WM1308X Differential Pressure Switch (Differential Pressure Controller)

WM1308X Differential Pressure Switch (Differential Pressure Controller) is a kind of product for differential pressure measurement and control. The product can be used to measure the differential pressure of various gases, liquids and other media. It can set differential pressure control points to achieve continuous pressure measurement and switching control. When the differential pressure reaches the preset value, the output control signal is turned on or off, so that the automatic control can be realized. The product has the advantages of high precision, low hysteresis, quick response, stable and reliable performance, easy operation and convenient installation. The same is a high technology product of the microcomputer technology used for the automatic control of differential pressure. The product is also an alternative for traditional pressure gauge.

The product is characterized by:

● Long life.
● Simple wiring.
● The product can work for a long time in the environment of vibration.

Technical Parameters

Display：-1999~9999, multi unit switching
Accuracy: 0.2%
Control output: relay, 4-20mA, RS485
Pressure control points and hysteresis: Can be set in full range
Contact capacity: 220V/3A, 24V/10A
Power consumption: 1W
Input voltage: 24V/220V optional
Working temperature: -20 -70℃
Compensation temperature: -10 -60℃
Stability：±0.2%FS/year
Overload capacity：200-300%
Housing Material: ABS engineering plastic or cast aluminum alloy

Ordering Codes (Model Selections)

WM1308	Pressure Switch (Pressure Controller)	
-	Housing type	0：100mm display diameter (1 relay output) 1：72mm display diameter (2 relays output) 2: Ex-proof cast alloy aluminum (2 relays output) 25: Ex-proof cast alloy aluminum (5 relays output)
-	Pressure range	e.g. 0-10bar or 0-1MPa etc.
-	Wet Part Material	-S4: 304 Stainless Steel -S6: 316 Stainless Steel
-O	Signal Output	1：4-20mA 2：RS485 3: specified
-V	Power Supply	1: 24VDC 2: 220VAC
-A	Installment type	1: thread 4: customer specified
-	Size of installment	e.g. for A1, -1/2BSP or -M20*1.5 etc.; for A3, -2" or 3" etc.

WM13080 type:
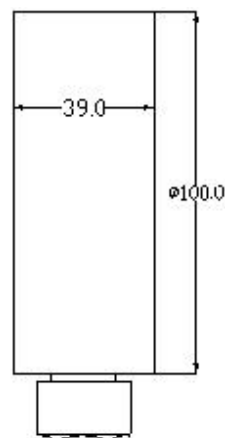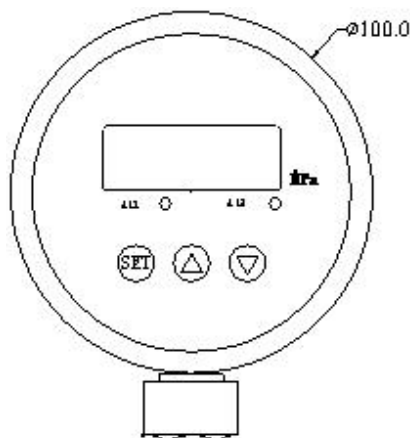
WM13081 type:

