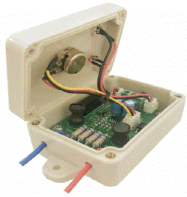


# AQTRONIC TPM2 Digital Ohmic Sensor Module User Guide

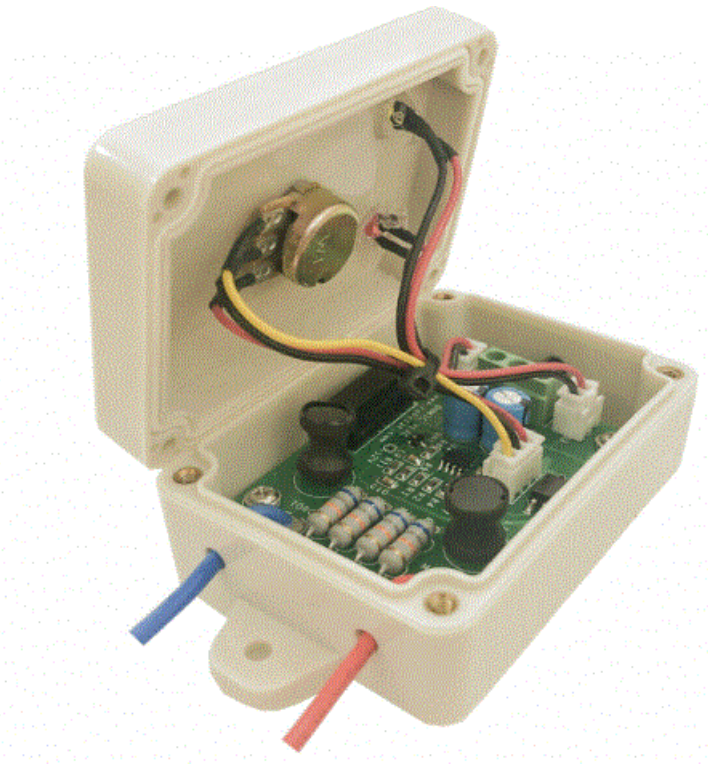


Contents



AQTRONIC

## AQTRONIC TPM2 Digital Ohmic Sensor Module



## Product Information

The TPM2 Digital Ohmic Sensor by AQTRONIC is a digital ohmic sensor comparator designed to analyze resistance changes between the special Ohmic consumable attached to the Plasma torch nozzle and the cutting piece or machine. It is used to ensure accurate and precise cutting operations. The device is equipped with the ability to adjust the ohmic sensor sensitivity, allowing users to customize the sensor's response according to their specific requirements. It also features the ability to eliminate HV/HF ionizing voltage, ensuring safe and reliable operation.

