
This operating manual contains safety and handling instructions and, as a result, all the information contained herein is legally binding. These regulations apply to our customers and end-users. Therefore, in the interests of safety,请确保遵守这些指导信息。Please make sure to follow these instructions in the interests of safety. Operators and end-users of this product are bound by the regulations specified in the purchase order and confirmed in our order. These operating manuals are variants of the standard

2.1 Symbol List

- Type and source of danger
- Measures to avoid the danger

1.1.2 Staff Qualification

Qualified persons are persons who are familiar with the product and the regulations for its installation, handling, and putting into service; operation; maintenance, removal from service, and disposal of the product. In addition, they must have understood and read the operating manual and in particular the safety-related information. The operating manual is an integral part of the product. The user must check whether the device is suited for the intended use. In case of doubt, please contact our sales department sale@bdsensors.cz (phone: +42 (0) 772 411 011) for technical questions. The user must ensure that only qualified persons, who are familiar with the device, are able to install, use the device for the intended purpose and are capable of acting in case of an emergency. The user must also ensure that the device is used in accordance with its intended use.

1.4 Limitation of Liability and Warranty

Failure to observe the instructions or technical regulations, the characteristics or instructions that are not mentioned and, in particular, of damage to the device will result in the forfeiture of warranty claims. The user is required to familiarise himself with the operating manual and all technical regulations related to the product. This includes persons that meet at least one of the following three requirements:

- They know the safety concepts and technology and automation technology and are familiar therewith on a project level.
- They are operating staff of the measuring and automation systems and have been instructed in the handling of the devices. They are familiar with the operation of the devices and the technologies described in this manual and the documentation.
- They are commissioning specialists or are employed in the service department and have received training that qualifies them for the repair of the system. In addition, they are authorised to put into operation, to ground, and to mark circuits and components according to the safety engineering standards. All work with this product must be carried out by qualified persons!

1.3 Intended Use

The devices are used to convert the physical parameter of pressure into an electric signal. The pressure transmitter HZ 200 has been especially developed for adverse operating conditions in the petrochemical industry (on- and offshore sites).

The operating manual applies to devices with explosion protection approval and is intended for use in IE-areas. A device in explosion-protection approval can be used if it was specified in the purchase order and confirmed in our order. In addition, the manufacturing label indicates ex-ign.

NOTE – if the device is installed with the pressure port pointing upwards, the cable must be arranged in such a way that the pressure port points upwards. This will reduce the risk of damage to the cable connection.

NOTE – Do not remove the packaging or protective caps of the device until shortly before mounting. If the protective caps are not removed, the device must be kept sealed! Dispose of the packaging properly!

NOTE – The following warning signs are affixed on devices with plastic enclosures.

NOTE – If the device is installed with the pressure port pointing upwards, the cable must be arranged in such a way that the pressure port points upwards. This will reduce the risk of damage to the cable connection.

NOTES - installation or maintenance in a moist environment:
- Please note that your application does not show a dew point, please protect the electrical connection of the transmitter. There are specially protected pressure transmitters for these operating conditions available. Please contact us for more information.
- Connect the device electrically strictly after mounting or prevent moisture penetration, e.g. by a suitable protective cap. The pressure port is specified in the data sheet only applies to the connected device.
- Select the mounting position such that spilled and condensed water can drain-off. Stationary liquid on sealing surfaces must be excluded!
- If the device has a cable outlet, the outgoing cable must be made tight and the cable needs to be routed upwards, this must be done in an initially downward curve.

2.2 Mounting, Wiring, and Connections

DANGER

- Install the device only in a de-energized and demagnetized condition. Do not install the device while there is electrical energy present!

NOTE – The technical data listed in the EC-type examination certificate is binding. Download this by accessing sale@bdsensors.cz (phone: +42 (0) 772 411 011).

NOTE – Make sure that the entire interconnection of the devices is watertight. For the installation diagram see the respective product-specific data sheet under “Output and Input Connections”. The limit values listed in the EC-type examination certificate are observed. (Capacity and inductance of the connection cable, in a dynamic application: 12-fold cable diameter as a minimum and must absolutely be complied with. If the data sheet is not available in the order or downloaded from our homepage: http://www.bdsensors.cz

NOTE – Do not use any force when installing the device to the flange. They are familiar with the installation and handling of the systems. They are familiar with the empirical data of the IS versions of our products and the parameters of the products are the same. They are familiar with the installation, operation, maintenance, removal from service, and disposal of the product. They are familiar with the overall system (entire circuitry).

