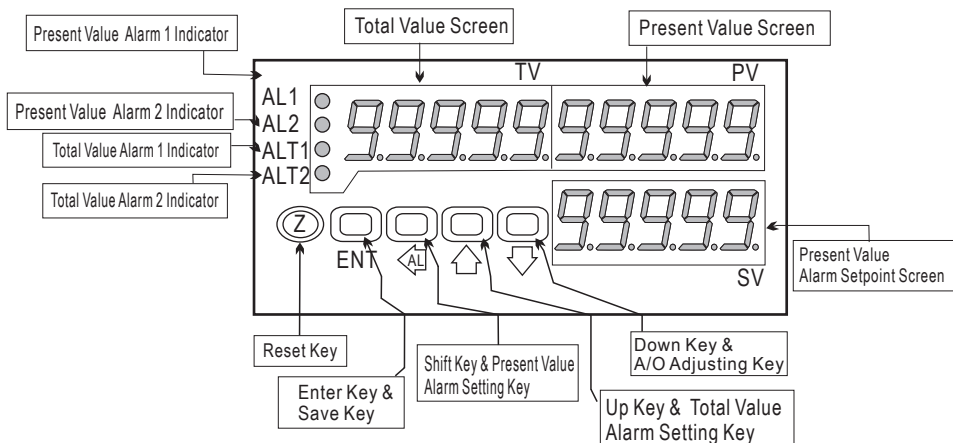


\*Please understand key indicators & functions at the first operation.

**FRONT PANEL & KEY FUNCTIONS**



Key Name	Symbol	Descriptions
Reset Key	Ⓩ	1. Press this key to enable the reset function.
Enter Key & Save Key	ENT	1. In the measuring status, press this key can enter to parameter pages. 2. In the parameter setting, press this key can save the value & go to next parameter.
Shift Key & Total Value Alarm 1 Setting Key	←AL	1. In the measuring status, press this key for 3 sec can enter to total value alarm 1 setting page (The selecting digit will be flashed) 2. In the parameter setting, press this key can move the cursor left.
Up Key & Present Value Alarm Setting Key	↑	1. In the measuring status, press this key for 3 sec can enter to present value alarm setting page (The selecting digit will be flashed) 2. In the parameter setting, press this key can increase the digits.
Down Key & A/O Adjusting Key	↓	1. In the measuring status, press this key for 3 sec can enter to analog output adjustment. 2. In the parameter setting, press this key can decrease the digits.

- \*\*1. The following block charts are parameters codes, parameter codes & parameters will alternate flashing if the parameters can be modified.
- 2. To modify the parameters, please press ←↑↓, and press ENT to save the parameter after the modification.
- 3. Please don't forget the new pass code after modification.
- 4. In any pages, press ↑&↓, or don't press any keys for 2 minutes that will back to measuring status.

**GENERAL MODE OPERATING PROCEDURES**

Block Charts	Display	Descriptions	Default	
Power ON	10000	Total Value Alarm 1 Setpoint		
Press ← for 3 sec	10000	Measuring Status	Present value for measurement	
Press ENT	10000	Total Value Alarm 1 Setpoint (AL1)	Press ←↑↓ to modify total value alarm 1 setpoint.	00000
<b>Alarm Setpoint</b>				
Press ↑ for 3 sec	10000	Measuring Status	Present value for measurement	
Press ENT	PvAL1	Present Value Alarm 1 Setpoint (Pv.AL2)	Press ←↑↓ to modify present value alarm 1 setpoint.	00000
Press ENT	PvAL2	Present Value Alarm 2 Setpoint (Pv.AL2)	Press ←↑↓ to modify present value alarm 2 setpoint.	00000
Press ENT	tvAL2	Total Value Alarm 2 Setpoint (tv.AL2)	Press ←↑↓ to modify total value alarm 2 setpoint.	00000
<b>Analog Output: "ZERO" &amp; "SPAN" Adjustment</b>				
Press ↓ for 3 sec	10000	Measuring Status	The following steps are only available for analog output.	
Press ENT	APEro	A/O Zero Adjustment (AZero)	Press ← to select adjusting speed rate, press ↑ ↓ to modify the A/O zero. PS: To use this function to adjust the real A/O zero.	00000
Press ENT	ASPA n	A/O Span Adjustment (ASPA n)	Press ← to select adjusting speed rate, press ↑ ↓ to modify the A/O span. PS: To use this function to adjust the real A/O span.	00000

Remark: 1. There are 4 parameter groups of "System Setting Group(SYS)", "Alarm Setting Group(roP)", "Analog Output Setting Group (AoP)" & "RS485 Setting Group(doP)" for modification.  
2. Press ← to select each group page, and press ENT to enter each group or parameter page for modification or saving the parameters.  
3. Some of optional functions of parameter pages still exist, but the functions are disable.

