

# PORTABLE INSTRUMENT : APW

## APW-MES

### AUTONOMOUS SUSPENDED SOLIDS METER

(1) SS sensor connexion

(2) ON/OFF button

(3) Slope « p % »

(4) Damping potentiometer « Amt »

(5) zero potentiometer « z »

(6) Calibration potentiometer « Etal »

(7) 9V battery compartment



**CONTROL BOX**

Cable (10 m)

Connector



**SENSOR + CABLE**

SS optical sensor

Optical length 5 mm

## Powering up the device

- The sensor comes connected with the Control Box in its carrying case (**PONVM2**).
- Push the button On/Off (**2**).
- The sensor in the air, the value must be between 0 to 2 g/L.

## Calibration :

Remarques préalables :

- The device comes with the 0 calibration.
- During calibration, the potentiometer Amt (**4**) at the minimum.
- Clean the SS sensor, specially optics.

### **ZERO ADJUSTMENT :**

- Dip the sensor into clean water
- Wait for the temperature stabilisation (about 10 sec./°C)
- Adjust the potentiometer « Z » (**5**) et amener la lecture à 0.00 (+/- 0.01).

### **SLOPE ADJUSTEMENT :**

- sample a Prélever un échantillon représentatif du milieu à contrôler, d'un volume suffisant pour introduire le capteur (seau).
- Dip the sensor into the sample and agitate it and note :
  - the value on the screen (**a**)
  - the slope value « X1 » when the « %p » button (**3**) is maintain pushed .
- check the SS value according a standardized analyse of the sample (NFT90-105). (for a best analyse, make 3 analyses and note the average "**b**")
- If there is a big difference between "**a**" and the standardized analyse , adjust the instrument using the new slope value "**x2**" :

$$\frac{a}{x1} = \frac{b}{x2} \Rightarrow x2 = x1 \left( \frac{b}{a} \right)$$

Push the " %p " button (**3**) (and maintain pushed this button and adjust the reading value to the x2 value using the potentiometer " ETAL " (**6**)).

## Measure :

- Dip the sensor into the solution,
- Read the value after value stabilisation.

If necessary, you can adjust the damping using the potentiometer " Am t " (**4**).

## Maintenance :

### **Sensor PONCIR-MES5-S10.**

- Rinse after using.
- Clean the optics with a wetted sponge.
- Control and adjust the zero value with clean water

### **Battery change**

The LOBAT indicator on the display screen indicates that the battery could be change. Remove the transparent cover, open the battery compartment (**7**) and replace the 9 V battery.

**Observation :** It is normal to read « LOBAT » on the display for a short time during the switching-off.

### **Control Box and connectors**

Keep the connectors dry and clean and connected if possible.  
A temperature up to 80°C could make the control box worse.

## Specifications :

<b>Control Box</b>	<b>Sensor</b>
<p><b>Power supply :</b> 1x 9V battery - 55 Hours lifetime</p> <p><b>Electronic box :</b> Protection IP 65</p> <p><b>Dimensions :</b> (h x w x d) : 161 x 81 x 55 mm Weight : 400 g</p> <p><b>Material :</b> IP 65. reinforced polyester with hinged IP 67 transparent cover Display : 2000 pts LCD display, 3 ½ digit. 18 x 46 mm</p> <p><b>Operating temperatures:</b> from – 10.0°C to +60°C</p> <p><b>Measured parameters :</b> IR optical absorption (950nm) With automatic temperature compensation.</p> <p><b>Measuring range :</b> 0 to 20 g/l for the APWMES-20 0 to 50 g/l for the APWMES-50</p> <p><b>Accuracy :</b> 2% of displayed value +/- 1 digit</p> <p><b>Options :</b> analog output Accessories: winding drum</p>	<p><b>Process :</b> IR optical absorption (950nm), pulsed emission (frequency 10 Hz) and regulated</p> <p><b>Material :</b> Delrin, Polyuréthane, and spécial glass, IP68</p> <p><b>Dimensions :</b> Diameter 58 mm Length 210 mm</p> <p><b>Weight :</b> 450 g</p> <p><b>Cable :</b> 4 threads, coated shielded PU cable, 3 m standard length. (customized up to 100 m on request, 40 g / m).</p>