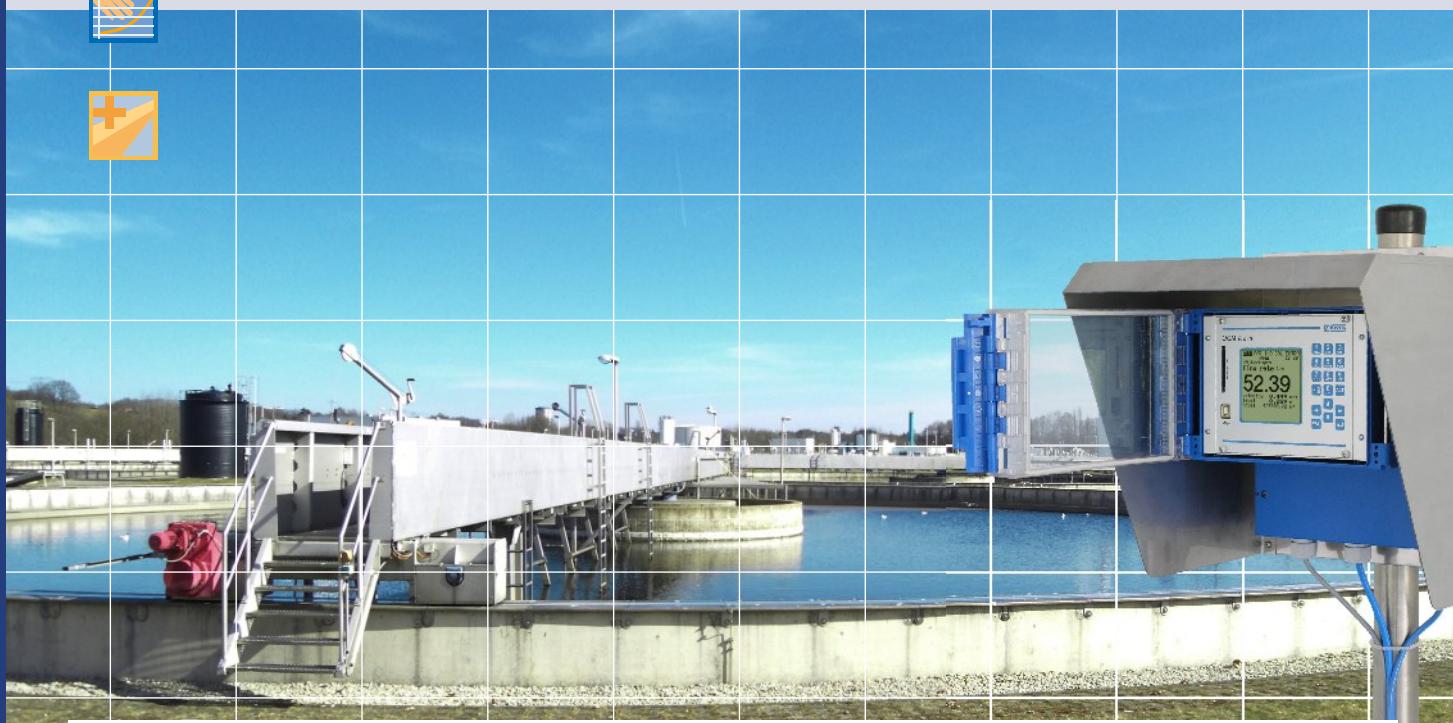


INSTRUMENTATION FOR WATER INDUSTRY



„Instrumentation for Water Industry“ List 2013

valid as of April 2013



PERMANENT FLOW MEASUREMENT

The NivuLog SunFlow is a self-sufficient, solar-powered flow measurement station independent from mains power with integrated data transmission via GPRS.



new

[More information: Flow permanent > P. 26](#)



PORTABLE FLOW MEASUREMENT

PCO portable clamp-on flowmeter for efficient and leakage monitoring on full pipes over long periods of time.



new

[More information: Flow portable > P. 46](#)



LEVEL MEASUREMENT

i-Series ultrasonic sensors with integrated transmitter. Install sensor, connect - done!



new

[More Information: Level > P. 62](#)



GPRS DATA LOGGER AND D2W INTERNET PORTAL

Level Data Collector for groundwater level measurement. Data transmission via GPRS to higher, server-based Device to Web (D2W) data portal.



new

[More information: Level > P. 76](#)

The release of the price list 2013 invalidates any previous issue. This price list is valid as of April 2013. All prices are quoted ex works, exclusive of VAT and do not include packing, postage and installation. The minimum order value is EUR 35,-.

We assume no liability due to misprints!
Modifications subject to change!

Send national and international E-mail orders to:

mailto:mailorder@nivus.com

² Product group A = no reduction

Permanent

**FLOW**

Portable

**LEVEL**

Continuous Measurement Technology
Ultrasound, hydrostatic and pressure

**TELECONTROL**

Recording of measurement data
GPRS Data logger

**WATER QUALITY**

Turbidity, Detection of Interfaces

**SERVICES**

Identifications
Confirmations & Certificates

**ACCESSORIES**

Mounting Systems
Overvoltage Protection

**NIVUS Hotline**

Phone: +49 (0)7262 9191-888
hotline-worldwide@nivus.com

Our experienced and committed experts will quickly and comprehensively answer your questions.



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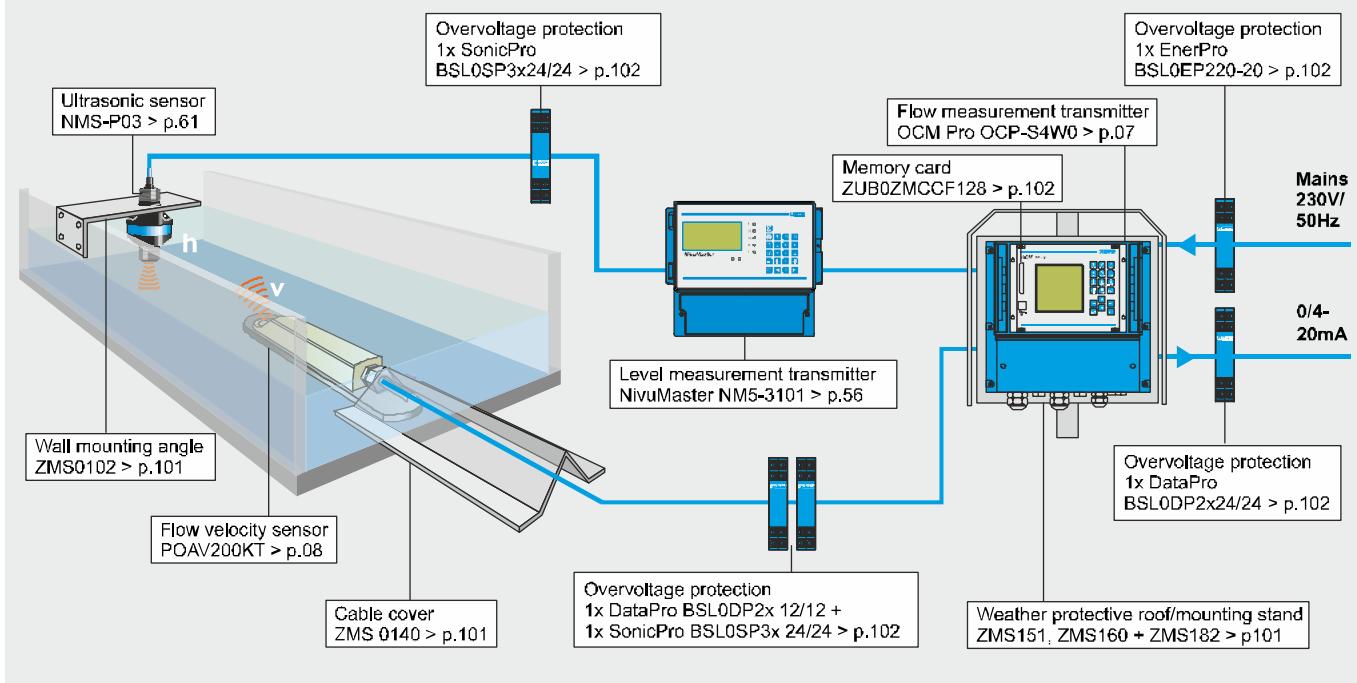
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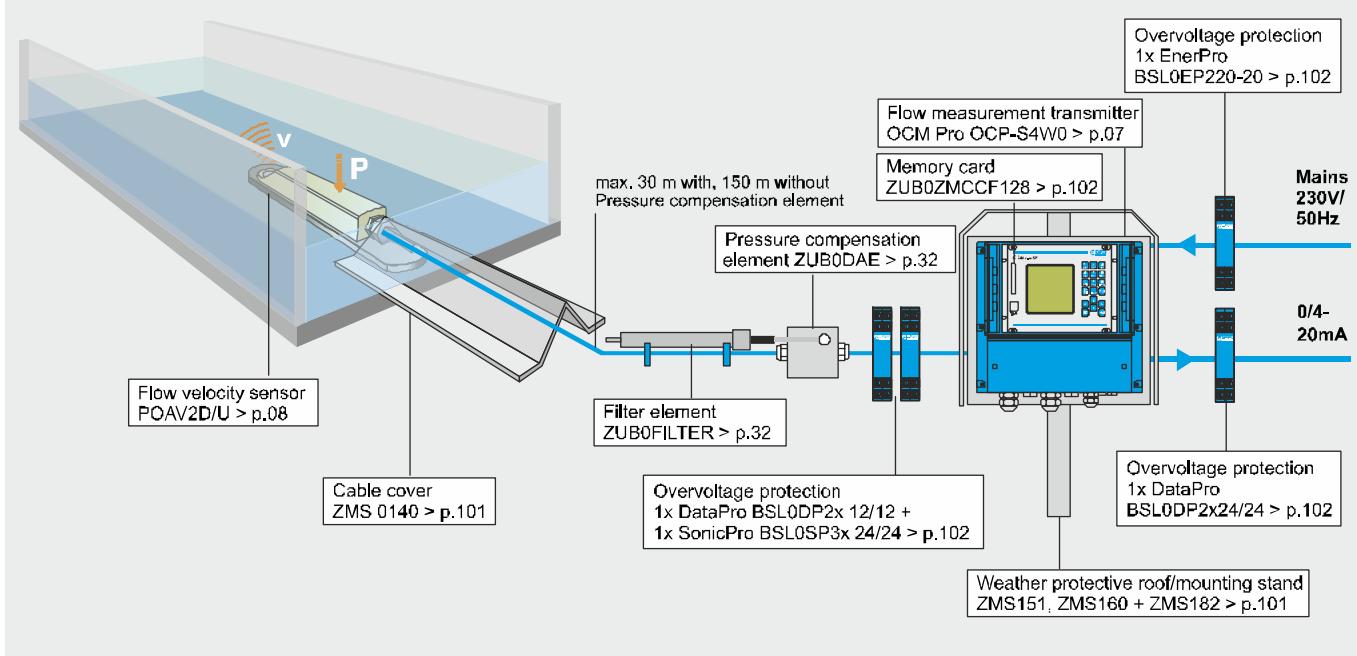
OCM Pro CF Measurement in open channels and full or partly filled pipes by using cross correlation



Example 1: Measurement in open channels, level measurement using ultrasound from top down



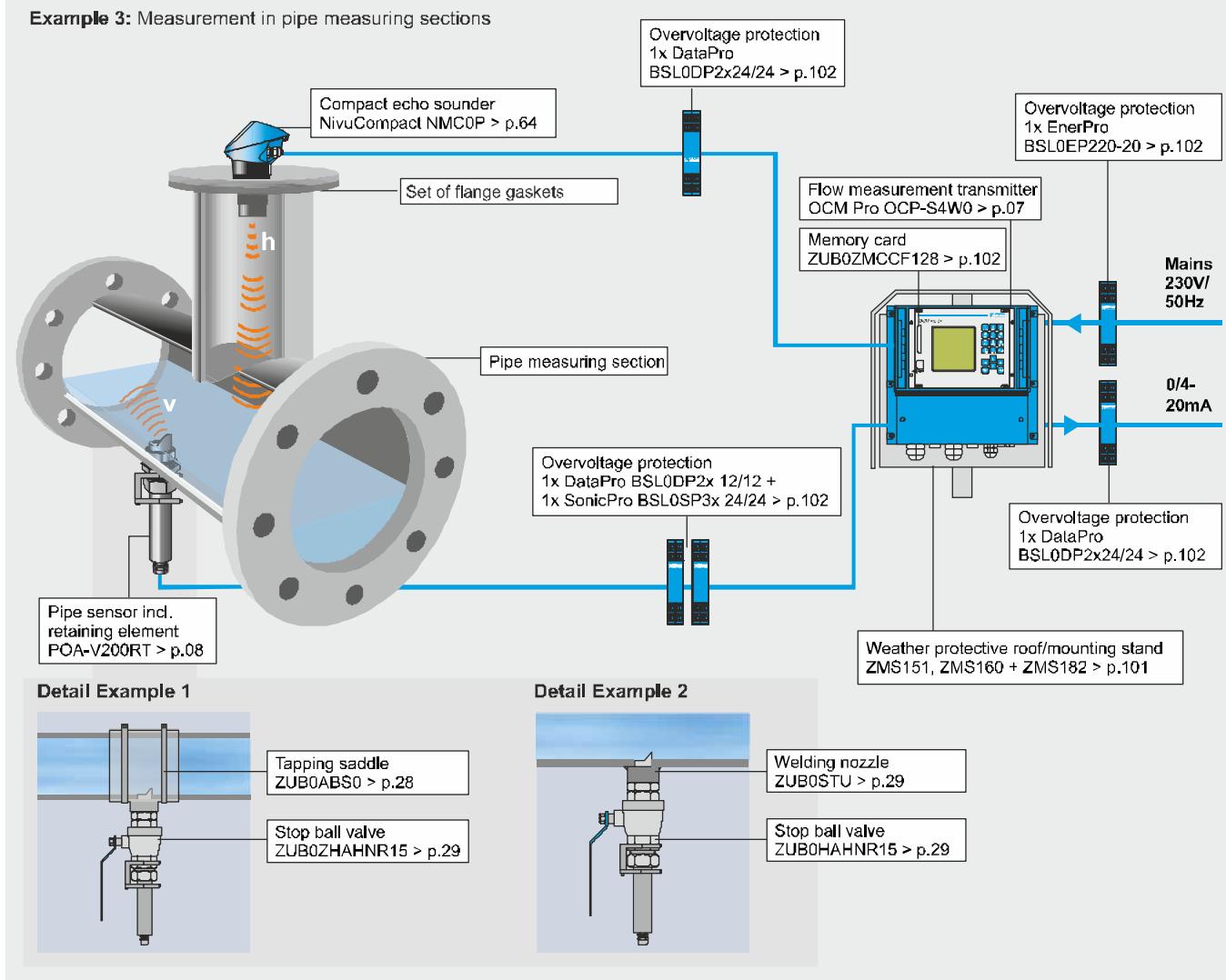
Example 2: Measurement in open channels, level measurement using pressure from bottom up



