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

OPTISWIRL 4200
Vortex flowmeter

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

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.

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.

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

For devices used in SIL applications, additional safety notes apply. For detailed information refer to the "Safety Manual".

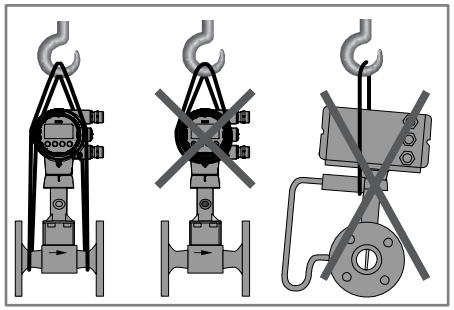
The responsibility as to the suitability, intended use and corrosion resistance of the used materials against the measured fluid of this device rests solely with the operator.

1 Installation

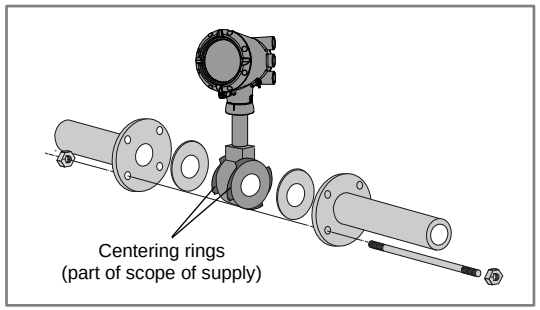
Special conditions of use to be observed:
- The flameproof joints are not intended to be repaired (only for Ex d).
- Electrostatic discharge of the painted enclosure and flow sensor shall be prevented by suitable measures for gas group IIC.
- For thermal and electrical data, the instructions provided in the supplementary manual shall be followed in detail.

Note for supplementary manual:
Observe the type of protection (refer to nameplate) of the device.

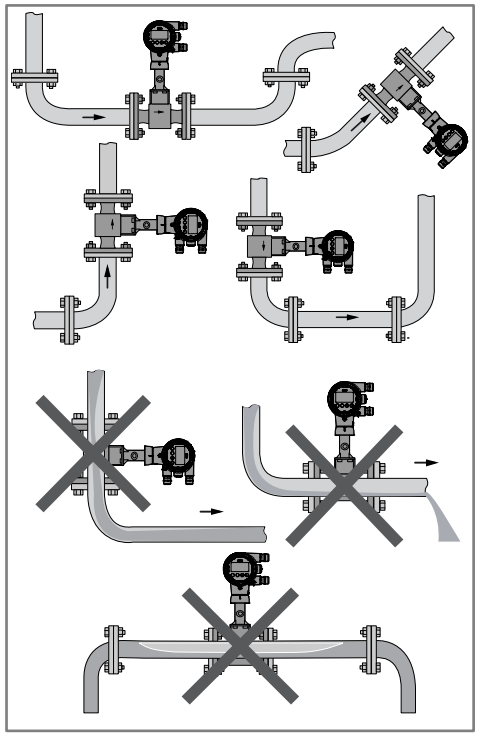
Transport



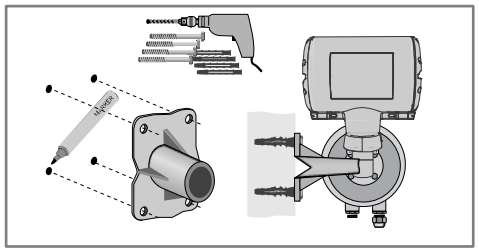
Sandwich design – centering rings



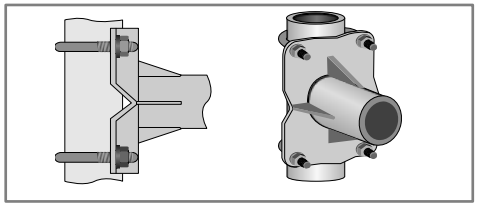
Liquids



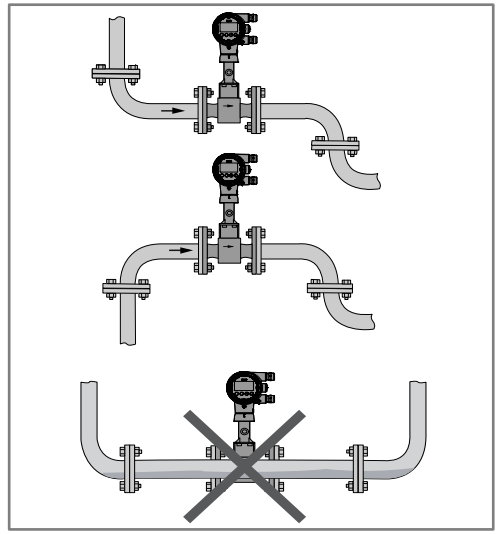
Remote: wall mounting of the field housing



