

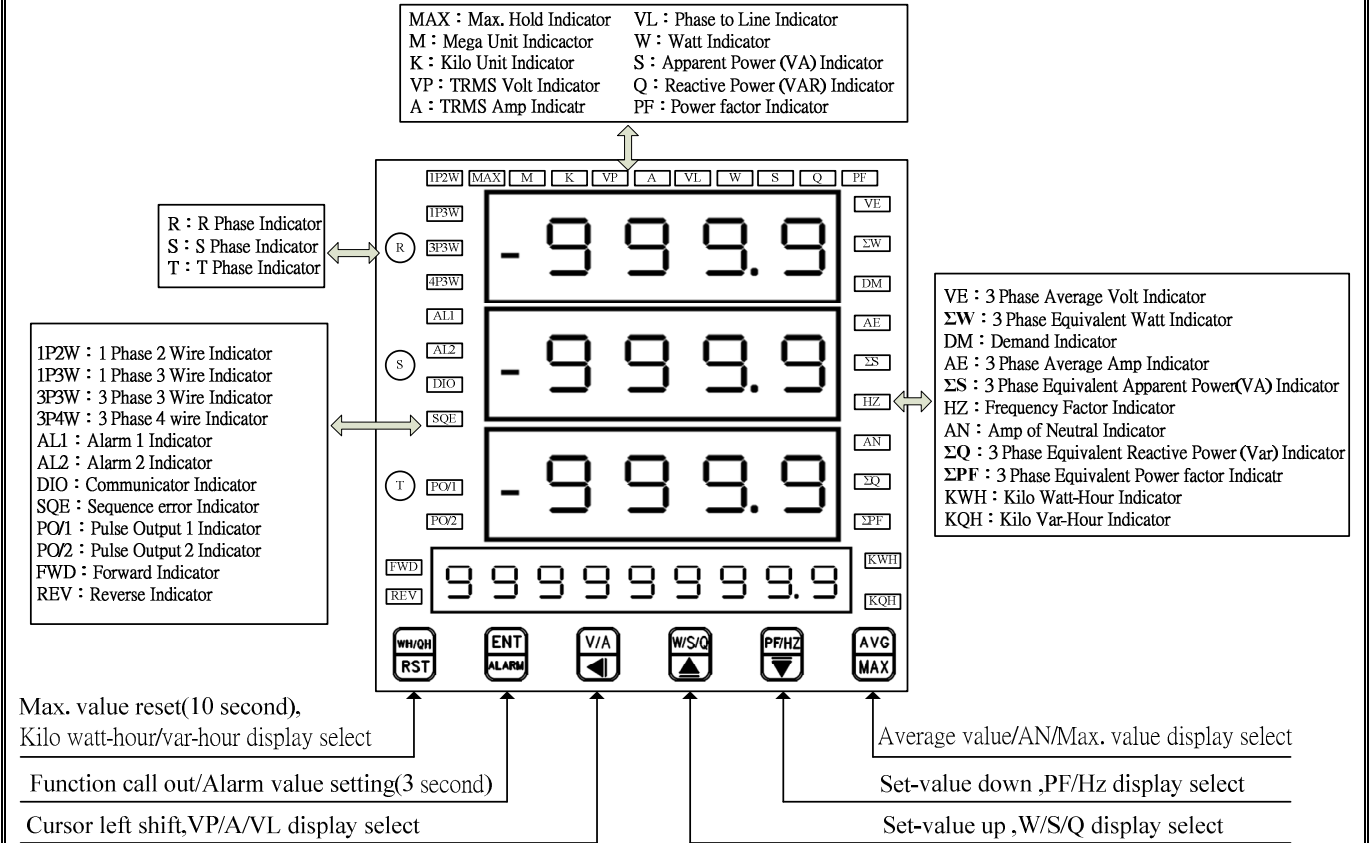
AXE MULTI-FUNCTION POWER METER

MMP2

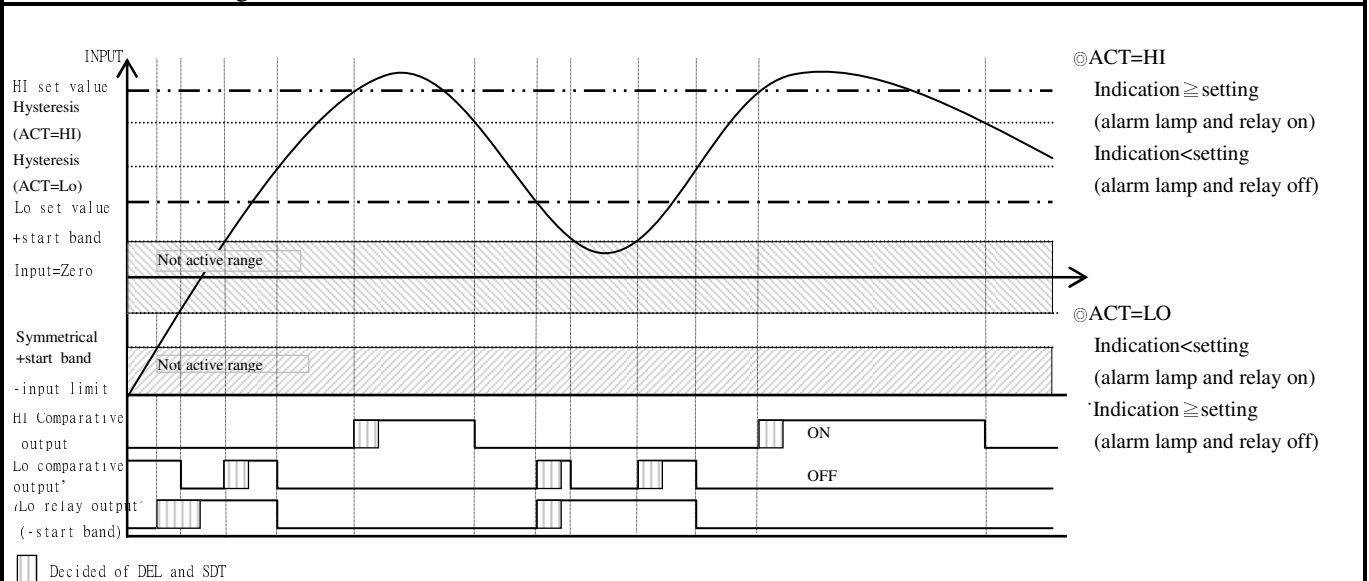
■ Features

- Accuracy $\pm 0.25\%$ FS
- Measuring ACV/ACA/Watt/Var/Power factor/Frequency / KWH/DM
- Input measurement network can be selectives(1 ϕ 2W/ 1 ϕ 3W/3 ϕ 3W/3 ϕ 4W)
- CT rate/PT rate can be modified(1 to 9999)
- Manual or auto scanning mode can be modified
- Two alarm control function(option)
- Two pulse output function(option)
- Digital RS-485 interface function(option)
- BAUD RATE:38400/19200/9600/4800/2400
- Man-machine interface ,easy to operate
- EEPROM Saving ,data safekeeping over 10 years
- Modified inside parameter must have pass code

■ Name Of Parts



■ Alarm Function Diagram



Key Introduce

Operation Manual

Key Function

- In normal display, The key function is call out setting group/alarm value setting(press 3 sec.)
- In parameter setting page, The key function is data enter , and goto next page

◀Key Function	1. In normal display, The key function is select VP/A/VL display mode 2. Into parameter setting page, the parameter mark& data is alternate display, If need modify data can press shift key into setting procedure, The display is lock parameter data, this time must let off key about 0.2 sec, press again, the cursor(twinkle express)is cycle moving left/right. (Key Response about 0.2 sec)		
▲Key Function	1. In normal display, The key function is select W/S/Q display mode 2. Into parameter setting page, the parameter mark& data is alternate display, If need modify data can press up key into setting procedure, The display is lock parameter data, this time must let off key about 0.2 sec, press again, the parameter data will increment. (Key Response about 0.2 sec)		
▼Key Function	1. In normal display, The key function is select PF/Hz display mode 2. Into parameter setting page, the parameter mark& data is alternate display, If need modify data can press down key into setting procedure, The display is lock parameter data, this time must let off key about 0.2 sec, press again the parameter data will decrement. (Key Response about 0.2 sec)		
▲&▼Key Function	In setting group or setting page press ▲&▼ key return normal display, but if in setting page the modify data will be lost		
No Key in anything	In setting group or setting page no key in anything about 2 minutes, return normal display		
Step	Parameter Mark Description	Parameter Mark	Operation Manual
1	Normal display	1 2 3 4	Press ⏏/FUNC key into P.COD setting page