Block Charts	Display	Descriptions	Default	
Power On	10000	<b>Parameter Group Setting Procedures</b>		
Press ENT	PCod	Measuring Status	Present value for measurement	
Press ENT	PCod	Pass Code (P.Cod)	Press ←↑↓ to enter pass code.	00000
P.Code Correct?		Pass code is correct that will enter to parameter groups. Pass code is wrong that will back to measuring status.		
NO				
YES	5YS	System Setting Group (SYS)		
Press ←	roP	Alarm Setting Group (roP)		
Press ←	RoP	A/O Setting Group (AoP)		
Press ←	doP	RS485 Setting Group (doP)		

Display	Descriptions	Default
<b>System Setting Group Procedures</b>		
System Setting Page (SYS)		
Input Type Setting (tYPE)	Press $\uparrow$ / $\downarrow$ to modify the input type. (1U2D / 1P2D / 1A2B)	1U2d
1A2B Accurate Setting (ACCU)	Press $\uparrow$ / $\downarrow$ to modify 1A2B accurate (X1, X4).	41
Count Mode Setting (ModE)	Press $\uparrow$ / $\downarrow$ to modify count mode (SYN, NSYN). (SYN: synchronizing; NSYN: non-synchronizing)	SYn
Present Value Decimal Point Setting (Pv.dP)	Press $\uparrow$ / $\downarrow$ to select present value decimal point (0, 1, 2, 3, 4). EX: if the value shows "0.00" that means the decimal point is 2 digits.	0000 1
Total Value Decimal Point Setting (tv.dP)	Press $\uparrow$ / $\downarrow$ to select total value decimal point (0, 1, 2, 3, 4). EX: if the value shows "0.00" that means the decimal point is 2 digits.	0000 1
Pre-Division Setting (div)	Press $\uparrow$ / $\downarrow$ to modify pre-division (1~999999).	0000 1
Scale Coefficient Adjustment (SCALE)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to modify scale coefficient (0.0001 ~9.9999).	01.000
Pass Code Setting (CodE)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to modify pass code (0~19999). PS: Please don't forget the new pass code after modification.	00000
Key Lock Setting (LoCK)	Press $\uparrow$ / $\downarrow$ to lock the keys, using key lock function only can view the parameters, but cannot modify any values. PS: no (unlock), YES ("ENT" unlock, others lock).	no
<b>Alarm Setting Group Procedures</b>		
Alarm Setting Page (roP)	<b>The following steps are only available for alarm output.</b>	
PV Alarm 1 (P.Act1)	Alarm Action Setting PS: 1. There are 4 alarms output optional. 2. This page is exist without alarm output, but the function will be disabled. 3. Press ENT to save the value and go to the next parameter.	Hi
PV Alarm 2 (P.Act2)		
TV Alarm 1 (t.Act1)		
TV Alarm 2 (t.Act2)		
Present Value Output Mode Setting (Pv.oPM)	Press $\uparrow$ / $\downarrow$ to modify present value output mode (N, R, C). N: manual; R: return; C: continue	n
Total Value Output Mode Setting (tv.oPM)	Press $\uparrow$ / $\downarrow$ to modify total value output mode (N, R, C). N: manual; R: return; C: continue	n
Present Value Output Time Setting (Pv.oPt)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to modify present value output time (1~99).	0000 1
Total Value Output Time Setting (tv.oPt)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to modify total value output time (1~99).	0000 1

