STARTING UP FOR 801 / 901

FEATURES

- **VERSION ED : PANEL MOUNTING DIN 72 x 144 mm**
- **VERSION MD : WALL-MOUNTING ENCLOSURE**
- **2 SWITCHABLE SCALES :**
  - **0 - 2 MΩ (Centred 100 KΩ)**
  - **0 - 20 MΩ (Centred 1 MΩ)**
- **1 ADJUSTABLE SET POINT**
- **VOLT FREE CHANGE OVER RELAY**
- **ANALOG 4 to 20 mA OUTPUT**

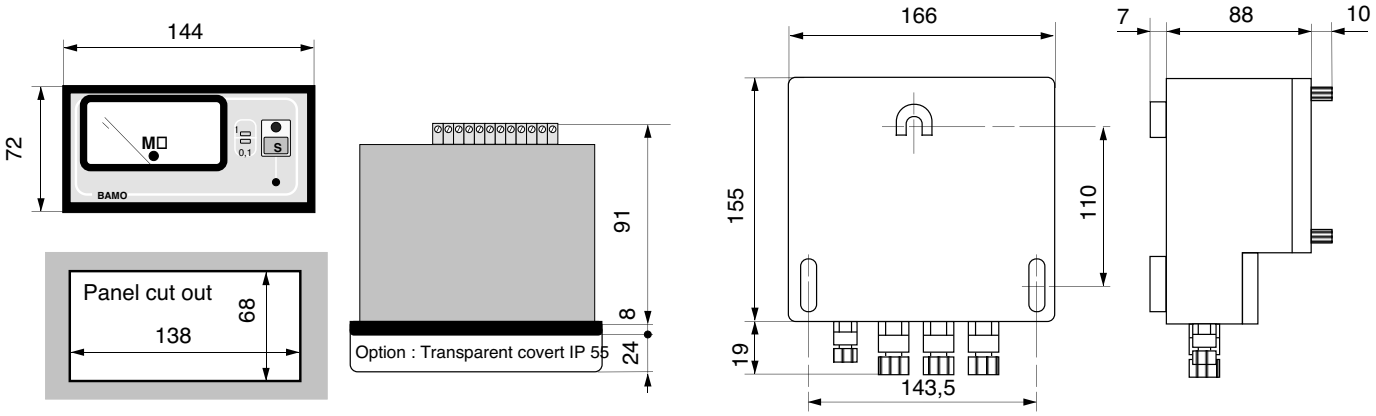
TECHNICAL SPECIFICATIONS

Main power supply	: 230 V/ 50-60 Hz 10 VA single phase.
Dilated scales	: 0 - 2 MΩ (Centred 100 KΩ) 0 - 20 MΩ (Centred 1 KΩ)
Conductivity meter	: Version 901 ED or 901 MD mS graduation
Accuracy	: ± 3%
Set-points	: adjustable with potentiometer and push-button
Output relay	: Volt free change over contact rated at 500VA / 250V / 2A Indication with green and red LED
Analog output	: 4 to 20 mA (max. 300 Ω)
Housing	: DIN 72 x 144 mm panel mounting IP 40. Connections with removable wiring connectors. Wall mounting IP 55. Connections with 9 mm cable glands
Associated probes	: Coefficient C = 0.1
OPTIONS	Wall mounting with transparent cover IP 55 on ED model (ref. CV 72)

BAMO MESURES
22, Rue de la Voie des Bans - ZI de la Gare - 95100 ARGENTEUIL
Tél. (+33) 01 30 25 33 20 - Web : www.bamo.fr
Fax : (+33) 01 34 10 13 05 - E-mail : nfo@bamo.fr

15/02/99
RESISTIVITY AND CONDUCTIVITY METER
- SERIES 801/901 -
310 I1 01 A
MES
310/1

1 - DIMENSIONS



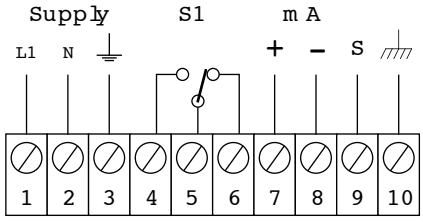
2 - INSTALLATION

For Panel mounting models the dimensions for the panel cutout are 138 x 68 mm.
In all cases avoid the risk of water or dust and mount the unit according to the installation norm. The unit has to be placed in non condensing area with temperatures between 0 and 50°C.

