

CS2-MC Multifunction A/B Phase Counter Manual

FEATURE

- Measuring Pulse 0.01Hz~6KHz(A/B phase: 3KHz for each channel); Contact / NPN / PNP / Voltage Pulse can be switch on rear of meter
- 2 rows LED , display Totalizer 、 Batch 、 Batch count
- CS2-MC Multifunction Counter design for pulse signal input, sensors: Proximity switch, Photoelectric sensor, Encoder.... etc.,
- Counter (Increment / Decrement), location-based, batch and other displays, control, with remote communication capabilities.
- 4 relays, each can be individual programmed for N/R/C/E/do mode and timer function.
- 3 external control input for Reset, Gat of totalizer and/or batch
- Analogue Output and RS485(Modbus RTU mode) available in option

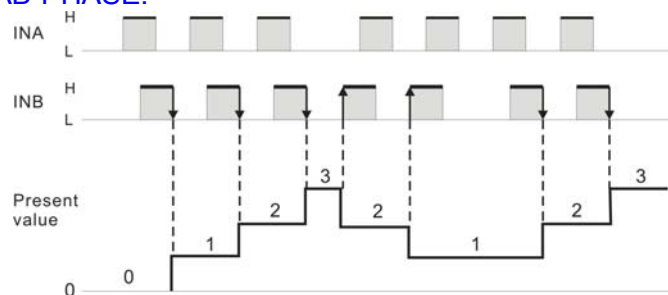


FUNCTIONS

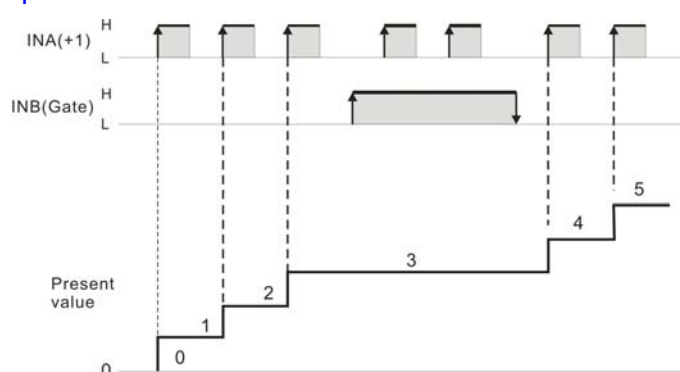
Counting

Counting mode :

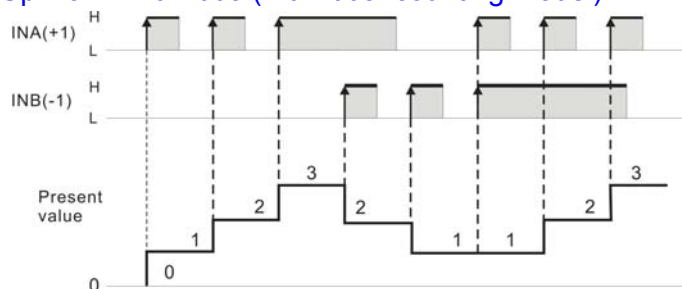
AB-PHASE:



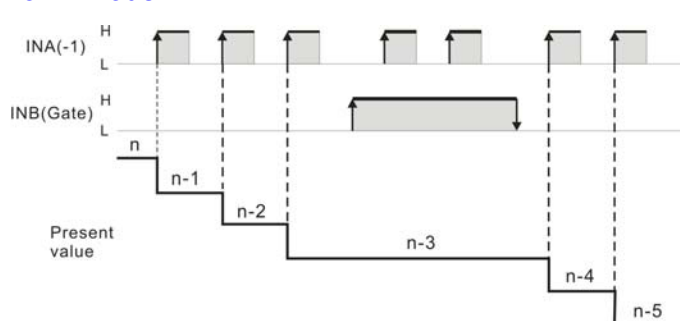
Up Mode



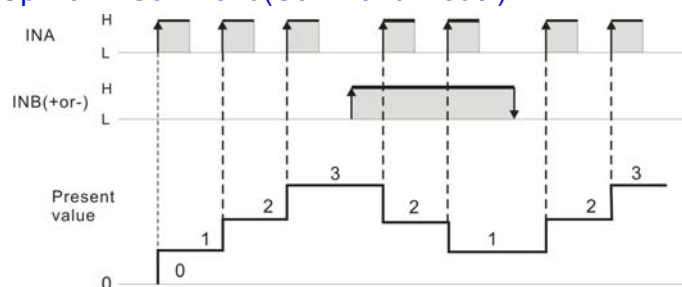
Up/Down Individual(Individual counting model)



Down Mode



Up/Down Command(Command model)



DISPLAY FUNCTIONS

Select the Up display

Can be set Totalizer or Batch Count display ◦

Counter Set Factor

Display value=pulse x multiplier (CntrSF)

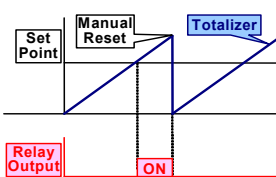
Shows the multiplier can be set to the range of 0.100000 - 9.99999 with a different decimal point position

Offset:

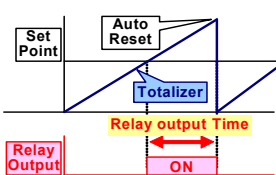
Counter reset after the [inPUt GroUP] in [oFSEt set the startingvalue (for example: 200),Will be starting from the default value (200) number of the startingproduct.

RELAY FUNCTIONS

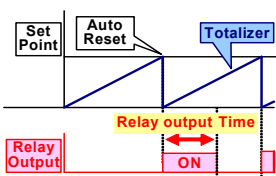
This table provides four relay output options, you can choose the corresponding control volume and mass execution N / R / C / E four control output



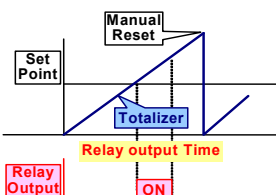
N MODE:
When the condition of Set Point is met:
1. The relay will be energized;
2. The totalizer will run as same as usual; until manual reset by front key or by rear terminal, the totalizer will be reset to "0" and the relay will be de-energized.



R MODE:
When the condition of Set Point is met:
1. The relay will be energized; until the time is over Relay output time (rY.1(or 2).ot).
2. The totalizer will run as same as usual; until the time is over Relay output time (rY.1(or 2).ot),The totalizer will be reset to "0"



C MODE:
When the condition of Set Point is met:
1. The relay will be energized; until the time is over Relay output time (rY.1(or 2).ot).
2. The totalizer will be reset to "0", then counts-up from "0".



