

Features

- For parameterisation or recalibration
- For 2 or 6-wire pressure sensors
- Including programming software
- Including mains adapter
- Including RS-232 cable
- Runs under all modern Windows systems
- Mains or battery operation

Picture



Brief Description

The MPPKIT serves the software parameterisation of a pressure sensor from the MPB, MPG, MPC, MPJ families with the aid of a modern (32-bit) MS Windows PC.

The kit comprises:

- PC interface
- Mains adapter
- RS-232 cable
- Programming software

The PC requirements are fulfilled by all current PCs provided that they have a free RS-232 interface. The possible functions of the menu-guided parameterisation software can be taken from the Operating Manual 21.810.0066900.001.

The PC interface can be powered via the internal battery or the supplied mains adapter. The connected pressure sensor is simultaneously powered from the PC adapter. The connection line to the pressure sensor can have a length of up to 600m.

The connections for the pressure sensor are **not** electrically isolated from the external supply and the RS-232 connection for the PC.

Technical Data HW

Battery Supply (from internal battery)

- Battery type: 1 alkaline-magnesium, 9 V, type HR22 or equivalent (17.5 x 26.5 x 48.5 mm, 0.55 Ah)
- Supply voltage: DC 9 V, protected against polarity reversal
- Current consumption: approx. 50 mA (incl. 1 pressure sensor, without output current)
- Battery lifetime: approx. 6 h (intermittent operation @ 25°C)

External Supply (Power IN)

- Supply voltage range: AC 100 V ... 240 V, 50 ... 60 Hz / DC 9 V, 1.2 A

Fuse

- Fusible cut-out: 250 mA T (in DC 9 V circuit, only with mains operation)

Pressure Sensor Connection (transmitter)

- Output voltage: nom. DC 15 V
- Output current: max. 25 mA, not short circuit-proof
- Length of connector cable to pressure sensor: max. 600 m (cross-section min. 0.25mm²)
- Electrical isolation transmitter connection relative to supply and RS232: not available

MPB, MPG (2-wire transmitter):

- Internal load at Pout: approx. 120 Ω

MPC, MPJ (digital transmitter):

- RS485: bi-directional, bus compatible, half duplex

General Data

- Operating temperature range: -10 ... +50°C
- Storage temperature range: -20 ... +70°C
- Humidity: 0 ... 80% relative humidity
- Housing material: Impact resistant polystyrene, beige
- Dimensions: L=158mm, W=130 mm (incl. bushes), H=45mm
- Protection class: IP50
- Weight: approx. 400 g (incl. battery)

Quality Tests

CE The power supply unit fulfils the requirements of the EMC directive of the EU (89/336/EEC) with regard to noise immunity and noise emissions.

Technical Data SW

- Data carrier: CD-ROM
- Total size: approx. 6 MB
- Runs under OS: Windows 9x, ME, NT Vers. 4.0, 2000, XP

Electrical Connections

(For the connection designations, refer to the dimensions drawing or to the top of the PC interface.)

A special plug is provided for connection of the external supply (Power IN) and a total of six 4mm plug-in / clamp terminals are available for connecting the pressure sensor (transmitter).

The PC connection is a 9-pin Sub-D connector. The 9-pole Sub-D cable provided can be used for connecting to the PC. If the PC is equipped with a 25-pole Sub-D socket, then a corresponding purchasable adapter has to be used.

For battery operation, a 9 V battery has to be inserted into the underside of the unit after removing the battery compartment lid. The unit is protected against wrong insertion of the battery.

Application Notes

For continuous operation, the unit must be supplied from an external power supply.

Battery operation is only suitable for short-term parameterisation operation (approx. 10 minutes) and is not suitable for continuous operation. When the unit is switched off, the batteries regenerate after a short time so that several hours of intermittent operation at room temperature can be achieved. The battery capacity is strongly dependent on the environmental temperature and at -20°C is only around 10% of the value at 25°C.

The battery voltage is monitored by the Status LED. When the Status indicator lights, this indicates that the battery voltage is about to break down. Even under these circumstances, perfect operation of the unit is still possible for a short time.

Parameterisation

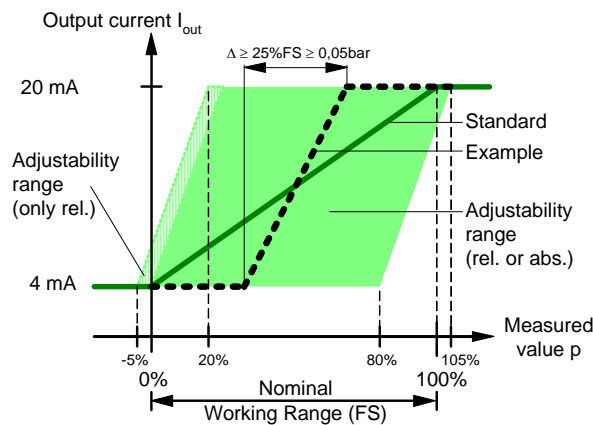
- Range selection for output current 4 ... 20 mA (Current Range)

With the range selection 4 ... 20 mA, the 4 mA and 20 mA current values can be assigned to measured values other than the standard 0% and 100% of the nominal measuring range. (Typically with 4 mA a value from the range -5% ... +25% of the nominal measuring range, with 20 mA, a value from the range +25% ... +105% of the nominal measuring range.) In this way, a sub-range or even a negative pressure can be measured. The difference Δ between the minimum and maximum must amount to at least 25% of the nominal measuring range and be at least 50 mbar.

