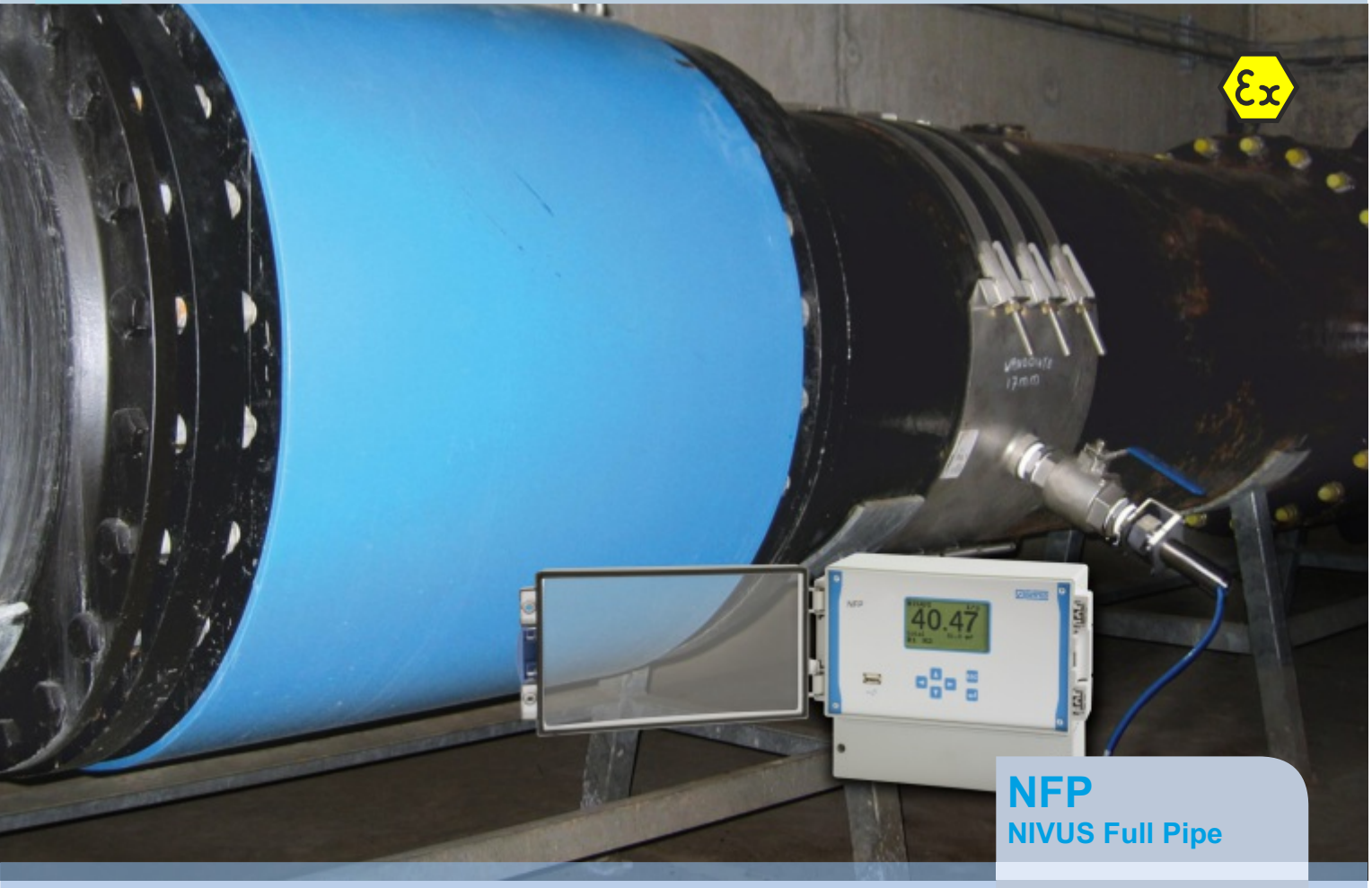