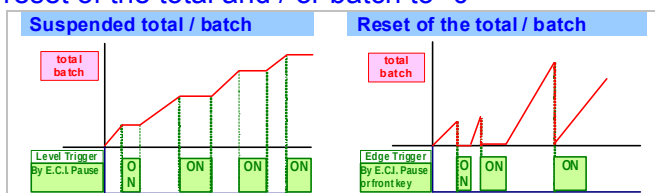
E MODE:
When the count reaches the set value:
1. relay output, until rY.1(or 2).ot (Relay output time) to set time has elapsed, the relay will revert to the (de-energized)
2. count the number will continue to plot, until the
▶ button manual reset by the panel
▶ reverted by the ECI terminal short circuitCount value from "0" to re-plot several

External Control Inputs (ECI)

Input mode: 2 ECI points, Contact Implementation can be set individually and the total volume-related functions

Power or batch power reset:

Total suspended and / or batch several the plot reset of the total and / or batch to "0"

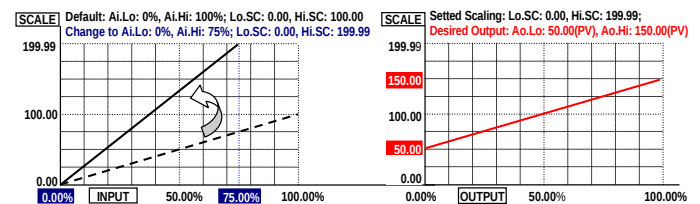


Enter the confirm time: This function is mainly to avoid the scene of the disturbance caused by the malfunction surge; Please note, this time setting is every 16 milliseconds (16msecond) for Units, please refer to the following example [dEbnC] set to be 5, it means 5 x 16 msecond = 80 msecond That, contact input must be greater than 60msecond, the instrument Will identify the correct input, otherwise ignore this input. ◦

Analogue output

• **Ao.LS:**Analogue Output relative Low Scale

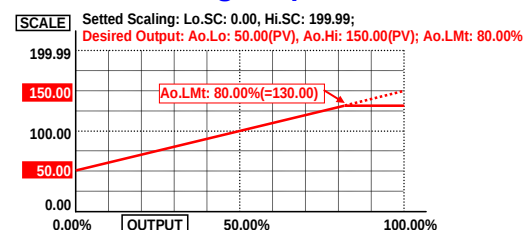
• **Ao.HS:**Analogue Output relative High Scale



Fine Zero & Span Adjustment for Analog Output:

Users can get Fine Adjustment of analogue output by front key of the meter. Please connect standard meter to the terminal of analogue output. To press the front key(up or down key) of meter to adjust and check the output.

High Limited for Analog Output :

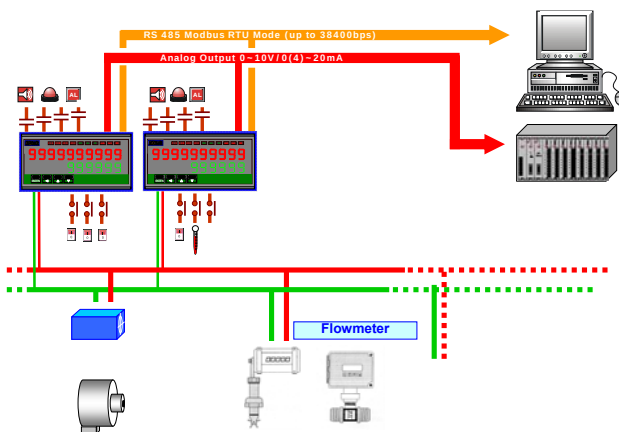


RS485 communication

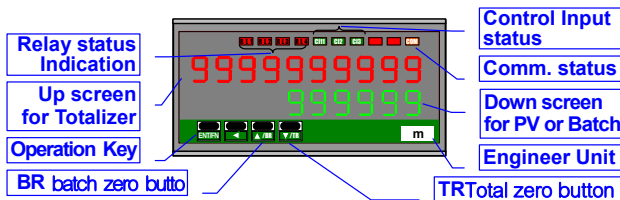
- Protocol: ModBus RTU Mode
- Baud Rate: 1200/2400/4800/ 9600/19200 bps
- Data Bits: 8 bit
- Stop Bits: 1bit or 2 bit
- Parity: Even / Odd / None
- Device Number: 1~255

Application

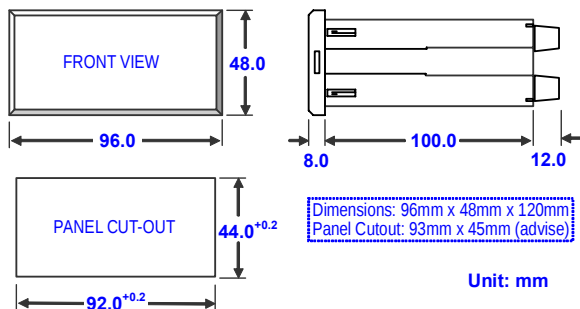
With the proximity switches, photoelectric switches, encoders ...etc., do the count (plus / less count), length, location, location, batch etc. displays, control, and remote communication capabilities.



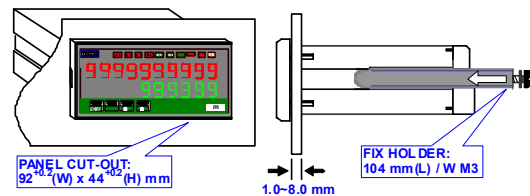
FRONT PANEL



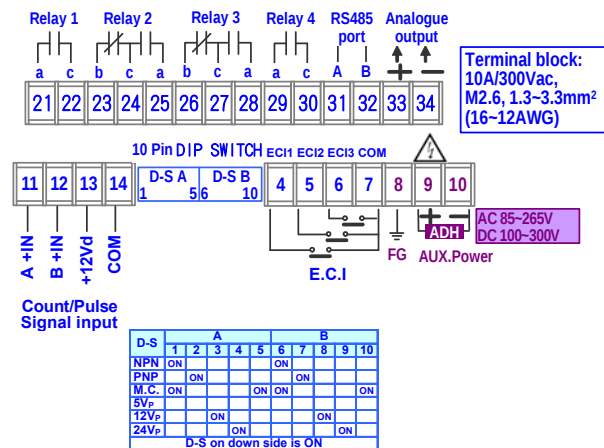
DIMENSIONS



INSTALLATION



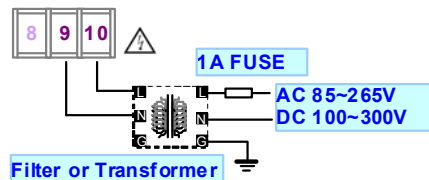
CONNECTION DIAGRAM



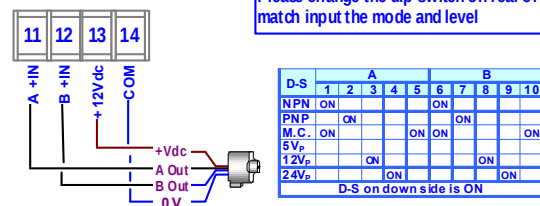
Connected to 11 (A + IN), 12 (B + IN) pin signal level required to clear the high and low potential, Do not floating (high impedance).

Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker

Power Supply

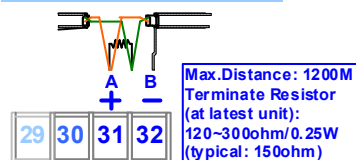


Sensor input connection

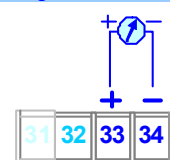


Please change the dip-switch on rear of meter to match input the mode and level

RS485 Communication Port



Analog retransmit output



■ OPERATIONS:

Error Message	DISPLAY	REMARK
BEFORE POWER ON, PLEASE CHECK THE SPECIFICATION AND CONNECTION AGAIN		
SELF-DIAGNOSIS AND ERROR CODE:		
EEP / FA IL : EEPROM occurs error	EEP FA IL	(Please send back to manufactory for repaired)
AbC.nG / P U : Didn't execute the calibrate of output Signal	AbC.nG P U	(Please process Calibrating Output Signal)
AbC. / FA IL : Output Signal calibrated error	AbC. FA IL	(Please check Calibrating Output Signal)

■ Operating Key:

*Please access to the Programming Level to check and set the parameters when users start to run the meter

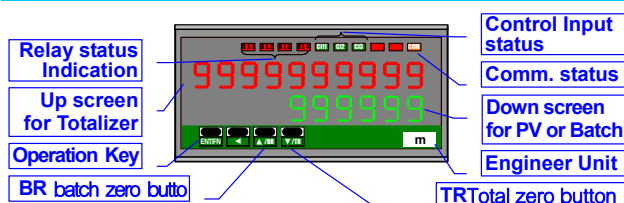
■ Operating Key: 4 keys for Enter(Function) / Shift(Escape) / Up key / Down key

■ The meter has designed operation similar as PC's and . In any page, press key means "enter" or "confirm setting", and press key means "escape()" or "shift".

■ In Programming Level, the screen will return to Measuring Page after do not press any key over 2 minutes, or press for 1 second.

	Function Index	Setting Status
(=) Enter/Fun key	(1) In any page, press to access the level or function index (2) From the function index to access setting status	(3) Setting Confirmed, save to EEProm and go to next function index
(=) Shift key	(1) In measuring page, press for 1 second to access user level. (2) In function index, press for 1 second to go back upper level. (3) In function group index, press for 1 second to go back measuring page	(4) In setting status, press to Shift the setting position. (5) In setting status, press for 1 second to abort setting and go back this function index.
(=) Up key	(1) In function index, press to go back to previous function index	(2) In setting status for function, press to select function (3) During number Setting, press can roll the digit up
(=) Down key	(1) In Function Index Page, press will go to the next Function Index Page.	(2) In setting status for function, press to select function (3) During number Setting, press can roll the digit down.

■ FRONT PANEL



■ LED:

- 9999999999: 10 digital present values: 0.28"(7.2mmH) red LED
- 999999: 6 digital present values: 0.28"(7.2mmH)green LED

RL1 RL2 RL3 RL4 Relay Energized: 4 square red LED

RL1 display when Relay 1 has been energized ;

RL2 display when Relay 1 has been energized ;

RL3 display when Relay 1 has been energized ;

RL4 display when Relay 1 has been energized ;

COM RS 485 Communication: 1 square orange LED; will flash express the meter is receive or send data, and flash quickly means the data transient quicker.

EC1 EC2 EC3 E.C.I.: 3 square green LED ;

EC1 display when E.C.I. 1 has been closed(dry contact) ;

EC2 display when E.C.I. 1 has been closed(dry contact) ;

EC3 display when E.C.I. 1 has been closed(dry contact) ;

Pass Code: Settable range:0000~9999;

User must key-in the exactly pass code for access to [Programming Level]. Otherwise, the meter will return to measuring page. If user forgets the pass code, please contact with your service window

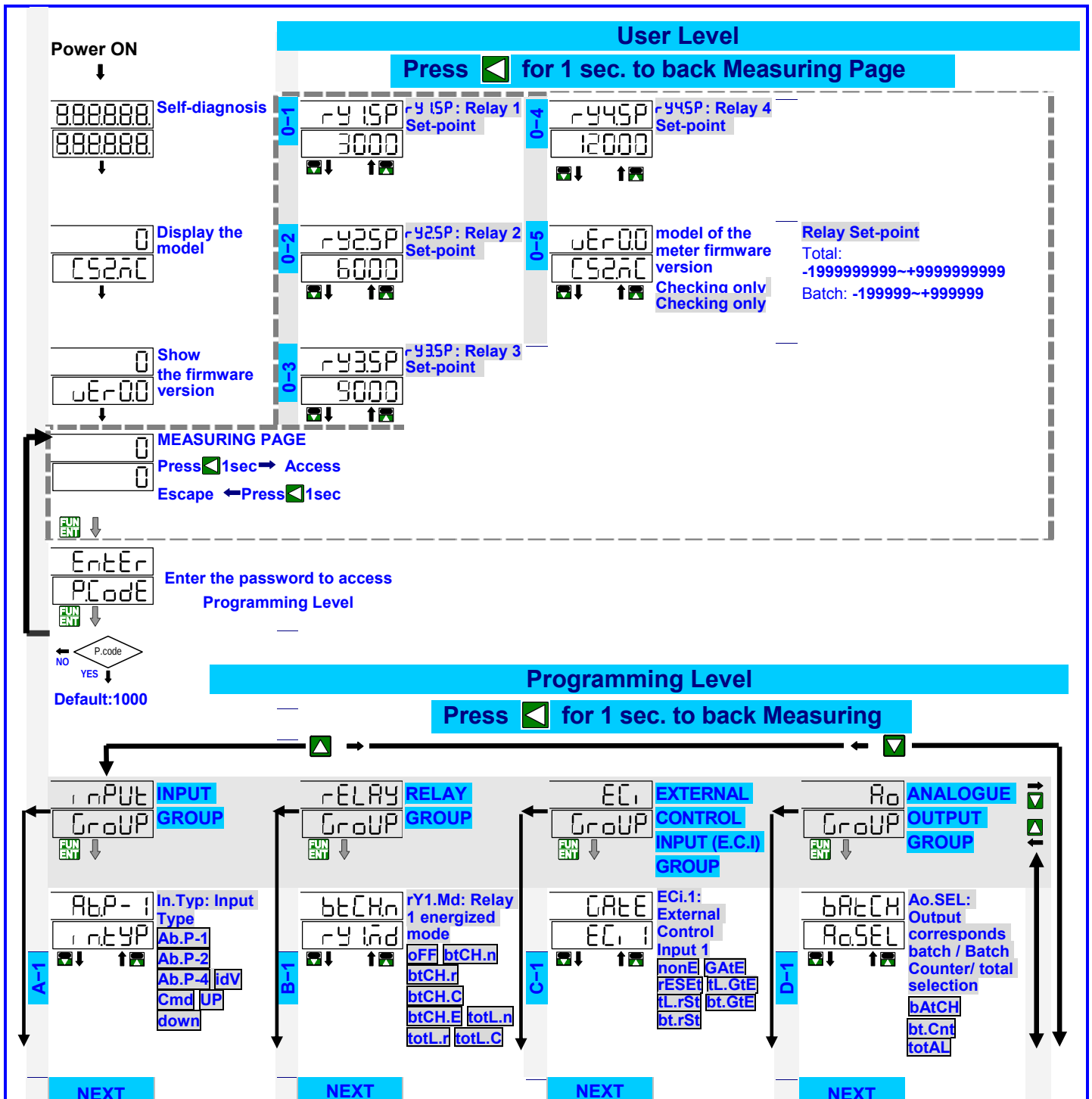
Function Lock: There are 4 levels programmable: User Level / Engineer Level / All(User Level & Engineer Level) / None ; All lock. User can access to all level for checking but can not setting.

