DC4-R

5 DIGITAL MICRO-PROCESS RPM / LINE-SPEED / FREQUENCY METER with ALARM / ANALOG OUTPUT / RS-485

MANUAL

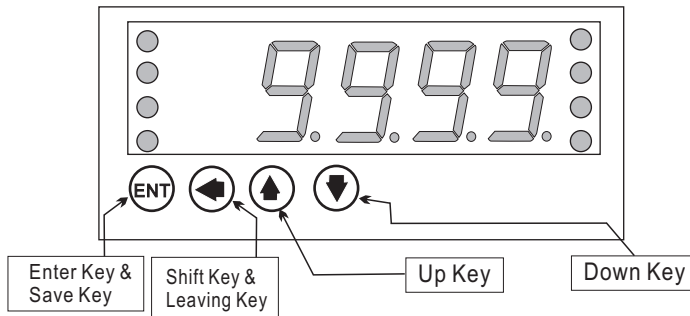✱ Please understand key indicators & functions at the first operation.

FRONT PANEL & KEY FUNCTIONS

Enter Key & Save Key — Shift Key & Leaving Key — Up Key — Down Key

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 & Leaving Key	⇦	1. In the any status, press this key for 1 sec can go back the previous page. 2. In the parameter setting, press this key can move the cursor left.
Up Key	⇧	1. In the parameter group, press this key can go on to the next parameter. 2. In the parameter setting, press this key can decrease the digits.
Down Key	⇩	1. In the parameter group, press this key can go back to the last parameter. 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.

WIRING CONNECTION & ADJUSTMENT

● Relay output:

● Analog output:

● RS-485:
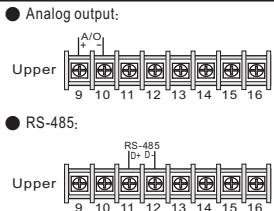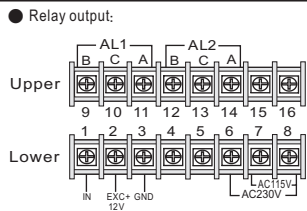
DIP SWITCH	1	2	3	4	5
NPN	ON				
PNP		ON			
Contact	ON				ON
DC 5Vp					
DC 12Vp			ON		
DC 24Vp				ON	

**D-S down is "ON"

GENERAL MODE OPERATING PROCEDURES

Block Charts	Display	Descriptions	Default
Power ON		**Max / Min Value & Alarm Setpoint**	
	Measuring Status	Present value for measurement	
	Min Value Display	Press ⇧⇩ to go on / go back to the next(last) parameter.	0000
	Max Value Display	Press ⇧⇩ to go on / go back to the next(last) parameter.	0000
	Max / Min Reset Setting (M.rst)	Press ENT to enter the setting, and reset the Max/Min value.	
	Alarm 1 Setpoint (rY1.SP)	Press ENT to enter the setting, and modify alarm 1 setpoint.	0000
	Alarm 2 Setpoint (rY2.SP)	Press ENT to enter the setting, and modify alarm 1 setpoint.	0000
	Alarm 1 Reset Setting (M.rst)	Press ENT to enter the setting, and reset alarm.	0000
	Software Version Display	Press ⇧⇩ to go on / go back to the next(last) parameter.	0000

Remark: 1. There are 4 parameter groups of "System Setting Group(inPUt)", "Alarm Setting Group(rELAY)", "Analog Output Setting Group (Ao)" & "RS485 Setting Group (rS485)" 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

	Display	Descriptions	Default
Power On		**Parameter Group Setting Procedures**	
	Measuring Status	Present value for measurement	
	Pass Code (P.Cod)	Press ⇦⇧⇩ to enter pass code.	0000
		Pass code is correct that will enter to parameter groups. Pass code is wrong that will back to measuring status.	

inPUt (inPUt) → rELAY (rELAY) → Ao (Ao) → rS485 (rS485)

System Setting Group | Alarm Setting Group | A/O Setting Group | RS485 Setting Group