2	P.COD(Pass code input page) Default=0	P. 0 0 0 0 0 0 0 0	1. Key in 4 digit pass code with ◀&▲&▼key 2. Press ⏏key, the pass code is right into setting group , otherwise return normal display
3	SYS(System setting group)	5 4 5	1. Select setting group with ◀key 2. Press ⏏key into setting page of selection setting group
	ROP(Alarm setting group)	7 0 P	
	DOP(Communication setting group)	0 0 P	
	DSP(Display value adjust)	0 5 P	
4	SYS(System setting group)	5 4 5	Press ◀key select setting group and Press ⏏ into setting group
4-1	NET(NET) Default=3φ4L	7 E E 3 P 4 L	1. Decide net with ▲&▼key(1φ2L,1φ3L,3φ3L,3φ4L) 2. Press ⏏key enter data and into CT rate setting page
4-2	CT.R(CT Rate) Default=1	0 E 7 1	1. Decide CT rate with ◀&▲&▼key (1~9999) 2. Press ⏏key enter data and into PT rate setting page
4-3	PT.R(PT Rate) Default=1	P E 7 1	1. Decide PT rate with ◀&▲&▼key (1~9999) 2. Press ⏏key enter data and into DEA.T setting page
4-4	DEA.T(Demand Time) Default=15	0 E 1 5 1 5	1. Decide Demand Time with ◀&▲&▼key (1~60) 2. Press ⏏key enter data and into AUTO setting page
4-5	AUTO(Auto scan) Default=NO	7 0 0 0 7 0	1. Decide display mode auto scan with ▲&▼key (NO or YES) 2. Press ⏏key enter data and into CODE setting page
4-6	CODE(Code) Default=0	0 0 0 0 0 0 0 0	1. Decide Pass code with ◀&▲&▼key (0~9999) 2. Press ⏏key enter data and into LOCK setting page
4-7	LOCK(Panel Lock) Default=NO	0 0 0 0 7 0	1. Decide panel lock with ▲&▼ key (NO or YES) 2. Press ⏏key enter data and return SYS setting group
4-8	SYS(System setting group)	5 4 5	Press ◀key select setting group and Press ⏏ into setting group
5	ROP(Alarm setting group)	7 0 P	Press ◀key decide ROP setting group, press ⏏key into AL1.S setting page
5-1	AL1.S (Alarm 1 Select) Default=AE	7 0 1 5 7 E	1. Decide AL1.S with ▲&▼key (VE,AE,AN, Σ -W, Σ -Q, Σ -S, Σ -PF,DEMA,MAX.D,+KWH,-KWH,+KQH,-KQH) 2. Press ⏏key into AL2.S setting page
5-2	AL2.S (Alarm 2 Select) Default=AE	7 0 2 5 7 E	1. Decide AL2.S with ▲&▼key (VE,AE,AN, Σ -W, Σ -Q, Σ -S, Σ -PF,DEMA,MAX.D,+KWH,-KWH,+KQH,-KQH) 2. Press ⏏key into ACT1 setting page
5-3	ACT1(Alarm Active 1 setting page)Default=HI	7 0 0 1 7 1	1. Decide active 1 with ▲&▼key(HI or LO) 2. Press ⏏key enter data and into ACT2 setting page
5-4	ACT2(Alarm Active 2 setting page)Default=HI	7 0 0 2 7 1	1. Decide active 2 with ▲&▼key(HI or LO) 2. Press ⏏key enter data and into HYS1 setting page
5-5	HYS1(Alarm Hysteresis 1 setting page1)Default=0	7 0 0 0 0 0 0 0	1. Decide HYS1 with ◀&▲&▼key (0~999) 2. Press ⏏key enter data and into HYS2 setting page

