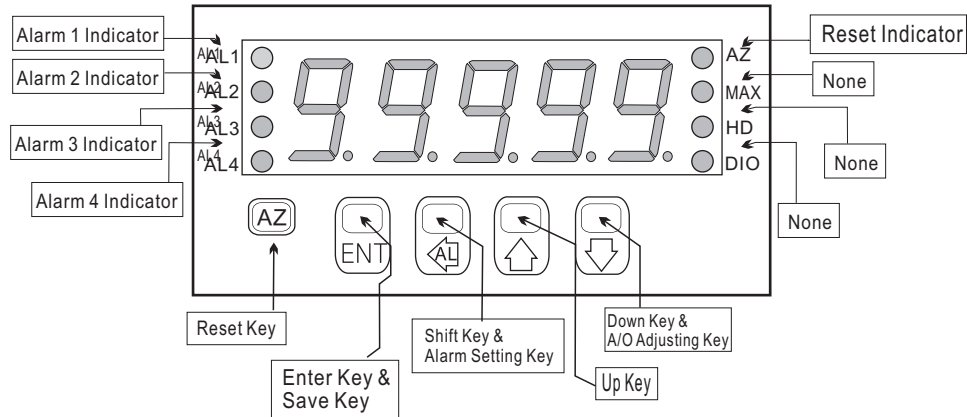


* Please understand key indicators & functions at the first operation.

FRONT PANEL & KEY FUNCTIONS



Key Name	Symbol	Descriptions
Reset Key	Ⓩ	1. Press this key to enable the reset function & reset indicator (Z) is light; press this key again to disable the reset function & reset indicator (Z) is dark.
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	↑	1. 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.
Combination Key (Linearization)	ENT + ←AL	1. In the measuring status, press the key for 3 sec can enter to 20 points linearization setting.
Combination Key (Display Adjustment)	←AL + ↑	1. In the measuring status, press the key for 3 sec can enter to 20 points display adjustment setting.

- **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
Alarm Setpoint			
Power ON	10000	Measuring Status	Present value for measurement
Press ← for 3 sec	AL 1	Alarm 1 Setpoint (AL1)	Press ←↑↓ to modify alarm 1 setpoint.
Press ENT	AL 2	Alarm 2 Setpoint (AL2)	Press ←↑↓ to modify alarm 2 setpoint.
Press ENT	AL 3	Alarm 3 Setpoint (AL3)	Press ←↑↓ to modify alarm 3 setpoint.
Press ENT	AL 4	Alarm 4 Setpoint (AL4)	Press ←↑↓ to modify alarm 4 setpoint.
Press ENT			
Analog Output: "ZERO" & "SPAN" Adjustment			
Power ON	10000	Measuring Status	The following steps are only available for analog output.
Press ↓ for 3 sec	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.
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.
Press ENT			

- Remark: 1. There are 3 parameter groups of "System Setting Group(SYS)", "Alarm Setting Group(roP)", "Analog Output Setting Group (AoP)" 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.

PROGRAMMING MODE OPERATING PROCEDURES

Block Charts	Display	Descriptions	Default
Parameter Group Setting Procedures			
Power On	10000	Measuring Status	Present value for measurement
Press ENT	PCod	Pass Code (P.Cod)	Press ←↑↓ to enter pass code.
Press ENT	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	SYS	System Setting Group (SYS)	
Press ←	roP	Alarm Setting Group (roP)	
Press ←	AoP	A/O Setting Group (AoP)	
Press ENT			

Display	Descriptions	Default
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">SYS</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
System Setting Group Procedures		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">dP</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Decimal Point Setting (dP)	Customers specify
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">SdP</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Scale Decimal Point Setting (SdP)	Customers specify
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">SCALE</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Display Scale Setting (SCALE)	00001
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">AvG</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Display Average Setting (AvG)	00005
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">LCuT</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Display Low Cut Setting (LCuT)	00000
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">CodE</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Pass Code Setting (CodE)	00000
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">SqrT</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Root Square Setting (SqrT)	no
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">LoCK</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Key Lock Setting (LoCK)	no
Alarm Setting Group Procedures		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">roP</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
Alarm Setting Page (roP)		
The following steps are only available for alarm output.		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">ACT1</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Alarm Action Setting	Hi
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">ACT2</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">ACT3</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">ACT4</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">HYS1</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Alarm Hysteresis Setting	00000
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">HYS2</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">HYS3</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">HYS4</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">dEL1</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Alarm Run Delay Setting	00000
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">dEL2</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">dEL3</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">dEL4</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">Sb</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Alarm Start Band Setting (Sb)	00000
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">Sdt</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	Alarm Start Band Time Setting (Sdt)	00000

Display	Descriptions	Default
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">RoP</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>		
A/O Setting Group Procedures		
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">PoLAr</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	A/O Polarity Setting (PoLAr)	no
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">AnLo</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	A/O Low Scale Setting (AnLo)	00000
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">AnHi</div> <div style="margin-left: 5px;">Press: ENT ↓</div> </div>	A/O Hi Scale Setting (AnHi)	99999

Error Code of Self-Diagnosis	
Display	Descriptions
1 oFL	Input signal is over 120% of input range.
-1 oFL	Input signal is under -20% of input range.
AdEr	Input signal is over 180% of input range or meter error.
doFL	Input signal is over display range (99999)
-doFL	Input signal is under display range (-19999)
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.

