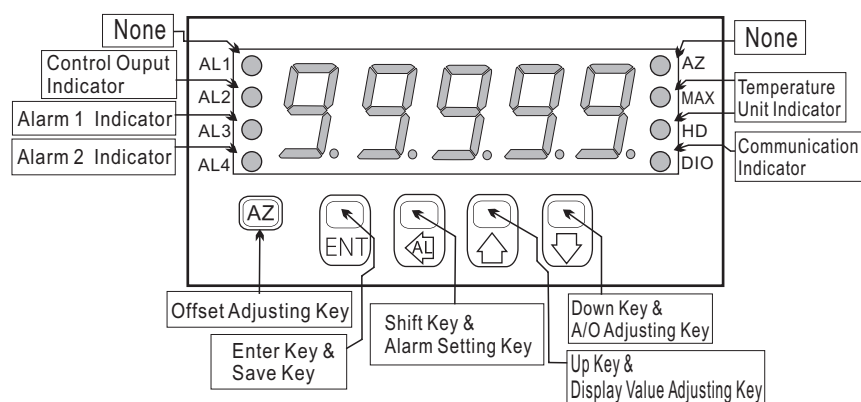


* Please understand key indicators & functions at the first operation.

FRONT PANEL & KEY FUNCTIONS



Key Name	Symbol	Descriptions
Offset Adjusting Key	AZ	1. In the measuring page, press this key can enter to offset adjustment.
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 & Alarm Setting Key	AL	1. In the measuring status, press this key for 3 sec can enter to alarm setting page (The selecting digit will be flashed) 2. In the parameter setting, press this key can move the cursor left.
Up Key & Display Value Adjusting Key	↑	1. In the measuring status, press this key for 3 sec can enter to display value adjustment of "ZERO" & "SPAN" 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 $\leftarrow$ $\rightarrow$, 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 $\uparrow$ & $\downarrow$, or don't press any keys for 2 minutes that will back to measuring status.

GENERAL MODE OPERATING PROCEDURES

Block Charts	Display	Descriptions	Default
Alarm Setpoint			
Power ON	10000	Measuring Status	Present value for measurement.
Press $\leftarrow$ for 3 sec	SP	Control Output Setting (S.P)	Press $\leftarrow$ $\rightarrow$ to modify control output value.
Press ENT	AL 1	Alarm 1 Setpoint (AL1)	Press $\leftarrow$ $\rightarrow$ to modify alarm 1 setpoint.
Press ENT	AL 2	Alarm 2 Setpoint (AL2)	Press $\leftarrow$ $\rightarrow$ to modify alarm 2 setpoint.
Press ENT		Offset Adjustment	
Press AZ	oFSt	Offset Adjustment Setting (oFSt)	Press $\leftarrow$ $\rightarrow$ to modify offset value.
Press ENT		Display: "ZERO" & "SPAN" Adjustment	
Power ON	10000	Measuring Status	Present value for measurement.
Press $\uparrow$ for 3 sec	dPEro	Display Zero Adjustment (dZerO)	Press $\leftarrow$ to select adjusting speed rate, press $\uparrow$ $\downarrow$ to modify the zero value. PS: To use this function to adjust the real zero value.
Press ENT	dSPAN	Display Span Adjustment (dSPAN)	Press $\leftarrow$ to select adjusting speed rate, press $\uparrow$ $\downarrow$ to modify the span value. PS: To use this function to adjust the real span value.
Press ENT		Analog Output: "ZERO" & "SPAN" Adjustment	
Power ON	10000	Measuring Status	The following steps are only available for analog output.
Press $\leftarrow$ for 3 sec	APero	A/O Zero Adjustment (AZerO)	Press $\leftarrow$ to select adjusting speed rate, press $\uparrow$ $\downarrow$ to modify the A/O zero. PS: To use this function to adjust the real A/O zero.
Press ENT	ASPA	A/O Span Adjustment (ASPA)	Press $\leftarrow$ to select adjusting speed rate, press $\uparrow$ $\downarrow$ to modify the A/O span. PS: To use this function to adjust the real A/O span.
Press ENT			

PROGRAMMING MODE OPERATING PROCEDURES

Block Charts	Display	Descriptions	Default
Parameter Group Setting Procedures			
Power ON	10000	Measuring Status	Present value for measurement.
Press ENT	P.Cod	Pass Code (P.Cod)	Press $\leftarrow$ $\rightarrow$ to enter pass code.
Press ENT			Pass code is correct that will enter to parameter groups. Pass code is wrong that will back to measuring status.
P.Code Correct			
NO			
YES	SYS	System Setting Group	
Press ENT	roP	Alarm Setting Group	
Press ENT	RoP	A/O Setting Group	
Press ENT	doP	RS485 Setting Group	

Display	Descriptions	Default
	System Setting Group Procedures	
System Setting Page (SYS)		
Sensor Type Setting (tYPE)	The page shows temperature sensor's type.	Customers specify
Decimal Point Setting (dP)	Press to select decimal point (0, 1, 2, 3, 4). EX: if the value shows "0.00" that means the decimal point is 2 digits.	Customers specify
Temperature Unit Setting (unit)	Press to select the units (°C or °F).	Customers specify
Cold Junction Compensation (CJC)	Press can switch (on) or (off) cold junction compensation.	no
Display Average Setting (AvG)	Press to modify display average (1~99). PS: Please use this function for stable display value when input signal is unstable.	00005
Pass Code Setting (CodE)	Press to modify pass code (0~19999). PS: Please don't forget the new pass code after modification.	00000
Key Lock Setting (LoCK)	Press 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
	Alarm Setting Group Procedures	
Alarm Setting Page (roP)	The following steps are only available for alarm output.	
Control Relay Setting (ACTt)	Press can select control relay action (Hi) or (Lo).	Hi
Alarm 1 (ACT1)	Press to modify alarm value that is $\geq$ (Hi) or $<$ (Lo) for alarm action.	
Alarm 2 (ACT2)		
Proportion Control Percentage (P.b)	Press to modify proportion control percentage (0~999).	00000
Hysteresis 1 (HYS1)	Press to modify the value, when alarm runs lower or higher display value (depends on alarm action). Alarm setpoint $\pm$ this value (0~999) will turn off the alarm.	00000
Hysteresis 2 (HYS2)		
Proportion Time (C.time)	Press to modify proportion time (0~99 sec).	00000
Delay Time 1 (dEL1)	Press to modify the value, when the display value reach the alarm value that need to wait for this time (0~99 sec) for alarm action.	00000
Delay Time 2 (dEL2)		