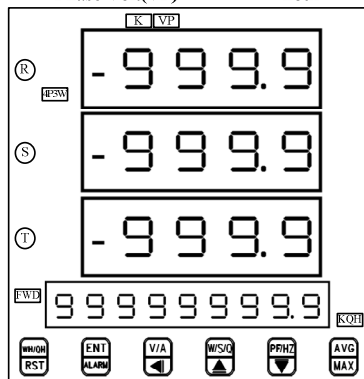
5-6	HYS2(Alarm Hysteresis 2 setting page2)Default=0	H Y S 2	1. Decide HYS2 with ◀&▲&▼key (0~999)
		□ □ □ □	2. Press ⑨ key enter data and into DEL1 setting page
5-7	DEL1(Delay 1) Default=0	Δ E L 1	1. Decide DEL1 with ◀&▲&▼key (0~±999 sec)
		□ □ □ □	2. Press ⑨ key enter data and into DEL2 setting page Note:-1~999 is active time setting,0~999 is delay time setting
5-8	DEL2(Delay 2) Default=0	Δ E L 2	1. Decide DEL2 with ◀&▲&▼key (0~±999 sec)
		□ □ □ □	2. Press ⑨ key enter data and into SDT setting page Note:-1~999 is active time setting,0~999 is delay time setting
5-9	SDT(Start Delay Time) Default=0	S Δ E	1. Decide SDT with ◀&▲&▼key (0~99 sec)
		□ □ □ □	2. Press ⑨ key enter data and into P1.2.S setting page
5-10	P1.2.S(Pluse 1/Pluse 2 output select)Default=+KQH/-KQH	P 1.2.S	1.Decide P1.2.S with ▲&▼key(+KWH/-KWH or
		± K Q	+KQH/-KQH or +KWH/+KQH) 2. Press ⑨ key enter data and into KWHP setting page
5-11	KWHP(Pulse out) Default=1	± K W H P	1. Decide KWHP with ◀&▲&▼key (0.001,0.01,0.1,1,10,
		100,1000)	2.Press ⑨ key return Alarm Active setting group
5-12	ROP(Alarm setting group)	Δ □ P	Press ◀key select setting group and Press ⑨ into setting group
6	DOP(Communication setting group)	Δ □ P	Press ◀key decide DOP setting group, press ⑨ key into ADDR setting page
6-1	ADDR(Communication Address) Default=0	R Δ Δ Δ	1. Decide address with ◀&▲&▼key (0~255)
		□ □ □ □	2. Press ⑨ key enter data and into BAUD setting page
6-2	BAUD(Communication Baud Rate) Default=19200	Δ R U Δ	1. Decide baud rate with ▲&▼key (38400,19200,9600,4800,2400)
		1 9 2 2	2. Press ⑨ key enter data and into PARI setting page
6-3	PARI(Communication Parity Check)Default=n.8.2.	P R Δ Δ	1. Decide parity check with ▲&▼key(n.8.2,n.8.1,even,odd)
		Δ 8.2	2. Press ⑨ key enter data and return DOP setting group
6-4	DOP(Communication setting group)	Δ □ P	Press ◀key select setting group and Press ⑨ into setting group
7	DSP(Display value adjust)	Δ S P	Press ◀key decide DSP setting group, Press ⑨ key into R.V.P setting page
7-1	R.V.P(R Phase Voltage Adjust) Default=0	Δ V P	1. Input Max. voltage to phase R ,Adjustment display span with
		□ □ □ □	▲&▼key 2. Press ⑨ key enter data and into S.V.P setting page
7-2	S.V.P(S Phase Voltage Adjust)Default=0	S V P	1. Input Max. voltage to phase S ,Adjustment display span with
		□ □ □ □	▲&▼key 2. Press ⑨ key enter data and into T.V.P setting page
7-3	T.V.P(T Phase Voltage Adjust)Default=0	T V P	1. Input Max. voltage to phase T ,Adjustment display span with
		□ □ □ □	▲&▼key 2. Press ⑨ key enter data and into R.A setting page
7-4	R.A(R Phase Current Adjust)Default=0	Δ R	1. Input Max. current to phase R ,Adjustment display span with
		□ □ □ □	▲&▼key 2. Press ⑨ key enter data and into S.A setting page
7-5	S.A(S Phase Current Adjust)Default=0	S A	1. Input Max. current to phase S ,Adjustment display span with
		□ □ □ □	▲&▼key 2. Press ⑨ key enter data and into T.A setting pag
7-6	T.A(T Phase Current Adjust)Default=0	T A	1. Input Max. current to phase T ,Adjustment display span with
		□ □ □ □	▲&▼key
		□ □ □ □	3.Press ⑨ key enter data and into RW setting pag
7-7	RW(R Phase Watt Adjust)Default=0	Δ W	1. Input Max. watt to phase R ,Adjustment display value with
		□ □ □ □	▲&▼key 2.Press ⑨ key enter data and into SW setting page
7-8	SW(S Phase Watt Adjust)Default=0	S W	1. Input Max. watt to phase S ,Adjustment display value with
		□ □ □ □	▲&▼key 2. Press ⑨ key enter data and into TW setting pag
7-9	TW(T Phase Watt Adjust)Default=0	T W	1. Input Max. watt to phase T ,Adjustment display value with
		□ □ □ □	▲&▼key 2. Press ⑨ key e enter data and into RVAR setting pag