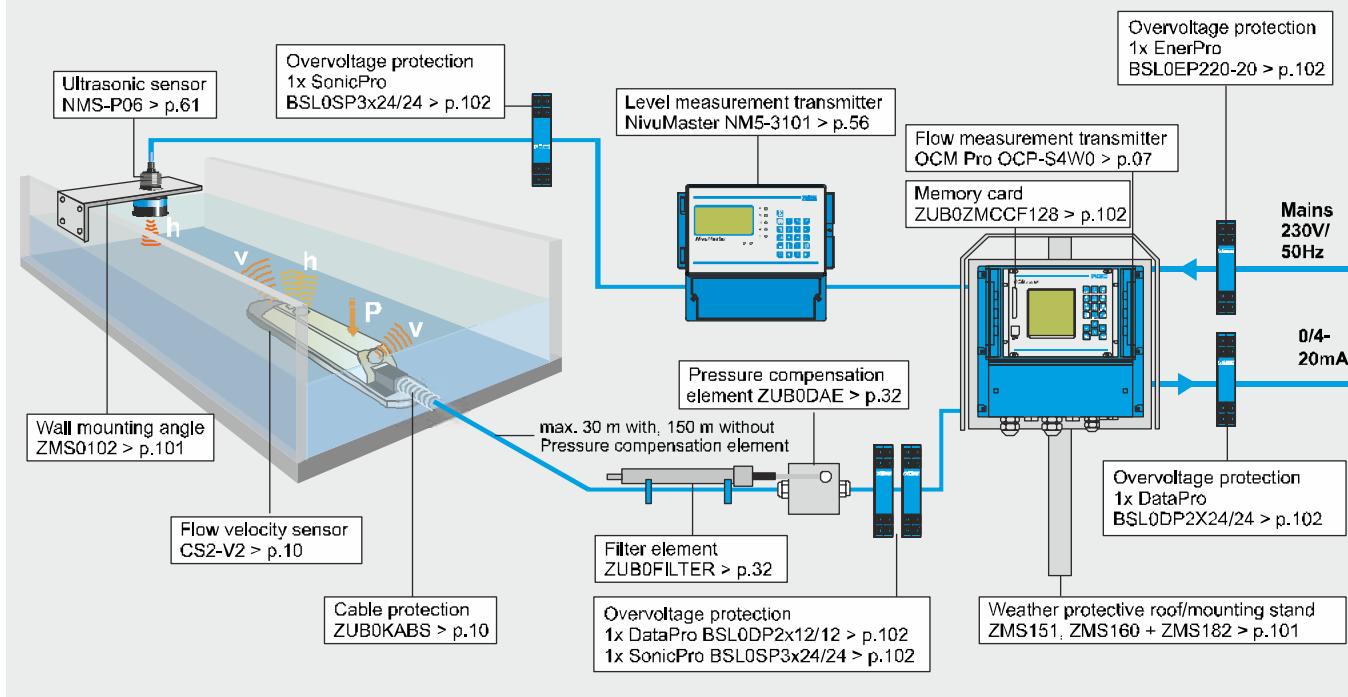


FLOW Permanent Transmitter

Example 3: Measurement in pipe measuring sections



Example 4: Measurement in open channels with the Vector Profiler, level measurement using ultrasound from top down





OCM Pro CF

Flow measurement transmitter for open channels and part filled and full pipes. Flow profile measurement using ultrasound. Signal evaluation by using cross correlation. Internet access via HTML protocol, TCP/IP via Intranet or direct connection with Modbus TCP. Includes NivuSoft software for Windows XP / Vista / Windows 7.



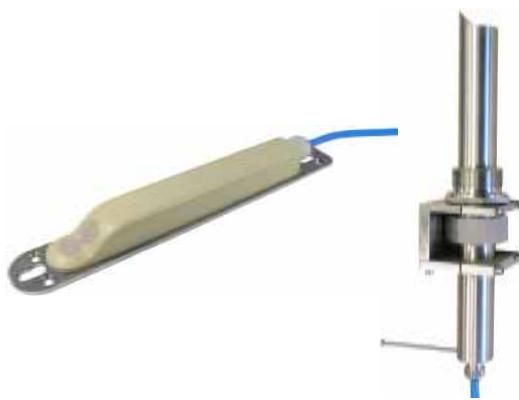
OCP-	Type			
	S4	Standard version with 2 relays, 2 mA output (galv. isolated), 1 mA input (galv. isolated with 2-wire sensor supply) or for external level measurement		
	M4	Multifunctional version with 5 relays, 4 mA outputs (galv. isolated), 4 digital inputs, 5 analog inputs (1 of them galv. isolated with 2-wire sensor supply), integrated 3-point step controller with flush function, connecting options for up to 3 sensors		
Construction				
F0 Panel mounting IP54/IP20, no data transmission available W0 Wall-mounting IP65				
Data Transmission				
00 without Internet communication (for F0 enclosure) IN Internet communication via Intranet (for W0 enclosure) MA Internet communication via internal analog modem (for W0 enclosure) MI Internet communication via internal ISDN modem (for W0 enclosure) MG Internet communication via GPRS (GSM antenna required) (for W0 enclosure)				
Power Supply				
A4 100-240 V AC / 47-63 Hz D4 9-36 V DC				
ATEX Approvals				
0 none E Intrinsically safe sensor supply in Ex zone 1				
OCP-				





POA Ultrasonic sensor for flow velocity or combi sensor for flow velocity and level for connection to OCM Pro CF.
 Retaining element for pipe sensors inclusive.

POA Ultrasonic sensor for flow velocity or combi sensor for flow velocity and level for connection to OCM Pro CF.
 Retaining element for pipe sensors inclusive.



POA-	Type	Sensor with spatial allocation of flow velocities covering a maximum of 16 scan layers																										
	V200 without Level Measurement																											
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571																										
	KP	Wedge sensor made of high resistant full PEEK, ground plate 1.4571																										
	KX	Wedge sensor, special construction (e.g. made of high resistant full PEEK with ground plate made of Hastelloy or Titanium).																										
	RT	Pipe sensor made of PPO with PEEK sensor face; pipe body 1.4571																										
	RP	Pipe sensor made of high resistant full PEEK; pipe body 1.4571																										
	RX	Pipe sensor, special construction																										
	V2H1 with ultrasound from bottom up for Level Measurement																											
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571																										
	KP	Wedge sensor made of high resistant full PEEK, ground plate 1.4571																										
	KX	Wedge sensor, special construction (e.g. made of high resistant full PEEK with ground plate made of Hastelloy or Titanium).																										
	RT	Pipe sensor made of PPO with PEEK sensor face; pipe body 1.4571																										
	RP	Pipe sensor made of high resistant full PEEK; pipe body 1.4571																										
	RX	Pipe sensor, special construction																										
	V2D0 with Pressure Measurement Cell 1 for Level Measurement																											
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571																										
	KX	Wedge sensor, special construction																										
	V2U1 with Pressure Measurement Cell 1 and ultrasound from bottom up for Level Measurement																											
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571																										
	KX	Wedge sensor, special construction																										
ATEX Approvals																												
<table border="1"> <tr> <td>0</td> <td>none</td> </tr> <tr> <td>E</td> <td>Zone 1</td> </tr> </table>			0	none	E	Zone 1																						
0	none																											
E	Zone 1																											
Cable Length (max. 150 m / with pressure measurement cell up to 30 m)																												
<table border="1"> <tr> <td>10</td> <td>10 m</td> </tr> <tr> <td>15</td> <td>15 m</td> </tr> <tr> <td>20</td> <td>20 m</td> </tr> <tr> <td>30</td> <td>30 m</td> </tr> <tr> <td>50</td> <td>50 m</td> </tr> <tr> <td>99</td> <td>100 m</td> </tr> <tr> <td>XX</td> <td>Special length upon request</td> </tr> <tr> <td>1B</td> <td>10 m, FEP coated*</td> </tr> <tr> <td>2B</td> <td>20 m, FEP coated*</td> </tr> <tr> <td>3B</td> <td>30 m, FEP coated*</td> </tr> <tr> <td>5B</td> <td>50 m, FEP coated*</td> </tr> <tr> <td>9B</td> <td>100 m, FEP coated*</td> </tr> <tr> <td>XB</td> <td>Special length / special construction*</td> </tr> </table>			10	10 m	15	15 m	20	20 m	30	30 m	50	50 m	99	100 m	XX	Special length upon request	1B	10 m, FEP coated*	2B	20 m, FEP coated*	3B	30 m, FEP coated*	5B	50 m, FEP coated*	9B	100 m, FEP coated*	XB	Special length / special construction*
10	10 m																											
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5B	50 m, FEP coated*																											
9B	100 m, FEP coated*																											
XB	Special length / special construction*																											



					Sensor Connection
				K	Cable end pre-configured for connection to OCM Pro CF Type V20 and V2H
				L	Cable end pre-configured for connection to OCM Pro CF Type V2D and V2U
					Pipe Length
			0		(only for wedge sensor)
			2		20 cm (standard)
			3		30 cm (minimum length for ball stop valve)
			4		40 cm (minimum length for retractable fitting)
			X		Special pipe length in dm, price per dm
			G		20 cm + extension thread
POA-					

* = Cable not possible for sensor type V2D0 and V2U1

¹ Please find pressure compensation element on page 32.

CSM **Correlation Sensor Mini: ultrasonic velocity sensor for low levels, for connection to Electronic Box EBM**

Sensor-Set for OCM Pro CF

CSM0 SET3 E070 10K

Sensor set ATEX Zone 1, consisting of:

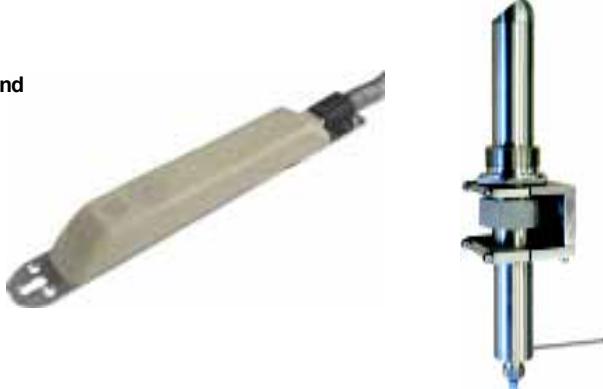
- 1 pc. Flow velocity sensor, type CSM, 7 m cable
- 1 pc. Electronic box, type EBM, 10 m cable

More sensors of the "Mini" sensor family see page 43.





- CS2** Sensor for flow velocity profile measurement using ultrasound or combi sensor with integrated level measurement.
 Ideal in applications with water levels up to 4 meters.
 For use in part filled and full pipes and open channels.
 For connection to OCM Pro CF transmitters.
 Retaining element for pipe sensors inclusive.