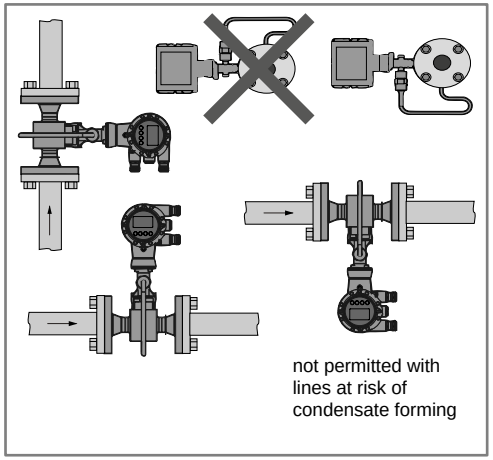
Remote: pipe mounting of the field housing



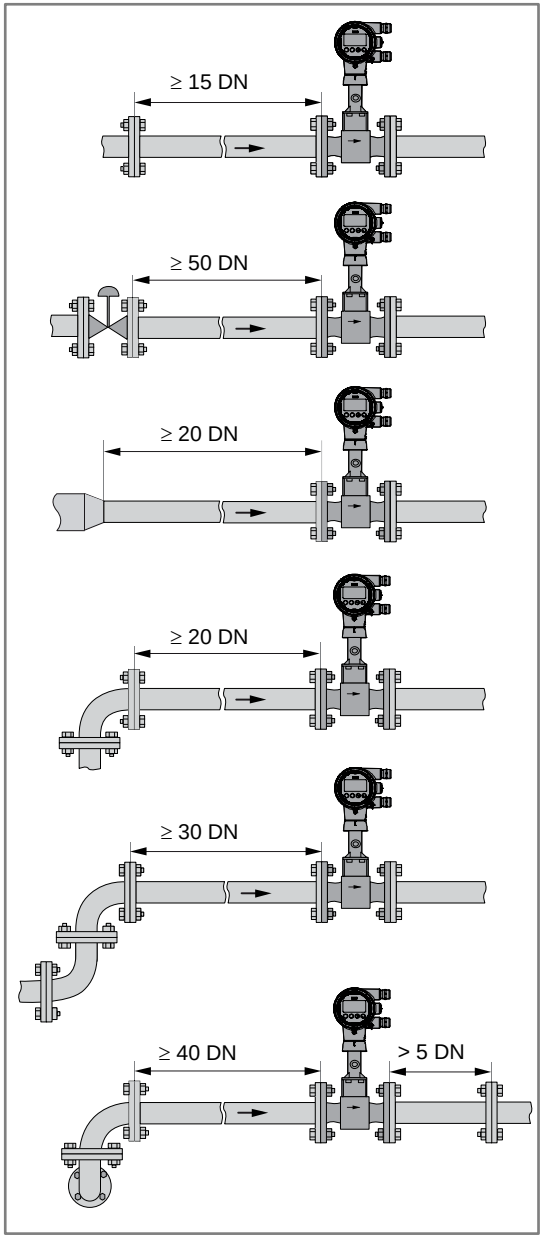
Steam & gases



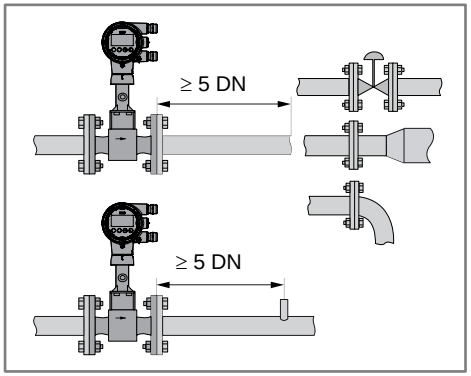
Mounting position



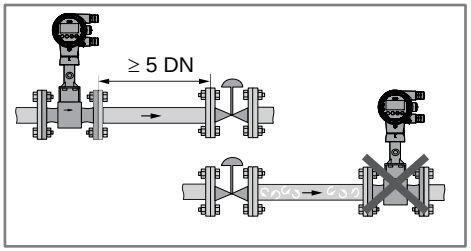
Minimum inlet section



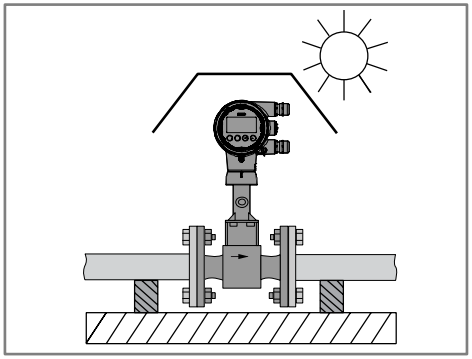
Minimum outlet section



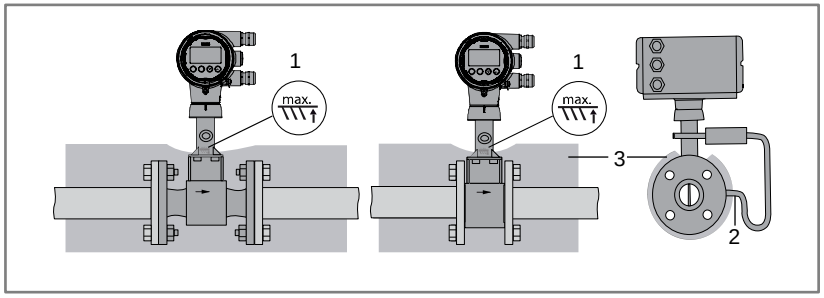
Pipelines with control valve



Sunshade



Heat insulation for T_{medium} > +160°C / +320°F

