MPM6861T is an intelligent wireless pressure and temperature transmitter with low power consumption and wireless communication function, which can be connected to two separate temperature and pressure sensors simultaneously. It can be equipped with NB-IoT/4G network. It reports the data according to the set interval and sends alarms to users. Customers can configure the device and inquire for data remotely. All the upload and download data will be stored into the database automatically for later query. It is more intuitive, accurate and efficient through PC or mobile terminals access internet to acquire and analyze data as well as forming with report and data curve. The transmitter can detect the real-time data of many monitoring points in a large area such as fire pipe, fire terminal, fire pump room, urban water supply, petrochemical and other fields that need unattended and remote monitoring.

**FEATURES**

- NB-IoT / 4G network for application
- Integrated high-energy lithium battery, with service life over 2 years
- Data application in PC and mobile terminals, device data query
- Based on GIS managing system, device status prompt
- Support remote setting for data collecting frequency, data transferring frequency, etc.
- Indicator light alert for device state/abnormal conditions
- Opened database and interface protocol, and available interface parsing file

**SPECIFICATIONS**

**Temperature Sensor**

- Measuring Range: -50°C ~150°C
- Accuracy: ±2.0%°C

**Pressure Sensor**

- Pressure Range: 0kPa~20kPa...70MPa
- Accuracy: ±0.5%FS
- Over Pressure: 1.5 times FS
- Pressure Type: Absolute/Sealed Gauge
- Long Term Stability: ±0.5%FS/Year
- SIM Card: Nano SIM (12mm×9mm)
- Power Supply: 3.6V@38Ah Lithium Battery
- Display: LCD display
- Keyboard: Panel key triggered
- Setting: In site/Remote control
- Weight: ≥1.5kgs
- Communication Mode: NB-IoT/4G
- Communication Protocol: MQTT
- Consumption: Average current at sending status ≤100mA@3.6V DC, at sleep mode ≤25uA@3.6V DC

**ENVIRONMENT CONDITIONS**

- Operation Temperature: -20°C ~70°C
- Storage Temperature: -40°C ~85°C
- Relative Humidity: 0%~95%
- Protection: IP65
MPM6861T
Wireless Pressure and Temperature Transmitter

OUTLINE CONSTRUCTION (Unit: mm)

Fig.1 MPM6861T Wireless Pressure and Temperature Transmitter

Fig.2 Installation of MPM6861T Wireless Pressure and Temperature Transmitter

DATA TRANSMISSION

<table>
<thead>
<tr>
<th>Communication Mode</th>
<th>Standard/Band</th>
<th>Transmission Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>TDD-LTE B38/B39/B40/B41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FDD-LTE B1/B3/B8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TD-SCDMA B34/B39</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WCDMA B1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDMA 1X/EDGE B0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GSM/GPRS/EDGE B3/B8</td>
<td></td>
</tr>
<tr>
<td>Multi-Bands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe / Korea /</td>
<td>FDD-LTE B1/B3/B5/B7/B8/B20</td>
<td>Global Bands</td>
</tr>
<tr>
<td>EMEA/Thailand /</td>
<td>WCDMA B1/B5/B8</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>GSM/GPRS/EDGE B3/B8</td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td>FDD-LTE B2/B4/B12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WCDMA B2/B5</td>
<td></td>
</tr>
<tr>
<td>South America /</td>
<td>TDD-LTE B40</td>
<td></td>
</tr>
<tr>
<td>Zealand / Taiwan,</td>
<td>WCDMA B1/B2/B5/B8</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>GSM/GPRS/EDGE B2/B3/B5/B8</td>
<td></td>
</tr>
<tr>
<td>NB-IoT</td>
<td>B3/B5/B8</td>
<td></td>
</tr>
</tbody>
</table>
MPM6861T Wireless Pressure and Temperature Transmitter

### Features
- Safely applied in explosive hazardous areas
- Opened database and interface protocol
- Indicator light alert for device state
- Frequency, data transferring frequency
- Support remote setting for data collecting
- Status prompt terminals, device data query
- Terminals, device data query
- With service life over 2 years
- Integrated high-energy lithium battery
- Pressure Transmitter MDM490 Differential

### Construction
- Full stainless steel construction, compact
- Ex-proof version MDM490 conforms to CE and RoHS certificates
- Positive and negative pressure adjustable outside
- Temperature compensation and aging effect
- Using piezoresistive differential pressure sensor
- Laser welding, full-sealed construction