CS2-	Type	Correlation sensor for large dimensions
	V100	without level measurement
	RP	Pipe sensor made of high resistant full PEEK; pipe body 1.4571
	RX	Pipe sensor, special construction
	SP	Rod sensor made of highly resistant full PEEK, pipe material 1.4571
	V200	without level measurement
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
	V2H1	with ultrasound from bottom up for level measurement
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
	V2D0	with pressure measurement cell ¹ for level measurement
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
	V2U1	with pressure measurement cell ¹ and ultrasound from bottom up for level measurement
	KT	Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
	ATEX approval	
	0	none
	E	Zone 1
	Cable Length (max. 150 m / with pressure measurement cell up to 30 m)	
	10	10 m
	15	15 m
	20	20 m
	30	30 m
	50	50 m
	99	100 m
	XX	Special length upon request
	Sensor Connection	
	K	Connection to OCM Pro CF, Type V20 and V2H
	L	Connection to OCM Pro CF, Type V2D and V2U
	R	for pipe sensors for connection to OCM Pro CF, Type V10
	F	Connection to PCM Pro and PCM 4 for type V2D and V2U, incl. plug and replaceable filter element
	S	Connection to PCM Pro and PCM 4 for type V20 and V2H, incl. plug
	Pipe Length	
	0	(only for wedge sensor)
	2	20 cm (standard)
	3	30 cm (minimum length for stop ball valve)
	4	40 cm (minimum length for retractable fitting)
	X	Special pipe length in dm, price per dm
	G	20 cm + extension thread
CS2-		

ZUBO KABS

Cable protection length 0.5, 1 and 3 m, other lengths upon request

¹ Please find pressure compensation element (not for connection F and S) on page 32.



OCL Active air-ultrasonic sensor for non-contacting water level measurement for connection to OCM Pro CF.



OCL-L1 Active air-ultrasonic sensor

Construction

- K** Wedge sensor
- X** Special construction

Sensor Version

- S** Standard version made of PPO, cable: PUR
- X** Special construction

Transmitting Frequency

- 12** 120 kHz
- XX** Special construction

Approvals

- 0** none
- E** Ex zone 1

Cable Length (max. 150 m)

- 10** 10 m
- 15** 15 m
- 20** 20 m
- 30** 30 m
- 50** 50 m
- 99** 100 m
- XX** Special length upon request

Sensor Connection

- K** Cable end pre-configured for connection to OCM Pro CF

OCL-L1

K





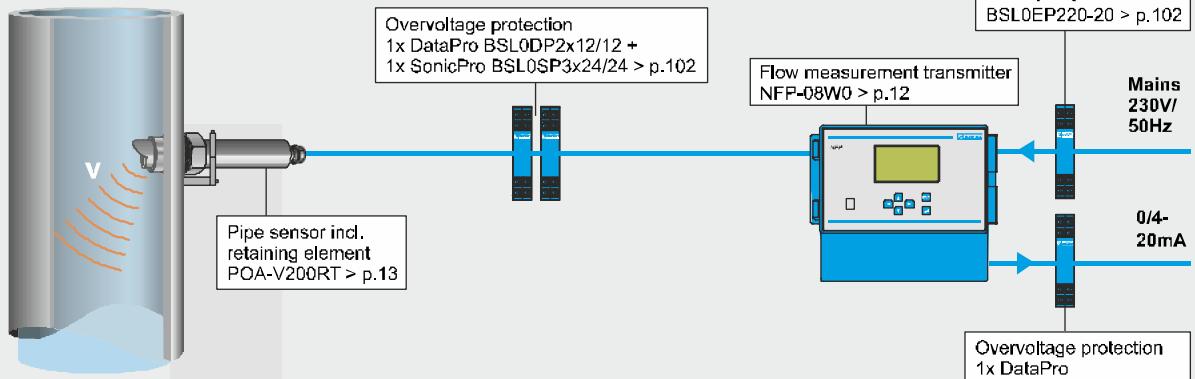
FLOW Permanent
Transmitter

NFP

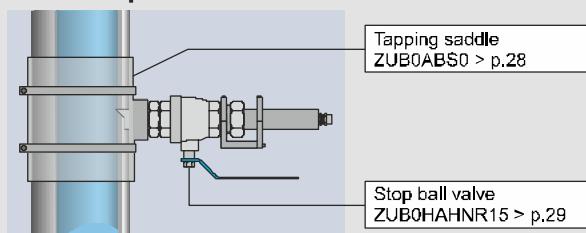
Measurements exclusively in full pipelines up to 800 mm diameter by using cross correlation



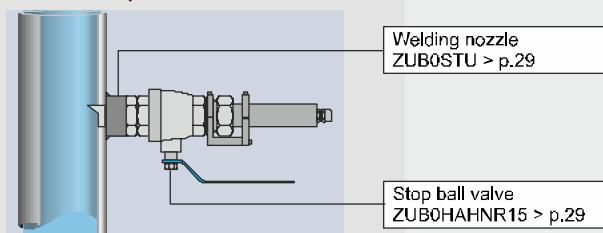
Example: Measurement in pipe line



Detail Example 1



Detail Example 2



Ideal for slightly polluted media up to sludge. Flow velocity profile measurement using ultrasound.

Signal evaluation by using cross correlation.

NFP-**Construction**

05 Nominal diameter DN100 - DN500

08 Nominal diameter DN100 - DN800

Construction

W0 Wall mount enclosure IP65

Power Supply

AC 85 - 265 V AC, 47-63 Hz

DC 20 - 28 V DC

ATEX Approvals

0 none

E Intrinsically safe sensor supply in Ex zone 1

Extensions (Hardware)

1 1 analog output

3 3 analog outputs

NFP-**W0**



NFP Ultrasonic sensors for flow velocity for connection to NIVUS Full Pipe (NFP).
Retaining element for pipe sensors inclusive.



POA- Active water-ultrasonic sensor with spatial allocation of flow velocities covering a maximum of 16 scan layers

V200

RT Pipe sensor made of PPO with PEEK sensor face; pipe body 1.4571

RP Pipe sensor made of high resistant full PEEK; pipe body 1.4571

RX Pipe sensor, special construction

ATEX-Approvals

0 none

E Ex zone 1

Cable Length - max. 150 m (FEP coating upon request)

10 10 m

15 15 m

20 20 m

30 30 m

50 50 m

99 100 m

XX Special length upon request

Sensor Connection

K Cable end pre-configured for connection to NFP

Pipe Length

2 20 cm (standard)

3 30 cm (minimum length for stop valve)

4 40 cm (minimum length for retractable fitting)

X Special pipe length in dm, price per dm

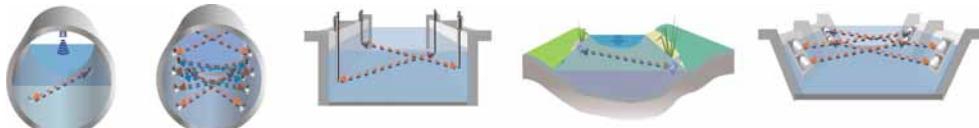
G 20 cm + extension thread

POA-	V200			K	
-------------	-------------	--	--	----------	--

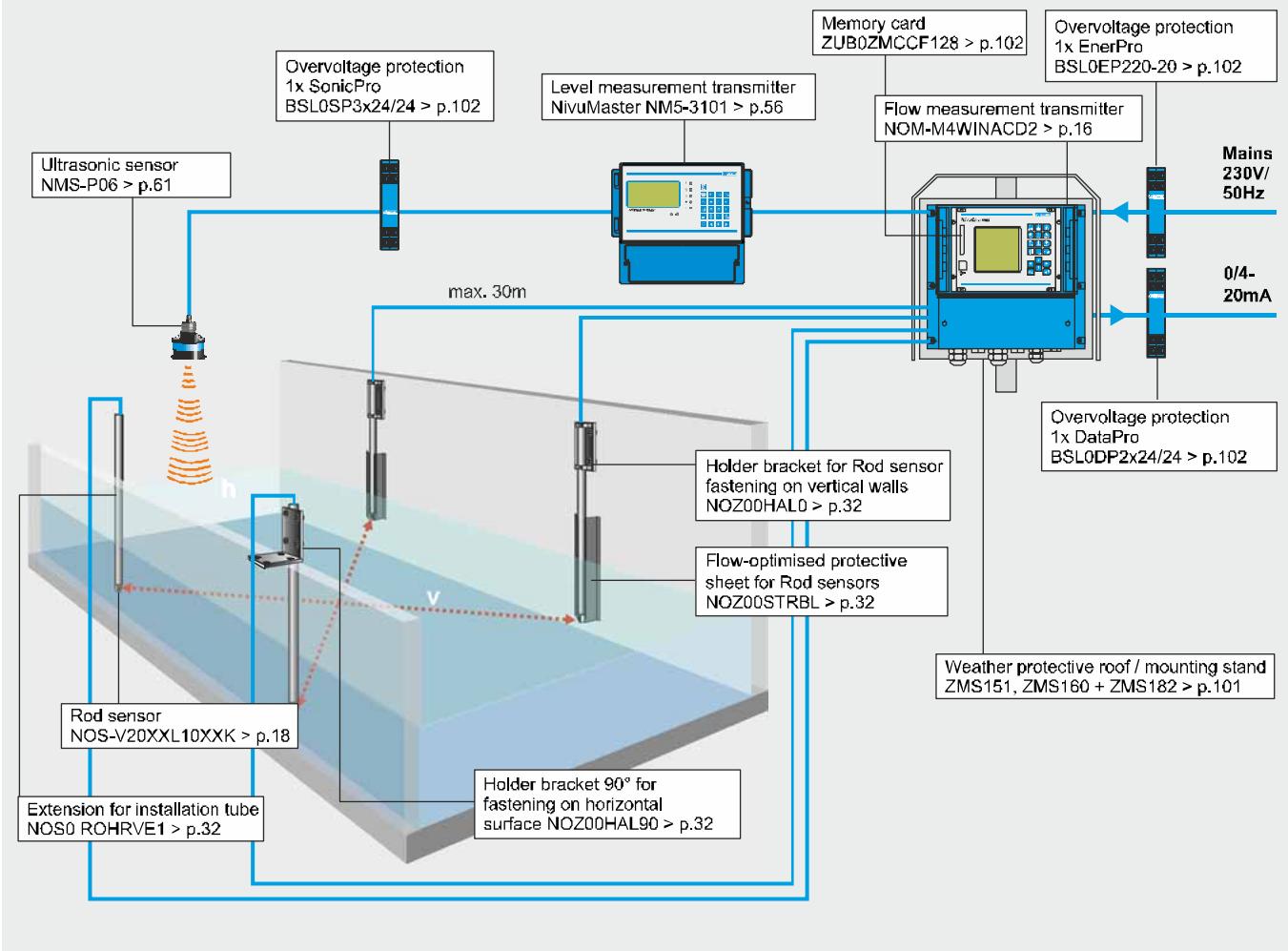


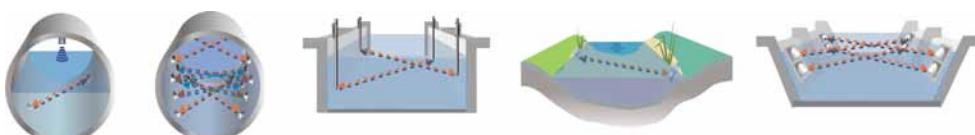


NivuChannel Measurement in clear water by using ultrasonic transit time

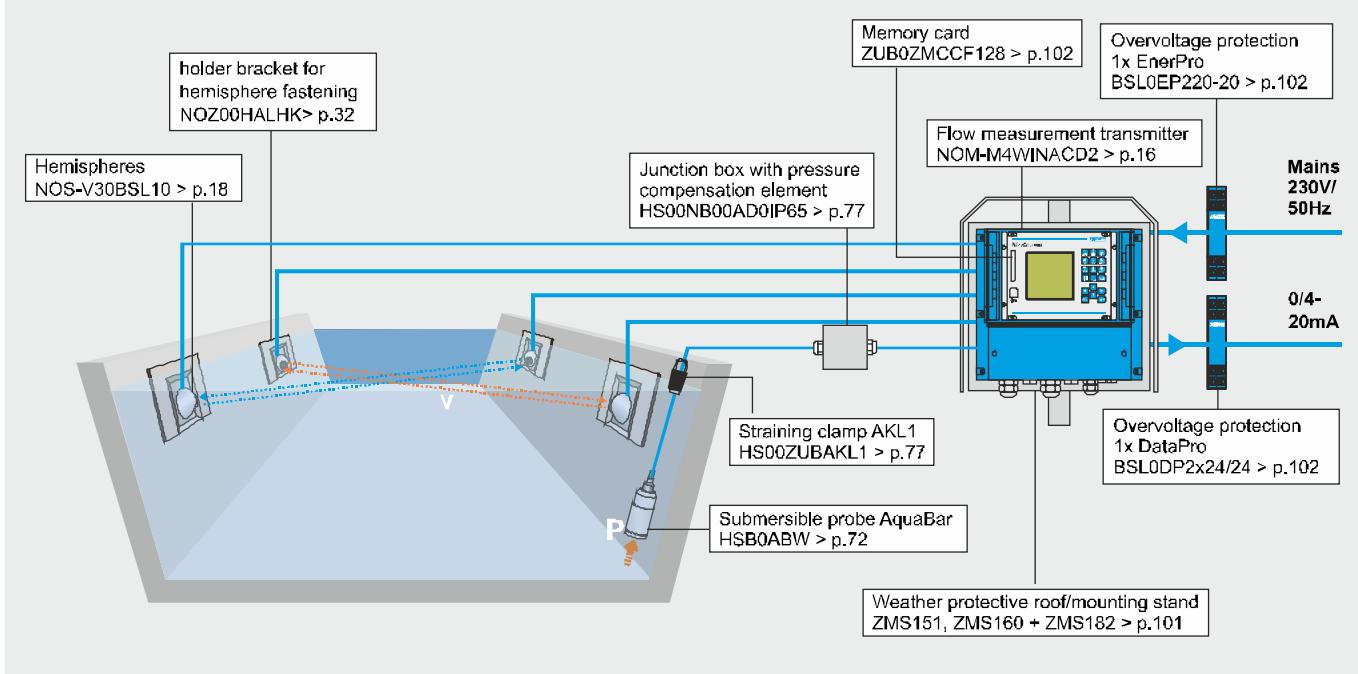


Example 1: Transit time measurement in open channel, 1 or 2 paths, rod sensors, level measurement using ultrasound from top down