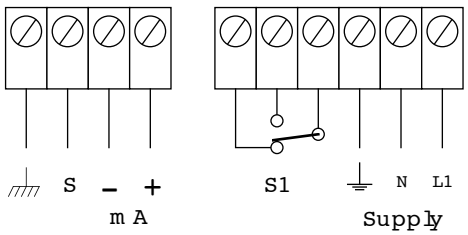
3 - CONNECTION

To verify the connections.
Installation depends of the used model, the labels on the units clearly indicates the different connections.
We recommend to use 3 x 1 mm2 cable for the power supply and 0.75 mm2 for all the other connections.
The measuring probe has to be connected with the centre of the coax cable to number 9 (S) and the shield to number 10 (Ground).
Please note that the plait of the electrode corresponds to an electronic mass and not to earth.
The used coax cable shut be of the CCA type or the cable provided with the probe.
We do not recommend to use other cables, this can produce serious measuring errors.

Enclosure box



Wall mounting



4 - ANALOG OUTPUT

The resistivity meter 801ED / 801MD are equipped with an analog 4 to 20 mA output (0 to 20 mA on request).
The analog signal allows a recording of the measure.
Attention, the output is proportional to the display.
4 mA (or 0 mA) corresponds with 0 for the resistivity meters.
12 mA (or 10 for 0-20 mA output) corresponds with 0.1 M on the 0-2 M scale or with 1M on the 0-20 M scale.
20 mA corresponds with 2M on the 0-2 M scale or to 20 M on the 0-20 M scale.

BAMO MESURES
22, Rue de la Voie des Bans - Z.I. de la Gare - 95100 ARGENTEUIL
Tél. (+33) 01 30 25 33 20 - Web : www.bamo.fr
Fax : (+33) 01 34 10 13 05 - E-mail : nfo@bamo.fr

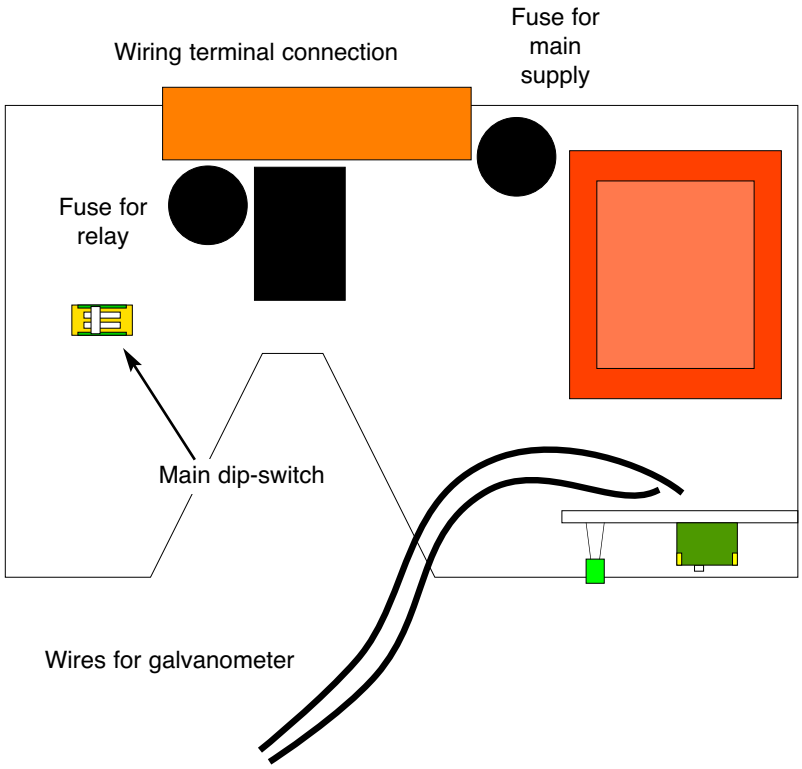
5 - CHOICE OF THE MEASURE RANGE

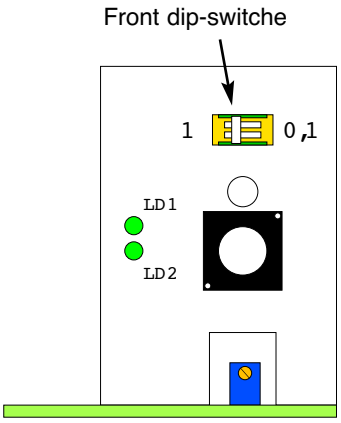
Panel mounting model

The choice of the measuring range is made with 2 Dip-switches located on the printed circuit board inside the unit. To access the switches remove the front and back panel on the unit.
Gently push out the PCB.
Attention the galvanometermeter is connected to the PCB with 2 wires.
Set the Dip-switch on the front PCB to the left (range 1).
On the main PCB set the second Dip-Switch to the left, range 1.
Range 1 is from 0 to 20 MΩ with the centre on 1 MΩ.
When the unit is powered up the indicator LED LD1 will light up, the analog output is set automatically on the range from 0-20 MΩ.
Set the Dip-switch on the front PCB to the right (range 0.1).
On the main PCB set the second Dip-Switch to the right, range 0.1.
Range 0.1 is from 0 to 2 MΩ with the centre on 0.1 MΩ.
When the unit is powered up the indicator LED LD2 will light up, the analog output is set automatically on the range from 0-2 MΩ.