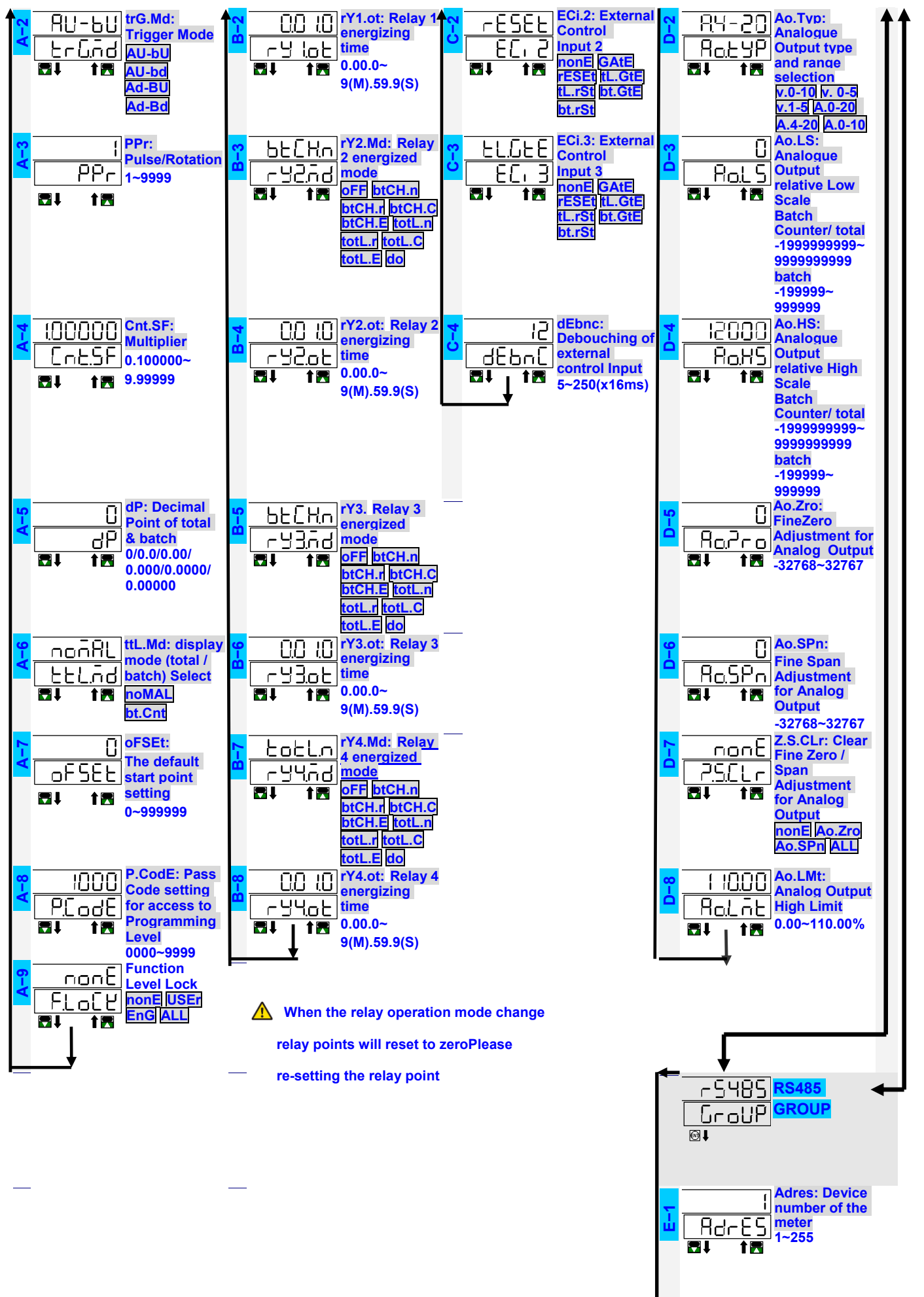
Front Key Function

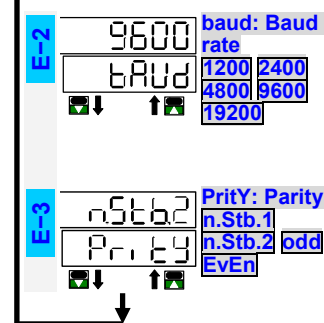
The  Key can be set to be the same function as the setting of [EC 1] (ECI).

Ex. The [EC 1] set to be **PuHLd** and the function [E 1:UP] set to be **YES** in [EC 1 GROUP]. When user presses  Key, the PV will hold as like as terminals of ECI1 close.