### Specifications
- Housing: Stainless steel 304
- Diaphragm: Stainless steel 316L
- O-ring: Viton
- Filled liquid: Silicon oil
- CE and RoHS certificates

### Electric Performance
- Insulation resistor: 100MΩ, 500V DC
- Electrical connection: Plug connection or Φ7.2mm 7-pin cable
- Power supply: 2-wire 15V~28V DC
- Output signal: 2-wire 4mA~20mA DC; 3-wire 0/1V~5V DC

### Power Supply
- Power Supply: 3.6V@38Ah Lithium Battery/9V~36V DC
- Over Pressure: ≤1.5 times FS
- Accuracy: ≤±0.5%FS
- Stability: ≤±0.1%FS/Year
- Consumption: Average current at sending status≤100mA@3.6V DC, at sleep mode≤25uA@3.6V DC
- Transmission: ≤1ms

### Communication Mode
- Code | Communication Mode
- GC   | 4G Multi-Bands in China mainland
- GE   | 4G Multi-Bands in EMEA/Korea/Thailand/India
- GA   | 4G Multi-Bands in North America
- GS   | 4G Multi-Bands in South America/Australia/New Zealand/Taiwan, China
- GN   | NB-IoT
- GD   | 4G, 2G and NB-IoT, three-in-one

### Power Supply
- Code | Power Supply
- N    | Without Battery
- E    | Disposable Lithium-thionyl Chloride (Li-SOCI2) Battery (3.6V/38Ah)

### Antenna Type
- Code | Antenna Type
- A1   | Integrated Antenna (Recommended)
- A2   | External Sucker Antenna (Length=1m)

### SIM Card
- Code | SIM Card
- S2   | Self-owned SIM card (Data Flow Service Required)

### Software Service Type
- Code | Software Service Type
- M    | Micro Sensor Big Data Platform
- C    | Customer Self-built Platform (Note on Docking Mode)

### Others
- Code | Others
- C1   | M20×1.5 Male, face type seal
- C3   | G1/2 Male, face type seal
- C5   | M20×1.5 Male, waterline seal
- S    | Sealed Gauge
- A    | Absolute
- W    | Separated Type Mounting Bracket
- L5   | Probe length L= 50mm (customized)

###型号 | 说明
- MPM6861T | [0–2]MPa [0–60] °C
- G2    | E
- A1   | S1
- M    | C1S5
- L5   | The whole spec.
ORDER NOTES:

1. Please make sure that the measured medium should be compatible with the contact of the product.
2. The minimum range of the absolute type transmitter is 0.1MPa.
3. To improve the reliability of the product, the installation of lightning proof and grounding are highly recommended.
4. Please choose the installation method and mounting interface according to the dimension of the mounting interface. The inserted depth of the probe should not be less than ten times of the diameter of the protective tube.
5. With the further development of the temperature sensor technology, the measurement accuracy of the transmitter is also improved. Please pay attention to choosing the accuracy.
6. The default material of probe is stainless steel 304, unless otherwise specified.
7. The default cooling part length of temperature transmitter is 0mm, please specify if you have special requirement.

<table>
<thead>
<tr>
<th>Type</th>
<th>Length</th>
<th>Diameter</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Cooling Part</td>
<td>Default</td>
<td>0mm</td>
<td>-100 °C &lt; Temp. &lt; 100 °C</td>
</tr>
<tr>
<td></td>
<td>Customized</td>
<td>20mm–50mm</td>
<td>-200 °C &lt; Temp. &lt; 200 °C</td>
</tr>
<tr>
<td>Probe Length</td>
<td>Default</td>
<td>50mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customized</td>
<td>5mm–100mm</td>
<td>Ø 6 (default) Ø 6–Ø 12</td>
</tr>
</tbody>
</table>

8. If users need docking platform, please refer to the following (such as: I1);
   Classification:
   I1: No docking, Micro Sensor platform is selected;
   I2: Retrieves data through the API interface;
   I3: Open limited access to the database and users can retrieve data themselves;
   I4: Force control configuration docking;
   I5: Provide communication protocol and users will write the analysis program to complete the docking;
   I6: Set up the resolution server, deploy the resolver, and deploy the default database (php+apache+Mysql);
   I7: Set up the resolution server, deploy the specified database resolution program (sqlserver, oracle, postgresql...);
   I8: Deploy the parsing SDK to parse the data according to the data format specified by the customer;
   I9: Users customize docking method, note required.

9. For special requirements, please contact us and note in the order.