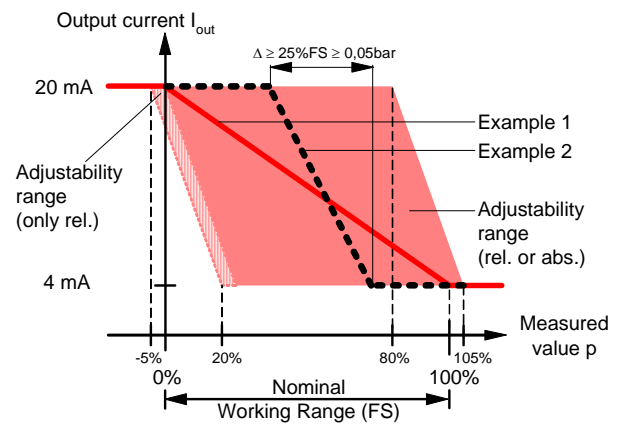
Inverted control can be achieved by exchanging the values for 4 mA and 20 mA.

The ranges of adjustability are presented graphically in the following illustrations.

Non-inverted Control:



Inverted Control:



- Programmable Damping of the Current Output (Current Damping)

The analog output can be damped with a low pass filter of the 1st order. The adjustability enables values between ~33 ms (default) and 10 s.

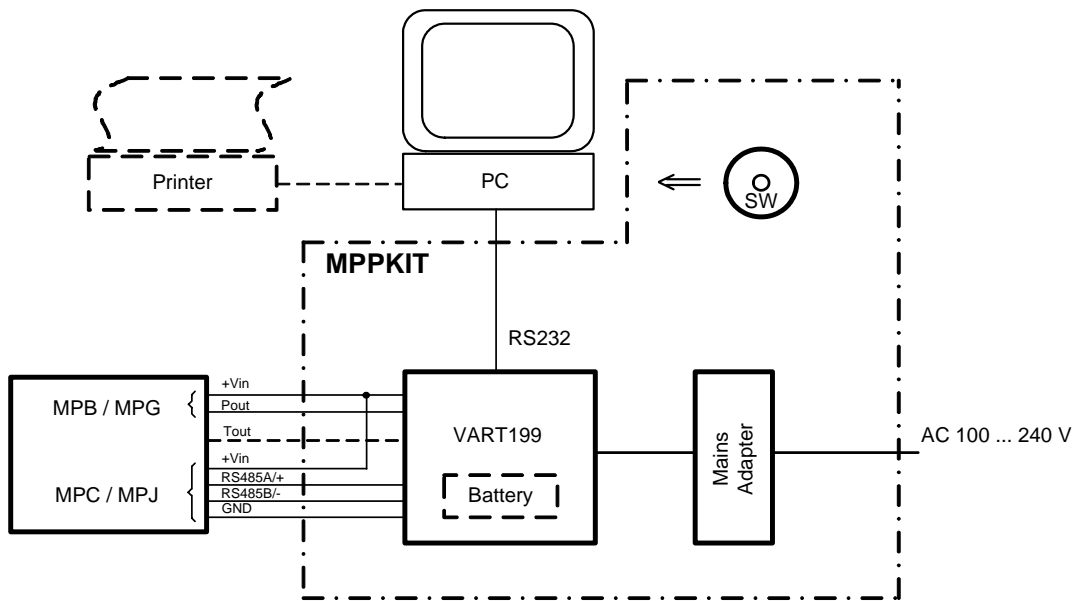
Note: During commissioning, damping is preferably left at the minimum value.

- Recalibrating the probe (calibration 0 % or 100 %) enables compensation of the drift which inevitably occurs with resistive pressure transducers. The zero drift alone or the combination of zero drift and slope change can be compensated. In doing so, the original calibration of the probe is not lost and can be recalled as necessary.

Setting range 0%: -5% ... +5% of nominal measuring range (FS) with relative measuring probes
 0% ... +5% of nominal measuring range (FS) with absolute measuring probes

Setting range 100%: 95% ... 105% of nominal measuring range (FS)

Block Diagram / Electrical Connections



Note:

- The connection from Tout (option with MPC / MPJ) is not necessary for programming/recalibration.
- With MPC / MPJ, the connection from Pout is not necessary for programming/recalibration.

Dimensions [mm]