NOTE – DX18 HU 200, DX18 HU 400

NOTE – dx18 HU 300, dx18 HU 400

Note that no line resistances have been listed in this operating manual. If the device is installed with the pressure port pointing upwards, the cable must be arranged in such a way that the pressure port points upwards. This will reduce the risk of damage to the cable connection.

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NOTE – Do not use any force when installing the device to the flange.
6. Commissioning

**Danger of death from explosion**

Explosion hazard! If the operating voltage is too high (max. 28 V DC!), open the device only within the specified maximum allowed operating voltage range (output signal to the safety circuit).

- The device has been installed properly.
- The device does not have any visible defect.
- The device is within the specified maximum allowed operating voltage range (output signal to the safety circuit).

**Fault detection / remedy**

The device must be disposed of according to the European Directive 2012/19/EU (waste electrical and electronic equipment). Waste equipment must not be disposed of in household waste!

NOTE - Dispose of the device properly!

10.2 Return

- Before every return of your device, whether for recalibration, decontamination, modifications or repair, it has to be cleaned carefully and packed safely and properly. You have to enclose a list of the order data (e.g. DX18 HU 400, order number), a declaration of decontamination, and the purchase order.

**Information on service / repair:**

- www.bdensors.cz
- oase@bdensors.cz
- phone: +42 (0) 572 411 011

In case of doubt regarding the fluid used, devices without a declaration of decontamination will only be examined after receipt of an appropriate declaration!

NOTE - After clearing, mechanical connections must be fitted with protective caps.

10. Service/Repair

- Information on service / repair:
  - www.bdensors.cz
  - oase@bdensors.cz
  - Service phone: +42 (0) 572 411 011

11. Disposal

**Danger of injury from aggressive media or pollutants**

- Depending on the measured medium, this may constitute a danger to the operator.
- Wear suitable protective clothing e.g. gloves, goggles.

**NOTE** - Dispose of the device properly!

12. Warranty Terms

The warranty terms are subject to the legal warranty period of 24 months, valid from the date of delivery. If the device is used improperly, modified or damaged, we will rule out any warranty claim. A damaged diaphragm will not be accepted as a warranty case. Likewise, there shall be no entitlement to services or parts provided under warranty if the defects have arisen due to normal wear and tear.

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2-wire-system (current) MIL / Bendix

aining of an 80 % calibration signal!

- For producing an 80 % calibration signal, please apply a pressure signal/ make a voltage of min. 5 V to the connections IN- and OUT-.
- Depending on the pressure device, max. allowed operating voltage. By applying the voltage is CAV and CAL - on an internal current of 12.5 mA is issued, resulting in an output signal of 15.6 mA. For ex devices, it has to be observed that the same source of supply has to trigger the calibration signal and supply the signal circuit.

**DX18 HU 400**

- An configuration:
  - Pressure
  - Supply Pt: 10 - 100 V DC
  - Supply R: 20 - 30 V DC

**Wiring diagrams**

1. 2-wire-system (current) MIL / Bendix

**Connection technique**

- Two measuring circuits are established. By the third wire it is possible to find out and to compensate the resistance of the wire.

**5. HART communication with DX18 HU 400**

**DANGER**

- An additional signal as per HART® specification is superimposed on the analogue output signal. The device may be critically or even dangerous means of a HART® communication device. In this regard, we recommend the G555 programming (installable access). In order to ensure trouble-free operation, the following requirements must be taken into account:

  - Maximum cable length between measuring device and supply: Lm = 50 m (C4 = 10-12 F)
  - Minimum length of cable in [m]: Lc = maximum length of cable in [m] + (R / C) + R / C

**Troubleshooting**

**DANGER**

- As a principle of work on energized parts, except for intrinsically safe circuits, is prohibited while there is an explosion hazard.

- If malfunctions cannot be resolved, put the device out of service.

**DANGER**

- Depending on the measured medium, this may constitute a danger to the operator.
- Wear suitable protective clothing e.g. gloves, goggles.

**NOTE** - Dispose of the device properly!

<table>
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**NOTE** - Dispose of the device properly!

**Fault detection / remedy**

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**DANGER**

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- Wear suitable protective clothing e.g. gloves, goggles.

**NOTE** - Dispose of the device properly!

**2-wire-system (ground) MIL / Bendix**

**Wiring diagrams**

**Ph200 / Ph2000 3-wire system**

- Electrical connection field housing M20x1.5
- Electrical connections to the control field housing. Suitable for the following solutions:
  - 2-wire-system (current) Glenair
  - 2-wire-system (current) MIL / Bendix
  - Temperature
  - Pressure

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