7-10	RVAR(R Phase VAR Adjust)Default=0		1. Input Max. VAR to phase R ,Adjustment display value with ▲&▼key 2.Press key enter data and into SVAR setting page
7-11	SVAR(S Phase VAR Adjust)Default=0		1. Input Max. VAR to phase S ,Adjustment display value with ▲&▼key 2. Press key enter data and into TVAR setting pag
7-12	TVAR(T Phase VAR Adjust)Default=0		1. Input Max. watt to phase T ,Adjustment display value with ▲&▼key 2. Press key e enter data and into R-PH setting pag
7-13	R-PH(R Phase Voltage & Current Adjust)Default=0		1. Input Max. watt to phase R ,Adjustment display value with ▲&▼key let 0.5PF = -0.5PF watt 2.Press key enter data and into S-PH setting page
7-14	S-PH(S Phase Voltage & Current Adjust)Default=0		1. Input Max. watt to phase S ,Adjustment display value with ▲&▼key let 0.5PF = -0.5PF watt 2. Press key enter data and into T-PH setting pag
7-15	T-PH(T Phase Voltage & Current Adjust)Default=0		1. Input Max. watt to phase T ,Adjustment display value with ▲&▼key let 0.5PF = -0.5PF watt 2. Press key enter data and return DSP setting group
Step	Parameter mark description	Parameter mark	Operation manual
8	Normal display	1 2 3 4	Press /ALARM about 3 sec, into AL1 setting page
8-1	AL1 (Alarm value 1 setting page) Default=3.000		1. Decide alarm value 1 with & ▲&▼ key (0~999999999) 2. Press key enter data and into AL2 setting page
8-2	AL2 (Alarm value 2 setting page) Default=3.000		1. Decide alarm value 2 with & ▲&▼ key (0~999999999) 2. Press key enter data and return Normal display
Appendix	Error Mark Description	Error Mark	Analyze & Description
1	Display over error detect	8 0 F L	Display over range (9999)
2	Display negative over error detect	- 8 0 F L	Display over range (-9999)
3	Line error	L n E r	Line error, voltage/current polarity error
4	EEPROM error detect		1.External interference when EEPROM read/write 2.EEPROM write over 10 million times(guarantee 10 years) Please power reset, if still display E-00,doing following step: 1.E-00 & No alternate display for inquire reset EEPROM 2.Decide Yes with ▲ or ▼ key, press key return normal display EEPROM was reset, Please follow step 1~8 set again