**Specification:**

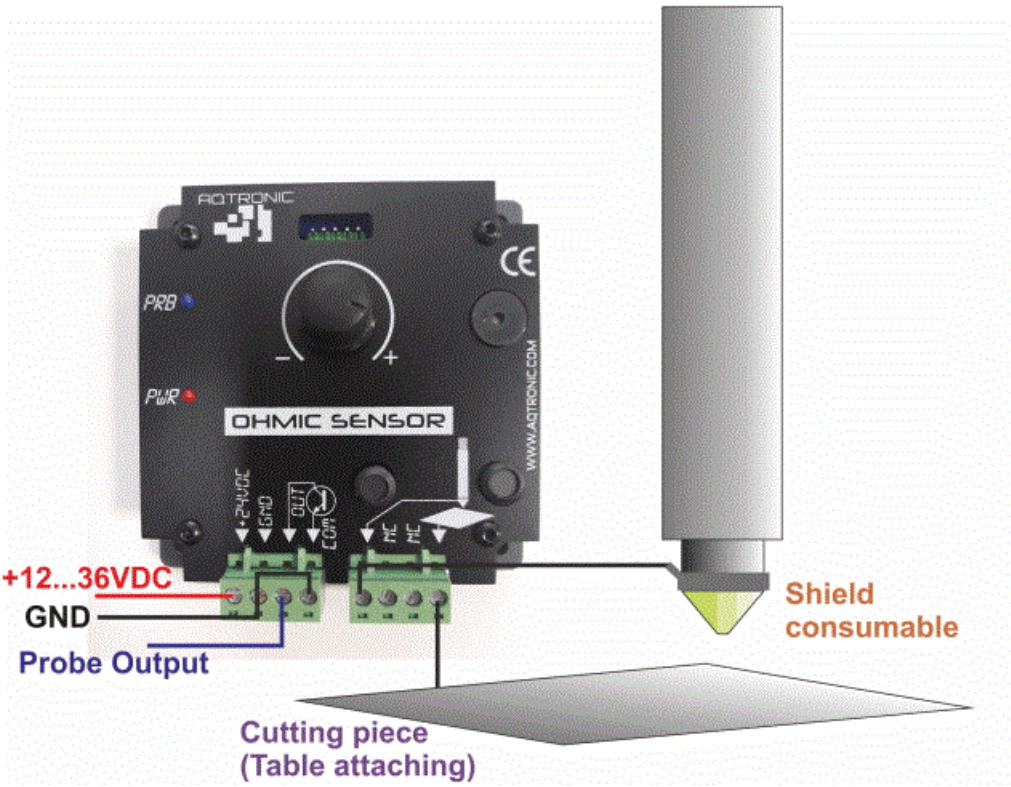
- Power: 12-36VDC
- Output: Opto Isolated – Low active
- Sensing range: 0 – 1 MOhm

## Product Usage Instructions

1. Always use the Ohmic sensor with a backup sensing system like FloatHead (mechanical Touch-off) that will stop down motion or a magnetic torch holder if the sensor fails to work. This is especially important when working with dirty, oily, rusty, or painted metal surfaces.
2. Ensure that the tip of the nozzle on your torch is clean and free from any debris or slag. This will help maintain proper electrical contact.
3. Do not coat or cover the plate in nonconductive material as electrical contact is required for the sensor to function correctly.
4. If using a water table, be cautious as the torch shield gas may splash water onto the torch, closing the Ohmic circuit. Additionally, the torch may descend into a puddle of water on the plate, resulting in a missed cut. Take extra care when using ohmic sensing over water.

## Device information

- The unit is a digital ohmic sensor comparator that works by analyzing resistance changes between the special Ohmic consumable attached to the Plasma torch nozzle and the cutting piece or machine's table. The microprocessor activates the output when the resistance value at the detector, the input is less than the stored threshold value.
- Always use the Ohmic sensor with a backup sensing system like FloatHead (mechanical Touch-off) that will stop down motion or a magnetic torch holder if the sensor fails to work. This can happen on dirty, oily, rusty or painted metal. Keep the tip of the nozzle on your torch clean and free from trash and slag.
- Be aware that since electrical contact is required. The plate must not be coated or covered in non-conductive material. Please note that if you use a water table, the torch shield gas tends to splash the water around and the result is that it gets on the torch, which closes the Ohmic circuit, or that the torch will go down into a puddle of water on the plate, which could result in a miss cut. More care needs to be taken when using ohmic sensing over water.




Specification:

- **Power**: 12…36VDC
- **Output**: Opto Isolated – Low active
- **Sensing range** – (0 – 1) MOhm

Ability to adjust the ohmic sensor sensitivity Ability to eliminate HV/HF ionizing voltage

### Unit setting

- Confirm the power supply and I/O signal circuit.
- Turn on OHMIC. The red light (PWR light) will light up, and rotate the dial clockwise until the blue led (PRB) lights up, the buzzer is also noisy, this is an additional alarm indicator that you can turn on or off by pressing and holding the button for one second. At this point, slowly turn the dial counterclockwise until the blue LED turns off. The microprocessor will store this point until the next user adjustment.
- The unit is ready for use.

http://www.aqtronic.com

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### Documents / Resources

**AQTRONIC TPM2 Digital Ohmic Sensor Module** [pdf] User Guide

TPM2 Digital Ohmic Sensor Module, TPM2, Digital Ohmic Sensor Module, Ohmic Sensor Module, Sensor Module, Module