Display	Descriptions	Default
10000	20 Points Display Adjustment	
Measuring Status	Present value for measurement Press & together for 3 sec will enter to 20 points display value adjustment.	
dSP01	No.1 Display Value Setting (dSP01) Press to modify No. 1 display value (-19999~99999)	99999
dSP02	No.2 Display Value Setting (dSP02) Press to modify No. 2 display value (-19999~99999)	99999
dSP03	No.3 Display Value Setting (dSP03) Press to modify No. 3 display value (-19999~99999)	99999
dSP04	No.4 Display Value Setting (dSP04) Press to modify No. 4 display value (-19999~99999)	99999
dSP05	No.5 Display Value Setting (dSP05) Press to modify No. 5 display value (-19999~99999)	99999
dSP06	No.6 Display Value Setting (dSP06) Press to modify No. 6 display value (-19999~99999)	99999
dSP07	No.7 Display Value Setting (dSP07) Press to modify No. 7 display value (-19999~99999)	99999
dSP08	No.8 Display Value Setting (dSP08) Press to modify No. 8 display value (-19999~99999)	99999
dSP09	No.9 Display Value Setting (dSP09) Press to modify No. 9 display value (-19999~99999)	99999
dSP10	No.10 Display Value Setting (dSP10) Press to modify No. 10 display value (-19999~99999)	99999
dSP11	No.11 Display Value Setting (dSP11) Press to modify No. 11 display value (-19999~99999)	99999
dSP12	No.12 Display Value Setting (dSP12) Press to modify No. 12 display value (-19999~99999)	99999
dSP13	No.13 Display Value Setting (dSP13) Press to modify No. 13 display value (-19999~99999)	99999
dSP14	No.14 Display Value Setting (dSP14) Press to modify No. 14 display value (-19999~99999)	99999
dSP15	No.15 Display Value Setting (dSP15) Press to modify No. 15 display value (-19999~99999)	99999
dSP16	No.16 Display Value Setting (dSP16) Press to modify No. 16 display value (-19999~99999)	99999
dSP17	No.17 Display Value Setting (dSP17) Press to modify No. 17 display value (-19999~99999)	99999
dSP18	No.18 Display Value Setting (dSP18) Press to modify No. 18 display value (-19999~99999)	99999
dSP19	No.19 Display Value Setting (dSP19) Press to modify No. 19 display value (-19999~99999)	99999
dSP20	No.20 Display Value Setting (dSP20) Press to modify No. 20 display value (-19999~99999)	99999

CALIBRATION OPERATING PROCEDURES		
Display	Descriptions	Default
10000	20 Points Linearization	
Measuring Status	Present value for measurement Press & together for 3 sec will enter to 20 points linearization operating procedures.	
in01	No.1 Linearization Setting (in01) 1. Input No. 1 scale signal. 2. Press to calibrate input No. 1 scale.	00000
in02	No.2 Linearization Setting (in02) 1. Input No. 2 scale signal. 2. Press to calibrate input No. 2 scale.	00000
in03	No.3 Linearization Setting (in03) 1. Input No. 3 scale signal. 2. Press to calibrate input No. 3 scale.	00000
in04	No.4 Linearization Setting (in04) 1. Input No. 4 scale signal. 2. Press to calibrate input No. 4 scale.	00000
in05	No.5 Linearization Setting (in05) 1. Input No. 5 scale signal. 2. Press to calibrate input No. 5 scale.	00000
in06	No.6 Linearization Setting (in06) 1. Input No. 6 scale signal. 2. Press to calibrate input No. 6 scale.	00000
in07	No.7 Linearization Setting (in07) 1. Input No. 7 scale signal. 2. Press to calibrate input No. 7 scale.	00000
in08	No.8 Linearization Setting (in08) 1. Input No. 8 scale signal. 2. Press to calibrate input No. 8 scale.	00000
in09	No.9 Linearization Setting (in09) 1. Input No. 9 scale signal. 2. Press to calibrate input No. 9 scale.	00000
in10	No.10 Linearization Setting (in10) 1. Input No. 10 scale signal. 2. Press to calibrate input No. 10 scale.	00000
in11	No.11 Linearization Setting (in11) 1. Input No. 11 scale signal. 2. Press to calibrate input No. 11 scale.	00000
in12	No.12 Linearization Setting (in12) 1. Input No. 12 scale signal. 2. Press to calibrate input No. 12 scale.	00000
in13	No.13 Linearization Setting (in13) 1. Input No. 13 scale signal. 2. Press to calibrate input No. 13 scale.	00000
in14	No.14 Linearization Setting (in14) 1. Input No. 14 scale signal. 2. Press to calibrate input No. 14 scale.	00000
in15	No.15 Linearization Setting (in15) 1. Input No. 15 scale signal. 2. Press to calibrate input No. 15 scale.	00000
in16	No.16 Linearization Setting (in16) 1. Input No. 16 scale signal. 2. Press to calibrate input No. 16 scale.	00000
in17	No.17 Linearization Setting (in17) 1. Input No. 17 scale signal. 2. Press to calibrate input No. 17 scale.	00000
in18	No.18 Linearization Setting (in18) 1. Input No. 18 scale signal. 2. Press to calibrate input No. 18 scale.	00000
in19	No.19 Linearization Setting (in19) 1. Input No. 19 scale signal. 2. Press to calibrate input No. 19 scale.	00000
in20	No.20 Linearization Setting (in20) 1. Input No. 20 scale signal. 2. Press to calibrate input No. 20 scale.	00000
545	System Setting Page(SYS) 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.