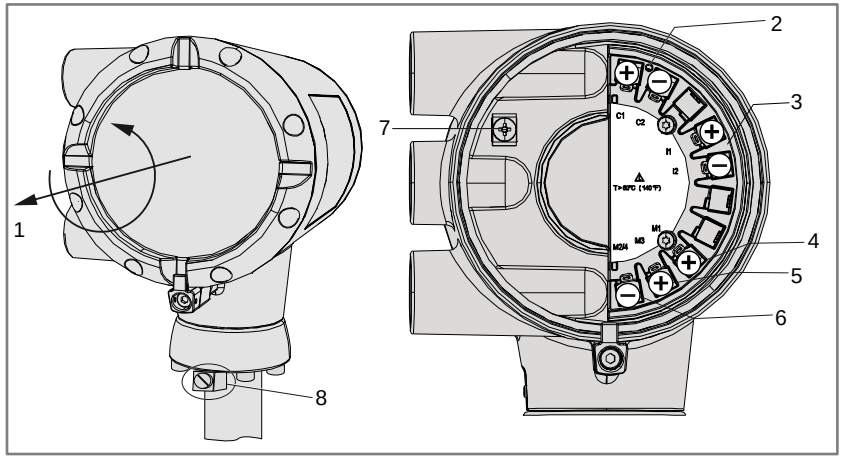


1 Marking of max. height of the insulation
2 Max. thickness of the insulation up to the bend of the pressure pipe
3 Insulation

2 Electrical connection

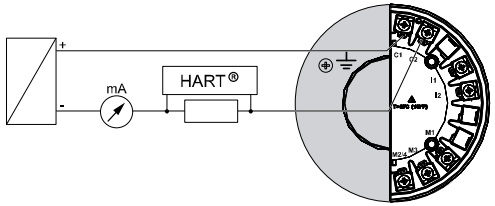
Danger:
All work on the electrical connections may only be carried out with the power disconnected.
Take note of the voltage data on the nameplate.
Observe the national regulations for electrical installations.