Display	Descriptions	Default
<b>A/O Setting Group Procedures</b>		
A/O Setting Page (AoP)	<b>The following steps are only available for analog output.</b>	
A/O Polarity Setting (PoLAr)	Press $\uparrow$ / $\downarrow$ to select output for positive or negative pole. PS: Voltage output, NO: positive pole output (0~+10V) YES: positive & negative pole output (-10~+10V)	no
A/O Low Scale Setting (AnLo)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to adjust A/O low scale to correspond to the display value. EX: A/O is 0~10V, the display is 10.0 to output 0V, this value must be set for 10.0.	00000
A/O Hi Scale Setting (AnHi)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to adjust A/O hi scale to correspond to the display value. EX: A/O is 0~10V, the display is 90.0 to output 1 0V, this value must be set for 90.0.	99999
<b>RS485 Setting Group Procedures</b>		
RS485 Setting Page (doP)	<b>The following steps are only available for RS-485.</b>	
Address Setting (Addr)	Press $\leftarrow$ / $\uparrow$ / $\downarrow$ to modify address (0~255).	00000
Baud Rate Setting (bAUd)	Press $\uparrow$ / $\downarrow$ to select baud rate (38400/19200/9600/4800).	19200
Parity Setting (PAri)	Press $\uparrow$ / $\downarrow$ to select parity (n.8.2/n.8.1/even/odd).	n8.2
Frame Setting (FrAmE)	Press $\uparrow$ / $\downarrow$ to select frame type. (NO:Hi→Lo, YES:Lo→Hi)	no

### ERROR CODE OF SELF-DIAGNOSIS

Display	Descriptions
E-00	EEPROM reading/writing suffers the interference (about 1 million times).

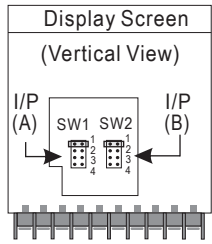
\*\*Please check the wiring connection is correct first, if the problem still exist, please return the meter to the factory.

#### \*\*Relay Output Mode Descriptions:

- N: (Manual); the relay is on when the present value reaches the alarm setpoint, the present value is still counted and the relay don't deactivate until manual reset by "reset key" or "external control terminal". Then the present value is reset to zero.
- R: (Return); the relay is on when the present value reaches the alarm setpoint, the present value is counted until the relay output time is terminated. Then the present value is reset to zero.
- C: (Continue); the relay is on when the present value reaches the alarm setpoint, the present value is reset to zero. And the relay is still on until the relay output time is terminated.

MODE: SYN (present value & total is synchronizing)  
NSYN (present value reaches the 1st setpoint, total value added 1)

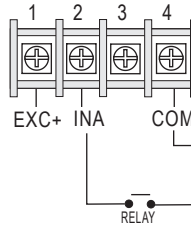
# INPUT SIGNAL MODIFICATION



\*\*To Select the pin to modify the input signal for different sensors.  
PS: In dual input type, excitation power must be the same.

SW1	JUMPER	DEFINITION
	1	Open: 12V; Close: 5V
	2	Open: 100KHz; Close: 100Hz
	3	Open: NPN; Close: PNP
	4	Open: PNP; Close: NPN

※Connection:

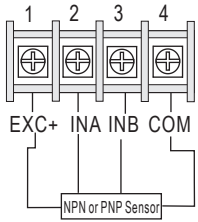


Relay Contact: NPN 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

\*\*For relay input type, please select NPN 0~ 100 Hz.

※Connection:



