
	Hour 6129h			0~23	0	R
	Minute 612Ah			0~59	0	R
	Second 612Bh			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 612Eh			2000~2099	2015	R
	Month 612Fh			1~12	1	R
	Day 6130h			1~31	1	R
	Hour 6131h			0~23	0	R
	Minute 6132h			0~59	0	R
	Second 6133h			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 6136h			2000~2099	2015	R
	Month 6137h			1~12	1	R
	Day 6138h			1~31	1	R
	Hour 6139h			0~23	0	R
	Minute 613Ah			0~59	0	R
	Second 613Bh			0~59	0	R
IAVG.DM.MAX(normal)	613Ch	0.000~9999.999A	Maximum average current demand (normal) and time stamp	0	R	
	613Dh			0	R	
	Year 613Eh			2000~2099	2015	R
	Month 613Fh			1~12	1	R
	Day 6140h			1~31	1	R
	Hour 6141h			0~23	0	R
	Minute 6142h			0~59	0	R
	Second 6143h			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 6146h			2000~2099	2015	R
	Month 6147h			1~12	1	R
	Day 6148h			1~31	1	R
	Hour 6149h			0~23	0	R
	Minute 614Ah			0~59	0	R
	Second 614Bh			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 614Eh			2000~2099	2015	R
	Month 614Fh			1~12	1	R
	Day 6150h			1~31	1	R
	Hour 6151h			0~23	0	R
	Minute 6152h			0~59	0	R
	Second 6153h			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 6156h			2000~2099	2015	R
	Month 6157h			1~12	1	R
	Day 6158h			1~31	1	R
	Hour 6159h			0~23	0	R
	Minute 615Ah			0~59	0	R
	Second 615Bh			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 615Eh			2000~2099	2015	R
	Month 615Fh			1~12	1	R
	Day 6160h			1~31	1	R
	Hour 6161h			0~23	0	R
	Minute 6162h			0~59	0	R
	Second 6163h			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	6166h	2000~2099		2015	R	
Month	6167h	1~12		1	R	
Day	6168h	1~31		1	R	
Hour	6169h	0~23		0	R	
Minute	616Ah	0~59		0	R	
Second	616Bh	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	616Eh	2000~2099	2015		R	
Month	616Fh	1~12	1		R	
Day	6170h	1~31	1		R	
Hour	6171h	0~23	0		R	
Minute	6172h	0~59	0		R	
Second	6173h	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	6176h	2000~2099		2015	R	
Month	6177h	1~12		1	R	
Day	6178h	1~31		1	R	
Hour	6179h	0~23		0	R	
Minute	617Ah	0~59		0	R	
Second	617Bh	0~59		0	R	
Max DM Clear	617Ch	0 or 55h		0None 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 caculation	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	6A34h	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	
	6197h	0-59	1st time interval of the 1st time table(minute)	0	R/W
	6198h	0-3	1st time interval fee of the 1st time table 0:sharp 1:peak 2:valley 3:normal	0	
	6199h	0-23		23	
	619Ah	0-59	2nd time interval and fee of the 1st time table	59	R/W
	619Bh	0-3		0	
	619Ch	0-23		23	
	619Dh	0-59	3rd time interval and fee of the 1st time table	59	R/W
	619Eh	0-3		0	
	619Fh	0-23		23	
	61A0h	0-59	4th time interval and fee of the 1st time table	59	R/W
	61A1h	0-3		0	
	61A2h	0-23		23	
	61A3h	0-59	5th time interval and fee of the 1st time table	59	R/W
	61A4h	0-3		0	
	61A5h	0-23		23	
	61A6h	0-59	6th time interval and fee of the 1st time table	59	R/W
	61A7h	0-3		0	
	61A8h	0-23		23	
	61A9h	0-59	7th time interval and fee of the 1st time table	59	R/W
	61AAh	0-3		0	
	61ABh	0-23		23	
	61ACh	0-59	8th time interval and fee of the 1st time table	59	R/W
61ADh	0-3		0		
Time interval of 2nd time table setting	61AEh	1-8		1	R/W
	61AFh	0-23		0	
	61B0h	0-59		0	R/W
	61B1h	0-3		0	
	61B2h	0-23		23	
	61B3h	0-59		59	R/W
	61B4h	0-3		0	
	61B5h	0-23		23	
	61B6h	0-59		59	R/W
	61B7h	0-3		0	
	61B8h	0-23		23	
	61B9h	0-59	1st~8th time interval and fee of the 2nd time table	59	R/W
	61BAh	0-3		0	
	61BBh	0-23		23	
	61BCh	0-59		59	R/W
	61BDh	0-3		0	
	61BEh	0-23		23	
	61BFh	0-59		59	R/W
	61C0h	0-3		0	
	61C1h	0-23		23	
	61C2h	0-59		59	R/W
	61C3h	0-3		0	
	61C4h	0-23		23	
	61C5h	0-59		59	R/W
61C6h	0-3		0		
Time interval of 3rd time table setting	61C7h	1-8		1	R/W
	61C8h	0-23		0	
	61C9h	0-59		0	R/W
	61CAh	0-3		0	
	61CBh	0-23		23	
	61CCh	0-59		59	R/W
	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			
	61D8h	0-59		59	R/W		
	61D9h	0-3		0			
	61DAh	0-23		23			
	61DBh	0-59		59	R/W		
	61DCh	0-3		0			
	61DDh	0-23		23			
	61DEh	0-59		59	R/W		
	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	
61E2h		0-59	0	R/W			
61E3h		0-3	0				
61E4h		0-23	23				
61E5h		0-59	59	R/W			
61E6h		0-3	0				
61E7h		0-23	23				
61E8h		0-59	59	R/W			
61E9h		0-3	0				
61EAh		0-23	23				
61EBh		0-59	59	R/W			
61ECh		0-3	0				
61EDh		0-23	23				
61EEh		0-59	59	R/W			
61EFh		0-3	0				
61F0h		0-23	23				
61F1h		0-59	59	R/W			
61F2h		0-3	0				
61F3h		0-23	23				
61F4h	0-59	59	R/W				
61F5h	0-3	0					
61F6h	0-23	23					
61F7h	0-59	59	R/W				
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			
	61FBh	0-59		0	R/W		
	61FCh	0-3		0			
	61FDh	0-23		23			
	61FEh	0-59		59	R/W		
	61FFh	0-3		0			
	6200h	0-23		23			
	6201h	0-59		59	R/W		
	6202h	0-3		0			
	6203h	0-23		23			
	6204h	0-59		59	R/W		
	6205h	0-3		0			
	6206h	0-23		23			
	6207h	0-59		59	R/W		
	6208h	0-3		0			
	6209h	0-23		23			
	620Ah	0-59		59	R/W		
	620Bh	0-3		0			
	620Ch	0-23		23			
	620Dh	0-59		59	R/W		
	620Eh	0-3		0			
620Fh	0-23	23					
6210h	0-59	59	R/W				
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	
	6214h	0~59		0	R/W
	6215h	0~3		0	
	6216h	0~23		23	
	6217h	0~59		59	R/W
	6218h	0~3		0	
	6219h	0~23		23	
	621Ah	0~59		59	R/W
	621Bh	0~3		0	
	621Ch	0~23		23	
	621Dh	0~59		59	R/W
	621Eh	0~3		0	
	621Fh	0~23		23	
	6220h	0~59		59	R/W
	6221h	0~3		0	
	6222h	0~23		23	
	6223h	0~59		59	R/W
	6224h	0~3		0	
	6225h	0~23		23	
	6226h	0~59		59	R/W
	6227h	0~3		0	
	6228h	0~23		23	
	6229h	0~59		59	R/W
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	
	622Dh	0~59		0	R/W
	622Eh	0~3		0	
	622Fh	0~23		23	
	6230h	0~59		59	R/W
	6231h	0~3		0	
	6232h	0~23		23	
	6233h	0~59		59	R/W
	6234h	0~3		0	
	6235h	0~23		23	
	6236h	0~59		59	R/W
	6237h	0~3		0	
	6238h	0~23		23	
	6239h	0~59		59	R/W
	623Ah	0~3		0	
	623Bh	0~23		23	
	623Ch	0~59		59	R/W
	623Dh	0~3		0	
	623Eh	0~23		23	
	623Fh	0~59		59	R/W
	6240h	0~3		0	
	6241h	0~23		23	
	6242h	0~59		59	R/W
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	
	6246h	0~59		0	R/W
	6247h	0~3		0	
	6248h	0~23		23	
	6249h	0~59		59	R/W
	624Ah	0~3		0	
	624Bh	0~23		23	
	624Ch	0~59		59	R/W
	624Dh	0~3		0	
	624Eh	0~23		23	
	624Fh	0~59		59	R/W
	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	
	6257h	0~23		23	R/W
	6258h	0~59		59	
	6259h	0~3		0	
	625Ah	0~23		23	R/W
	625Bh	0~59		59	
	625Ch	0~3		0	