Connecting the signal converter



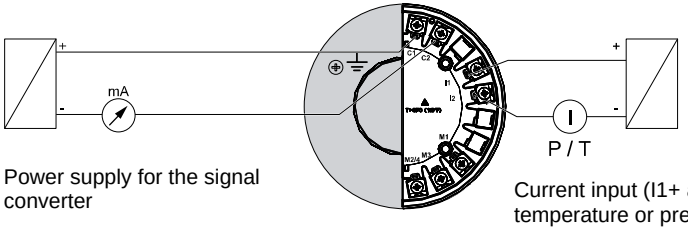
1 Open the housing cover of the electrical terminal compartment using the key
2 Signal converter supply and 4...20 mA loop
3 4...20 mA current input, - external transmitter, optional
4 Terminal M1 binary (high current)
5 Terminal M3 binary (NAMUR)
6 Terminal M2/4 binary, common minus connection
7 Ground terminal in housing
8 Ground terminal on connection piece between flow sensor and signal converter

Current output



Connect current loop 4..20 mA to terminals C1+ and C2-

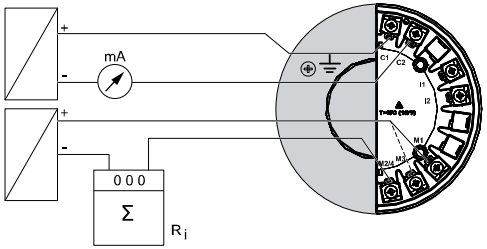
Current input



Power supply for the signal converter

Current input (I1+ and I2-) of an external temperature or pressure transmitter

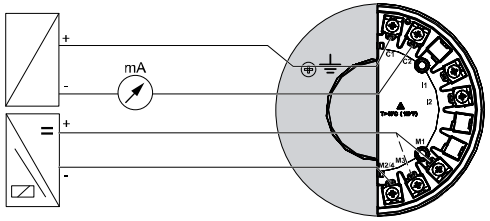
Pulse output / frequency output



The maximum frequency of both pulse output and frequency output is 1000 Hz

The connection is made between terminal M2/4 Common (-) and M1 for Hi Current (+) or M3 NAMUR (+)

Limit switch output



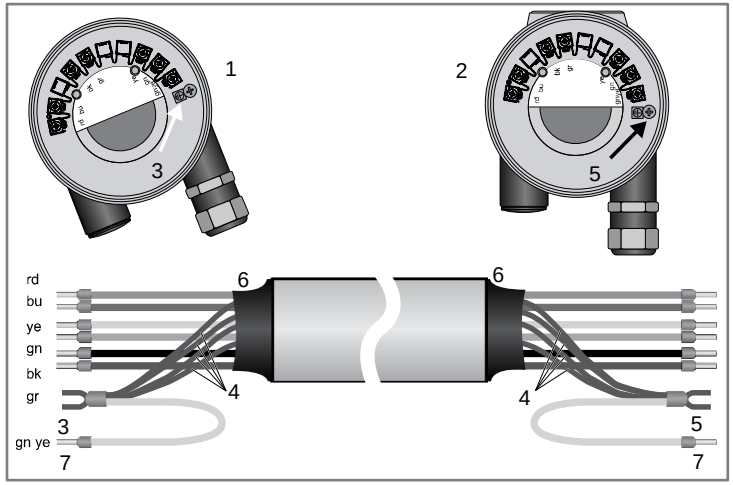
Connection NAMUR:
M2/4 (common); M3 (open collector)

Connection transistor output:
M2/4 (common); M1 (open collector)

Status output

The connection is made between terminal M2/4 Common (-) and M1 for Hi Current (+) or M3 NAMUR (+)

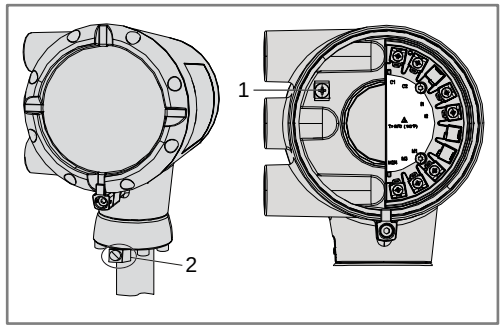
Connection of remote version



Terminal	Strand colour
rd	red
bu	blue
bk	black
gr	grey
ye	yellow
gn	green
gnye	Shielding