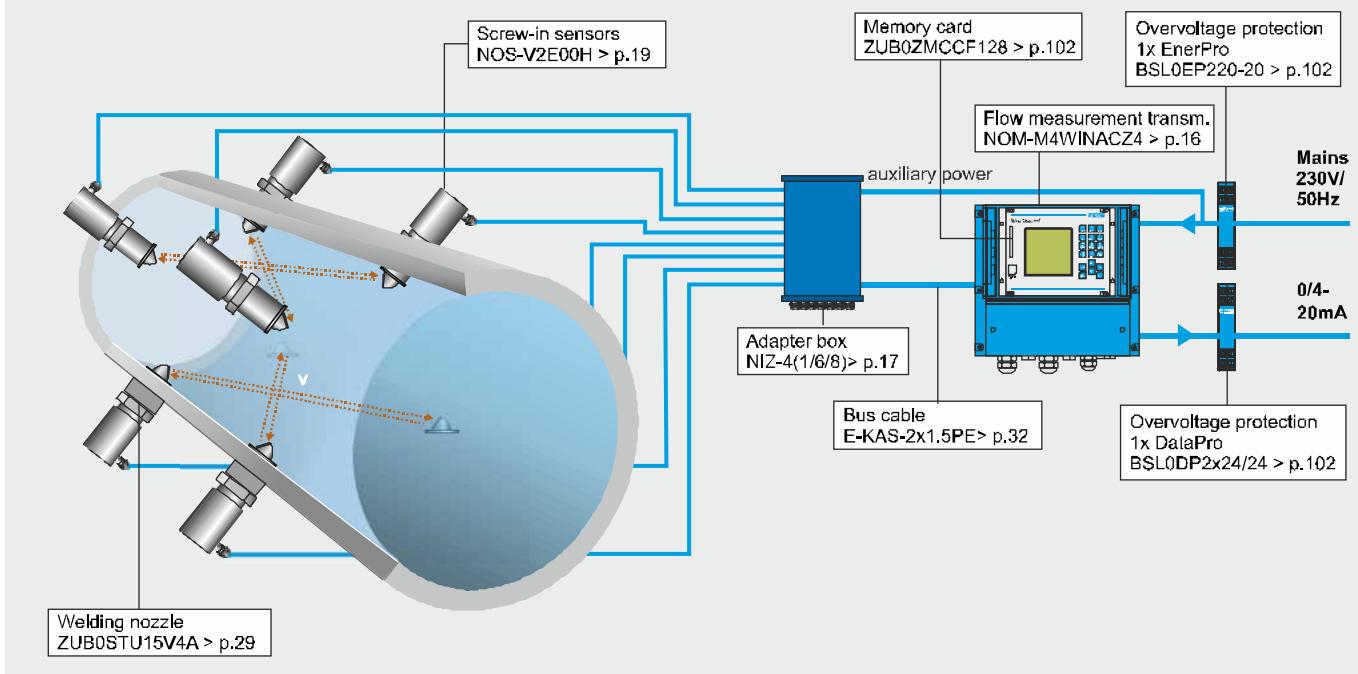




Example 2: Transit time measurement in open channel, hemispherical sensor, level measurement using pressure probe



Example: Transit time measurement in large full pipe line using more than 2 measurement paths





FLOW Permanent
Transmitter

1

NivuChannel Flow measurement transmitter for full and part filled pipes, open channels/water bodies and multi-path measurements according to IEC60041. (calibration according to EN ISO 6416 on site recommended) Internet access via HTML protocol, TCP/IP via Intranet or direct connection with Modbus TCP. Includes NivuSoft software for Windows XP / Vista / Windows 7.



NOM-	Type				
	M4W	Standard version with 5 relays, 4x 0/4-20 mA outputs , 1x 4-20 mA input (for external level measurement) 4x 0/4-20 mA inputs (galv. isolated for additional external level measurements or set points).	Data Transmission		

IN Internet communication via Intranet
MA Internet communication via internal analog modem
MI Internet communication via internal ISDN modem
MG Internet communication via GPRS

Power Supply

AC 100-240 V AC / 47-63 Hz
DC 24 V stabilised

Evaluation Setup

D Direct connection of sensors, Types NOS-V2 and NOS-V3 as well as NIS-V2 and NIS-V3
X Direct connection of sensors, Type NOS-V4
Z Connection via adapter box*

Number of Paths

1	1 Path (adapter box* optional)
2	2 Paths (adapter box* optional)
4	4 Paths (adapter box* required)
8	8 Paths (adapter box* required)

NOM- M4W

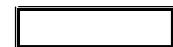
* = Please find the adapter box on page 17.



NIZ- Adapter box for connection of several sensor pairs
Types NOS-V2, NOS-V3, NIS-V2 and NIS-V3 to NivuChannel
as well as for cable extension on NivuSonic.



NIZ-	Type	
1	1-2 Measurement paths (NivuChannel, NivuSonic)	
4	3-4 Measurement paths (NivuChannel)	
6	5-6 Measurement paths (NivuChannel)	
8	7-8 Measurement paths (NivuChannel)	
	Power Supply	
	AC 100-240 V AC / 47-63Hz	
	DC 24 V DC ±15 %	
NIZ-		



Adapter box for connection of several sensor pairs Type NOS-V4 to NivuChannel.

NIX-	Type	
2001	1-2 Measurement paths	
2004	3-4 Measurement paths	
2006	5-6 Measurement paths	
2008	7-8 Measurement paths	
	Power Supply	
	AC 100-240 V AC / 47-63 Hz	
	DC 24 V DC ±15 %	
NIX-		



You can find accessories for the adapter box on page 32.



1 FLOW Permanent

Sensors

NOS Sensors for part filled channel shapes for connection to NivuChannel for flow velocity detection by ultrasonic transit time.



NOS- Type

- V2005** Rod sensor made of 1.471; installation tube length 500 mm diameter 35 mm; sensor head with CFK sensor face (\varnothing 20 mm) for 1 MHz; pair of sensors (2 pieces!)
- V2010** Rod sensor made of 1.471; installation tube length 1000 mm diameter 35 mm; sensor head with CFK sensor face (\varnothing 20 mm) for 1 MHz; pair of sensors (2 pieces!)
- V3005** Rod sensor made of 1.471; installation tube length 500 mm diameter 35 mm; sensor head with CFK sensor face (\varnothing 40 mm) for 1 MHz; pair of sensors (2 pieces!)
- V3010** Rod sensor made of 1.471; installation tube length 1000 mm diameter 35 mm; sensor head with CFK sensor face (\varnothing 40 mm) for 1 MHz; pair of sensors (2 pieces!)
- V30BS** Hemispheres made of POM, sensor face (\varnothing 40 mm) made of CFK (Carbon); pair of sensors (2 pieces!)
- V30BX** Hemispheres, sensor face (\varnothing 40 mm); special construction; pair of sensors (2 pieces!)
- V4005** Rod sensor made of 1.471; installation tube length 500 mm diameter 35 mm; sensor head (\varnothing 65 mm) für 200 KHz; pair of sensors (2 pieces!)
- V4010** Rod sensor made of 1.471; installation tube length 1000 mm diameter 35 mm; sensor head (\varnothing 65 mm) für 200 KHz; pair of sensors (2 pieces!)

Pressure Level

- L** 1,2 bar

Path Position

- 1** Path position 45° against flow direction (recommended setup angle)

Approvals

- 0** non

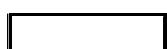
Cable Length

- 10** 10 m pre-configured
- 15** 15 m pre-configured
- 20** 20 m pre-configured
- 30** 30 m pre-configured
- 50** 50 m pre-configured
- 99** 100 m pre-configured
- XX** Special length

Sensor Connection

- A** Connection to NivuChannel transmitter via underwater plug connection (only for Type V30B)
- B** Connection via adapter box* to NivuChannel transmitter via underwater plug connection (only Type V30B)
- K** Connection to NivuChannel transmitter
- Z** Connection to NivuChannel transmitter via adapter box*

NOS-	L	1	0	
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* = Please find the adapter box on page 17.



NOS Screw-in sensors for connection to NivuChannel for flow velocity detection via ultrasonic transit time in full pipes - preferably multi-path applications according to IEC60041.



NOS-	Type		
	V2E00	Screw-in sensors for installation in welding nozzle (installation possible only from the <u>outside!</u>); sensor pair (2 pieces!)	
	V2S00	Plug-in sensors for installation in duct (installation only possible from the <u>inside!</u>); sensor pair (2 pieces!)	
Pressure Level			
H 80 bar			
Path Position			
A 45° Position of path			
B Position of path			
C Position of path			
D Position of path			
X Special position			
ATEX Approvals			
0 none			
Cable Length			
10 10 m pre-configured			
15 15 m pre-configured			
20 20 m pre-configured			
30 30 m pre-configured			
50 50 m pre-configured			
99 100 m pre-configured			
XX Special length			
Sensor Connection			
K Connection to NivuChannel transmitter			
Z Connection to NivuChannel transmitter via adapter box*			
NOS-	H	0	

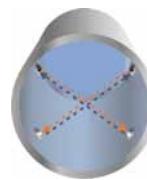
* = Please find the adapter box on page 17.



FLOW Permanent Transmitter

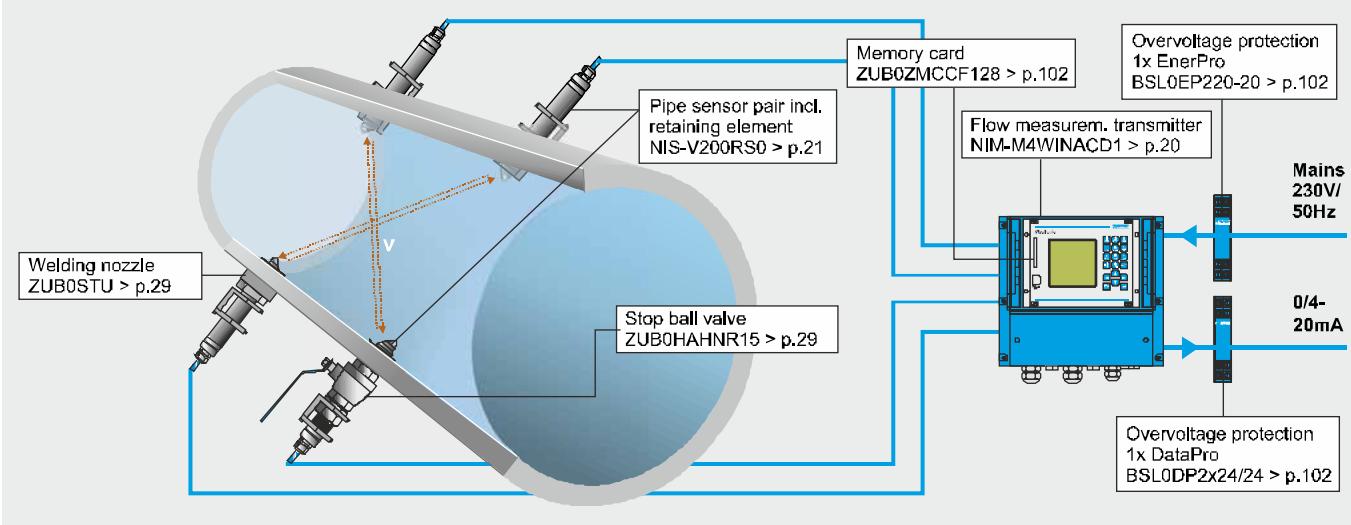
NivuSonic NivuSonic CO

Flow measurement in full pipes as of 100 mm diameter by using ultrasonic transit time
Clamp-on measurement using ultrasonic transit time



Flow measurement by ultrasonic transit time.
Internet access via HTML protocol, TCP/IP via Intranet or
direct connection in Modbus TCP.
Includes software NivuSoft for Windows XP / Vista / Windows 7.

Example: Transit time measurement in full pipe line



NIM-	Type				
	M4W	Standard version with 5 relays, 4mA outputs, 4 mA inputs			
	Data Transmission				
	IN	Internet communication via Intranet			
	MA	Internet communication via internal analog modem			
	MI	Internet communication via internal ISDN modem			
	MG	Internet communication via GPRS			
	Power Supply				
	AC	100-240 V AC / 47-63 Hz			
	DC	24 V stabilised			
	Evaluation Setup				
	D	Direct connection of sensors			
	Z	Connection via adapter box*, type NIZ-			
	Number of Paths				
	1	1-2 Paths (adapter box* optional) 2 Paths maximum			
	Firmware				
	0	Standard firmware			
	01	Clamp-on measurement (NivuSonic CO)			
NIM-	M4W				
			1		

* = Please find the adapter box on page 17.