■ Display switching indication

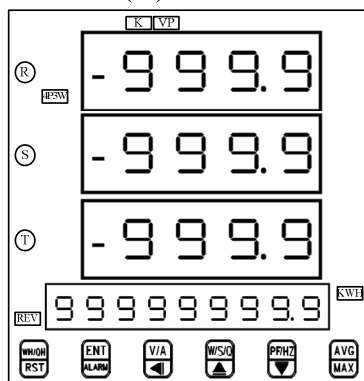
Display group of totalize value

Θ3 Phase-Volt(VP) and kilo var-hour



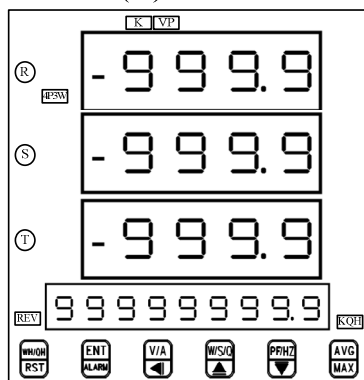
Press WH/QH
RST

3 Phase-Volt(VP) and reverse kilo watt-hour



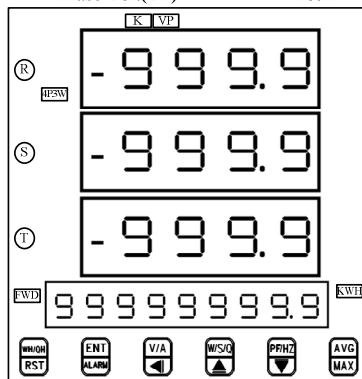
Press WH/QH
RST

3 Phase-Volt(VP) and reverse kilo var-hour



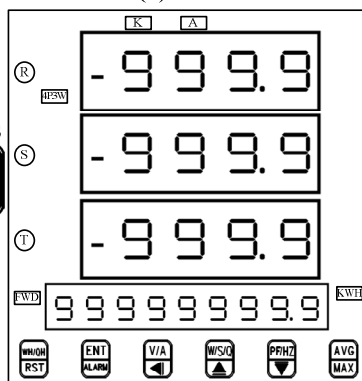
Display group of Volt/AMP

Θ3 Phase-Volt(VP) and kilo watt-hour



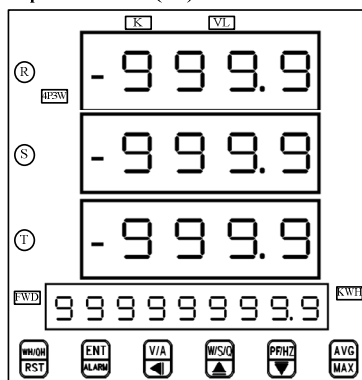
Press V/A

3 Phase-AMP(A) and kilo watt-hour



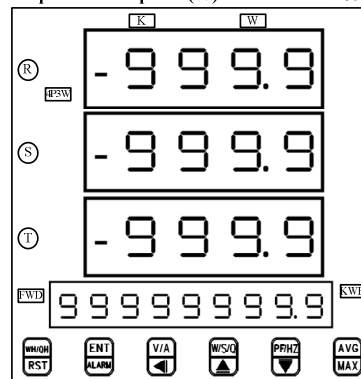
Press V/A

3 phase Line-Volt(VL) and kilo watt-hour



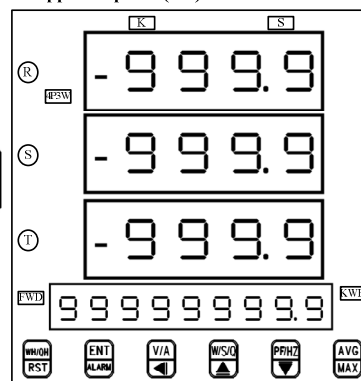
Display group of power value

Θ3 phase active power(W)and kilo watt-hour



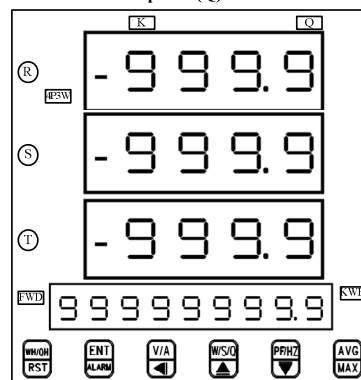
Press W/S/Q

3 apparent power(VA) and kilo watt-hour



Press W/S/Q

3 Phase reactive power(Q) and kilo watt-hour



NOTE: 1. It will changed display indication each 10S while AUTO = YES

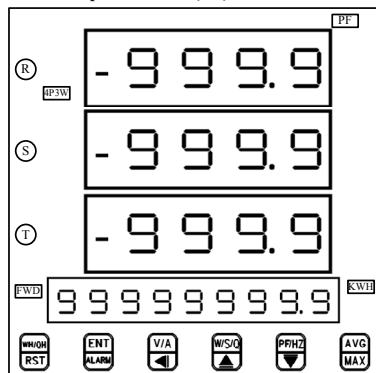
2.It will recurring in same display group while press same key to select display group.

3.It will start new display group with Θ while press different key to select display group.

■ Display switching indication

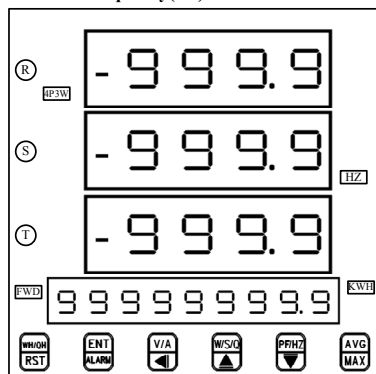
Display group of PF/HZ

Θ3 Phase power factor(PF) and kilo watt-hour



Press

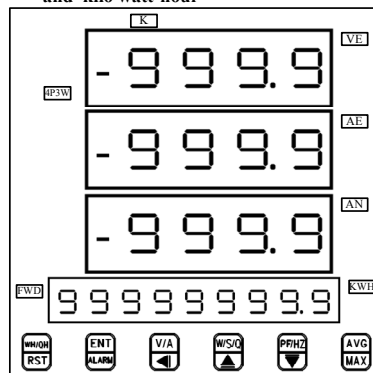
3 Phase frequency(Hz) and kilo watt-hour