NPN (5V): 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

NPN (5V): 0~100 KHz

JUMPER	SW1/SW2
1	
2	
3	
4	

NPN (12V): 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

NPN (12V): 0~100 KHz

JUMPER	SW1/SW2
1	
2	
3	
4	

PNP (5V): 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

PNP (5V): 0~100 KHz

JUMPER	SW1/SW2
1	
2	
3	
4	

PNP (12V): 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

PNP (12V): 0~100 KHz

JUMPER	SW1/SW2
1	
2	
3	
4	

# MODBUS RTU MODE PROTOCOL ADDRESS TABLE

Data: 16Bit / 32Bit, +/- is 8000~7FFF (-32768~32767), 80000000~7FFFFFFF(-2147483648~2147483647)				
Modbus	HEX	Name	Descriptions	Act
40001	0000	ID	Model number identification; DC5H-CT is "0B"	R
40002	0001	STATUS	Current alarm output & external control input status display; range: 0000~00F0 (0~240) (0:OFF, 1:ON) (Bit7:ALT2, Bit6: ALT1, Bit5: AL2, Bit4: AL1)	R
40003	0002	POLAR	Analog output polarity setting; range: 0000~0001 (0~1) 0:NO, 1:YES	R/W
40004	0003	LOCK	Key lock setting; range: 0000~0001 (0~1) 0:NO, 1:YES	R/W
40005	0004	FRAME	Frame setting; range 0000~0001(0~1) 0:NO, 1:YES	R/W
40006	0005	P.ACT1	Present Value Alarm 1 act setting; range 0000~0001(0~1) 0:Hi, 1:Lo	R/W
40007	0006	P.ACT2	Present Value Alarm 2 act setting; range 0000~0001(0~1) 0:Hi, 1:Lo	R/W
40008	0007	T.ACT1	Total Value Alarm 1 act setting; range 0000~0001(0~1) 0:Hi, 1:Lo	R/W
40009	0008	T.ACT2	Total Value Alarm 2 act setting; range 0000~0001(0~1) 0:Hi, 1:Lo	R/W
40010	0009	TYPE	Input type setting; range: 0000~0002 (0~1) 0:1U2D, 1:1P2D, 2:1A2B	R/W
40011	000A	ACCU	1A2B accurate setting; range 0000~0001(0~1) 0:X1, 1:X4	R/W
40012	000B	MODE	Count mode setting; range 0000~0001(0~1) 0:SYN, 1:NSYN	R/W
40013	000C	PVDP	Present Value decimal point setting; range: 0000~0004 (0~4) 0:10 <sup>0</sup> ; 1:10 <sup>1</sup> ; 2:10 <sup>2</sup> ; 3:10 <sup>3</sup> ; 4:10 <sup>4</sup>	R/W
40014	000D	TVDP	Total Value decimal point setting; range: 0000~0004 (0~4) 0:10 <sup>0</sup> ; 1:10 <sup>1</sup> ; 2:10 <sup>2</sup> ; 3:10 <sup>3</sup> ; 4:10 <sup>4</sup>	R/W
40015	000E	PVOPM	Present value relay output mode setting; range: 0000~0002 (0~2) 0:N, 1:R, 2:C	R/W
40016	000F	TVOPM	Total value relay output mode setting; range: 0000~0002 (0~2) 0:N, 1:R, 2:C	R/W
40017	0010	BAUD	Baud rate setting; range: 0000~0003 (0~3) 0:38400, 1:19200, 2:9600, 3:4800	R/W
40018	0011	PARI	Parity setting; range: 0000~0003 (0~3), 0:N.8.2., 1:N.8.1., 2:EVEN, 3:ODD	R/W
40019	0012	ADDR	Address setting; range: 0000~00FF (0~255)	R/W
40020	0013	PVOPT	Present value relay output time setting; range: 0000~0063 (0~99)	R/W
40021	0014	TVOPT	Total value relay output time setting; range: 0000~0063 (0~99)	R/W
40022	0015	AZERO	Analog output zero setting; range: D8F1~270F (-9999~9999)	R/W
40023	0016	ASPAN	Analog output span setting; range: D8F1~270F (-9999~9999)	R/W
40024	0017	CODE	Pass code setting; range: 00000000~0001869F (0~99999) Hi Bit	R/W
40025	0018		Pass code setting; range: 00000000~0001869F (0~99999) Low Bit	R/W
40026	0019	DIV	Pre-division setting; range: 00000001~0001869F (1~99999) Hi Bit	R/W
40027	001A		Pre-division setting; range: 00000001~0001869F (1~99999) Low Bit	R/W
40028	001B	SCALE	Total scale setting; range: 00000001~0001869F (1~99999) Hi Bit	R/W
40029	001C		Total scale setting; range: 00000001~0001869F (1~99999) Low Bit	R/W
40030	001D	ANLO	Analog output low scale setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40031	001E		Analog output low scale setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W
40032	001F	ANHI	Analog output hi scale setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40033	0020		Analog output hi scale setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W
40034	0021	PVAL1	Present value alarm 1 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40035	0022		Present value alarm 1 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W

Modbus	HEX	Name	Descriptions	Act
40036	0023	PVAL2	Present value alarm 2 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40037	0024		Present value alarm 2 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W
40038	0025	TVAL1	Total value alarm 1 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40039	0026		Total value alarm 1 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W
40040	0027	TVAL2	Total value alarm 2 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40041	0028		Total value alarm 2 setpoint setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W
40042	0029	PV	Current present value setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40043	002A		Current present value setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W
40044	002B	TV	Current total value setting; range: FFFFB1E1~0001869F (-19999~99999) Hi Bit	R/W
40045	002C		Current total value setting; range: FFFFB1E1~0001869F (-19999~99999) Low Bit	R/W