# 数据表 | Data sheet
# 压力校准器 DPC
# Pressure Calibrator DPC


DPC 能够测量并生成压力，因此可用作压力测量设备，或用作压力传感器及压力开关的测试与校准设备。
内置的锂离子电池使 DPC 成为移动校准作业的理想之选。因此，无需再为校准而拆卸系统，这加快了校准流程，并将相关成本降至最低。可编程压力曲线能够实现个性化校准流程的自动化。除了带来极致便捷性外，DPC 还具有极低的测量不确定度和出色的长期稳定性。

The DPC measures and generates pressure and can therefore be used as a pressure measurement device or as a test and calibration device for pressure sensors and pressure switches.
An integrated lithium-ion battery makes the DPC the perfect companion for mobile calibration tasks. It is therefore no longer necessary to disassemble the systems for calibration, thus speeding up the calibration process and reducing associated costs to a minimum. Programmable pressure profiles enable the automation of individual calibration processes. In addition to offering maximum convenience, the DPC also has an extremely low measurement uncertainty and great long-term stability.

## 应用领域

DPC 压力校准器最常用于以下应用场景：
实验室校准、洁净室、测试自动化、生产监测。

## Applications

The DPC pressure calibrator is most commonly used in the following applications:
Mobile calibration, laboratory calibration, clean room, test automation, production monitoring

## 技术参数 | Technical Data

| 总体 \| General | |
|---|---|
| 测量原理 \| Measurement principle | 感应式测量方法 \| Inductive Measurement System |
| 压力生成 \| Pressure generation | 内置式 \| internal |
| 测量介质 \| Measured medium | 非腐蚀性气体 \| Non-aggressive gasses |

| 测量与控制数据 \| Measure and control data | 8 种型号 \| 8 variants | | | |
|---|---|---|---|---|
| 测量与控制范围 \| Measure and control range (可在 4 种范围间选择 \| selectable between 4 options) | **DPC -1** | **DPC -10** | **DPC -100** | **DPC -1000** |
| | 0 ... 1 hPa | 0 ... 10 hPa | 0 ... 100 hPa | 0 ... 1000 hPa |
| | **DPCB -1** | **DPCB -10** | **DPCB -100** | **DPCB -1000** |
| | -1 ... 1 hPa | -10 ... 10 hPa | -100 ... 100 hPa | -600 ... 1000 hPa |
| 整体精度 \| Overall accuracy<br>上述精度基于 3 小时预热时间<br>The specified accuracy applies if a warm-up time of 3 hours is taken into account. | 0,3 % 满量程值\| FS* | 0,1 % 满量程值\| FS* | | |
| 调整精度 \| Adjustment accuracy | 0,05 % | | | |
| 稳定时间 \| Settling time | < 5 s | | | |
| 长期稳定性 \| Long-term stability | < +/- 0,1 % 满量程值/年 \| FS/year<br>基于自动或手动零点校正及幅值调整<br>0.0 % with automatic or manual zero-point adjustment | | | |
| 温度漂移 \| Temperature drift | ≤ 0,03 % 满量程值 / 开尔文 \| FS/K | | | |
| 零点平衡 \| Zero balance | 自动：可设置时间间隔<br>手动：零点按钮<br>Automatic: in adjustable time intervals<br>Manual: ZERO button | | | |

| 电气数据 \| Electrical data | |
|---|---|
| 供电 \| Power supply | 电源\| Power supply（24 VDC / 1 A）<br><br>电池供电：锂离子电池（高负载下约 8 小时续航）<br>Lithium-ion battery supply (apx 8 hours battery lifetime)<br>Nominal: 14,4 V / 16,8 V<br>Energy: 83,52 Wh / 5,8 Ah |
| 接口 \| Interfaces | USB - RS232 |

* 精度代表最大允许测量偏差，包含线性误差、滞后误差和重复性误差。
FSM AG 生产的压力传感器均经过 零点校准 和 幅值修正，因此所列精度已涵盖室温下的最大误差。