Press

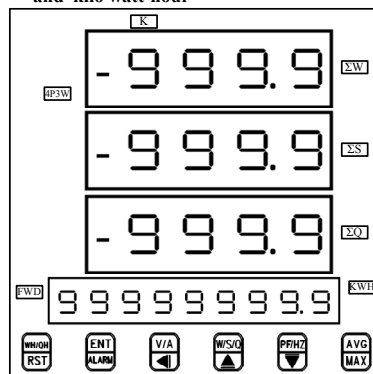
Display group of AVG/MAX. value

Θ3 Phase average V,A,AN of Neutral and kilo watt-hour



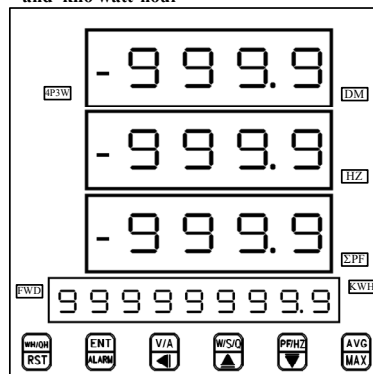
Press

3 Phase equivalent WATT,VA,Var and kilo watt-hour



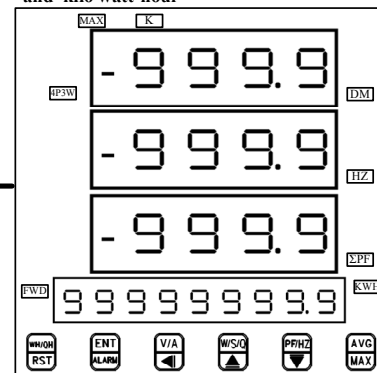
Press

3 Phase equivalent DM,HZ,PF and kilo watt-hour



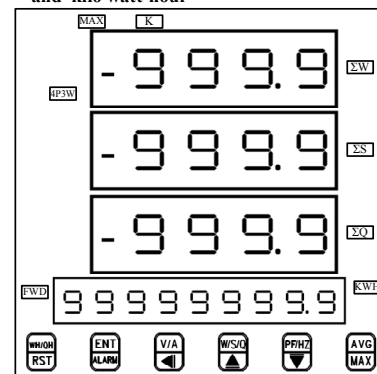
Press

MAX. 3 Phase equivalent Demand,HZ,PF and kilo watt-hour



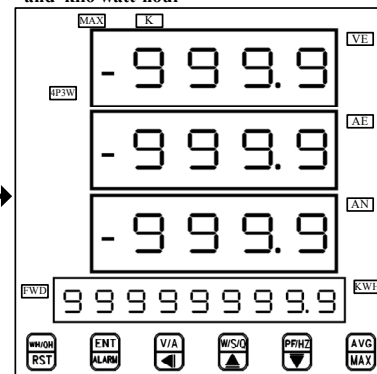
Press

MAX. 3 Phase equivalent Watt,VA,Var and kilo watt-hour



Press

MAX. 3 Phase average V,A,A of Neutral and kilo watt-hour



Press

NOTE: 1. It will changed display indication each 10S while AUTO = YES

2.It will recurring in same display group while press same key to select display group.

3.It will start new display group with Θ while press different key to select display group.

Note1. DEL:

Active time setting:

Alarm signal active time while alarm generate

Delay time setting

Alarm signal delay time while alarm generate

2.Relation with CT & max. display value & LCUT value & SB value

CT.r	Max. disp	LCUT Value	SB Value
x 1	0.000~5.000A	0.045A	0.05A
x 2~10	0.00~50.00A	CT.r*0.45A	0.5A
x 11~100	0.0~500.0A	CT.r*0.45A	5.0A
x 101~1000	0.000~5.000KA	CT.r*0.45A	0.05KA
x 1001~9999	0.00KA~50.00KA	CT.r*0.45A	0.5KA

3. Relation with PT & max. display value & Lcut value & SB value

PT.r	Max. disp	LCUT Value	SB Value
x 1	0.0~600.0V	24.0V	0V
x 2~10	0.000~6.000KV	PT.r*0.024KV	0KV
x 11~100	0.00~60.00KV	PT.r*0.024KV	0KV
x 101~1000	0.0KV~600.0KV	PT.r*0.024KV	0KV
x 1001~9999	0~6000KV	PT.r*0.024KV	0KV

4. Relation watt with CT *PT & max. display value & LCUT value & SB value

CT.r *PT.r	Max. disp	LCUT Value	SB Value
x 1	0.000~2.500KW	±0.003W	0W
x 2~10	0.00~25.00KW	±0.03KW	0KW
x 11~100	0.0~250.0KW	±0.3KW	0KW
x 101~1000	0.000~2.500MW	±0.003MW	0MW
x 1001~10000	0.00~25.00MW	±0.03MW	0MW
x 10001~100000	0.0~250.0MW	±0.3MW	0MW
≥ 100001	0~2500MW	±3MW	0MW

5. Relation watt-hour with CT *PT & max. display value & LCUT value & SB value

CT.r *PT.r	Max. disp
x 1	0.000~999999.999KW
x 2~10	0.00~9999999.99KW
x 11~100	0.0~99999999.9KW
≥ 101	0~999999999KW

6 LCUT(low value cut out):while display value $\leq$ LCUT value, display value = 0

SB(start band): while ALx $\geq$ SB, into alarm mode

7.KWHP pulse out max value:61pulse/S

MMP-2 Modbus RTU Mode Protocol Address Map

Data format 16Bit/32Bit, sign bit 8000~7FFF(-32768~32767),80000000~7FFFFFFF(-2147483648~2147483647)