NIS Sensors for connection to NivuSonic for flow velocity detection using ultrasonic transit time in full pipes.
Retaining element for pipe sensors inclusive.



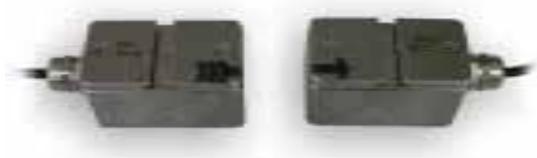
NIS-	Type			
	V200 Pipe sensor			
	RS	Pipe sensors; 1.4571; with CFK- sensor face (Carbon) ø 20 mm; sensor pair (2 pcs.)		
	RX	Pipe sensors; special construction; sensor pair (2 pcs.)		
	V300 Wedge sensor			
	KS	Wedge sensor made of PPO with CFK-sensor face (Carbon) ø40 mm, ground plate 1.4571; sensor pair (2 pcs.)		
	KX	Wedge sensor, special construction; sensor pair (2 pcs.)		
	ATEX Approvals			
	0	none		
	Cable Length			
	10	10 m pre-configured		
	15	15 m pre-configured		
	20	20 m pre-configured		
	30	30 m pre-configured		
	50	50 m pre-configured		
	99	100 m pre-configured		
	XX	Special length upon request		
	Sensor Connection			
	K	Connection to NivuSonic transmitter		
	Z	Connection to NivuSonic transmitter via adapter box*, type NIZ- (optional)		
	Pipe Length			
	0	(for wedge sensor)		
	2	200 mm (for pipe sensors)		
	3	300 mm (for stop ball valve)		
	X	special length		
NIS-	0			

* = Please find the adapter box on page 17.

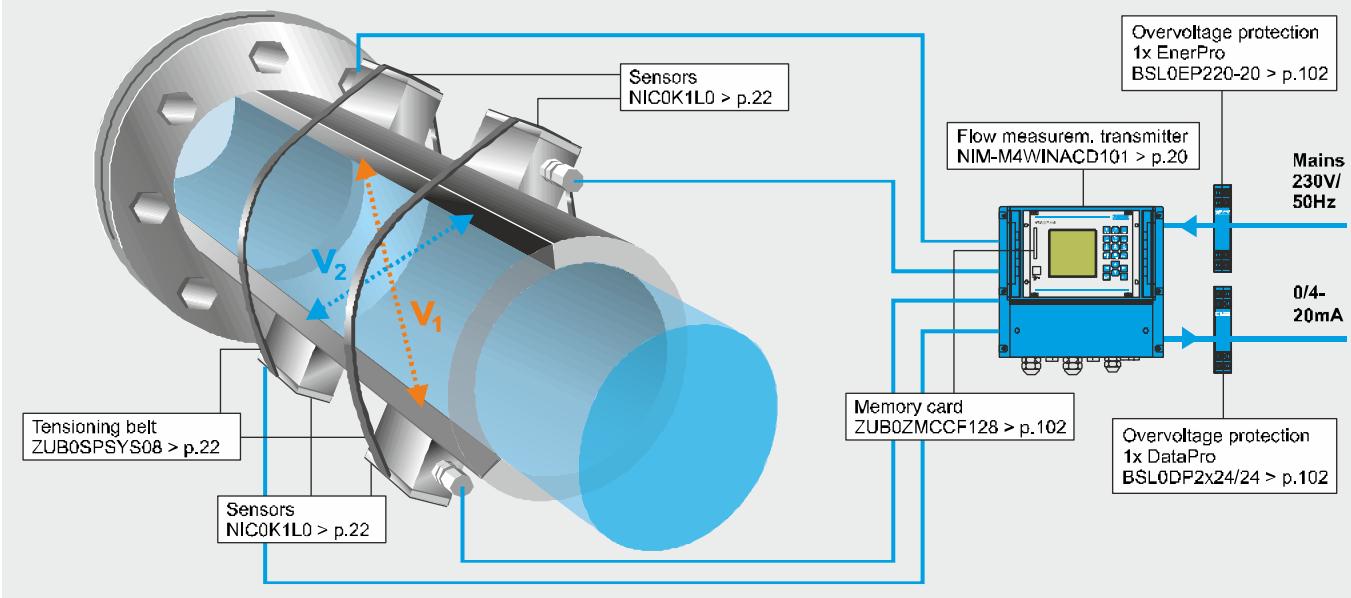




NIC0 Clamp-on sensors for non-contact flow velocity measurement using ultrasonic transit time on full pipes. For clean to slightly polluted water.



Example: Transit time measurement in full pipe line with clamp on sensors, 2 path measurement



NIC0	Type			
	K1L	Clamp-on sensor pair for connection to NivuSonic CO; measurement range $\pm 20 \text{ m/s}$		

ATEX Approvals

0 none

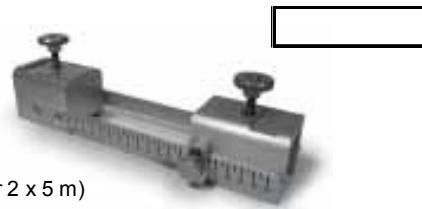
Cable Length

- 10 10 m pre-configured
- 15 15 m pre-configured
- 20 20 m pre-configured
- 30 30 m pre-configured
- 50 50 m pre-configured

Sensor Connection

K Connection to NivuSonic CO transmitter

NIC0	K1L	0		K
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Fastening system / Accessories

ZUB0 SPSYS08

Clamping system consisting of tensioning belt, width 8 mm (length 10 m for 2 x 5 m) and 2 turnbuckles for fastening of 2 sensors; incl. coupling paste

ZUB0 CORAIL

Rail system consisting of tensioning belt, length 10 m, 2 turnbuckles and split, movable sensor receptacles for easier sensor installation.

ZUB0 COBAG01

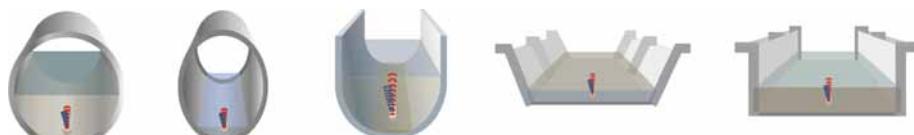
Transport bag for ZUB0 CORAIL rail system

² = Product group A

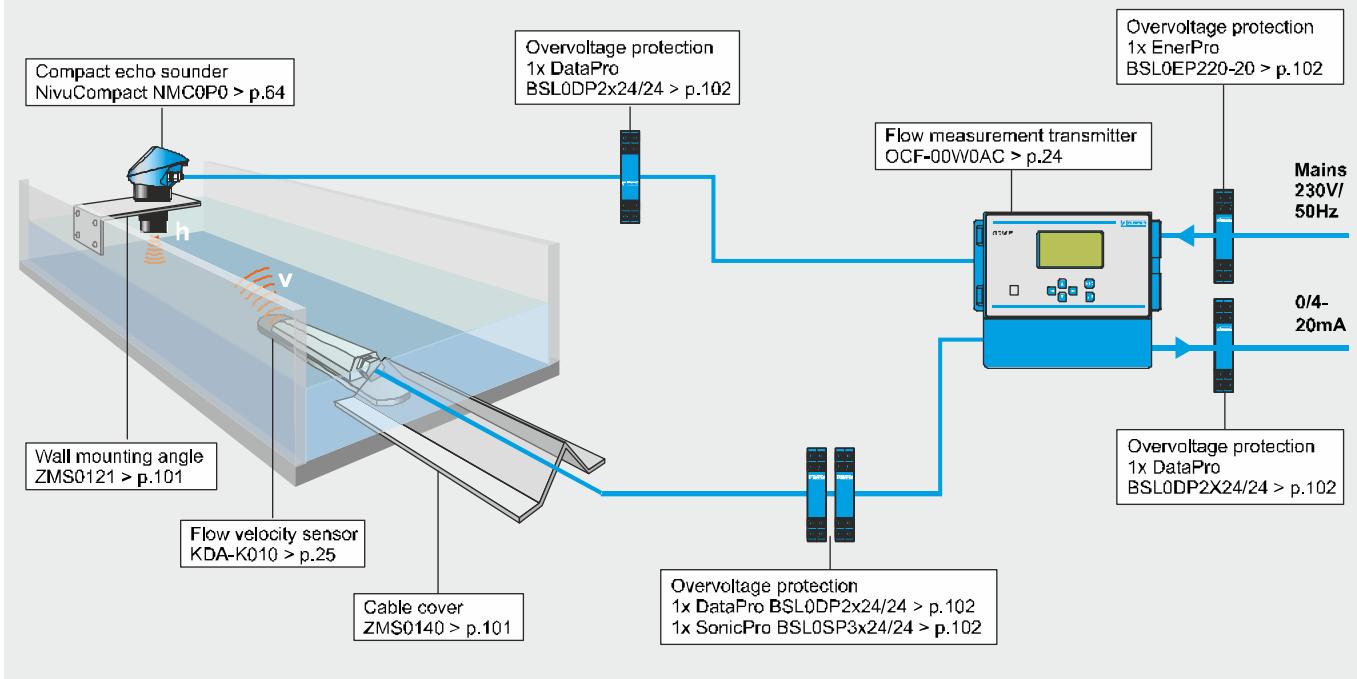


OCM F

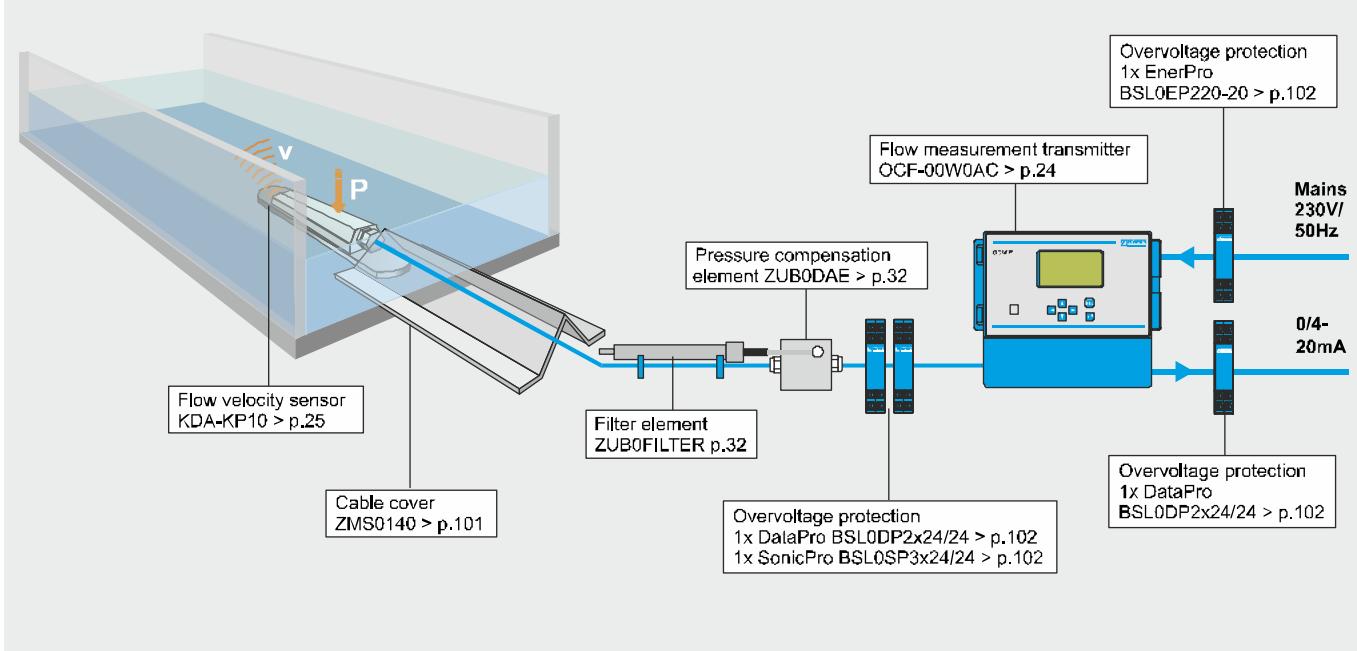
Flow measurement in open channels and part filled or full pipes by using **Doppler method**.



Example 1: Measurement in open channel, level measurement using ultrasound from top down



Example 2: Measurement in open channel, level measurement using pressure from bottom up





1 FLOW Permanent Transmitter

OCM F Flow measurement transmitter for open channels and part filled or full pipes. Flow velocity detection by using Doppler method.