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Display	Descriptions	Default
System Setting Page (inPUt)	**System Setting Group Procedures**	
Input Type Setting (Pv.tYP)	Press ENT enter to the setting, and modify the input type. (RPM/Linear-Speed/Frequency)	Customers specify
PPR Setting (PPr)	Press ENT to enter the setting, and modify ppr (1~9999).	0001
Line-Speed Unit Setting (E.Unit)	Press ENT to enter the setting, and modify the unit of line-speed. **PS: Line-Speed type available**	Customers specify
Diameter Setting (diAMt)	Press ENT to enter the setting, and modify the diameter setting.	01.000
Decimal Point Setting (dP)	Press ENT to enter the setting, and select decimal point (0, 1, 2, 3). EX: if the value shows "0.00" that means the decimal point is 2 digits.	Customers specify
Display Factor Setting (FACtr)	Press ENT to enter the setting, and modify display factor setting.	1.000
Display Low Cut Setting (Lo.CUt)	Press ENT to enter the setting, and modify display low cut to 0 (0~99).	0005
Pulse Time Out Type Setting (ito.md)	Press ENT to enter the setting, and modify pulse time out mode.	AUto
Pulse Time Out Setting (ito)	Press ENT to enter the setting, and modify pulse time out setting.	0.0
Display Average Setting (AvG)	Press ENT to enter the setting, and modify display average (1~99). PS: Please use this function for stable display value	0005
Digital Filter Setting (d.FiLt)	Press ENT to enter the setting, and modify down key setting.	0
Pass Code Setting (P.CodE)	Press ENT to enter the setting, and modify pass code (0~19999). PS: Please don't forget the new pass code after modification.	1000
Alarm Setting	**Alarm Setting Group Procedures**	
Alarm Setting Page (rELAY)	**The following steps are only available for alarm output.**	
Alarm Start Band Setting (rY.Sb)	Press ENT to enter the setting, and modify the value (-99~+99), if the display value don't over this range; the alarm will not be act.	0000
Alarm Start Band Time Setting (rY.Sd)	Press ENT to enter the setting, and modify the value (0~99 sec), if the display value reach alarm start band value; the alarm will be act after this value (sec).(The function is used with "Sb" function.)	0000
Alarm 1 Action Setting (rY1.Md)	Press ENT to enter the setting, and modify alarm value that is ≥(Hi) or <(Lo) for alarm action.	Hi
Alarm 1 Hysteresis Setting (rY1.HY)	Press ENT to enter the setting, and modify the value, when alarm runs lower or higher display value (depends on alarm action). Alarm setpoint ± this range (0~9999) will turn off the alarm.	0000
Alarm 1 Delay Time Setting (rY1.rd)	Press ENT to enter the setting, and modify the value, when the display value reach the alarm value that need to wait for this time (0~99 sec) for alarm action.	0000
Alarm 1 Return Time Setting (rY1.rd)	Press ENT to enter the setting, and modify the value, when the display value reach the alarm value that need to wait for this time (0~99 sec) for alarm return.	0000
Alarm 2 Action Setting (rY2.Md)		
Alarm 2 Hysteresis Setting (rY2.HY)	Please refer to the above Alarm 1 group setting procedure.	
Alarm 2 Delay Time Setting (rY2.rd)		
Alarm 2 Return Time Setting (rY2.rd)		

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Display	Descriptions	Default
	A/O Setting Group Procedures	
A/O Setting Page (Ao)	**The following steps are only available for analog output.**	
A/O Polarity Setting (Ao.tYP)	Press ENT to enter the setting, and 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 (Ao.LS)	Press ENT to enter the setting, and 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.	0000
A/O Hi Scale Setting (Ao.HS)	Press ENT to enter the setting, and adjust A/O hi scale to correspond to the display value (programmable). EX : A/O is 0~10V, the display is 90.0 to output10V, this value must be set for 90.0.	9999
A/O Zero Adjustment (Ao.Zro)	Press ENT to enter the setting, and adjust A/O zero adjustment	0000
A/O Span Adjustment (Ao.Spn)	Press ENT to enter the setting, and adjust A/O span adjustment	0000
A/O Adjustment Reset Setting(Z.S.CLr)	Press ENT to enter the setting, and reset the A/O adjustment.	
	RS485 Setting Group Procedures	
RS485 Setting Page (doP)	**The following steps are only available for RS-485.**	
Address Setting (Addr)	Press ENT to enter the setting, and modify address (0~255).	1
Baud Rate Setting (bAUd)	Press ENT to enter the setting, and select baud rate (38400/19200/9600/4800)	9600
Parity Setting (PAri)	Press ENT to enter the setting, and select parity (n.8.2/n.8.1/even/odd)	n.5tb.2

Error Code of Self-Diagnosis

Display	Descriptions	Remark
ouFL	Input signal is over input range (+110%).	**Please check the wiring connection is correct first, if the problem still exist, please return the meter to the factory.
-ouFL	Input signal is less than display range (Lo.SC).	
	Check the wiring.	