Address	Name	Description	Accept
0000	ID	Judge type code MMP-2 is 00	R
0001	STATUS	STATUS, range 0000~0003(0~3)(0:OFF,1:ON) (Bit0:AL1,Bit1:AL2)	R
0002	DISP-MODE	Display mode,range000~00010(0~16) ⁽⁴⁾	R/W
0003	ACT1	ACT1, range 0000~0001(0~1)(0:HI,1:LO)	R/W
0004	ACT2	ACT2, range 0000~0001(0~1)(0:HI,1:LO)	R/W
0005	DEA.T	Demand Time, range (1~60)	R/W
0006	AL1.S	AL1 select, range 0000~000C(0~12) (0:VE,1:AE,2:AN,3:ΣW,4:ΣQ,5:ΣS,6:ΣPF,7:Σ DEMA,8:MAX.D, 9:+KWH, 10:-KWH,11:+KQH,12:-KQH)	R/W
0007	AL2.S	AL2 select, range 0000~000C(0~12) (0:VE,1:AE,2:AN,3:ΣW,4:ΣQ,5:ΣS,6:ΣPF,7:Σ DEMA,8:MAX.D, 9:+KWH, 10:-KWH,11:+KQH,12:-KQH)	R/W
0008	P1.2.S	Pluse 1/Pluse 2 output select, range 0000~0002(0~2) (0:+KWH/-KWH, 1:+KQH/-KQH, 2:+KWH/+KQH)	R/W
0009	KWHP	KWHP, range 0000~0006(0~6) 0:0.001,1:0.01,2:0.1,3:1,4:10,5:100,6:1000	R/W
000A	NET	NET, range 0000~0003(0~3),(0:1ψ2L,1:1ψ3L,2:3ψ3L 3:3ψ4L)	R/W
000B	AUTO	AUTO, range 0000~0001(0~1),(0:NO,1:YES)	R/W
000C	LOCK	LOCK, range 0000~0001(0~1),(0:NO,1:YES)	R/W
000D	BAUD	BAUD, range 0000~0004(0~4)0:38K2,1:19K2,2:9600,3:4800,4:2400	R/W
000E	PARI	PARI, range 0000~0003(0~3) ,0:N.8.2.,1:N.8.1.,2:EVEN,3:ODD	R/W
000F	ADDR	ADDR, range 0000~00FF(0~255)	R/W
0010	HYS1	HYS1, range 0000~03E7 (0~999)	R/W
0011	HYS2	HYS2, range 0000~03E7 (0~999)	R/W
0012	DEL1	DEL1, range FC19~03E7(-999~999)	R/W
0013	DEL2	DEL2, range FC19~03E7(-999~999)	R/W
0014	SDT	SDT, range 0000~0063(0~99)	R/W
0015	CT.R	CT rate, range 0001~270F(1~9999)	R/W
0016	PT.R	PT rate, range 0001~270F(1~9999)	R/W
0017	CODE	CODE, range 0000~270F(0~9999)	R/W
0018	AL1	AL1, range 00000000~3B9AC9FF(0~999999999) low word	R/W
0019	AL2	AL2, range 00000000~3B9AC9FF(0~999999999) low word	R/W
001A	DISP-RVP	DISP-RVP , range 0000~2710(0~10000) ⁽¹⁾	R
001B	DISP-SVP	DISP-SVP , range 0000~2710(0~10000) ⁽¹⁾	R
001C	DISP-TVP	DISP-TVP , range 0000~2710(0~10000) ⁽¹⁾	R
001D	DISP-RA	DISP-RA , range 0000~2710(0~10000) ⁽¹⁾	R
001E	DISP-SA	DISP-SA ,0000~2710(0~10000) ⁽¹⁾	R
001F	DISP-TA	DISP-TA,0000~2710(0~10000) ⁽¹⁾	R
0020	DISP-RVL	DISP-RVL, range 0000~2710(0~10000) ⁽¹⁾	R
0021	DISP-SVL	DISP-SVL, range 0000~2710(0~10000) ⁽¹⁾	R
0022	DISP-TVL	DISP-TVL, range 0000~2710(0~10000) ⁽¹⁾	R
0023	DISP-RKW	DISP-RKW, range D8F0~2710(-10000~10000) ⁽²⁾	R ⁽³⁾
0024	DISP-SKW	DISP-SKW, range D8F0~2710(-10000~10000) ⁽²⁾	R ⁽³⁾
0025	DISP-TKW	DISP-TKW, range D8F0~2710(-10000~10000) ⁽²⁾	R ⁽³⁾
0026	DISP-RKVAR	DISP-RKVAR, range D8F0~2710(-10000~10000) ⁽²⁾	R ⁽³⁾