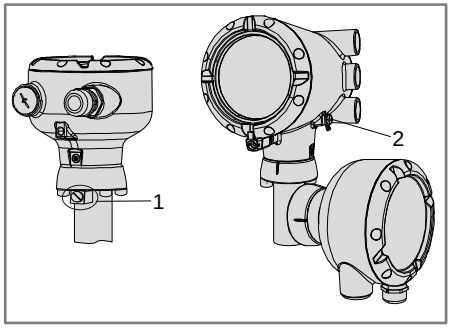
1 Connection terminal flow sensor
2 Connection terminal signal converter
3 Connection shielding flow sensor
4 Shielding (drain wire and overall shield)
5 Connection shielding signal converter
6 Heat shrink tubing
7 Shielding

Grounding of compact version



1 Ground terminal in housing
2 Ground terminal on connection piece between flow sensor and signal converter

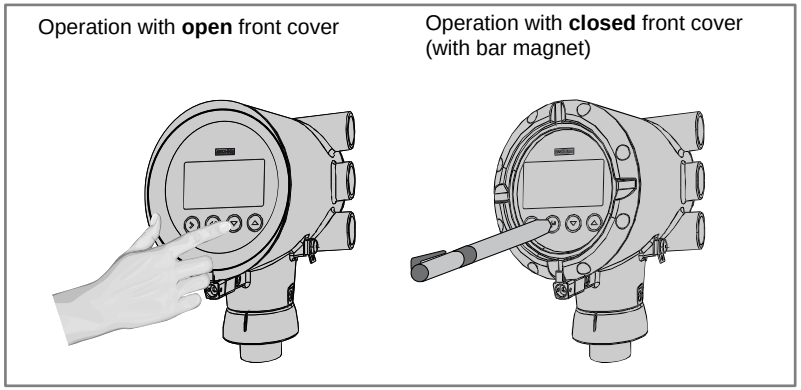
Grounding of remote version



1 Ground terminal on flow sensor
2 Ground terminal on signal converter housing

3 Quick Setup

Meas.	Menu A		Submenus		
> ↵	↑↓	> ↵	↑↓	> ↵	↑↓
	A Quick Setup		A1 Language		
			A2 Contrast		
			A3 Login		
			A4 Tag		
			A5 Long Tag		
			A6 Message View		
			A7 Fluid		
			A8 Medium		
			A9 Units	A9.1 Volume Flow	A9.2 Cst. Vol. Flow
				A9.3 Norm. Vol. Flow	A9.4 Cst. N.Vol.Flow
				A9.5 Mass Flow	A9.6 Cst. Mass Flow
				A9.7 Power	A9.8 Cst. Power
				A9.9 Volume	A9.10 Cst. Volume
				A9.11 Norm. Volume	A9.12 Cst. Norm. Volume
				A9.13 Mass	A9.14 Cst. Mass
				A9.15 Energy	A9.16 Cst. Energy
				A9.17 Pressure	A9.18 Cst. Pressure
				A9.19 Temperature	A9.20 Cst. Temp.
				A9.21 Density	A9.22 Cst. Density
			A10 Meter Type		
			A11 Application Assistant	A11.1 Liquids	
				A11.2 Saturated Steam	
				A11.3 Superheated Steam	
				A11.4 Heat Measurement	
				A11.5 Gas	
				A11.6 FAD	
			A12 Cluster Checks	Cluster 1...12	



Access level	Default password	Permissions
User	0000 (any unassigned password)	• View device information • Configure the display (C5), including changing the display language and the content of the measurement pages
Operator	0009	• All rights of "User" access level • Configure binary output (C2.2) • Configure all HART® communication options (C3) with the exception of "C3.1.1 Current Loop Mode" • Change "Operator" password (C6.2.2) – note that the new password must have three leading zeroes ("000") • Activate a different meter type
Expert	0058	• All configuration rights, especially process setup (C1) and current output (C2.1) • Change "Expert" password (C6.2.2) – note that the new password must have two leading zeroes ("00")

Download documents and software

Scan the code on the nameplate or scan the following code and enter the serial number.

Watch ICV videos
Unboxing
Installation
Commissioning
Verification

Contact

Select your country from the region / language selector to view your local KROHNE contact details on:

www.krohne.com