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## Датчик записи МРМ4710



### Features

- The latest microprocessing technique; better accuracy and resolution for pressure and temperature signals; digital compensation for both linearity and temperature error of pressure sensor;
- Good data security due to nonvolatile memory units;
- Single 3.6V/2400mAh Lithium cell for power supply; low current  $\leq 30\mu A$  for Standby Mode; long-term collection available;
- Full stainless steel housing; multi-track O-ring sealing; easy to change battery and read data;
- Complete recording to pressure, temperature and the happening time;
- Flexible recording time setting, the min. 1s, the max. 255 hours 59 minutes 59 seconds;

# MPM4710 Recording Transmitter

- The max. 50,000 recording;
- Bus line RS485 protocol; freely wake up transmitter to set and read pressure value, temperature value and recording;
- Factory setting restore available, could reduce cost when the user makes incorrect setting or maintenance;
- High stable design, use hardware watch-dog and multi-track software inspection to reduce system halted;
- Protection class IP68, long-term submersible application available;
- High accuracy class at wider temperature range -30°C ~80°C

## Introduction

MPM4710 Recording Transmitter is able to be widely used in petroleum, chemi-industry, power station, water conservancy, city flood control and city water supply and drainage, etc. It is supplied by battery, could work without manual control. The transmitter could record level or pressure change continuously. By setting proper data collection interval, the transmitter could record from several days to several years. Very low power consumption is another advantages, one AA battery 3.6V/2400mAh could work many years continuously. MPM4710 has an absolute pressure sensor inside, to measure lower level, please be careful for atmosphere change. We suggest to install a barometer or another MPM4710 Recording Transmitter to record air pressure. And then calculate two pressure difference of two instruments by computer, that is the final level value; Please pay attention that get MPM4710 back from the measurement point, then remove end cap and read record through data interface.

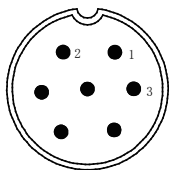
## Specification

|                        |                                                                                              |               |              |
|------------------------|----------------------------------------------------------------------------------------------|---------------|--------------|
| Pressure range         | 0~0.1...1.1MPa(Absolute)                                                                     |               |              |
| Overpressure           | 2×pressure range                                                                             |               |              |
| Power supply           | Cylinder 3.6V/2400mAh Lithium cell                                                           |               |              |
| Output signal          | RS485 digital                                                                                |               |              |
| Environment temp.      | -30°C ~80°C                                                                                  |               |              |
| Error <sup>1</sup>     | -10°C ~40°C                                                                                  | 0.10%FS(typ.) | 0.2%FS(max.) |
|                        | -30°C ~80°C                                                                                  | 0.15%FS(typ.) | 0.3%FS(max.) |
| Stability              | <0.2%FS/year (typ.)                                                                          |               |              |
| Resolution             | 0.01%FS                                                                                      |               |              |
| Temperature resolution | 0.1°C (-30°C ~80°C )                                                                         |               |              |
| Temperature accuracy   | ±1°C                                                                                         |               |              |
| Record interval        | 1s~255 hours 59 minutes 59 seconds<br>(1s~10 days 15 hours 59 minutes 59 seconds)            |               |              |
| Record data quantity   | Recording stops when the records are 50,000 (including date, time, temperature and pressure) |               |              |
| Static current         | (no collection, no recording, no communication)<30uA                                         |               |              |
| Battery life           | Typ. (once per hour)about 7 years                                                            |               |              |
| Construction material  | Housing: SS 316L O-ring: Viton                                                               |               |              |
| Protection class       | IP68                                                                                         |               |              |
| Others                 | Weight: about 500g Resolution: 100MΩ/50V<br>Shock: 20g 20~5000Hz Impact: 20g 11ms            |               |              |

1.Error calculation: the absolute value of max. error at working temperature and pressure.

## Electrical Connection

Aviation plug electrical connection:

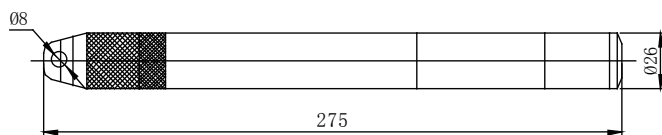


The end side of transmitter

| Pin               | Electric |
|-------------------|----------|
| 1                 | RS485A   |
| 2                 | RS485B   |
| 3                 | GND      |
| Other pin is null |          |

Pin 3 connects to GND of circuit inside. Generally, it can only connect to RS485A and RS485B. If RS485 communication has big disturbing, please connect to GND.

## Construction Outline



## Application Example

By software, users could calibrate transmitter zero, check battery, set data collection interval, read record and get temperature data and so on.

**MPM4710读取设置软件**

退出 关于

**变送器信息**

地址: 01 波特率: 56000 压力类型: MPM4710-A ID 编号: KDS236

量程零位: +050.0 量程满度: +550.0 软件版本: V1.01 压力单位: kPa

电池电压: +03.55 V 电量 %: %91.2 端口选择: COM1 小数点: 0.0

**时间设置**

仪器时间: 2009年06月09日 16时04分00秒 时间校准 采集间隔: 0 时 0 分 0 秒 修改设置

系统时间: 2009年06月09日 16时07分28秒 读出日期 0天 0小时 0分 0秒

注意: 最大可设置时间为255小时59分59秒, 最短时间为1s, 全为0表示关闭。

**存储器操作**

记录数量: 00054 剩余容量: 49945 读取 保存文件 全部刷新 上一仪器

注: 除非采集满50000条记录或者采集间隔时间为零采集才会停止。擦除操作后如果采集间隔时间不为零, 则自动启动采集记录。

把存储数据读出, 保存在计算机内存中 保存设置 下一仪器

**当前变送器校准监控**

当前压力: +094.0 压力清零 监控开关

当前温度: +025.9 恢复工厂

**地址波特率修改**

地址: 01 修改地址

波特率: 56000 修改波特率

MicroSensor Co., Ltd  
http://www.microsensor.cn

搜索 退出

刷新结束. 共 1个/第 1个/地址: 01/波特率: 56000bps

## Order Guide

| MPM4710 |            | Recording Transmitter   |   |                 |          |
|---------|------------|-------------------------|---|-----------------|----------|
|         | Range      | Pressure range: kPa/MPa |   |                 |          |
|         |            | (0~X) kPa               |   |                 |          |
|         |            | Code                    |   | Output signal   |          |
|         |            | R4                      |   | RS485 interface |          |
|         |            |                         |   | Code            | Others   |
|         |            |                         |   | A               | Absolute |
| MPM4710 | (0~600)kPa | R4                      | A | the whole spec  |          |

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