



**Montageanleitung /
Mounting instructions**

Elektronisches Digitalmanometer DM 2XX
Electronic Pressure Gauge DM 2XX

Elektronischer (Differenz-) Druckschalter DS 2XX/DS 4XX
Electronic (Differential) Pressure Switch DS 2XX/DS 4XX

DM 200, DM 201, DS 200, DS 200 P, DS 201, DS 201 P,
DS 202, DS 210, DS 214, DS 217, DS 226, DS 233,
DS 400, DS 400 P, DS 401, DS 401 P



DS 200P/ DS 400P:

**VOR GEBRAUCH SORGFÄLTIG LESEN
AUFBEWAHREN FÜR SPÄTERES NACHSCHLAGEN
READ THOROUGHLY BEFORE USING THE DEVICE
KEEP FOR FUTURE REFERENCE**

ID: MA_DM2XX-DS2XX_D-E | Version: 07.2021.0

Diese Montageanleitung stellt einen Auszug aus der ausführlichen Betriebsanleitung dar. Laden Sie sich diese auf unserer Homepage herunter, falls Sie nicht mit dem Produkt vertraut sind.



These mounting instructions are an excerpt from the complete operating manual. It may be downloaded from our homepage, if you are not familiar with the device.

<http://www.bdsensors.de>

– Technische Änderungen vorbehalten –
– Technical modifications reserved –

English

WARNING - In order to avoid hazards to operators and damages to the device, the following instructions have to be performed by qualified technical personnel.

WARNING - Adhere to the safety and operating instructions stated in the operation manual. Effective regulations on occupational safety, accident prevention as well as national installation standards and approved engineering techniques must in addition be complied with.

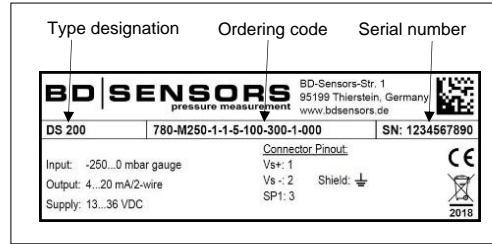
Limitation of liability and warranty

Failure to observe mounting instructions / operating manual or technical regulations, improper use and use not as intended, and alteration of or damage to the device will result in the forfeiture of warranty and liability claims.

Intended use

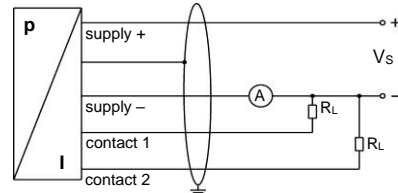
Ensure that the medium is compatible with the media-wetted parts and that the device is suitable for the application without restrictions. The technical data listed in the current data sheet is binding.

Product identification

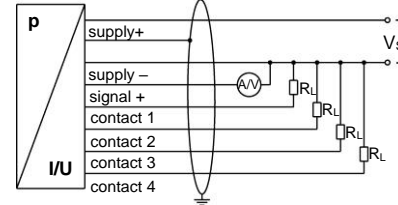


Wiring diagrams

2-wire-system (current)

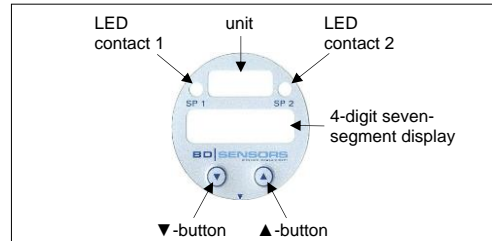


3-wire-system (current/voltage)



NOTE - For the electrical connection, a shielded and twisted multicore cable is recommended

Operating and display elements
(e.g. for DS 2XX with two contacts)



- ▲-button:** enter operating mode
move forward in the menu system
increase the displayed value
- ▼-button:** enter operating mode
move backward in the menu system
decrease the displayed value

both buttons simultaneously:
confirm the menu items and set values



Pin configuration

Electrical connections	M12x1, plastic (5-pin)	M12x1, metal (5-pin)	M12x1, plastic (8-pin)	Binder series 723 (5-pin)	ISO 4400	cable colours (DIN 47100)
Supply +	1	1	1	1	1	WH (white)
Supply -	3	3	3	3	2	BN (brown)
3-wire: Signal +	2	2	2	2	3	GN (green)
Contact 1	4	4	4	4	3	GY (grey)
Contact 2	5	5	5	5	-	PK (pink)
Contact 3	-	-	6	-	-	-
Contact 4	-	-	7	-	-	-
Shield	via pressure port	plug-housing/pressure port	via pressure port	plug-housing/pressure port	ground pin ⊕	GNYE (green / yellow)

NOTE - The pin configuration for different electrical connections can be found on the manufacturing label.

Mounting

DANGER

Danger of death from airborne parts, leaking fluid, electric shock

- Always mount the device in a depressurized and de-energized condition!
- Operate the device only within the specification! (according to data sheet)

Danger of death from improper installation

- Installation must be performed only by appropriately qualified persons who have read and understood the operating manual.

Danger of death from explosion in oxygen applications when used improperly

- Follow the instructions in the operating manual!

NOTE - For devices with 3-A symbol, EHEDG certificate or UL marking the corresponding specifications in the complete operating manual must be observed.

NOTE - Use a suitable seal for the medium and the pressure to be measured, if necessary.

NOTE - For connections according to DIN 3852 do not use any additional sealing material such as yarn, hemp or Teflon tape.

NOTE - The permissible tightening torque depends on the conditions on site (material and geometry of the mounting point). The specified tightening torques are valid for the pressure gauge / pressure switch and must not be exceeded!

connection according to DIN 3852

knurled ring: only tighten by hand
wrench size of steel:

- G1/4": approx. 5 Nm
- G1/2": approx. 10 Nm
- G3/4": approx. 15 Nm
- G1": approx. 20 Nm

wrench size of plastic: max. 3 Nm

dairy pipe connection

- Centre the dairy pipe connection in the counterpart.
- Screw the cup nut onto the mounting part.
- Then tighten it using a hook wrench.

connection according to EN 837

- G1/4": approx. 20 Nm
- G1/2": approx. 50 Nm

NOTE - note the permitted pressure and material acc. to EN 837

Clamp- and Varivent® connections

- Centre the connection above the counterpart with seal.
- Fit the device with a suitable fastening element (e. g. semi-ring or retractable ring clamp) according to the supplier's instructions.

NPT connections

- 1/4" NPT: approx. 30 Nm
- 1/2" NPT: approx. 70 Nm

G1" cone

- p_N < 10 bar: 30 Nm
- p_N ≥ 10 bar: 60 Nm

internal thread M20x1.5 (for high-pressure devices)

Screw the high-pressure fitting into the internal thread of the pressure measuring device and tighten it properly. (permissible tightening torque for device: max 120 N)

WARNING

Danger of injury due to wrong installation

- Do not use any seal!

mounting steps for DS 233 (differential pressure switch)

Connect the reference pressures as follows:
input p+: higher pressure **input p-**: lower pressure
G 1/8" Internal thread:
- Screw the fittings into the threads as far as possible.
- Tighten the fittings properly (max. 10 Nm).
tube nozzle Ø 6.6 x 11:
Slip your flexible tubes (Ø 6 mm) onto the tube nozzles as far as possible.