0027	DISP-SKVAR	DISP-SKVAR, range D8F0~2710(-10000~10000) ⁽²⁾	R ⁽³⁾
0028	DISP-TKVAR	DISP-TKVAR, range D8F0~2710(-10000~10000) ⁽²⁾	R ⁽³⁾
0029	DISP-RKS	DISP-RKS, range 0000~2710(0~10000) ⁽¹⁾	R ⁽³⁾
002A	DISP-SKS	DISP-SKS, range 0000~2710(0~10000) ⁽¹⁾	R ⁽³⁾
002B	DISP-TKS	DISP-TKS, range 0000~2710(0~10000) ⁽¹⁾	R ⁽³⁾
002C	DISP-RPF	DISP-RPF, range FC18~03E8(-1000~1000)	R
002D	DISP-SPF	DISP-SPF, range FC18~03E8(-1000~1000)	R
002E	DISP-TPF	DISP-TPF, range FC18~03E8(-1000~1000)	R
002F	DISP-RHZ	DISP-RHZ, range 0000~1964(0~6500)	R
0030	DISP-SHZ	DISP-SHZ, range 0000~1964(0~6500)	R
0031	DISP-THZ	DISP-THZ, range 0000~1964(0~6500)	R
0032	DISP-AN	DISP-AN, range 0000~2710(0~10000) ⁽¹⁾	R
0033	DISP-DM	DISP-DM, range 0000~2710(0~10000) ⁽¹⁾	R
0034	DISP-ΣKW	DISP-ΣKW, range 0000~2710(0~10000) ⁽¹⁾	R
0035	DISP-ΣKVAR	DISP-ΣKVAR, range 0000~2710(0~10000) ⁽¹⁾	R
0036	DISP-ΣKS	DISP-ΣKS, range 0000~2710(0~10000) ⁽¹⁾	R
0037	DISP-ΣVP	DISP-ΣVP, range 0000~2710(0~10000) ⁽¹⁾	R
0038	DISP-ΣA	DISP-ΣA, range 0000~2710(0~10000) ⁽¹⁾	R
0039	DISP-ΣPF	DISP-ΣPF, range 0~03E8(0~1000)	R
003A	DISP-ΣHZ	DISP-ΣHZ, range 0000~1964(0~6500)	R
003B	DISP-KWH	DISP-KWH, range 00000000~3B9AC9FF(0~99999999) high word	R
003C		DISP-KWH, range 00000000~3B9AC9FF(0~99999999) low word	R
003D	DISP-KQH	DISP-KQH, range 00000000~3B9AC9FF(0~99999999) high word	R
003E		DISP-KQH, range 00000000~3B9AC9FF(0~99999999) low word	R
003F	REVDISP-KWH	REVDISP-KWH, range 00000000~3B9AC9FF(0~99999999) high word	R
0040		REVDISP-KWH, range 00000000~3B9AC9FF(0~99999999) low word	R
0041	REVDISP-KQH	REVDISP-KQH, range 00000000~3B9AC9FF(0~99999999) high word	R
0042		REVDISP-KQH, range 00000000~3B9AC9FF(0~99999999) low word	R
0043	MAX. (DISP-ΣKW)	MAX.(DISP-ΣKW) , range 0000~2710(0~10000) ⁽¹⁾	R
0044	MAX. (DISP-ΣKVAR)	MAX.(DISP-ΣKVAR), range 0000~2710(0~10000) ⁽¹⁾	R
0045	MAX. (DISP-ΣKS)	MAX.(DISP-ΣKS) , range 0000~2710(0~10000) ⁽¹⁾	R
0046	MAX. (DISP-ΣVP)	MAX.(DISP-ΣVP) , range 0~2710(0~10000) ⁽¹⁾	R
0047	MAX. (DISP-ΣA)	MAX.(DISP-ΣA) , range 0~2710(0~10000) ⁽¹⁾	R
0048	MAX. (DISP-ΣPF)	MAX.(DISP-ΣPF) , range 0~03E8(0~1000)	R
0049	MAX. (DISP-ΣHZ)	MAX.(DISP-ΣHZ), range 0000~1964(0~6500)	R
004A	MAX. DISP-AN	MAX.(DISP-AN), range 0000~2710(0~10000) ⁽¹⁾	R
004B	MAX. DISP-DM	MAX.(DISP-DM), range 0000~2710(0~10000) ⁽¹⁾	R
004C	AL1	AL1, range 00000000~3B9AC9FF(0~99999999) high word	R/W
004D		AL1, range 00000000~3B9AC9FF(0~99999999) low word	R/W
004E	AL2	AL2, range 00000000~3B9AC9FF(0~99999999) high word	R/W
004F		AL2, range 00000000~3B9AC9FF(0~99999999) low word	R/W

- Note (1):MODBUS range 0~2710(0~10000),display of MMP-2 range 0~270F(0~9999)
(2):MODBUS range D8F0~2710(-10000~10000), display of MMP-2 range (-1999~9999)
(3):When in 3P3W mode, these value not exist
(4):0. 3 Phase-Volt (VP) and kilo watt-hour
1. 3 Phase-Volt (VP) and kilo var-hour
 2. 3 Phase-Volt (VP) and reverse kilo watt-hour
 3. 3 Phase-Volt (VP) and reverse kilo var-hour
 4. 3 Phase Line-Volt (VL) and kilo watt-hour
 5. 3 Phase-AMP (A) and kilo watt-hour
 6. 3 Phase active power (W) and kilo watt-hour
 7. 3 Phase apparent power (VA) and kilo watt-hour
 8. 3 Phase reactive power (Q) and kilo watt-hour
 9. 3 Phase power factor (PF) and kilo watt-hour
 10. 3 Phase frequency (Hz) and kilo watt-hour
 11. 3Phase average V, A, AN of Neutral and kilo watt-hour
 12. 3Phase equivalent WATT, VA, Var and kilo watt-hour
 13. 3 Phase equivalent DM, Hz, PF and kilo watt-hour
 14. MAX. 3 Phase equivalent Demand, Hz, PF and kilo watt-hour
 15. MAX. 3 Phase equivalent Watt, VA, Var and kilo watt-hour
 16. MAX. 3 Phase average V, A, A of Neutral and kilo watt-hour