OPERATING FLOW CHART: Plesae refer to operating manual for detail description







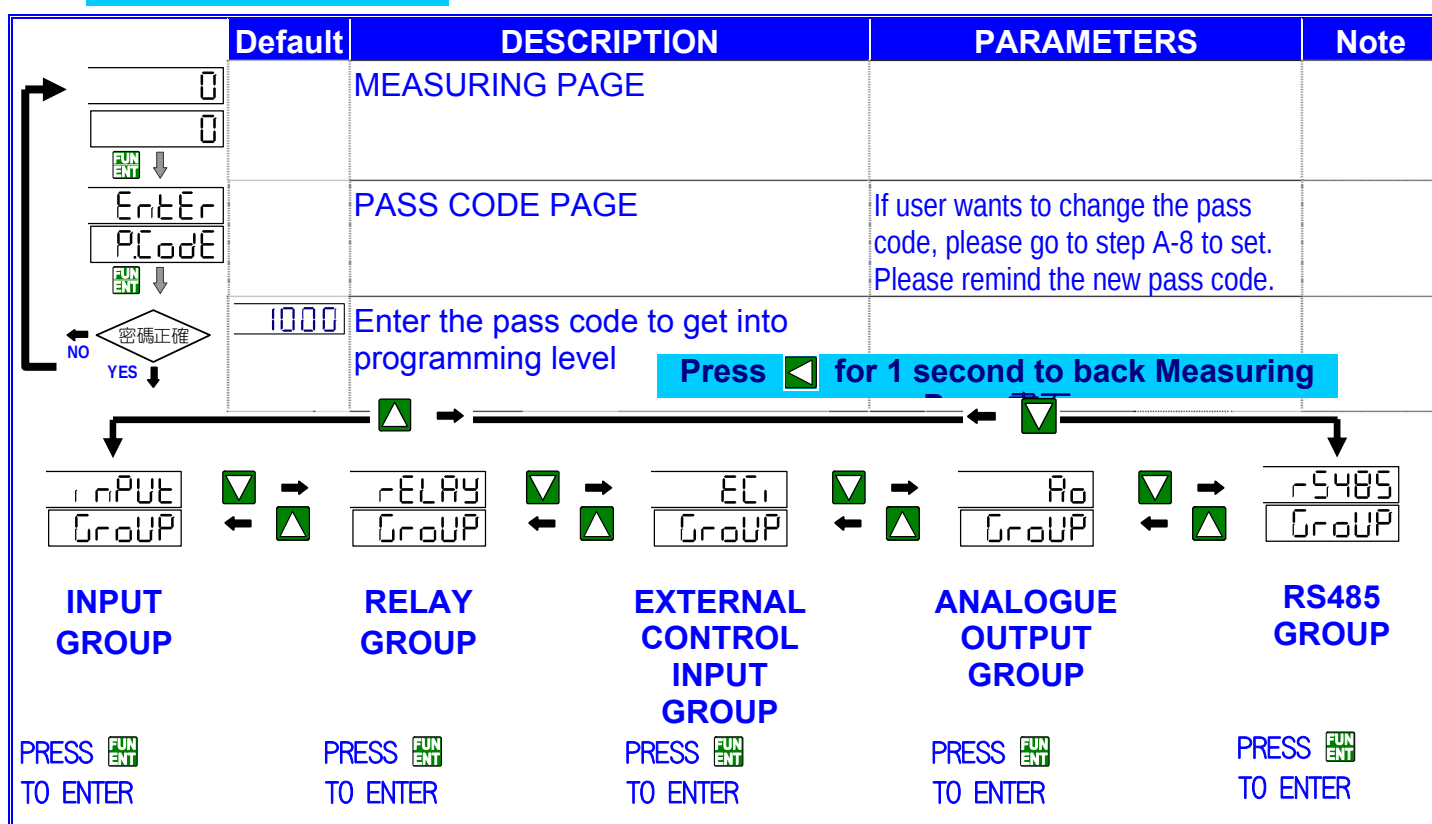
OPERATING STEPS

USER LEVEL

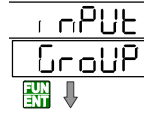
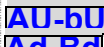
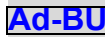
	Default	DESCRIPTION	PARAMETERS	Note
POWER ON			Please check the specification and wiring first.	
		Self-diagnosis (LED All bright) Totalizer		
		Totalizer		
		Batch		
		model number		
		firmware version		
		<u>Measuring Page (10 digital Totalizer +6 digital Batch)</u>	Press for 1 second can back to Measuring Page	
	3000	rY1.SP:Relay 1 Set-point setting Please check the setting of Relay energized mode and keep in mind. If the relay mode set to relative immediate value, the energized mode will be Hi or Lo.	Setting Range: Immediate Value (PV): -199999~999999 Totalizer: -1999999999~9999999999 Shift Up Down	
	6000	rY2.SP: Relay 2 Set-point setting	Setting Range: Immediate Value (PV): -199999~999999 Totalizer: -1999999999~9999999999 Shift Up Down	
	9000	rY3.SP: Relay 3 Set-point setting	Setting Range: Immediate Value (PV): -199999~999999 Totalizer: -1999999999~9999999999 Shift Up Down	

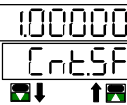
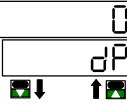
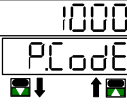
0-4		rY4.SP: Relay 4 Set-point setting	Setting Range: Immediate Value (PV): -199999~999999 Totalizer: -1999999999~9999999999 Shift Up Down	
0-5		Frimware version Model number	Review only It will be announce in our website when it has been version changed.	
0-1		Cyclic to first page Press for 1 second can back to Measuring Page in any page		

➤ PROGRAMMING LEVEL



➤ INPUT GROUP

	Default	DESCRIPTION	PARAMETERS	Note
 A-1 		INPUT GROUP INDEX	In following page, press  for 1 second to back INPUT GROUP INDEX.	
	Ab.P-1	In.Type:Input Type	Setting Range:        Ab.P-1 (A/B Phase×1): A/B Phase ×1 , Input pulse per cycle count 1, can be resolved to a cycle Ab.P-2 (A/B Phase×2): A/B Phase ×2 , Every 1/2 cycle of the input pulse count one, can be resolved to a 1/2 cycle Ab.P-4 (A/B Phase×4): A/B Phase ×4 , Every 1/4 cycle of the input pulse count one, can be resolved to a 1/4 cycle idV (Individual I/P): Individual counting mode , input A is Up , input B is Down Cmd (Command I/P): Command mode , Input A is Up , Input B is Control signal , control input A whether to change Down	
			UP (Up Count): input A is Up , Input B is Control signal , control input A Whether to suspend count . down (Down Count): input A is Down , Input B is Control signal , control input A Whether to suspend count   Up&Down Enter	
A-2 	AU-bU	trG.Md: Trigger Mode AU-BU: A positive-edge , B positive-edge trigger AU-Bd: A positive-edge , B negative-edge trigger Ad-BU: A negative-edge , B positive-edge trigger Ad-Bd: A negative-edge , B negative-edge trigger	Setting Range:  /  /  /    Up&Down Enter	