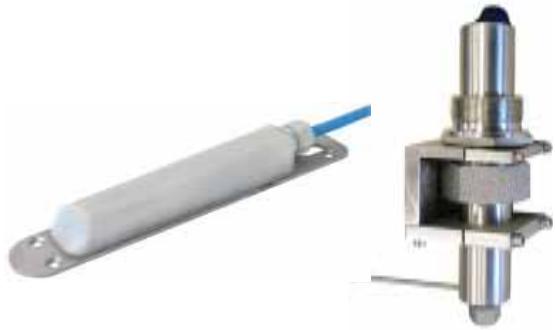


OCF-	Type	Enclosure	Power Supply	Approvals	
	00 Standard version for various pipe and channel shapes. 5 relays, 3 mA outputs (galv. isolated), 1 mA input (galv. isolated with 2-wire sensor supply) or for external level measurement , integrated 3-step controller				
	W0 wall mount IP 65		AC 85 - 265 V AC, 47-63 Hz	0 none	
			DC 20 - 28 V DC	E Intrinsically safe sensor supply in Ex zone 1	
OCF-	00	W0			





KDA Ultrasonic Doppler sensor for flow velocity or combi sensor for flow velocity and level for connection to OCM F.



KDA- Compact Doppler active sensor

Construction

- K010** Wedge sensor for fastening on channel bottom or by using the RMS2 pipe mounting system
- KP10¹** Combi wedge sensor with integrated pressure measurement cell, suitable for simultaneous flow velocity and level measurement. For installation on channel bottom or for fastening using the RMS 2 pipe mounting system.
- R007** Pipe sensor for installation with G1½" screw thread

ATEX Approvals

- | | |
|----------|--------|
| 0 | none |
| E | zone 1 |

Cable Length (max. 150 m / with pressure sensor up to 30 m possible)

- | | |
|-----------|-------|
| 10 | 10 m |
| 15 | 15 m |
| 20 | 20 m |
| 30 | 30 m |
| 50 | 50 m |
| 99 | 100 m |

XX Special cable lengths upon request

Sensor Connection

K Cable end, pre-configured, for Types K0 and R0

L Cable end, pre-configured, for Type KP

Pipe Length

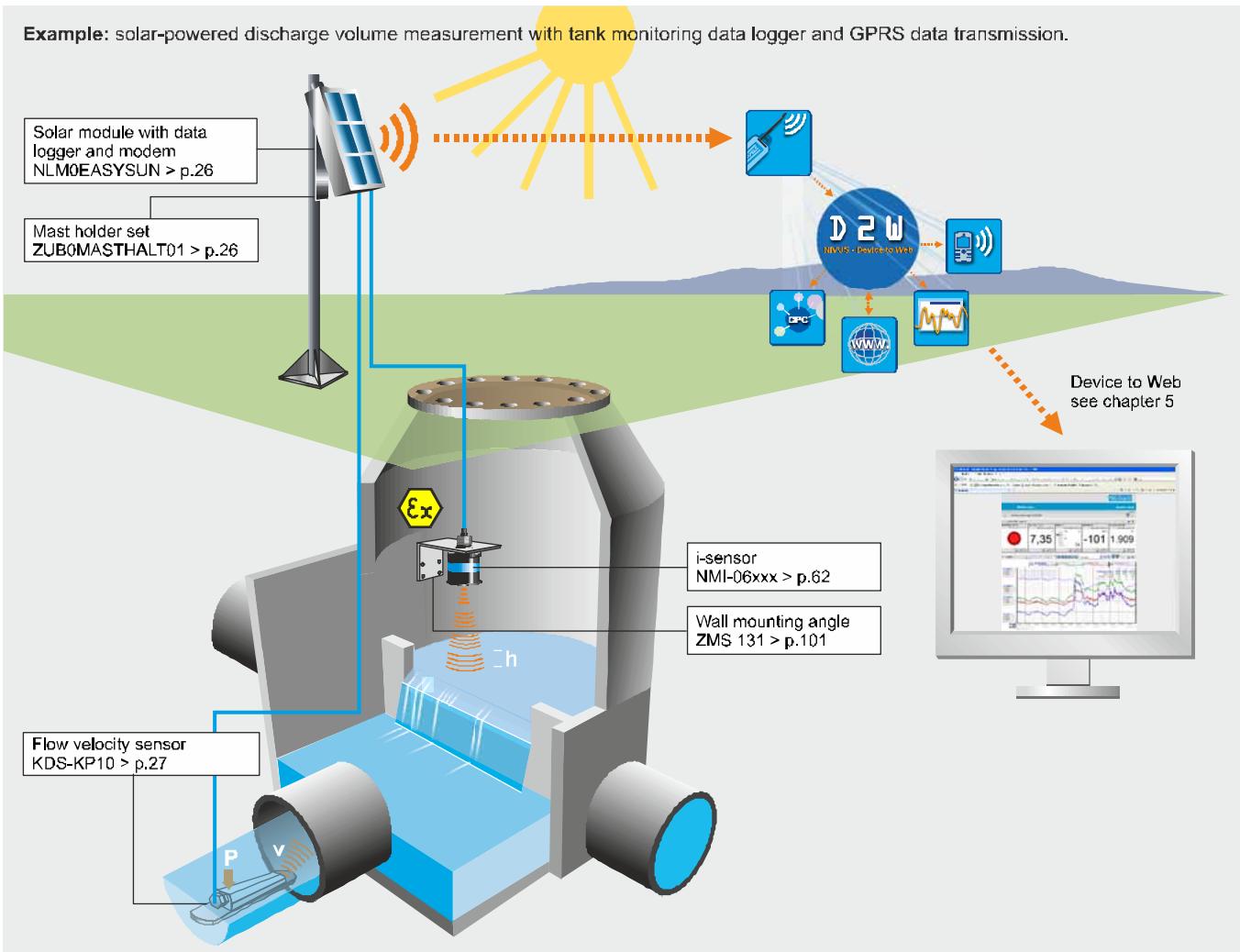
- | | |
|----------|---|
| 0 | (only for wedge sensor) |
| 2 | 20 cm (standard) |
| 3 | 30 cm (minimum length for stop valve) |
| X | Special pipe length in dm, price per dm |
| G | 20 cm + extension thread |

KDA-

¹ Please find Pressure compensation element on page 32.



NivuLog SunFlow solar-powered flow measurement station



NLMO SUNF LOW NivuLog SunFlow - solar-powered measurement station with integrated data logger, GPRS data transmission, solar control and buffer batteries¹

ZUB0 MAST HALT01 Robust mast holder set for fastening and adjustment of the NivuLog SunFlow on a mast with Ø70 - 90 mm, adjustable angles for 20°, 29°, 37° or 45°; material: stainless steel 1.4571

¹ Data tariffs - see price list page 89



KDS Ultrasonic Doppler sensor for flow velocity or combi sensor for flow velocity and level for connection to NivuLog SunFlow.



KDS- Compact Doppler active sensor

Construction

K010 Wedge sensor for fastening on channel bottom or by using the RMS 2* pipe mounting system.

KP10 Combi wedge sensor with integrated pressure measurement cell, suitable for simultaneous flow velocity and level measurement. For installation on channel bottom or for fastening using the RMS 2* pipe mounting system.

R007 Pipe sensor for installation with G 1½" screw thread

ATEX Approvals

0 none

Cable Length (with sensor type KP max. 30 m)

10 10 m

15 15 m

20 20 m

30 30 m

50 50 m

Sensor Connection

K Cable end, pre-configured, for Types K0 and R0

L Cable end, pre-configured, for Type KP

Pipe Length

0 for wedge sensors

2 20 cm (standard)

3 30 cm (Minimum length for stop valve)

X Special pipe length in dm, price per dm

G 20 cm + extension thread

KDS-	0		
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* RMS 2 pipe mounting system - see price list page 50.



Mounting accessories for pipe sensors

Tapping saddles for installation of pipe sensors

ZUBO ABS0108	for outside pipe diameters between 108-134 mm (pipe circumference 339-421 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines; material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0133	for outside pipe diameters between 133-155 mm (pipe circumference 418-487 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines; material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0138	for outside pipe diameters 138-160 mm (pipe circumference 433-502 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0159	for outside pipe diameters between 159-181 mm (pipe circumference 500-569 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0168	for outside pipe diameters between 168-190 mm (pipe circumference 528-597 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0190	for outside pipe diameters between 190-212 mm (pipe circumference 597-666 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0216	for outside pipe diameters between 216-238 mm (pipe circumference 679-748 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0238	for outside pipe diameters between 238-260 mm (pipe circumference 748-817 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0267	for outside pipe diameters between 267-289 mm (pipe circumference 839-908 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0289	for outside pipe diameters between 289-311 mm (pipe circumference 908-976 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0305	for outside pipe diameters 305-325 mm (pipe circumference 958-1021 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0324	for outside pipe diameters between 324-346 mm (pipe circumference 1018-1087 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)
ZUBO ABS0356	for outside pipe diameters between 356-378 mm (pipe circumference 1118-1188 mm), with nozzle 1.5" and gasket for installation of 1.5" pipe sensors in pipe lines. Material: stainless steel 1.4301 (V2A) and NBR (gasket)

More tapping saddles for diameters up to 1000 mm



Mounting plates with nozzle for installation of pipe sensors in pipes made of GFK and concrete

ZUBO ABP1590X	Mounting plate with nozzle 90° for installation of pipe sensors in pipes made of GFK or concrete, 1½" inner thread; material: stainless steel 1.4571
ZUBO ABP1520X	Mounting plate with nozzle 20° for installation of pipe sensors in pipes made of GFK or concrete, 1½" inner thread; material: stainless steel 1.4571
ZUBO ABP1530X	Mounting plate with nozzle 30° for installation of pipe sensors in pipes made of GFK or concrete, 1½" inner thread; material: stainless steel 1.4571

ATTENTION:

the DN-dimensions stated are not equal to the outside pipe diameter.

When ordering tapping saddles and mounting plates please specify the accurate outside pipe diameter!



Mounting accessories for pipe sensors

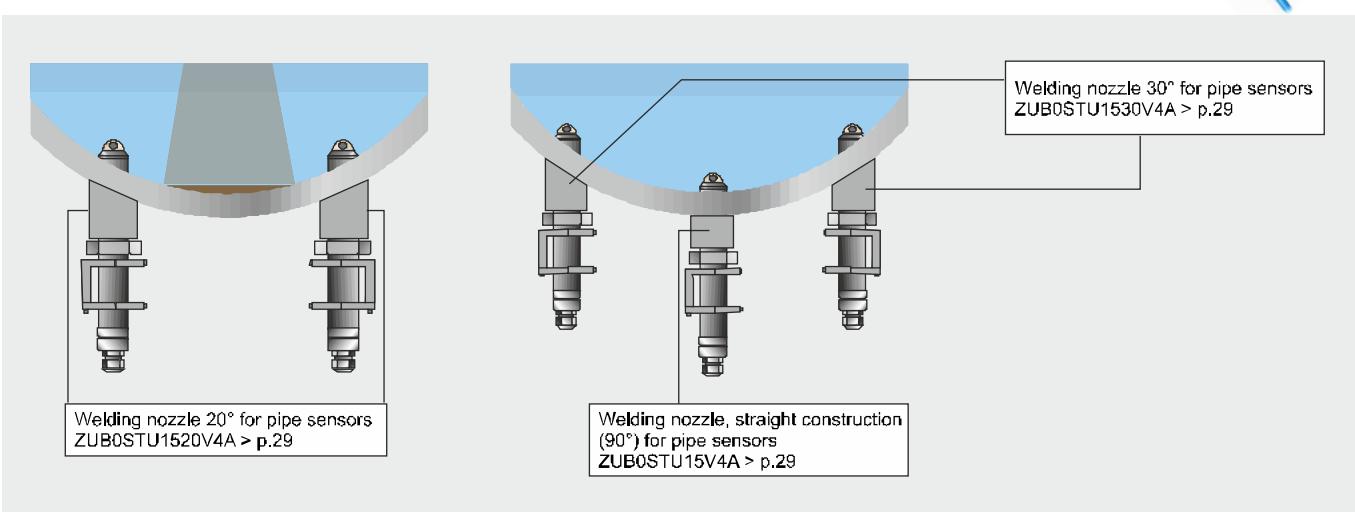
Drill bits

ZUB0BOHRK36	Drill bit ø36 mm for steel and stainless steel, for drilling through 1.5" ball valves (extension "ZUB0VER" additionally required), max. drilling depth 30 mm
ZUB0 BOHRK36 XL	Drill bit ø36 mm extra long (special design), max. drilling depth 100 mm
ZUB0BOHRK38	Drill bit ø38 mm for steel and stainless steel
ZUB0 VER	Extension by 200 mm for drill bits 36 mm and 38 mm
ZUB0SCHNEID	High-performance cutting paste for stainless steel and titanium, 125 g

Welding nozzle, Stop ball valve, Extraction tool

ZUB0 STU15ST	Welding nozzle, straight construction (90°) for pipe sensors, 1½" inner thread; Material: steel
ZUB0 STU15V4A	Welding nozzle, straight construction (90°) for pipe sensors, 1½" inner thread; Material: stainless steel 1.4571
ZUB0 STU1 520V4A	Welding nozzle, slanted construction (20°) for pipe sensors, 1½" inner thread; material: stainless steel 1.4571
ZUB0 STU1 530V4A	Welding nozzle, slanted construction (30°) for pipe sensors, 1½" inner thread; material: stainless steel 1.4571
ZUB0 STUSOV4A	Welding nozzle, special construction, straight with 1½" outer thread; Material: stainless steel 1.4571
ZUB0 HAHNR15	Stop ball valve 1½" for removal of pipe sensors from pipes without pressure; Material: stainless steel 1.4408
ZUB0 AA	Manual extraction tool for removal of 1 ½" pipe sensors under process conditions. Maximum pressure up to 4 bar; material: duralumin + brass (outside body); Retractable length: approx. 150 mm
ZUB0 AA02 K	Extraction Tool II complete consisting of base part and retractable rod system
ZUB0 AA02 B	Extraction Tool II, base part suitable for permanent fastening of 1½" pipe sensors with 300 mm length in tube with max. wall thickness of 70 mm. In combination with the retractable rod system ZUB0AA02G suitable to retract or extend sensors under process conditions. Materials: 1.4305; 1,4122
ZUB0 AA02 G	Extraction Tool II, retractable rod system to be put onto base part ZUB0AA02B suitable to retract 1½" pipe sensors, 300 mm length, under process conditions. Materials: 1.4305; 1,4122