Special day parameter of TOU (Function 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 < (End year - Start year)+1 ≤ 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 the 1st holiday (month)	1	R/W
	6262h	1~31	Date of the 1st holiday (Day)	1	
	6263h	1~8	Time table of the 1st 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(Function 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	
	62A0h	1-31	Date of the 1st holiday (day)	1	R/W
	62A1h	1-8	Time table of the 1st holiday	1	
2nd holiday	62A2h	1-12		1	
	62A3h	1-31	Date and the time table of the 2nd holiday	1	R/W
	62A4h	1-8		1	
3rd holiday	62A5h	1-12		1	
	62A6h	1-31	Date and the time table of the 3rd holiday	1	R/W
	62A7h	1-8		1	
4th holiday	62A8h	1-12		1	
	62A9h	1-31	Date and the time table of the 4th holiday	1	R/W
	62AAh	1-8		1	
5th holiday	62ABh	1-12		1	
	62ACh	1-31	Date and the time table of the 5th holiday	1	R/W
	62ADh	1-8		1	
6th holiday	62AEh	1-12		1	
	62AFh	1-31	Date and the time table of the 6th holiday	1	R/W
	62B0h	1-8		1	
7th holiday	62B1h	1-12		1	
	62B2h	1-31	Date and the time table of the 7th holiday	1	R/W
	62B3h	1-8		1	
8th holiday	62B4h	1-12		1	
	62B5h	1-31	Date and the time table of the 8th holiday	1	R/W
	62B6h	1-8		1	
9th holiday	62B7h	1-12		1	
	62B8h	1-31	Date and the time table of the 9th holiday	1	R/W
	62B9h	1-8		1	
10th holiday	62BAh	1-12		1	
	62BBh	1-31	Date and the time table of the 10th holiday	1	R/W
	62BCh	1-8		1	
11th holiday	62BDh	1-12		1	
	62BEh	1-31	Date and the time table of the 11th holiday	1	R/W
	62BFh	1-8		1	
12th holiday	62C0h	1-12		1	
	62C1h	1-31	Date and the time table of the 12th holiday	1	R/W
	62C2h	1-8		1	
13th holiday	62C3h	1-12		1	
	62C4h	1-31	Date and the time table of the 13th holiday	1	R/W
	62C5h	1-8		1	
14th holiday	62C6h	1-12		1	
	62C7h	1-31	Date and the time table of the 14th holiday	1	R/W
	62C8h	1-8		1	
15th holiday	62C9h	1-12		1	
	62CAh	1-31	Date and the time table of the 15th holiday	1	R/W
	62CBh	1-8		1	
16th holiday	62CCh	1-12		1	
	62CDh	1-31	Date and the time table of the 16th holiday	1	R/W
	62CEh	1-8		1	
17th holiday	62CFh	1-12		1	
	62D0h	1-31	Date and the time table of the 17th holiday	1	R/W
	62D1h	1-8		1	
18th holiday	62D2h	1-12		1	
	62D3h	1-31	Date and the time table of the 18th holiday	1	R/W
	62D4h	1-8		1	
19th holiday	62D5h	1-12		1	
	62D6h	1-31	Date and the time table of the 19th holiday	1	R/W
	62D7h	1-8		1	
20th holiday	62D8h	1-12		1	
	62D9h	1-31	Date and the time table of the 20th holiday	1	R/W
	62DAh	1-8		1	