WM13082 and WM130825 type:
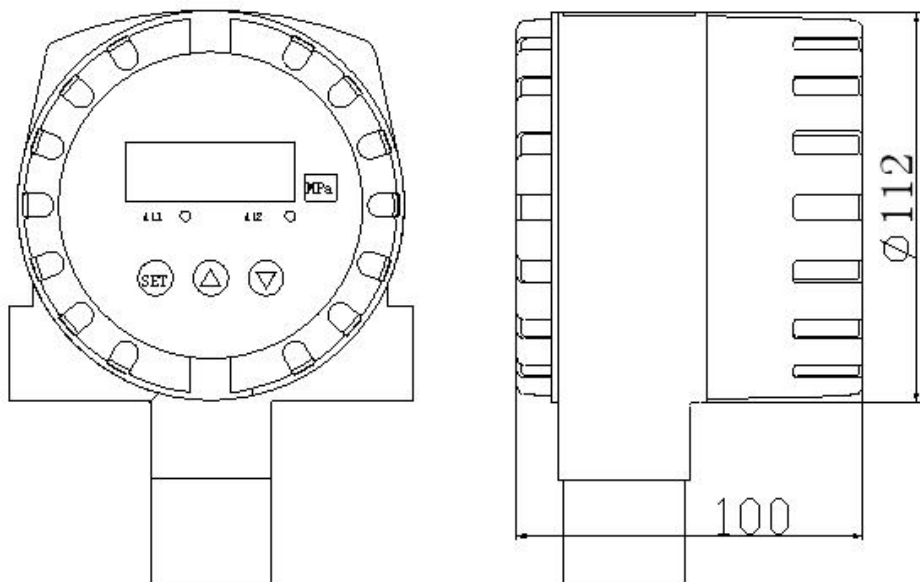
Controlling Points Preset Step (Take WM13081 as example):

"UP" Key：Cursor shift / select previous menu；
"SET" Key：Menu entry / confirmation；
"DOWN" Key：Digital modify / select next menu;
When the measured value status is displayed，Press the "UP" key to display the ah alarm value，Press "DOWN" key to display al alarm value;
When the measured value status is displayed，Press the "SET" key twice to enter the password，"UP" /"DOWN" key switch to modify the value, Press "SET" again to enter the menu；
After entering the menu, "UP" /"DOWN" key can switch to select the menu，"SET" key is used to enter the menu content to modify. After modification, press "SET" key to return to menu selection；
After each parameter is modified, confirm to save the setting at the end of the group of parameters; otherwise, the parameter modification is invalid；
After the parameters are confirmed and saved, switch to "END" option, and press "SET" key to return to display the measured value；

Group 1 Parameters: alarm parameter setting (password: 0010)

Serial No.	Symbol	Menu name	Value range	Menu description
1	AH	AH Alarm value	-1999~9999	Any setting within the range
2	AL	AL Alarm value	-1999~9999	Any setting within the range
3	ALo1	AH Alarm mode	HH or LL	Default HH (high alarm）
4	ALo2	AL Alarm mode	HH or LL	Default LL (low alarm)
5	HYA1	AH Alarm sensitivity	00.00~99.99	Default 0
6	HYA2	AL Alarm sensitivity	00.00~99.99	Default 0

7	SAUE	Save settings	YES or NO	Select Yes and press OK to save the settings
8	End	Exit		Exit settings

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

No.	Symbol	Menu name	Value range	Menu description
1	UN	Unit selection	Bar/KPa/MPa；PSI	Unit indicator switch
2	dot	Decimal point	0~3 bits	Decimal point position switch
3	U_r	Lower limit of measuring range	-1999~9999	Factory settings, do not modify*
4	F_r	Upper limit of measuring range	-1999~9999	Factory settings, do not modify*
5	Off	Zero correction	00.00~99.99	Zero offset compensation, default 0 note 1
6	Add	Postal address	0~255	Optional communication function
7	bAd	Communication baud rate	1200~9600	Optional communication function
8	PAR	Communication mode	N81/O81/E81/N82/O82/E82	Optional communication function
9	Cut	Zero resection range	0~1000（mean 0~100.0%）	Default20（mean2.0%） note 2
10	FLtr	Digital filtering time constant	0~250	Default 005 note 3
11	SPS	Sampling rate	0~1000	Default 40 note 4
12	U2ro	Zero AD value	0~3276	Do not modify*
13	UFUL	Full scale ad value	0~3276	Do not modify*
14	LoAd	Restore factory settings	YES or NO	Do not modify*
15	SAUE	Save settings	YES or NO	Select Yes and press OK to save the settings
16	End	Exit		Exit settings

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, if the zero correction is set to -0.05, the display value after compensation is 10.00；

