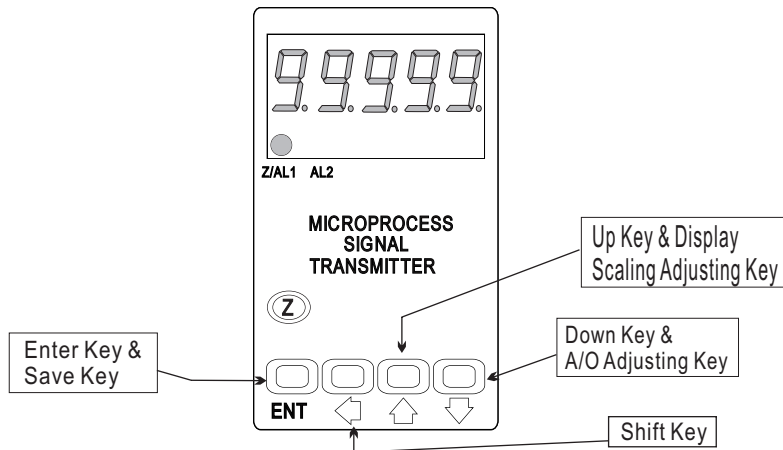


* Please understand key indicators & functions at the first operation.

FRONT PANEL & KEY FUNCTIONS



Key Name	Symbol	Descriptions
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	←	1. In the parameter setting, press this key can move the cursor left.
Up Key & Display Scaling Adjusting Key	↑	1. In the measuring status, press this key for 3 sec can enter to display scaling adjustment. 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.
- To modify the parameters, please press ← ↑ ↓, and press **ENT** to save the parameters after the modification.
 - Please don't forget the new pass code after modification.
 - In any pages, press ↑ & ↓, or don't press any keys for 2 minutes that will back to measuring status.
 - Scaling Formula: Frequency Display = (Scale x Input Frequency)/PPR
RPM Display = (Scale x Input Frequency x 60)/PPR
Line-Speed Display = [Scale x Input RPM x 3.1416 (π)]

GENERAL MODE OPERATING PROCEDURES

Block Charts	Display	Descriptions	Default
		Scaling Adjustment	
	Scale Coefficient Adjustment (SCALE)	Present value for measurement. Press ← ↑ ↓ to modify scale coefficient 1 (0.0001 ~9.9999). PS: 1. In Frequency & RPM types, this coefficient can be modified for display value. (Please refer to Scaling Formula) 2. In Line-Speed type, this coefficient means "diameter" of the roll, the unit will be changed by selecting display unit. EX: If the display unit is "Meter", the diameter is also showed "Meter".	10000
		Analog Output: "ZERO" & "SPAN" Adjustment	
	A/O Zero Adjustment (AZERO)	Present value for measurement. 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
	A/O Span Adjustment (ASPAN)	Present value for measurement. 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