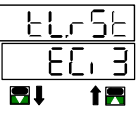
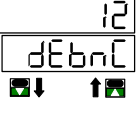
A-3			PPr:Pulse Per Rotation The input pulse number must be divided by this value, the count before doing arithmetic	Setting Range: 1~9999 ◀ Shift ▲ Up ▼ Down	
A-4		100000	Cnt.SF:Counter Set Factor After the count value is multiplied by this value is the display value	Setting Range: 0.10000~9.99999 ◀ Shift ▲ Up ▼ Down	
A-5		0	dP(Decimal Point): Decimal Point of Totalizer & Batch	Setting Range: 0 / n n / n.00 / 0.000 / 0.0000 / 0.00000 ▼&▲ Up&Down FUN ENT Enter	
A-6		nonAL	ttL.Md: Totalizer Mode of up screen Up screen display selection (Totalizer & Batch)	Setting Range: noMAL (Normal): Totalizer bt.Cnt (Batch Count): Batch ▼&▲ Up&Down FUN ENT Enter	
A-7		0	oFSEt(Offset): default start point setting	Setting Range:0~999999 ◀ Shift ▲ Up ▼ Down	
A-8		1000	P.CodE(Pass Code): Please remind and write down the new pass code so that get into programming level.	Setting Range:: 0000~9999 ◀ Shift ▲ Up ▼ Down	
A-9		nonE	F.LoCk(Function Lock): There are 4 levels selectable for lock.	Setting Range: nonE (None): no lock all USEr (User Level): User level lock. User can get into user level for checking but setting. EnG (Engineer Level): Programming level lock. User can get into programming level for checking but setting ALL (All Level): User can get into all level for checking but setting ▼&▲ Up&Down FUN ENT Enter	

B-1

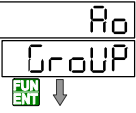
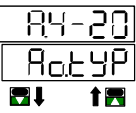
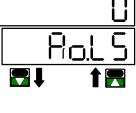
B-4	00 10 rY2.ot [Down] [Up]	00 10	rY2.ot:Relay 2 energized time (N mode is no such function)	Setting Range: 0:00.0~9m:59.9s [Left] Shift [Up] [Down]	
B-5	btCH.n rY3.nd [Down] [Up]	btCH.n	rY3.Md:Relay 3 energized mode	...as Relay 1 Energized Mode oFF / btCH.n / btCH.r / btCH.C / btCH.E / totL.n / totL.r / totL.C / totL.E / do	
B-6	00 10 rY3.ot [Down] [Up]	00 10	rY3.ot:Relay 3 energized time) (N mode is no such function)	Setting Range: 0:00.0~9m:59.9s [Left] Shift [Up] [Down]	
B-7	btCH.C rY4.nd [Down] [Up]	btCH.C	rY4.Md:Relay 4 energized mode	...as Relay 1 Energized Mode oFF / btCH.n / btCH.r / btCH.C / btCH.E / totL.n / totL.r / totL.C / totL.E / do	
B-8	00 10 rY4.ot [Down] [Up]	00 10	rY3.ot:Relay 3 energized time): (N mode is no such function)	Setting Range: 0:00.0~9m:59.9s [Left] Shift [Up] [Down]	

➤ EXTERNAL CONTROL INPUT(E.C.I.) GRUOP

	Default	DESCRIPTION	PARAMETERS	Note
	ECi GrOUP FUN ENT ↓	EXTERNAL CONTROL INPUT GROUP INDEX	In following page, press [Left] for 1 second to back EXTERNAL CONTROL INPUT GROUP INDEX.	
C-1	GAtE ECi.1 [Down] [Up]	ECi.1: External Control Input 1	Setting Range: none GAtE rESEt tL.GtE tL.rSt bt.GtE bt.rSt none (None): No function GAtE (Gate): This feature is batch & total suspended rESEt: Reset for Totalizer & Batch tL.GtE (Gate for Totalizer): This feature is total suspended tL.rSt: Reset for Totalizer bt.GtE (Gate for Batch): This feature is batch suspended bt.rSt: Reset for Batch [Down]&[Up] Up&Down FUN ENT Enter	
C-2	rESEt ECi.2 [Down] [Up]	ECi.2: External Control Input 2	same as ECi1 ...other as same as ECi1... none / GAtE / rESEt / tL.GtE / tL.rSt / bt.GtE / bt.rSt [Down]&[Up] Up&Down FUN ENT Enter	

C-3		ECi.3:External Control Input 3	same as ECI1 ...other as same as ECI1... nonE / GAtE / rESEt / tL.GtE /tL.rSt / bt.GtE / bt.rSt  Up&Down  Enter
C-4		dEbnc:Debouncing of external control Input	Setting Range: 5~250(x 16ms)  Shift  Up  Down

➤ ANALOGUE OUTPUT GRUOP

	Default	DESCRIPTION	PARAMETERS	Note
		ANALOGUE OUTPUT GROUP INDEX	In following page, press  for 1 second to back ANALOGUE OUTPUT GROUP INDEX.	
D-1		Ao.SEL:Analogue output relative parameter Totalizer/Batch/PV selection	Setting Range: bAtCH :Batch bt.Cnt :Batch Count totAL :Totalizer  Up&Down  Enter	
D-2		Ao.tYP:Analogue Output type	Setting Range: v.0-10 (0~10V) / v.0-5 (0~5V)/ v.1-5 (1~5V)/ A.0-20 (0~20mA)/ A.4-20 (4~20mA) /A.0-10 (0~10mA)  Up&Down  Enter	
D-3		Ao.LS:Analogue Output relative Low Scale	Setting Range: Totalizer / Batch Count: -1999999999~9999999999 Batch: -199999~999999  Shift  Up  Down ※Ex:Ao.TYP set 4~20mA , Display Range 0~1000.0 ; if Ao.LS setting 200.0 , Display 200.0 is output 4mA	
D-4		Ao.HS:Analogue Output relative High Scale	Setting Range: Totalizer / Batch Count: -1999999999~9999999999 Batch: -199999~999999  Shift  Up  Down ※Ex:Ao.TYP set 4~20mA , Display Range 0~1000.0 ; if Ao.HS setting 800.0 , Display 800.0 is output 20mA	
NEXT				

