ATTENTION: AVI-PSM system/unit is ready for operation
NO CONFIGURATION NEEDED BEFORE OPERATION
Power on after installation and AVI-PSM is ready for operation

However, if re-configuration is necessary for application, please read the following procedure carefully and operate strictly on the instructions as below:

Function Setting (Configuration)

5.1 Set point configuration

There are two types of set point calibration:
automatic set point calibration and **manual set point calibration**

5.1.1 Automatic set point calibration:

When the system works in automatic mode, it will run self-testing program after connecting to power. Then it will search set point automatically based on its original setting. The whole process needs approximately 50-80 seconds. Generally, the unit is installed in empty vessel. After the installation, the unit will take current reading as "normal status" indicating the process material does not reach the probe. After output the "warning signal/position", it turns back to "normal position" and keep output "normal signal".

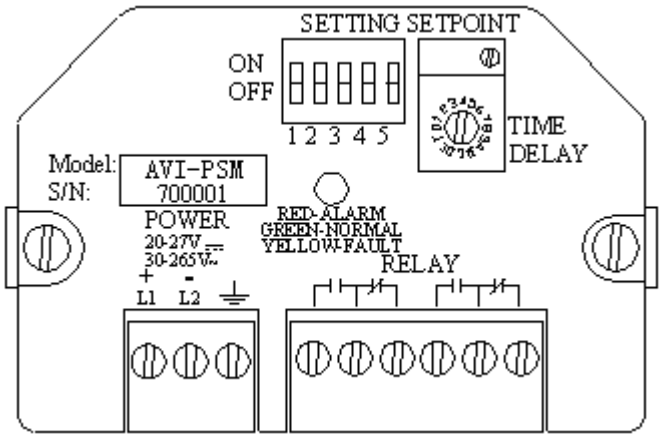


Figure 5.1 AVI-PSM Serial Unit Set Point

5.1.2 Manual set point calibration:

After connecting the power, the "set point" on the top of the unit needs to be adjusted manually to configure the set point. There is a "set point" button on the top right of the unit (see Figure 5.1) and it can be adjusted manually to set the output set point. Clockwise turning the set point indicate the ascending of setting point and anti-clockwise indicating the descending the setting point.

5.2 System State Indicator

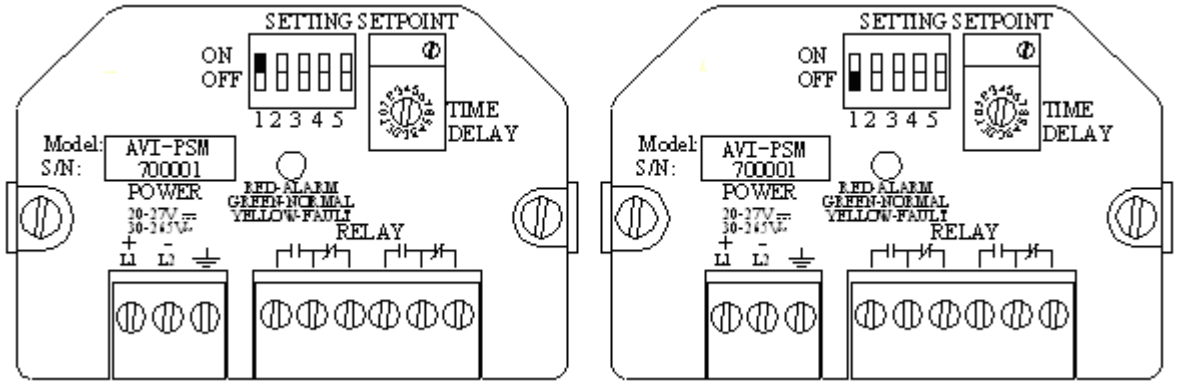
There is a LED indicator in the middle of the unit (Figure 5.1) indicating the system state: A Green LED indicates the system is in the normal state. A RED LED indicates the system is in alarm. A YELLOW LED indicates the system in ERROR.

5.3 Time Delay Control

There is a time delay switch on the top right-hand side of the unit (Figure 5.1). It is used for time delay control (time from alarm state back to normal state). Time delay is adjustable between 1 to70 seconds with 16 different setting as follow:

Setting position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Time delay (seconds)	1	2	4	6	8	10	12	14	16	18	20	30	40	50	60	70

5.4 Working Mode Setting



ON Mode OFF Mode

Figure 5.2 Working Mode Setting

There are 5 switches on the top of the unit panel (see Figure 5.2). Switch up is ON position and switch down is OFF position, except for the 5th switch, which is "reset switch". All functions of each individual switch are listed below:

Position and function	ON	OFF
1：Calibration mode	Manual calibration	Auto calibration
2：High or low alarm	High level alarm	Low level alarm
3：Material setting	Conductors	Insulators
4：Range setting	Long range application	Short range application

ATTENTION: WRONG SETTING MIGHT CAUSE INCORRECT OUTPUT

5.4.1 Calibration Mode

The system can be set as manual or automatic calibration mode. For the automatic calibration, empty vessel is required for the system to calibrate after installation.

5.4.2 High level or Low level alarm Mode

The switch system could be set into high level or low level alarm mode. High level alarm means when the processed material reach the position higher than the setting point in the vessel, it would give alarm status output, and also with its failsafe function. Low level alarm mode means when the processed materials reach the position lower than the setting point in the vessel, it would give alarm status output, and also with its failsafe function. High level alarm mode is default setting when it was manufactured.

5.4.3 Selection of processed materials

The processed materials can be divided into two major types: conductive materials (conductor) and insulating materials (insulator). Users can select the parameters for manual calibration mode based on the conductivity of the processed materials. Some process materials are listed below:

A	Conductors:	Coal, Mud, Sand, Water and water based liquid etc…
B	Insulators:	Powder, Ash, Oil, hot and dry coal, plastic, chips, etc…..

Attention: if user need change the setting of "Material Setting", switch 5 (reset switch) must be reset after power off. After power on, the system would work on new setting. So we strongly recommend that users set the "material setting" with power off

5.4.4 Probe Setting

In general, 98% applications are long probe applications.

A	Short probe	the probe is less than 500 mm (approximately 9 feet)
B	Long probe	the probe is longer than 500 mm (approximately 9 feet)

Attention: if user need change the setting of "Probe Setting", switch 5 (reset switch) must be reset after power off. After power on, the system would work on new setting. So we strongly recommend that users set the "material setting" with power off.

5.4.5 Reset Switch

Reset switch is designed to let system reset all settings (5.4.1 to 5.4.2). After reset, the system will reset all settings according to each individual switch settings (5.4.1 to 5.4.2) and control the output.

Attention: reset switch is only used to re-calibrate the system. If users press reset switch by accident, it will let the system loose all original setting parameters. So we strongly recommend that after system calibration, use glue tape with label to seal all switches to avoid any unintended press.

CALIBRATION

1 Power off and install the system properly. Make sure that the processed materials did not reach the probe.
2 Select automatic calibration (1st switch is OFF)
3 Select 2nd, 3rd and 4th switch on the correct position.
4 Press the 5th switch to new position.
5 Turn on the power, the system will calibrate automatically for approximately 80 seconds, then the system will be ready to operate.