Note 2：This parameter can cut off the small signal of zero display. For example, 0 pressure is displayed as 0.05, and it can return to zero when the setting value of resection range is increased；

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

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

Controlling Points Preset Step (Take WM13082 as example):
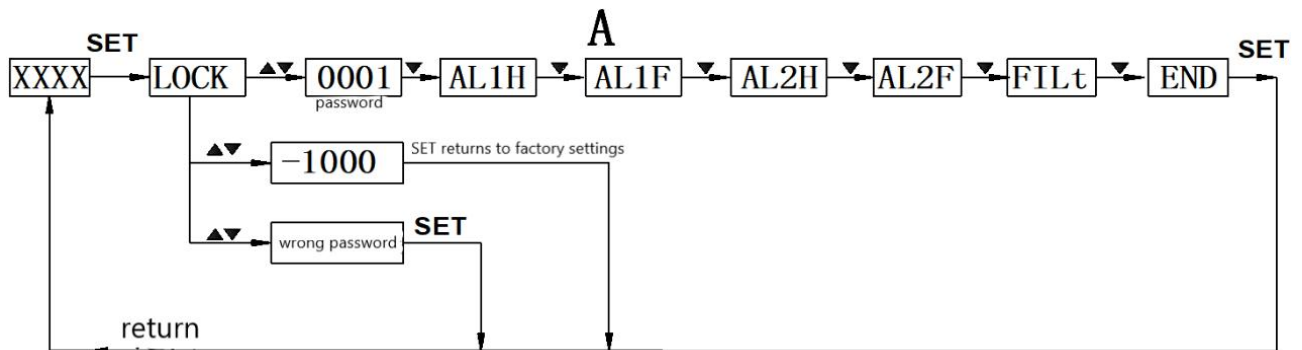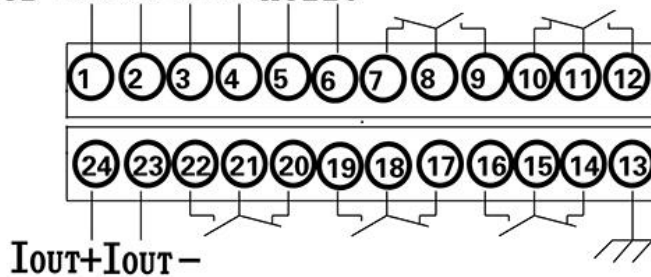
AL1H is the pull-in value of switch 1, AL1F is the release value of switch 1

AL2H is the pull-in value of switch 2, AL2F is the release value of switch 2

FILt this value is the display filter coefficient to prevent the display from jumping due to pressure fluctuation. The larger the filtering coefficient is, the more stable the display is, but the more lagged it is. 3 ~ 10 options

END save exit

Note: the switch point is determined by the configuration of the pull in value and the release value. When the pull in value is greater than the release value, it is the upper limit alarm output (normally open function). When the pull in value is less than the release value, it is the lower limit alarm output (normally closed function). The difference between the pull in value and the release value is the return difference of the switch point.

For example: to set the switch point 1 as the upper limit alarm output (normally open function) to draw at 4MPa and to disconnect at less than 3.95mpa; the switch point 2 as the lower limit alarm output (normally closed function) to disconnect at 10MPa and to draw at less than 9.95mpa:

Enter the menu: settings

AL1H=4.00   AL1F=3.95   AL2H=9.95   AL2F=10.00

Press "set" key● display "lock" (prompt for password)

Press the▲ or▼ key to input the password "1", ● press the "set" key to confirm.

Press the▲ or▼ key to scroll up or down for menu selection (al1h, al1f, al2h, al2f, end)

Press "set" key to enter the selected menu. Press the▲ or▼ key to change the setting.

Press the "set" key to confirm. If necessary, select other menus to modify.

After modification, select "end" and press "set" to confirm save and exit.

If no key is pressed for 30 seconds, it will exit the setting state automatically, but the modified data will not be saved.