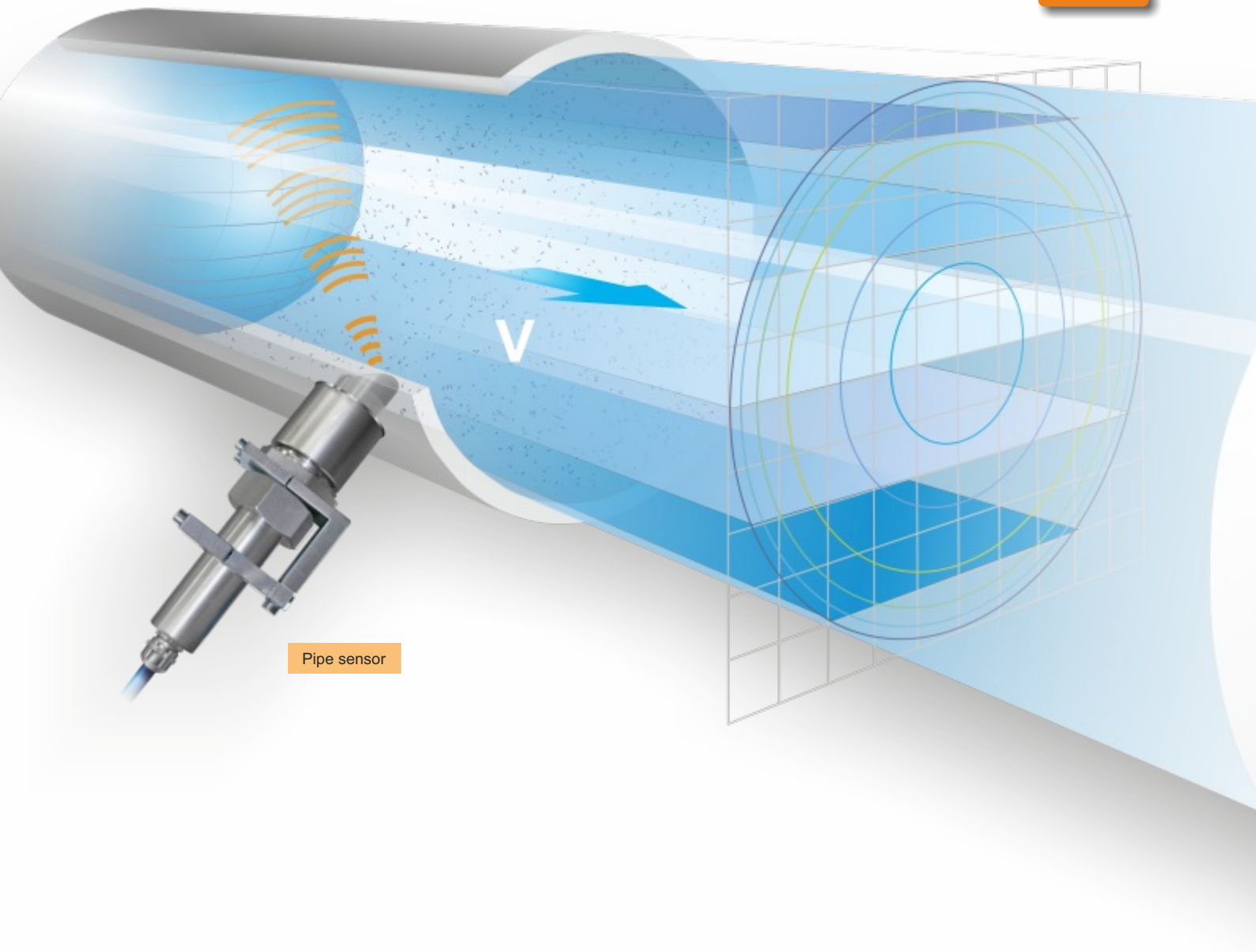