² = Product group A





Boats and holder

ZUBOSWK030KP	Float body made of stainless steel 1.4571, float width 300 mm for use in channels as from 800 mm width, for CS2 wedge sensor mounting. Minimum water level (without sediments): 30 cm Recommended maximum flow velocity: 100 cm/s
ZUBOSWK030R	Float body made of stainless steel 1.4571, float width 300 mm for use in channels as from 800 mm width, for pipe sensor mounting. Minimum water level (without sediments): 20 cm Recommended maximum flow velocity: 100 cm/s
ZUBOSWK040KP	Float body made of stainless steel 1.4571, float width 400 mm for use in channels as from 1200 mm width, for CS2 wedge sensor mounting. Minimum water level (without sediments): 30 cm Recommended maximum flow velocity: 100 cm/s
ZUBOSWK040R	Float body made of stainless steel 1.4571, float width 400 mm for use in channels as from 800 mm width, for pipe sensor mounting. Minimum water level (without sediments): 20 cm Recommended maximum flow velocity: 100 cm/s
ZUBO SWHA 30D	Holder for float body of 300 mm width; for vertically movable fastening of the float body on horizontal ceilings, crossbeams or similar. 4-point suspension with a length of 2000 mm, can be shortened. Material: stainless steel 1.4571
ZUBOSWHA30W	Holder for float body of 300 mm width; for vertically movable fastening of the float body on perpendicular walls. Maximum fastening width 1300 mm (other sizes upon request). 4-point suspension with 2000 mm length, can be shortened.
ZUBOSWHA40D	Holder for float body of 400 mm width; for vertically movable fastening of the float body on horizontal ceilings, crossbeams or similar. 4-point suspension with a length of 2000 mm, can be shortened. Material: stainless steel 1.4571
ZUBOSWHA40W	Holder for float body of 400 mm width; for vertically movable fastening of the float body on perpendicular walls. Maximum fastening width 1300 mm (other sizes upon request). 4-point suspension with 2000 mm length, can be shortened.
ZUBOSWVERL	Extension tubes for one float, 4 pcs. with 1000 mm length each (max. 1 extension per float possible)

POAO CATA MARAN1 PVC NIVUS Float Assembly - Catamaran for ONE flow sensor

POAO CATA MARAN2 PVC NIVUS Float TWIN Assembly - Catamaran for TWO flow sensors (Trimaran).

ZUBO BOAT PVC PVC NIVUS BOAT - LxWxD 800 x 200 x 150 mm C/W
Grade 304 S/Steel Frame Assembly C/W
4 x Grade 304S/Steel, 1500 mm Long x 15 mm Square x 1.5 mm Thick Wall
4 x Grade 304 S/Steel, 12 mm Dia Pivot Assemblies
1 x Machined 50 mm O/D x 35.5 mm I/D Sensor Housing Tube

² = Product group A



Mounting accessories for wedge sensors

Wedge bases and sensor protective sheet

ZUB0 KS03 G90POM

Wedge base straight construction for POA, CS2 and KDA sensors; for elevated sensor installation. Height: 30 mm, wedge base material: POM-C natural colour; fastening strap material: stainless steel 1.4571

ZUB0 KS05 G90POM

Wedge base straight construction for POA, CS2 and KDA sensors; for elevated sensor installation. Height: 50 mm, wedge base material: POM-C natural colour; fastening strap material: stainless steel 1.4571

ZUB0 KS10 G90V4A

Wedge base straight construction for POA, CS2 and KDA sensors; for elevated sensor installation. Height: 100 mm, material: stainless steel 1.4571

ZUB0 KS15 G90V 4A

Wedge base straight construction for POA, CS2 and KDA sensors; for elevated sensor installation. Height: 150 mm, material: stainless steel 1.4571

ZUB0 KS20 G90V4A

Wedge base straight construction for POA, CS2 and KDA sensors; for elevated sensor installation. Height: 200 mm, material: stainless steel 1.4571

"ZUB0 KS00 L20V4A

Wedge base left 20° for POA and CS2 sensors; for horizontal sensor installation in pipe. Material: stainless steel 1.4571

ZUB0 KS00 R20V4A

Wedge base right 20° for POA and CS2 sensors; for horizontal sensor installation in pipe. Material: stainless steel 1.4571

ZUB0 KS00 L30V4A

Wedge base left 30° for POA and CS2 sensors; for horizontal sensor installation in pipe. Material: stainless steel 1.4571

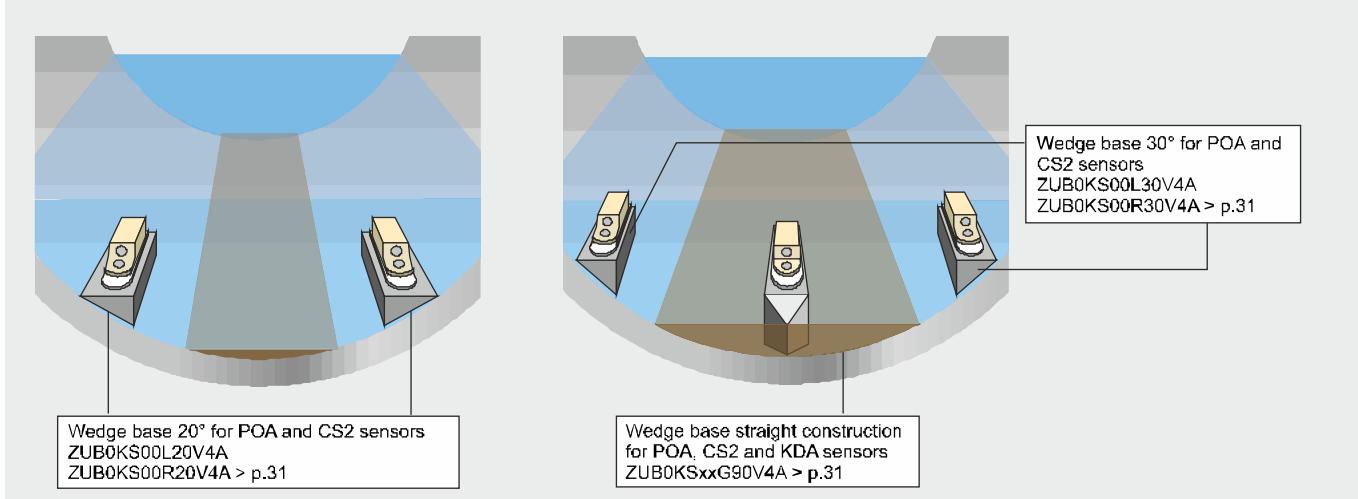
ZUB0 KS00 R30V4A

Wedge base right 30° for POA and CS2 sensors; for horizontal sensor installation in pipe. Material: stainless steel 1.4571

ZUB0 SENSCHU1

Protective sheet for all POA-, CS2- and KDA-wedge sensors; material: 1.4571

² = Product group A





Mounting accessories for transit time sensors

Mounting accessories for rod sensors type NOS-V20 and -V30 (NivuChannel sensors)

<i>NOZO_OHALO</i>	Holder bracket (2 pcs) for Rod sensor fastening on vertical walls, material: stainless steel 1.4301
<i>NOZO_OHAL90</i>	Holder bracket 90° (2 pcs) for Rod sensor fastening on horizontal surface, material: stainless steel 1.4301
<i>NOZO_OSTRBL</i>	Flow-optimised protective sheet for rod sensors; length 1300 mm, material 1.4301
<i>NOZO_ROHRVE1</i>	Extension for installation tube 33,7 x 2,0 mm; length 1000 mm; Material 1.4571

Mounting accessories for screw-in sensors type NOS-V2E and -V2S

<i>ZUBO_STU14V4A</i>	Welding nozzle, straight construction (90°) for screw-in sensors, 1¼" inner thread; material: stainless steel 1.4571
<i>ZUBO_STU1_4ST</i>	Welding nozzle, straight construction (90°) for screw-in sensors, 1¼" inner thread; material: steel

Mounting accessories for hemispheres type NOS-V30BS and -V30BX

<i>NOZO_OHALHK</i>	Standard holder bracket for hemisphere fastening for sensors Type NOS-V30B... on counterforts, material: stainless steel 1.4571
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Accessories for measurement transmitter OCM Pro CF, NivuChannel and NivuSonic

<i>ZUBO_GSM01</i>	Tri-band GSM antenna, omni-directional, for outdoor installation
<i>ZUBO_MANT</i>	Magnetic antenna 9 mm with 2.5 m cable

Bus cable for connection of adapter box to NivuSonic and NivuChannel

<i>KABO_NIZ01010</i>	Bus cable 10 m; cable pre-configured
<i>KABO_NIZ01015</i>	Bus cable 15 m; cable pre-configured
<i>KABO_NIZ01020</i>	Bus cable 20 m; cable pre-configured
<i>KABO_NIZ01030</i>	Bus cable 30 m; cable pre-configured
<i>KABO_NIZ01050</i>	Bus cable 50 m; cable pre-configured
<i>KABO_NIZ01100</i>	Bus cable 100 m; cable pre-configured
<i>E-KAS-2X1.5PE</i>	Bus cable (price per m); cable <u>not pre-configured!!</u>

Accessories for connection and extension of sensors type POA, CS2, OCL and KDA

<i>ZUBO_DAE</i>	Pressure compensation element for connection of POA-, CS2- and KDA-sensors with pressure measurement cell
<i>ZUBO_FILTER_02</i>	Filter element with plug and connection hose for pressure compensation element
<i>POAO_VER10KONF00</i>	Extension cable 10 m; for POA-, CS2- and KDA sensors without pressure measurement cell as well as OCL sensors
<i>POAO_VER15KONF00</i>	Extension cable 15 m; for POA-, CS2- and KDA sensors without pressure measurement cell as well as OCL sensors
<i>POAO_VER20KONF00</i>	Extension cable 20 m; for POA-, CS2- and KDA sensors without pressure measurement cell as well as OCL sensors
<i>POAO_VER30KONF00</i>	Extension cable 30 m; for POA-, CS2- and KDA sensors without pressure measurement cell as well as OCL sensors
<i>POAO_VER50KONF00</i>	Extension cable 50 m; for POA-, CS2- and KDA sensors without pressure measurement cell as well as OCL sensors
<i>POAO_VER99KONF00</i>	Extension cable 100 m; for POA-, CS2- and KDA sensors without pressure measurement cell as well as OCL sensors