D-5		Ao.Zro(Fine Zero Adjustment for Analog Output): Users can get Fine Adjustment of analogue output by front key of the meter. Please connect standard meter to the terminal of analogue output. To press the front key(up or down key) of meter to adjust and check the meter the output °	Setting Range: -32768~32767 ◀ Shift ▶ Up ▼ Down	
D-6		Ao.SPn(Fine Span Adjustment for Analog Output)	Setting Range: -32768~32767 ◀ Shift ▶ Up ▼ Down	
D-7		Z.S.Clr:Clear Fine Zero / Span Adjustment for Analog Output	Setting Range: nonE: Do not clear Ao.Zro: Clear low adjustment Ao.SPn: Clear high adjustment both: Clear low and high adjustment ▼&▲ Up&Down Enter	
D-8		Ao.LMt:Analog Output High Limit 	Setting Range: 0.00~110.00% of FS ◀ Shift ▶ Up ▼ Down	

➤ RS485 GRUOP

	Default	DESCRIPTION	PARAMETERS	Note
		RS485 GROUP INDEX	In following page, press ◀ for 1 second to back RS485 GROUP INDEX.	
E-1		Adress:Device number of the meter	Setting Range: 1~255 ◀ Shift ▶ Up ▼ Down	
E-2		bAUd:Baud rate	Setting Range: 1200 / 2400 / 4800 / 9600 / 19200 ▼&▲ Up&Down Ente	
E-3		PritY:Parity	Setting Range: n.Stb.1: None, 1 stop bit n.Stb.2: None, 2 stop bits odd: odd EvEn: Even ▼&▲ Up&Down Ente	

RS485(ModBus RTU Mode)

■ Modbus RTU Mode

一、Function 03H (Read Holding Registers)

Request Data Frame EX: Read the data of display value(0000H starts from 1 Word)

SLAVE Address	FUNCTION	Starting Address Hi	Starting Address Lo	No. of Word Hi	No. of Word Lo	CRC Lo	CRC Hi
01H	03H	00H	00H	00H	01H	84H	0AH

Response Data Frame; EX: The response value is "0"

SLAVE Address	FUNCTION	Byte count	Data Hi	Data Lo	CRC Lo	CRC Hi
01H	03H	02H	00H	00H	B8H	44H

Request Data Frame (EX: Continue to request the data of 10 points)

SLAVE Address	FUNCTION	Starting Address Hi	Starting Address Lo	No. of Word Hi	No. of Word Lo	CRC Lo	CRC Hi
01H	03H	00H	00H	00H	0AH	C5H	CDH

Response Data Frame

SLAVE Address	FUNCTION	Byte count	Data(1) Hi	Data(1) Lo	...	...	Data(10) Hi	Data(10) Lo	CRC Lo	CRC Hi
01H	03H	14H	00H	00H	...	...	01H	00H	--	--

二、Writing Command by Function 06H (Preset Single Register)

Request Data Frame

SLAVE Address	FUNCTION Code	Starting Address Hi	Starting Address Lo	Preset DATA Hi	Preset DATA Lo	CRC Lo	CRC Hi
01H	06H	00H	00H	00H	02H	08H	0BH

Response Data Frame

SLAVE Address	FUNCTION Code	Starting Address Hi	Starting Address Lo	Preset DATA Hi	Preset DATA Lo	CRC Lo	CRC Hi
01H	06H	00H	00H	00H	02H	08H	0BH

■ CS2-MC ADDRESS TABLE **Address number are Hexadecimal

User Level

Name	Address	Range	Explain	Initial	Write/Read	Note
Three Word Area						
TOTAL	0000h	-1999999999~ 9999999999	Totalizer (High Word)	0	R	
TOTAL	0001h		Totalizer (Mid Word)		R	
TOTAL	0002h		Totalizer (Low Word)		R	
BATCH	0003h	0000000000~ 9999999999	Batch Count (High Word)	0	R	
BATCH	0004h		Batch Count (Mid Word)		R	
BATCH	0005h		Batch Count (Low Word)		R	
RY1SP	0006h	-1999999999~ 9999999999	Relay1 Set Point (High Word)	3000	R/W	
RY1SP	0007h		Relay1 Set Point (Mid Word)		R/W	
RY1SP	0008h		Relay1 Set Point (Low Word)		R/W	
RY2SP	0009h	-1999999999~ 9999999999	Relay2 Set Point (High Word)	6000	R/W	
RY2SP	000Ah		Relay2 Set Point (Mid Word)		R/W	
RY2SP	000Bh		Relay2 Set Point (Low Word)		R/W	
RY3SP	000Ch	-1999999999~ 9999999999	Relay3 Set Point (High Word)	9000	R/W	
RY3SP	000Dh		Relay3 Set Point (Mid Word)		R/W	
RY3SP	000Eh		Relay3 Set Point (Low Word)		R/W	
RY4SP	000Fh	-1999999999~ 9999999999	Relay4 Set Point (High Word)	12000	R/W	
RY4SP	0010h		Relay4 Set Point (Mid Word)		R/W	
RY4SP	0011h		Relay4 Set Point (Low Word)		R/W	

Name	Address	Range	Explain	Initial	Write/Read	Note
RoLS	0012h	-1999999999~ 9999999999	Analogue Output Low Scale (High Word)	0	R/W	
RoLS	0013h		Analogue Output Low Scale (Mid Word)		R/W	
RoLS	0014h		Analogue Output Low Scale (Low Word)		R/W	
RoHS	0015h	-1999999999~ 9999999999	Analogue Output High Scale (High Word)	12000	R/W	
RoHS	0016h		Analogue Output High Scale (Mid Word)		R/W	
RoHS	0017h		Analogue Output High Scale (Low Word)		R/W	
Reserved	0018h					
Reserved	0019h					
Reserved	001Ah					
Reserved	001Bh					
Reserved	001Ch					
Reserved	001Dh					
		Two Word Area				
Batch	001Eh	-199999~999999	Batch (High Word)	0	R	
Batch	001Fh		Batch (Low Word)		R	
CntSF	0020h	0.10000~9.99999	Counter Set Factor (High Word)	1.00000	R/W	
CntSF	0021h		Counter Set Factor (Low Word)		R/W	
Offset	0022h	0~999999	Offset (High Word)	0	R/W	
Offset	0023h		Offset (Low Word)		R/W	
		One Word Area				
Reserved	0024h					
Reserved	0025h					
Reserved	0026h					
Reserved	0027h					
Reserved	0028h					
Reserved	0029h					
RELAY STATUS	002Ah	0~1	RELAY STATUS bit0~bit3: relay1~relay4; 0=Relay off 1=Relay on	00h	R/W	
E.C.I. STATUS	002Bh	0~1	External Control Input STATUS bit0~bit2: E.C.I.1~ E.C.I.3; 0=Un-triged 1=Triged	00h	R	
SYSTEM STATUS	002Ch		SYSTEM STATUS bit0=1, Input EEP fail; bit1=1, N/A; bit2=1, N/A; bit3=1, Analogue Output calibration fail; bit4=1, Analogue Output calibration NG	00h	R	
PPr	002Dh	1~9999	Pulse Per Rotation	1	R/W	
Reserved	002Eh					
Reserved	002Fh					

