AMFLO® SONIC UFA 340

Installation guide

Multi purpose, all-round, ultrasonic flowmeter for liquids in all industrial processes

Installation, assembly, start-up and maintenance may only be performed by appropriately trained personnel. Check the nameplate for correct operating conditions.

This instrument complies with requirements of Low Voltage Directive. Instruments must not be connected to power supply before reading instructions described in the manual.

This instrument complies with the requirements of Pressure Equipment Directive. Please refer to the nameplate for operating condition limits. Instruments must not be pressurised before reading instructions described in the manual.

The responsibility as to the suitability, intended use and corrosion resistance of the used materials against the measured fluid of this device rests solely with the operator.

For use in hazardous areas, special codes and regulations are applicable. Instruments must not be connected to power supply before reading instructions described in the supplementary manual

Special conditions to be observed

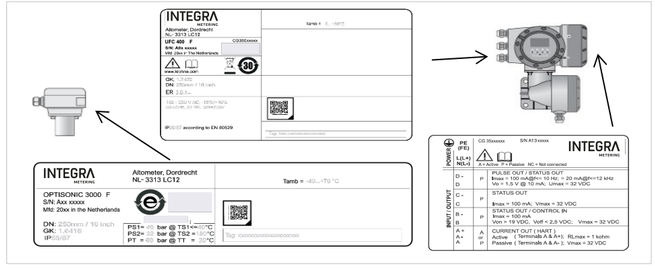
- For ambient and process temperatures, specific product and electrical data, see Ex manual or certificate.
- For dimensions and details of the flameproof joints, the manufacturer shall be contacted.
- The tensile strength of the special fasteners is at least 700 N/mm² (property class A2-70 / A4-70).
- The instructions provided with the product shall be followed in detail to assure safe operation.
- Avoid the risk of ignition as a result of electrostatic charging. Do not use the device in areas, with processes that generate high charges, with mechanical friction and cutting process, near electrostatic painting systems (spraying of electrons), with exposure of airborne powder or dust particles (pressurized systems).

General

Maximum ambient and process temperatures are depending on version (e.g liner material, size), temperature and protection class
and maximum surface temperature of sensor.

Consult the manual for :
XT / Cryogenic version

Typenschild des Geräts



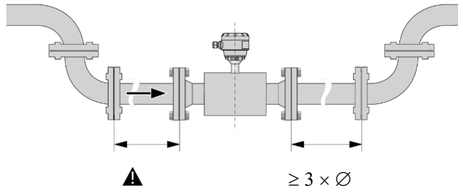
Check the device nameplate to ensure that the device is delivered according to your order.

1 Installation

For initial set up, we strongly recommend that you also refer to the relevant manual!

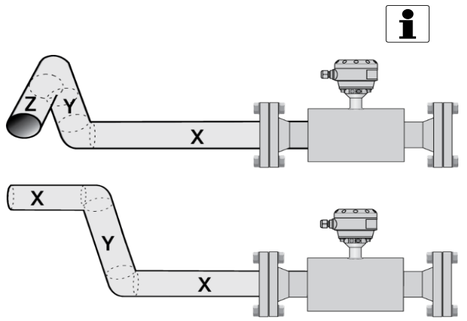
The actual installation depends on the version ordered.
The illustrations show installation of a separate (remote) version

Inlet, outlet and T-section



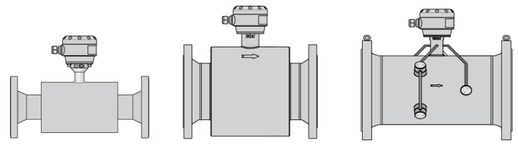
see below "2D and 3D bends"

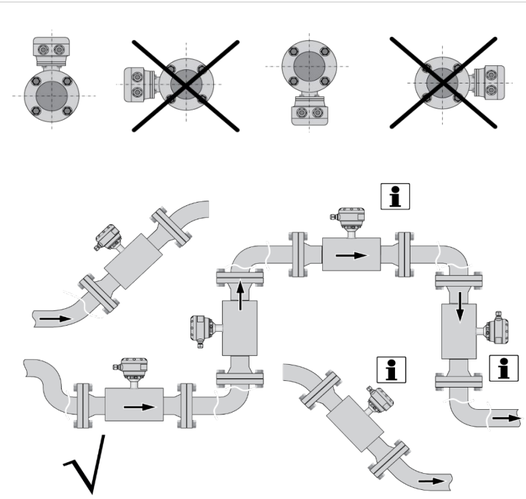
XY (2D bends upstream) : ≥ 5 × ∅
XYZ (3D bends upstream) : ≥ 10 × ∅