Wall mounting model

To select the range is done with the same procedure.
The Dip-switches are located under the hideout before mounting the unit.



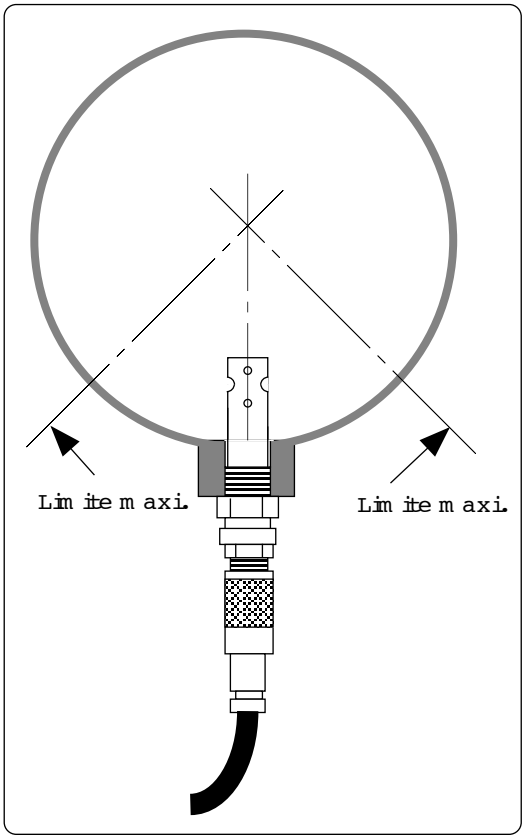


6. ADJUSTMENTS

Power up the unit, then press the S button on the front.
With the potentiometers located under the button adjust the meter indication to the value required.
Attention, it is necessary to take into account the configured measuring range.
The range is indicated by the figure 1 or 0.1 lights (See above point 5).
The relay output contact is protected with a fuse, respect the contact ratings (250V / 3A / 500VA).
The contact is closed between connector 5 and 6.

BAMO MESURES
22, Rue de la Voie des Bans - Z.I. de la Gare - 95100 ARGENTEUIL
Tél. (+33) 01 30 25 33 20 - Web : www.bamo.fr
Fax : (+33) 01 34 10 03 05 - E-mail : nfo@bamo.fr

7 - MEASURING PROBE SETTINGS



Probes to measure in flow.
Types BS 570 / BS 572 / BS 1285 / BC 1425
Probes to measure in immersion.
Types BS 575 / BS 1287
These coaxial probes are specially made for measure of resistivity in the water between 500 and 20M, and for conductivity between 0.5 S and 2mS. The setting have to be respected to obtain a correct measuring. (More informations about probe on page 360)

7.1 MOUNTING OF THE MEASURING PROBE

It is important to respect the maximum pressure and temperatures for each type of probe.

BS 570 / BS 572	: 10 Bar	100°C.
BS 1285	: 10 Bar	85°C.
BC 1425	: 5 Bar	50°C.
BS 575	: 10 Bar	100°C.
BS 1287	: 5 Bar	50°C.

In all cases the connector and installation has to be made according the diagram showing next.
Avoid a retention of air between the skirt and measuring electrode, use a straight length of tube, do not install the probe after a elbow to avoid turbulence.
The liquid has to be able to circulate freely around the probe.
Mounting the probe and tighten it with the screw, do not stress the coaxial connector.
For basin measuring probes the fixing of the probe can be made with a bridge.

7.2 CONNECTION

The connection of B probes 572 / 575 /1287 are made by a IP 55 connector.
Mount the coaxial cable as following, the centre to the connector indicating S and the shield to the connector indicating ground.
On B probes 570 and BS 1284 a coaxial connector is anticipated for the electrical connection.
Mount the coax cable to the connector according to the installation note ships with the connector.

8. VERIFICATION AND CONTROL OF THE MEASURING CHAINE

A simple check is necessary to control the cable connections.
Take the probe out of any liquid, the resistivity meter has to indicate the maximum in the display.
(the indication for conductivity meters shut show the minimum).
The analog output has to give a 20 mA signal for resistivity meters and 4 mA for conductivity meters.
Short circuit the skirt and the central electrode of the measuring probe, the resistivity meter has to indicate 0 (the indication for conductivity meters shut show the maximum).
The analog output has to give a 4 mA signal for resistivity meters (0 mA if the output is configured 0 -20 mA) and 20 mA for conductivity meters.
Attention, the measure is not temperature compensated.
The resistivity or conductivity displayed is a direct measure.
If measures are not correct than verify the cabling and mainly the connections and the coaxial connector.
In all cases our technical service is at your disposition for complementary information and help.