Display	A/O Setting Group Procedures	Default
	A/O Setting Page (AoP)	The following steps are only available for analog output.
A/O Polarity Setting (PoLAr)	Press to select output for positive or negative pole.	no
A/O Low Scale Setting (AnLo)	Press to adjust A/O low scale to correspond to the display value (programmable). 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 to adjust A/O hi scale to correspond to the display value (programmable). EX: A/O is 0~10V, the display is 90.0 to output 10V, this value must be set for 90.0.	99999
	RS485 Setting Group Procedures	
RS485 Setting Page (doP)	The following steps are only available for RS485 type.	
Address Setting (Addr)	Press to modify address (0~255).	00000
Baud Rate Setting (bAUd)	Press to select baud rate (38400/19200/9600/4800).	19200
Parity Setting (PAri)	Press to select parity (n.8.2/n.8.1/even/odd).	n82

Error Code of Self-Diagnosis	
Display	Descriptions
coFL	Cold junction is over sensor's (PT100) measuring range (0~100 °C).
-coFL	Cold junction is under sensor's (PT100) measuring range (0~100 °C).
oPEr	Input signal or cold junction is disconnection.
doFL	Input signal is over sensor's (T.C) measuring range.
-doFL	Input signal is under sensor's (T.C) measuring range.
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.	

- 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.

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-T is "0E"	R
40002	0001	STATUS	Current alarm output & external control input status display; range: 0000~0030 (0~48) (0:OFF, 1:ON) (Bit5: AL2, Bit4: AL1)	R
40003	0002	TYPE	Input type display	R
40004	0003	UNIT	Temperature unit setting; range: 0000~0001 (0~1) 0: °C, 1: °F	
40005	0004	CJC	Cold junction compensation setting; range: 0000~0001 (0~1) 0:NO, 1:YES	R/W
40006	0005	LOCK	Key lock setting; range: 0000~0001 (0~1) 0:NO, 1:YES	R/W
40007	0006	ACT	Control Relay act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40008	0007	ACT1	Alarm 1 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40009	0008	ACT2	Alarm 2 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40010	0009	DP	Decimal point setting; range: 0000~0004 (0~4) 0:10 ⁰ , 1:10 ⁻¹ , 2:10 ⁻² , 3:10 ⁻³ , 4:10 ⁻⁴	R/W
40011	000A	BAUD	Baud rate setting; range: 0000~0003 (0~3) 0:38400, 1:19200, 2:9600, 3:4800	R/W
40012	000B	PARI	Parity setting; range: 0000~0003 (0~3), 0:N.8.2., 1:N.8.1., 2:EVEN, 3:ODD	R/W
40013	000C	AVG	Display average setting; range: 0001~0063 (1~99)	R/W
40014	000D	ADDR	Address setting; range: 0000~00FF (0~255)	R/W
40015	000E	PTIME	Proportion control time setting; range: 0000~0063 (0~99)	R/W
40016	000F	DEL1	Alarm 1 act delay time setting; range: 0000~0063 (0~99)	R/W
40017	0010	DEL2	Alarm 2 act delay time setting; range: 0000~0063 (0~99)	R/W
40018	0011	RST	Proportion control area setting; range: 0000~03E7 (0~999)	R/W
40019	0012	HYS1	Alarm 1 hysteresis setting; range: 0000~03E7 (0~999)	R/W
40020	0013	HYS2	Alarm 2 hysteresis setting; range: 0000~03E7 (0~999)	R/W
40021	0014	CODE	Pass code setting; range: 0000~4E1F (0~19999)	R/W
40022	0015	OFST	Temperature off-set setting; range: FC19~03E7 (-999~999)	R/W
40023	0016	OUT	Control output value setting; range: B1E1~4E1F (-19999~19999)	R/W
40024	0017	AL1	Alarm 1 setpoint setting; range: B1E1~4E1F (-19999~19999)	R/W
40025	0018	AL2	Alarm 2 setpoint setting; range: B1E1~4E1F (-19999~19999)	R/W
40026	0019	DISPLAY	Current display; range: B1E1~4E1F (-19999~19999)	R

CALIBRATION OPERATING PROCEDURES

Display	Descriptions	Default
Calibration		
Measuring Status 10000 Press: ENT &  together for 3 sec	Present value for measurement Press ENT &  together for 3 sec will enter to calibration operating procedures.	
Input Low Scale Calibration (inLo) 1 nLo Press: ENT	1. Input standard low scale signal. 2. Press    to calibrate input low scale.	
Input Hi Scale Calibration (inHi) 1 nHi Press: ENT	1. Input standard hi scale signal. 2. Press    to calibrate input hi scale.	
System Setting Page (SYS) 555 Press:  &  together for 3 sec	1. Finish calibration operating procedures will enter to system setting group. 2. Press  &  together to back to measuring status.	

Warning: Calibration of this meter requires a standard signal with 0.01% accuracy or better and an external meter with 0.005% accuracy or better.