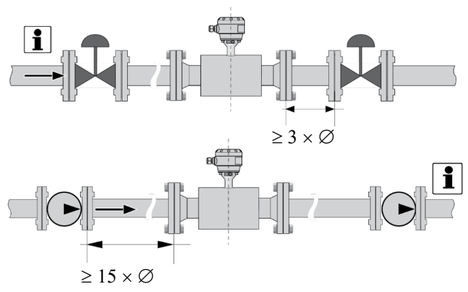
Installation: Depends on 2D/3D bends upstream

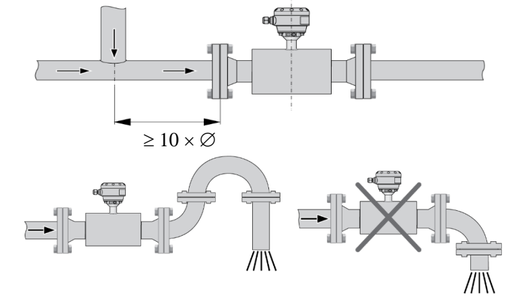
Device version(s)

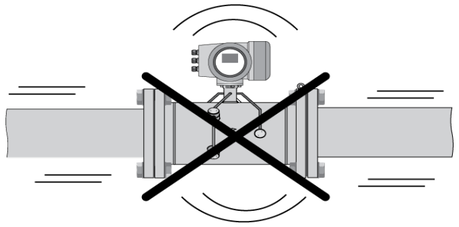




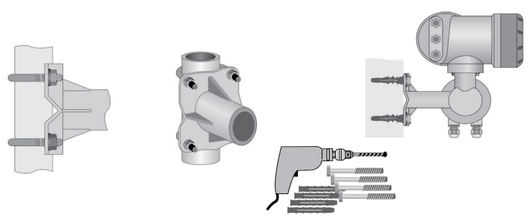
Check the manual for more details on installation options.







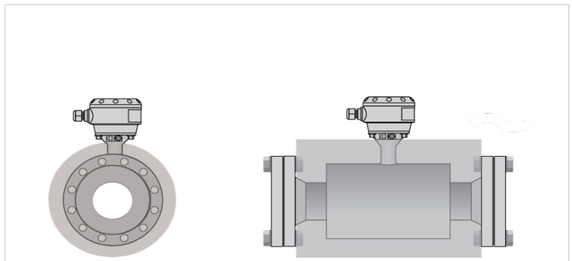
Avoid vibration



Pipe mounting

Wall mounting

Thermal insulation



Check the manual for more details on installation options.

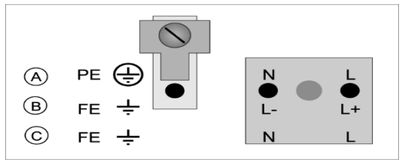
2 Electrical connection

All work on the electrical connections may only be carried out with the power disconnected. Take note of the voltage data on the nameplate! Observe the national regulations for electrical installations!

Observe without fail the local occupational health and safety regulations. Any work done on the electrical components of the measuring device may only be carried out by properly trained specialists.

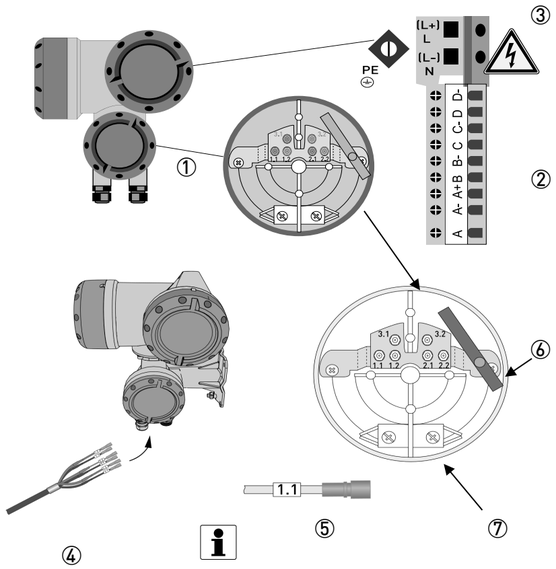
The device must be grounded in accordance with regulations in order to protect personnel against electric shocks.