NFP

NIVUS Full Pipe

Flow Measurement for full Pipes

patented



Efficient and highly accurate

- Very high accuracy
- Attractive price
- Low installation costs
- Real flow velocity profile measurement using cross correlation with digital pattern detection
- Absolutely stable zero point and drift-free
- No electrodes, no conductivity required
- Ex zone 1 optional

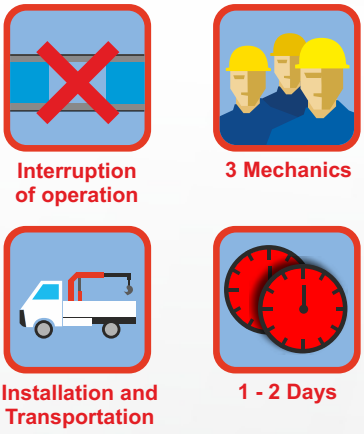
The NFP (NIVUS Full Pipe) has been developed particularly for flow measurement in full pipes with diameters between 100 and 800 mm. Based on the cross correlation method, the system can be used in a range of slightly to heavily polluted media. The NFP combines network measurements including adapted area weighting with a flow profile correction.

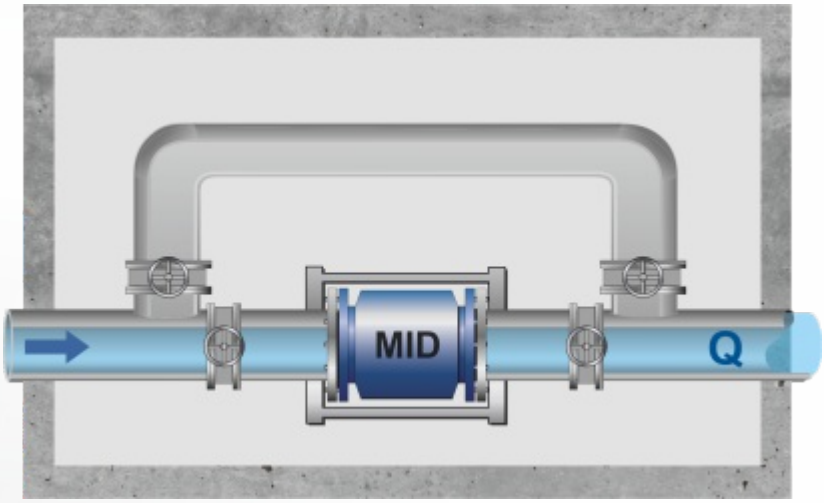
The unit has high accuracy and an unrivalled cost/performance ratio. Appropriate NIVUS accessories facilitate installation and keep maintenance expenses low. Therefore the NFP is an ideal substitute for obsolete or defect MIDs and other measurements. It is not required to remove existing measurement systems.

Quick Implementation - Easy Retrofitting

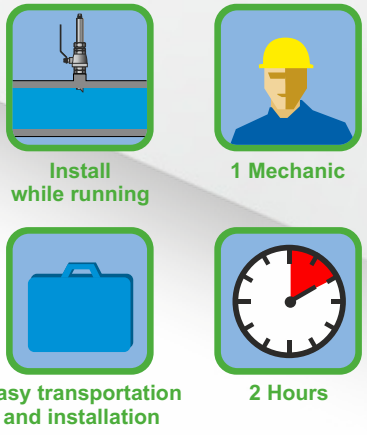
- Installation without interruption of processes
- Easy to transport
- Quick and easy installation
- Easy maintenance and calibration
- No need to remove defective EMFs for retrofitting