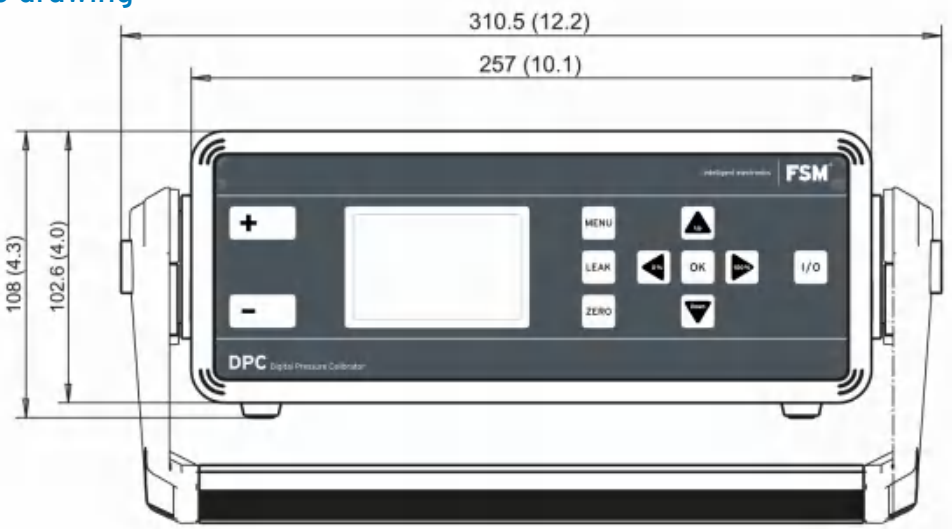
* The accuracy describes the maximum permissible measurement deviation of the sensor output signal from an applied pressure value. The accuracy includes measurement errors due to linearity errors, hysteresis errors and repeatability error. Pressure transducers from FSM are being subjected to a zero point calibration and an amplitude adjustment. Both errors are thereby compensated. The specified accuracy therefore includes the maximum error at room temperature.

| 环境条件| Ambient conditions | |
|---|---|
| Betriebsbedingungen \| Operating conditions | 温度 \| Temperature 10 °C - 40 °C<br>空气湿度 \| Humidity < 90 % RH<br>(非冷凝 \| non-condensing) |
| 运行条件 \| Storage conditions | 温度 \| Temperature -10 °C - 70 °C<br>空气湿度 \| Humidity < 90 % RH<br>(非冷凝 \| non-condensing) |

| 外壳 \| Housing | |
|---|---|
| 尺寸 \| Dimensions | 102,6 x 257 x 271 mm（宽 × 高 × 深| W x H x D)<br>不含手柄 \| without handle |
| 重量 \| Weight | 4,5 kg（不含电源 \| without power supply unit) |
| 压力接口 \| Pressure connections | 6,6 x 11 mm (适配外径 D=6 mm 的柔性软管 \| for flexible hoses D = 6 mm) |
| 显示屏 \| Display | 图形显示屏（蓝 / 白); 分辨率：10,000 点<br>Graphic display (blue/white); Resolution: 10.000 dots |

| 其他数据 \| Other data | |
|---|---|
| 运行模式 \| Operating modes | CTRL = 压力调节 \| Regulate pressure<br>MESS = 压 力 测 量 \| Pressure measurement<br>AUTO = 自由定义压力曲线 \| Freely definable pressure profiles<br><br>远程控制运行 (通过接口)<br>Remote controlled operation (via interfaces) |
| 标配附件 \| Standard accessory | 电源| Power supply<br>硅胶管，1 米 \| Silicon tube, 1 m |
| 选配件 \| Option | 运输箱 \| Transport case<br>备用硅胶管，1 米 \| Spare Silicon tube, 1 m<br>备用锂离子电池组 \| Spare Lithium-ion battery |

## 比例图 | Scale drawing



## EC 符合性声明摘录

我方特此单独承担责任声明：DPC 产品符合以下指令及协调标准的要求，因此符合相关规定：

| | |
|---|---|
| 2014/35/EU | 低电压指令 |
| 2014/30/EU | 电磁兼容性指令 |
| 2011/65/EU | 限制有害物质指令 |
| EN 61326-1:2013 | 测量、控制和实验室用电气设备 —— 电磁兼容性要求 —— 第 1 部分：通用要求 |
| EN 61000-3-2:2014 | 电磁兼容性（EMC）—— 第 3-2 部分：谐波电流发射限值（设备输入电流≤16 A / 相） |
| EN 61000-3-3:2013 | 电磁兼容性（EMC）—— 第 3-3 部分：限值 —— 公共低压供电系统的电压变化、电压波动和闪变限制（适用于额定电流≤16 A / 相且无需附加连接的设备） |
| EN 50581:2012 | 电气和电子产品中有害物质限制的评估技术文件 |

本设备贴有 CE 标志

## Extract from the EC Declaration of Conformity

We hereby declare under our sole responsibility that the DPC  product complies with the requirements of the following Directives and harmonised standards and is therefore in line with the provisions:

| | |
|---|---|
| 2014/35/EU | Low-voltage Directive |
| 2014/30/EU | EMC Directive |
| 2011/65/EU | RoHS Directive |
| EN 61326-1:2013 | Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements |
| EN 61000-3-2:2014 | Electromagnetic compatibility (EMC) – Part 3-2: Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) |
| EN 61000-3-3:2013 | Electromagnetic compatibility (EMC) – Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |
| EN 50581:2012 | Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

The device is labeled by the CE mark.