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

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

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

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

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

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

Parameters setting of 4th year holidays

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

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

Floating data (Function 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				
Load Type	7040h	R:82 L:76 C:67	R:Resistive, L:Inductive, C:Capacitive		R
	7041h				

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	Average 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 7057h	0.0~100.0%	Average total harmonic of voltage		R
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				
AE-IMP	7060h	0.0~99999999.9kWh	Import active energy		R
	7061h				
AE-Exp	7062h	0.0~99999999.9kWh	Export active energy		R
	7063h				
AE-Total	7064h	0.0~99999999.9kWh	Total active energy		R
	7065h				
AE-Net	7066h	-99999999.9~99999999.9kWh	Net active energy		R
	7067h				
RE-IMP	7068h	0.0~99999999.9kVARh	Import reactive energy		R
	7069h				
RE-Exp	706Ah	0.0~99999999.9kVARh	Export reactive energy		R
	706Bh				
RE-Total	706Ch	0.0~99999999.9kVARh	Total reactive energy		R
	706Dh				
RE-Net	706Eh	-99999999.9~99999999.9kVARh	Net reactive energy		R
	706Fh				
SE-Total	7070h	0.0~99999999.9kVAh	Total apparent energy		R
	7071h				
CO ₂	7072h	0.000~999999.999kg	Total CO ₂ weight of energy		R
	7073h				

* IP address format as below, for example 192.168.4.1

80C2h		80C3h	
Hi	Lo	Hi	Lo
192	168	4	1

Character Symbol

A	b	C	d	E	F	G	H	i	J	K	L	M
R	b	C	d	E	F	G	H	i	J	K	L	n
n	o	P	q	r	S	t	U	v	W	X	y	Z
n	o	P	q	r	S	t	U	v	W	X	y	Z
1	2	3	4	5	6	7	8	9	0	/	.	
1	2	3	4	5	6	7	8	9	0	/	.	

TECO

TECO Electric & Machinery Co., Ltd.

5F, No.19-9, SanChongRd., Nan-Kang, Taipei11501, Taiwan(R.O.C.)
Tel886-2-26553333ext3674



<https://tecoie.teco.com.tw/>
Intelligence Energy



FM4 40A236 Rev.0