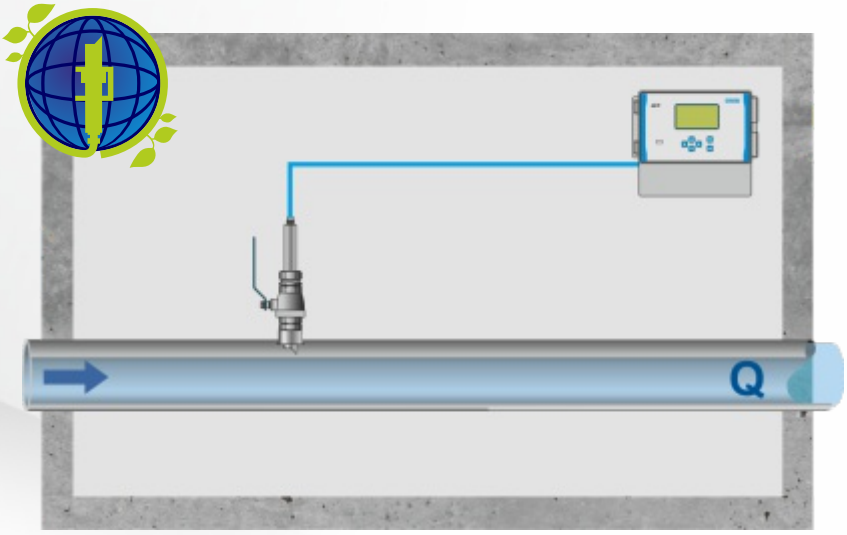
Installation comparison DN 800





Installation of magnetic-inductive flow measurement

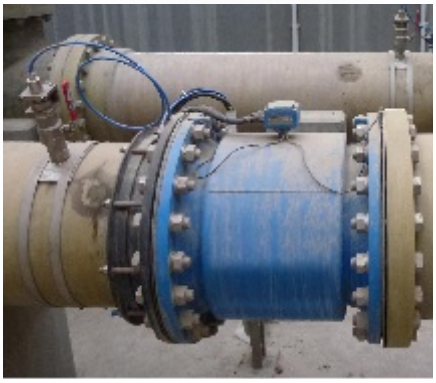




Installation of ultrasonic flow measurement using NFP

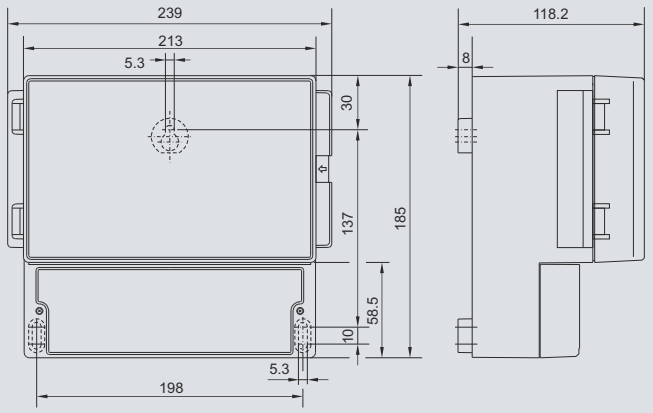
The NFP is outstandingly suitable for use in:

- Pump stations for rain water, dirty water and combined waste water
- Waste water treatment plants
- Pressure pipelines
- Drainage lines
- Return sludge lines
- Recirculation lines
- And many more



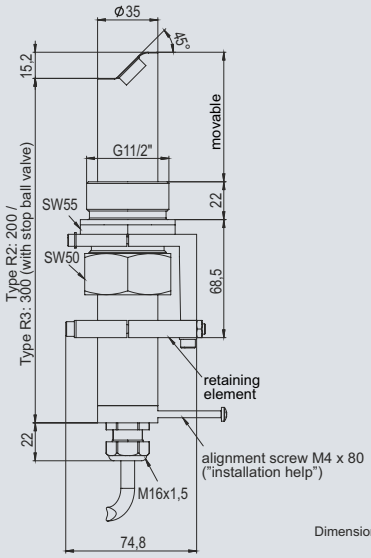
Specifications

Transmitter



Wall mount enclosure also suitable for DIN-rail mounting. Dimensions in **mm**

Pipe sensor



Dimensions in **mm**

Transmitter

Power supply	100 to 240 V AC; + 10 % / -15 %, 47 to 63 Hz or 24 V DC ± 15 %, 5 % residual ripple
Power consumption	max. 18 VA (7 VA typical)
Wall mount enclosure	material: Polycarbonate weight: approx. 1620 g protection: IP 65, if lid is closed and locked
Ex approval (optional)	II(2)G [Ex ib] IIB
Operating temperature	-20 °C to +60 °C
Storage temperature	-30 °C to +70 °C
Max. humidity	90 %, non-condensing
Display	full graphic, back-lit LCD, 128 x 64 pixels
Operation	6 keys, multilingual dialog mode
Inputs	1 digital input, 1 active sensor connectable
Outputs	1 (optional 3) x 0/4-20 mA, load 500 Ohm, 12 bit resolution, deviation less than 0.1 % (after calibration) 2 relays (SPDT)
Data storage	64.512 data points, readable via USB
Storage cycle	1 minute up to 1 hour

Sensors

Sensor type	pipe sensor/flow velocity sensor
Measurement principle	correlation with digital pattern detection
Measurement range (v)	-1 m/s to +6 m/s
Measurement frequency	1 MHz
Protection	IP 68
Ex approval	II 2 G Ex ib IIB T4
Operating temperature	-20 °C to +50 °C (-20 °C to +40 °C in Ex zone 1)
Storage temperature	-30 °C to +70 °C
Measurement uncertainty	deviation less than 1 %*
Operating pressure	max. 4 bar
Cable length	10, 20, 30, 50, 100m; special length upon request
Materials	Polyurethane, stainless steel 1.4571, PPO GF30, PA, HDPE
Option	chemically resistant sensor made of PEEK, cable with FEP coating
Accessories for pipe sensors	
Tapping saddle	for sensor mounting in pipes with inner diameters from 100 to 800 mm
Stop ball valve	for removal of sensors from pipes without pressure
Welding nozzle	straight construction (90°)
Retractable fitting	for removal of sensors under process conditions

The specifications above are extracts from the complete documentation.
You can find the complete specifications on our data sheets.

Accessories

Tapping saddles

Stop ball valve

Mounting plate

*Reference conditions: inner pipe diameter 250 mm, medium water, velocity 1 m/s < v < 4 m/s, medium temperature 20 °C, air temperature 20 °C, air pressure 1013 mbar

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Specifications subject to change. 04/2018 - FA 1.000