Power supply - grounding



Ⓐ 100...230 VAC (-15% / +10%), 22VA
Ⓑ 24VDC (-55% / +30%), 12W
Ⓒ 24VAC/DC (AC: -15% / +10%; DC: -25% / +30%), 22VA or 12W

Electrical connections signal converter



① Sensor cable connections
② I/O connections
③ Mains supply connection
④ Insert cable(s) into terminal compartment
⑤ Marking on cable
⑥ Tool for releasing connectors
⑦ Grounding clamps

Connect the cable on connector with similar numeral marking

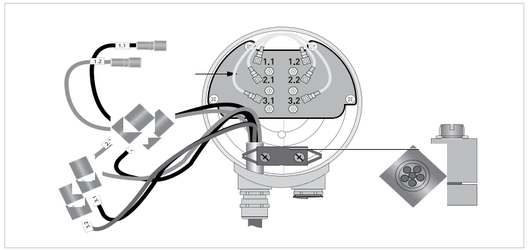
2 Electrical connection

For devices used in hazardous areas, additional safety notes apply; please refer to the Ex documentation.

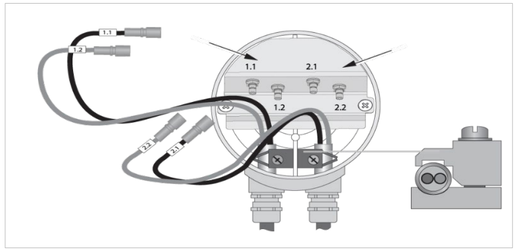
Refer to the manual for connection of Ex (/i) acc. to NAMUR

Connect the cable on connector with similar numeral marking

Signal cable to flow sensor

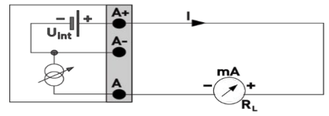


Cryogenic and XXT version

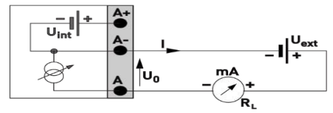


Standard version

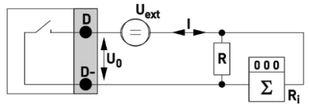
Connection diagram



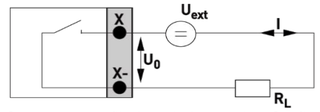
Current output active Ia (basic I/O)



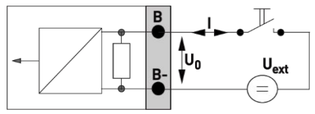
Current output passive Ip (basic I/O)



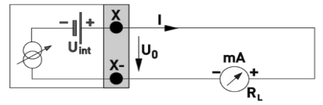
Pulse/frequency output passive Pp (basic I/O)



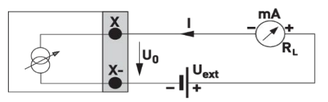
Status output/limit switch passive Sp (basic I/O)



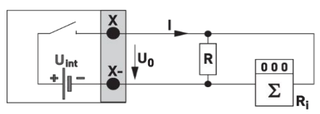
Control input passive Cp (basic I/O)



Current output active Ia (modular I/O)

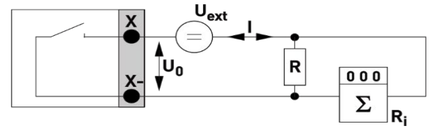


Current output passive Ip (modular I/O)

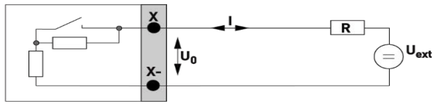


Pulse/frequency output active Pa (modular I/O)

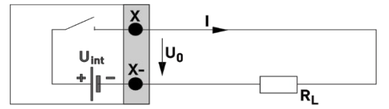
Observe connection polarity



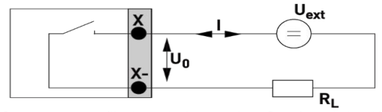
Pulse/frequency output passive Pp (modular I/O)



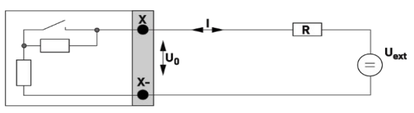
Pulse/ frequency output passive PN, NAMUR (modular I/O)



