

HPC-1000 Manual

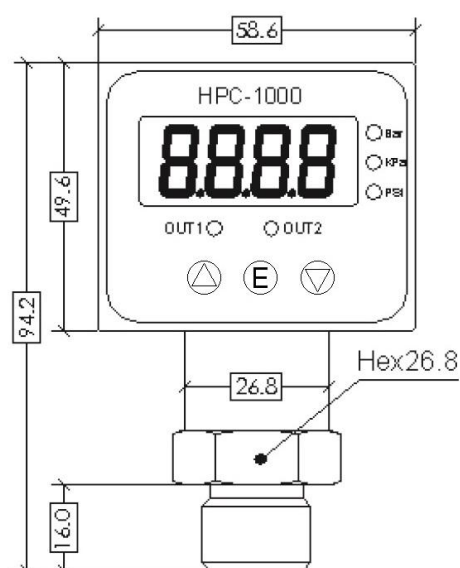


I: Description

HPC series intelligent digital pressure controller adopts high-precision and high-sensitivity pressure-sensitive components, and through high-precision AD conversion and high-speed microprocessor, it can not only accurately measure the pressure value, but also realize the control signal output, which is the ideal intelligent in the industrial field. Measurement and control instruments are widely used in industrial automation fields such as petroleum, chemical industry, metallurgy, environmental protection, measurement, automatic control engineering and production process detection.

II: Parameters

- Test medium: liquid or gas compatible with material
- Range: -0.1~250MPa
- Accuracy class: 0.1%FS, 0.25%FS, 0.5%FS
- Stability: $\pm 0.25\%FS/\text{year}$, $\pm 0.5\%FS/\text{year}$
- Output signal: two-way switch; analog, digital optional;
Relay output (single pole double throw) contact capacity
DC24V 5A/ AC250V 3A;
NPN/PNP output, load current <100mA, voltage <60VDC;
Analog: 4-20mA/0-10V; digital: RS485 communication
- Working power: 12~36VDC(customized 220V)



- Working temperature: -20~60℃
- Overload 300%
- Thread: M20*1.5, G1/2, 1/2NPT, etc.
- Protection level: IP65

Warning: It is strictly forbidden to disassemble the pressure controller without authorization!

Do not press the measuring element diaphragm with your fingers!

It is strictly forbidden to use any sharp objects to insert the pressure hole!

III. Definition of wires

Wires color Output	red	black	purple	white	brown	blue	orange	gray
Dual relay	24V+	24V-	H-COM	H-ON	H-OFF	L-COM	L-ON	L-OFF
Dual transistor	24V+	24V-	\	OUT1	\	\	OUT2	\
Relay + current	24V+	24V-	H-COM	H-ON	OUT+	L-COM	L-ON	OUT-
Relay+RS485	24V+	24V-	H-COM	H-ON	A	L-COM	L-ON	B

Note: H stands for high-level alarm, which is alarmed by OUT1 indicator; L stands for low-level alarm, which is alarmed by OUT2 indicator;
COM is the common terminal; ON is the normally open contact; OFF is the normally closed contact;

IV: Button and menu

▲ : Cursor shift or select the previous menu; **E** : Menu entry, confirm; ▼ : Modify the number or select the next menu;

- When displaying the measured value status, press the up key to display the OUT1 alarm value, press the key to display the OUT2 alarm value;
- When the measured value status is displayed, press the confirm key twice to enter the password setting, the up/down keys can be changed to modify the value, and press the confirm key again to enter the menu;
- After entering the menu, the up/down keys can be used to select the menu, and the confirm key enters to modify the menu content. After the modification is completed, press the confirm key to return to the menu selection;
- After each parameter modification, confirm and save the setting at the end of the group of parameters; otherwise, the parameter modification is invalid;
- After confirming and saving the parameters, switch to the END option and press the confirm key to return to the display of the measured value;

The first group of parameters: alarm parameter settings (password: 0010)

No.	Symbol	Menu	Value range	Remark
1	AH	OUT1 alarm value	-1999~9999	Arbitrary setting within the range
2	AL	OUT2 alarm value	-1999~9999	Arbitrary setting within the range
3	AL o1	OUT1 alarm mode	HH or LL	Default HH (High alarm)
4	AL o2	OUT2 alarm mode	HH or LL	Default LL (Low alarm)
5	HY A1	OUT1 alarm sensitivity	00.00~99.99	Default 0
6	HY A2	OUT2 alarm sensitivity	00.00~99.99	Default 0
7	SA UE	Save Settings	YES or NO	Select YES, press OK to save the settings
8	En d	Exit		Exit settings

Group 2 parameters: Range parameter setting (password: 0100)

No.	Symbol	Menu	Value range	Remark
1	UN	Unit option	Bar/KPa/MPa; PSI	Unit indicator switch
2	dot	Decimal point	0~3 numbers	Decimal point position switching
3	U_r	Measuring range lower limit	-1999~9999	Factory setting, do not modify*
4	F_r	Measuring range upper limit	-1999~9999	Factory setting, do not modify*
5	Off	Zero point correction	00.00~99.99	Zero deviation compensation, default 0 note1
6	Ad d	Communication address	0~255	Communication function optional, default 0
7	bA d	Baud rate	1200~9600	Default 9600
8	Cut	Zero cut range	0~1000 (means 0~100.0%)	Default 20 (means 2.0%) note2
9	FL tr	Digital filter time constant	0~250	Default 005 note3
10	SP S	Sampling rate	0~1000	Default 40 note4
11	U2 ro	Zero AD value	0~3276	Do not modify*
12	UF UL	AD value of full scale	0~3276	Do not modify*
13	Lo Ad	Restore factory settings	YES or NO	Do not modify*
14	SA	Save Settings	YES or NO	Select YES, press OK to save the settings

	UE			
15	End	Exit		Exit setting

Note 1: This parameter can compensate the deviation between the displayed value and the actual value. For example, if the display value is 10.05 and the zero point correction is set to -0.05, the display value after compensation is 10.00;

Note 2: This parameter can cut off the small signal displayed by the zero point. For example, the pressure of 0 is displayed as 0.05, and it can be reset to zero by increasing the setting value of the cutting range;

Note 3: This parameter can improve the stability of the displayed value. The larger the set value, the slower the display refresh;

Note 4: This parameter can set the frequency of data collection, the fastest collection of 1000 data per second;