➤ Engineer Level

【 Input Group 】						
Name	Address	Range	Explain	Initial	Write/Read	Note
Input	0030h	0~6	Input Type 0: A/B Phase×1 1: A/B Phase×2 2: A/B Phase×4 3: Individual I/P 4: Command I/P 5: Up Count 6: Down Count	0	R/W	
Triggnd	0031h	0~3	Triggger Mode 0: AU-BU 1: AU-BD 2: AD-BU 3: AD-BD	0	R/W	
dP	0032h	0~5	Decimal Point 0: 0 1: 0.0 2: 0.00 3: 0.000 4: 0.0000 5: 0.00000	0	R/W	
ttLnd	0033h	0~1	Totalizer Mode of up screen 0: Normal 1: Batch Count	0	R/W	
P.CodE	0034h	0000~9999	Pass Code	1000	R/W	
F.LoCk	0035h	0~3	Function Lock 0: none 1: User Level 2: Engineer Level 3: All	0	R/W	
【 Relay Group 】						
Name	Address	Range	Explain	Initial	Write/Read	Note
ry1nd	003Ah	0~9	Relay 1 Energized Mode 0: oFF(no use); 1: btCH.n(Batch with N Mode) 2: btCH.r(Batch with R Mode) 3: btCH.C(Batch with C Mode) 4: btCH.E(Batch with E Mode) 5: totL.n(Totalizer with N Mode) 6: totL.r(Totalizer with R Mode) 7: totL.C(Totalizer with C Mode) 8: totL.E(Totalizer with E Mode) 9: Do(Digital Output)	1	R/W	
ry1ot	003Bh	0000~5999 (0.1second)	Relay 1 Energized Time	10	R/W	
ry2nd	003Ch	0~9	Relay 2 Energized Mode 0: oFF(no use); 1: btCH.n(Batch with N Mode) 2: btCH.r(Batch with R Mode) 3: btCH.C(Batch with C Mode) 4: btCH.E(Batch with E Mode) 5: totL.n(Totalizer with N Mode) 6: totL.r(Totalizer with R Mode) 7: totL.C(Totalizer with C Mode) 8: totL.E(Totalizer with E Mode) 9: Do(Digital Output)	1	R/W	
ry2ot	003Dh	0000~5999 (0.1second)	Relay 2 Energized Time	10	R/W	

Name	Address	Range	Explain	Initial	Write/Read	Note
r43.nd	003Eh	0~9	Relay 3 Energized Mode 0: oFF(no use); 1: btCH.n(Batch with N Mode) 2: btCH.r(Batch with R Mode) 3: btCH.C(Batch with C Mode) 4: btCH.E(Batch with E Mode) 5: totL.n(Totalizer with N Mode) 6: totL.r(Totalizer with R Mode) 7: totL.C(Totalizer with C Mode) 8: totL.E(Totalizer with E Mode) 9: Do(Digital Output)	1	R/W	
r43.ot	003Fh	0000~5999 (0.1second)	Relay 3 Energized Time	10	R/W	
r44.nd	0040h	0~9	Relay 4 Energized Mode 0: oFF(no use); 1: btCH.n(Batch with N Mode) 2: btCH.r(Batch with R Mode) 3: btCH.C(Batch with C Mode) 4: btCH.E(Batch with E Mode) 5: totL.n(Totalizer with N Mode) 6: totL.r(Totalizer with R Mode) 7: totL.C(Totalizer with C Mode) 8: totL.E(Totalizer with E Mode) 9: Do(Digital Output)	3	R/W	
r44.ot	0041h	0000~5999 (0.1second)	Relay 4 Energized Time	10	R/W	

【 ECI Group 】

Name	Address	Range	Explain	Initial	Write/Read	Note
EC i.1	0046h	0~6	External Control Input 1 0:none (None); 1: GAtE(Gate for Totalizer & Batch) 2: rSEt(Reset for Totalizer & Batch) 3: tL.GtE(Gate for Totalizer) 4: tL.rSt(Reset for Totalizer) 5: bt.GtE(Gate for Batch) 6: bt.rSt(Reset for Batch)	1	R/W	
EC i.2	0047h	0~6	External Control Input 2 0:none (None); 1: GAtE(Gate for Totalizer & Batch) 2: rSEt(Reset for Totalizer & Batch) 3: tL.GtE(Gate for Totalizer) 4: tL.rSt(Reset for Totalizer) 5: bt.GtE(Gate for Batch) 6: bt.rSt(Reset for Batch)	2	R/W	
EC i.3	0048h	0~6	External Control Input 3 0:none (None); 1: GAtE(Gate for Totalizer & Batch) 2: rSEt(Reset for Totalizer & Batch) 3: tL.GtE(Gate for Totalizer) 4: tL.rSt(Reset for Totalizer) 5: bt.GtE(Gate for Batch) 6: bt.rSt(Reset for Batch)	4	R/W	
dEbnc	0049h	5~255	ECI debouncing 5~250 ×16mSec	12	R/W	

【AO Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
AOtYP	004Eh	0~5	Analog Output Type 0: 0~10V 1: 0~5V 2: 1~5V 3: 0~20mA 4: 4~20mA 5: 0~10mA	4	R/W	
AOSEL	004Fh	0~2	Analog Output Selection 0: Batch 1: Batch Counter 2: Totalizer	2	R/W	
P5CLR	0050h	0~3	The clear of AO_ZERO and AO_SPAN 0: None 1: AO_ZERO 2: AO_SPAN 3: Both	0	R/W	
AOLim	0051h	00.00%~110.00%	Analogue Output High Limit	11000	R/W	
【RS485 Group】						
Name	Address	Range	Explain	Initial	Write/Read	Note
AdRES	0056h	1~255	RS485 address	1	R/W	
bAUD	0057h	0~5	RS485 baud rate 0:1200 1:2400 2:4800 3:9600 4:19200	3	R/W	
Prty	0058h	0~3	RS485 parity 0: n-8-1 1: n-8-2 2: odd 3: even	1	R/W	