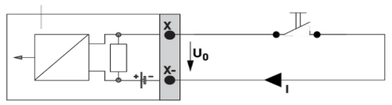
Status output/limit switch active Sa, (modular I/O)



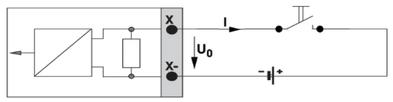
Status output/limit switch passive Sp, (modular I/O)



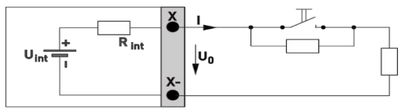
Status output/limit switch SN, NAMUR, (modular I/O)



Control input active Ca, (modular I/O)

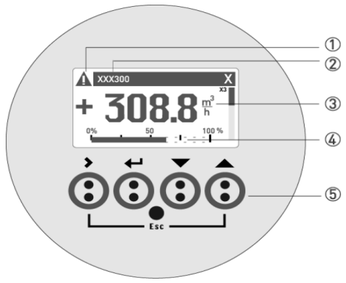


Control input passive Cp, (modular I/O)

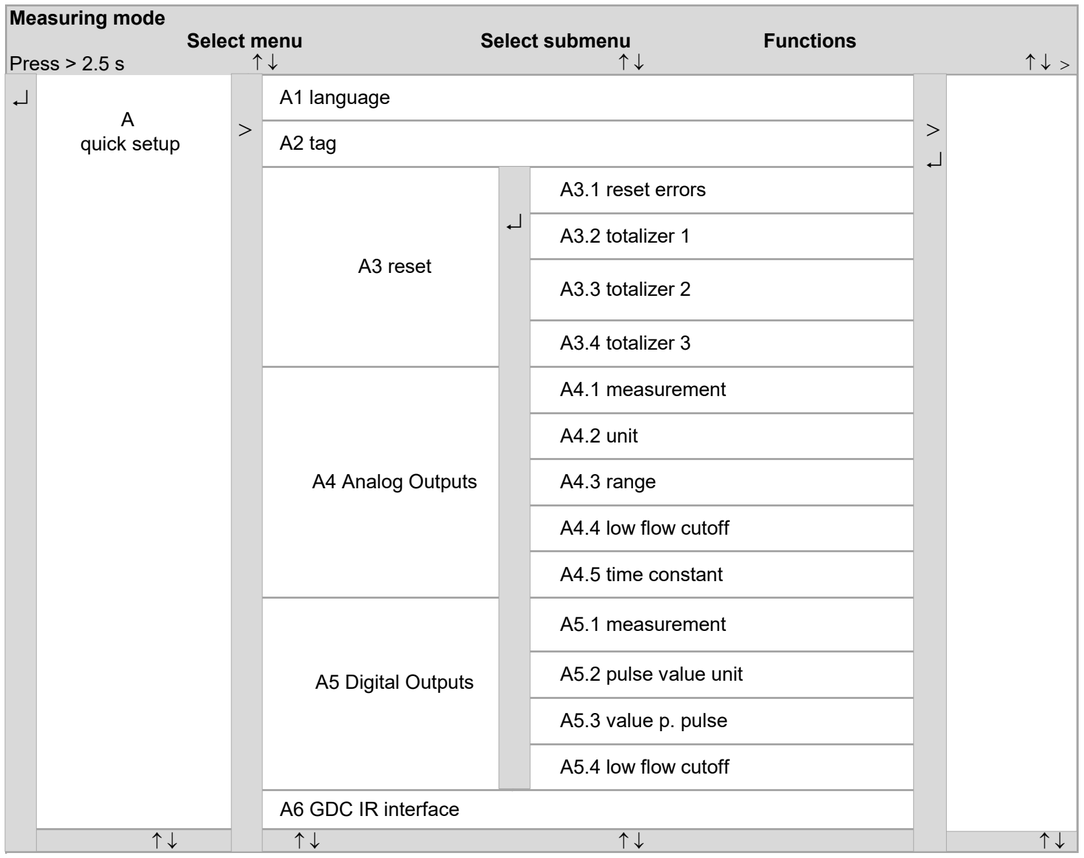


Control input active CN to NAMUR, (modular I/O)

3 Quick Setup



① Status message
② Tag number
③ Measured variable
④ Signal strength
⑤ Operating keys (operation with open housing)



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