PROGRAMMING MODE OPERATING PROCEDURES

Block Charts	Display	Descriptions	Default
<pre> graph TD Start[Power ON] --> D1[10000] D1 -- Press ENT --> D2[P.Cod] D2 -- Press ENT --> D3{P.Code Correct} D3 -- NO --> D1 D3 -- YES --> D4[dP] D4 -- Press ENT --> D5[tYPE] D5 -- Press ENT --> D6{Linear-Speed} D6 -- NO --> D7[Unit] D6 -- YES --> D8[PPr] D7 -- Press ENT --> D9[tbASE] D8 -- Press ENT --> D9 D9 -- Press ENT --> D10[AvG] D10 -- Press ENT --> D11[PoLAr] D11 -- Press ENT --> D12[AnLo] D12 -- Press ENT --> D13[AnHi] D13 -- Press ENT --> D14[CodE] D14 -- Press ENT --> D15[LoCK] D15 -- Press ENT --> End[] </pre>	Measuring Status	Present value for measurement.	
	Pass Code (P.Cod)	Press \leftarrow \rightarrow \uparrow \downarrow to enter pass code.	00000
	Decimal Point Setting (dP)	Press \leftarrow \rightarrow \uparrow \downarrow to select decimal point (0, 1, 2, 3, 4) EX: if the value shows "0.00" that means the decimal point is 2 digits.	0
	Input Type Setting (tYPE)	Press \uparrow \downarrow to modify the input type (RPM/Line-Speed/Frequency).	Customers specify
	The following steps are only available for Line-Speed type.		
	Line-Speed Unit Setting (Unit)	Press \uparrow \downarrow to modify the unit of line-speed (Meter/Foot/Yard).	Customers specify
	PPR Setting (PPr)	Press \leftarrow \rightarrow \uparrow \downarrow to modify ppr (1~99999).	0000 1
	Sampling Time Base (tbASE)	Press \leftarrow \rightarrow \uparrow \downarrow to modify sampling time base (0.1~999.9 sec).	0000. 1
	Display Average Setting (AvG)	Press \leftarrow \rightarrow \uparrow \downarrow to modify display average (1~99). PS: Please use this function for stable display value when input signal is unstable.	00005
	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 \rightarrow \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 \rightarrow \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 10V, this value must be set for 90.0.	99999
	Pass Code Setting (CodE)	Press \leftarrow \rightarrow \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.	no	

Error Code of Self-Diagnosis

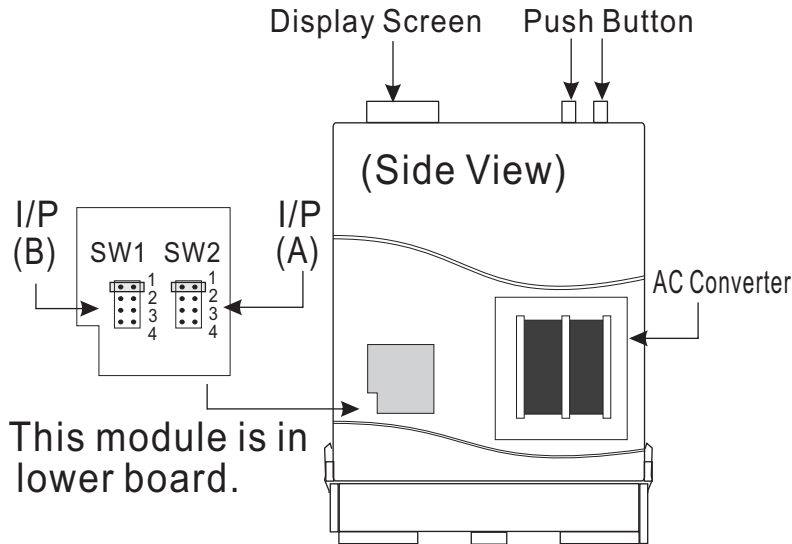
Display	Descriptions
1 oFL	Input signal is over input range (0~100KHz).
doFL	Input signal is over display range (99999).
E-00	EEPROM reading/writing suffers the interference (about 1 million times).

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

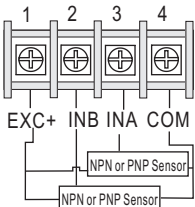
Frequency Input Signal Modification

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

SW1/SW2	JUMPER	DEFINITION
	1	Open: 12V; Close: 5V
	2	Open: 100KHz; Close: 100Hz
	3	Open: NPN; Close: PNP
	4	Open: PNP; Close: NPN



**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	

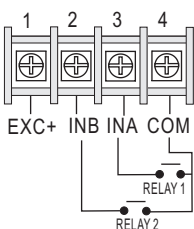
PNP (12V): 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

PNP (12V): 0~100 KHz

JUMPER	SW1/SW2
1	
2	
3	
4	

**Connection:



Relay Contact: NPN 0~100 Hz

JUMPER	SW1/SW2
1	
2	
3	
4	

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