Ä

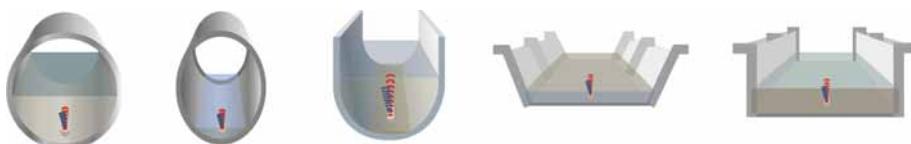
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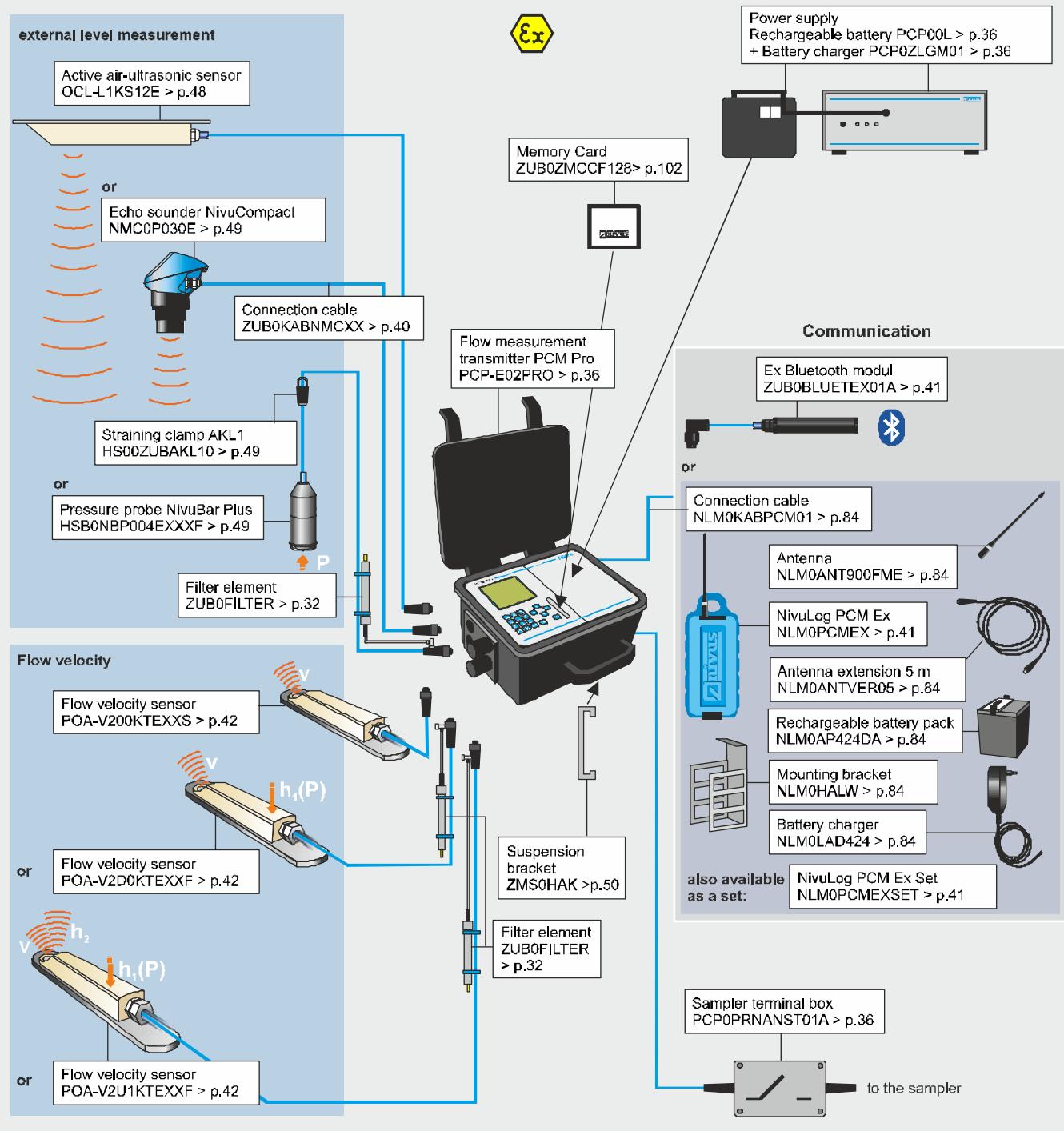
FLOW Portable Transmitter

2

PCM Pro Ex Portable flow measurement transmitter for open channels and part filled or full pipes for using in Ex Zone 1.

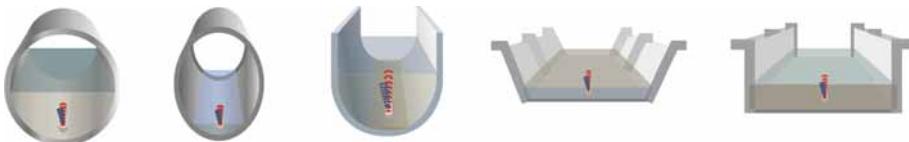


Example: portable flow measurement in Ex area for universal use; e.g. measurement places for billing, channel efficiency etc. in open channels and part filled and full pipelines as from inner diameters of 250 mm

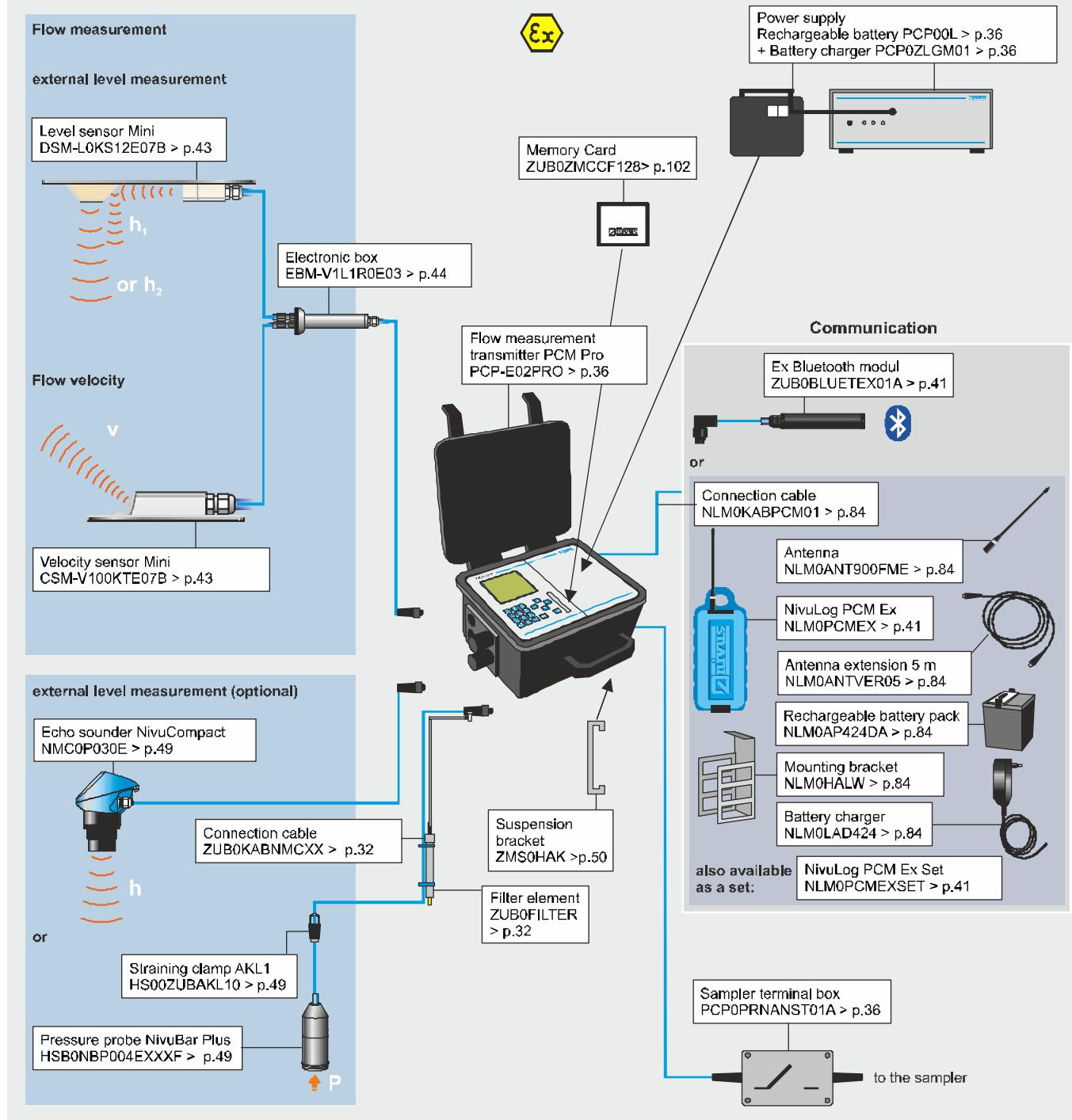




Portable flow measurement transmitter for low discharge volumes such as extraneous water and indirect discharge, low pipe diameters starting at 160 mm and measurement spots for billing.



Example: portable flow measurement in Ex area with lowest discharge volumes; e.g. extraneous water and indirect dischargers; small pipe diameters as from 160 mm and measurement places for billing





FLOW Portable

Transmitter

PCP-E02PRO "Portable" Ex protected flow measurement transmitter, includes software NivuSoft for Windows XP / Vista / Windows 7

2



ZUBO BLUE TEUP Subsequent installation of interface on PCM Pro for connection of Bluetooth / GPRS module and sampler terminal box.
Upgrading possible as of Art. No. PCP-E01



Power Supply for PCM Pro

PCP0_0L00

Rechargeable battery NiMH 24 Ah

PCP0_ZLGM0100

3-line battery charger for rechargeable NiMH battery

You can find the communication via GPRS on page 41.

More accompanying articles can be found in chapters 4 and 5.

Accessories for PCM Pro

PCP0_PRNA_NST0_1A

Sampler terminal box (Ex protected) for connection to PCM Pro

PCP5_ZKEY1

Replacement safety socket wrench for opening of battery compartment cover

You can find the external level sensors on page 49.

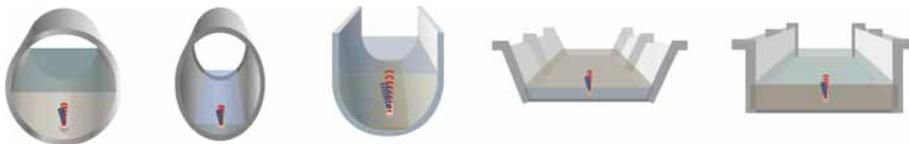
Please find additional accessories for installation and operation of our portable flow meters starting from page 50.



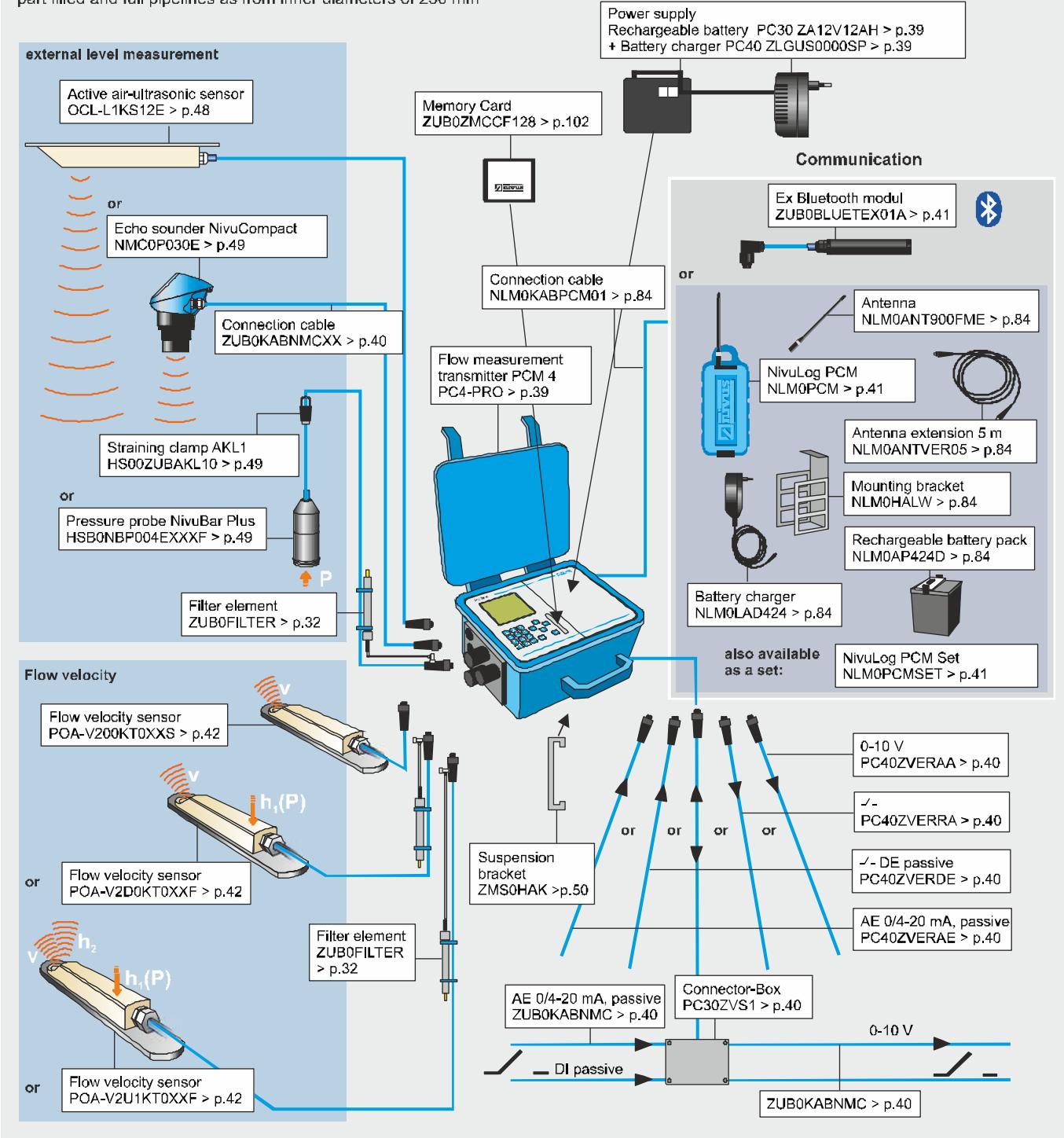


PCM 4

Portable flow measurement transmitter for open channels and part filled or full pipes.



Example: portable flow measurement for universal use; e.g. measurement places for billing, channel efficiency etc. in open channels and part filled and full pipelines as from inner diameters of 250 mm

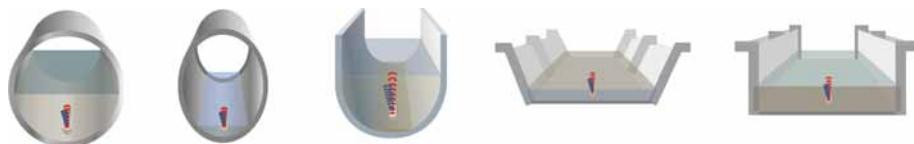




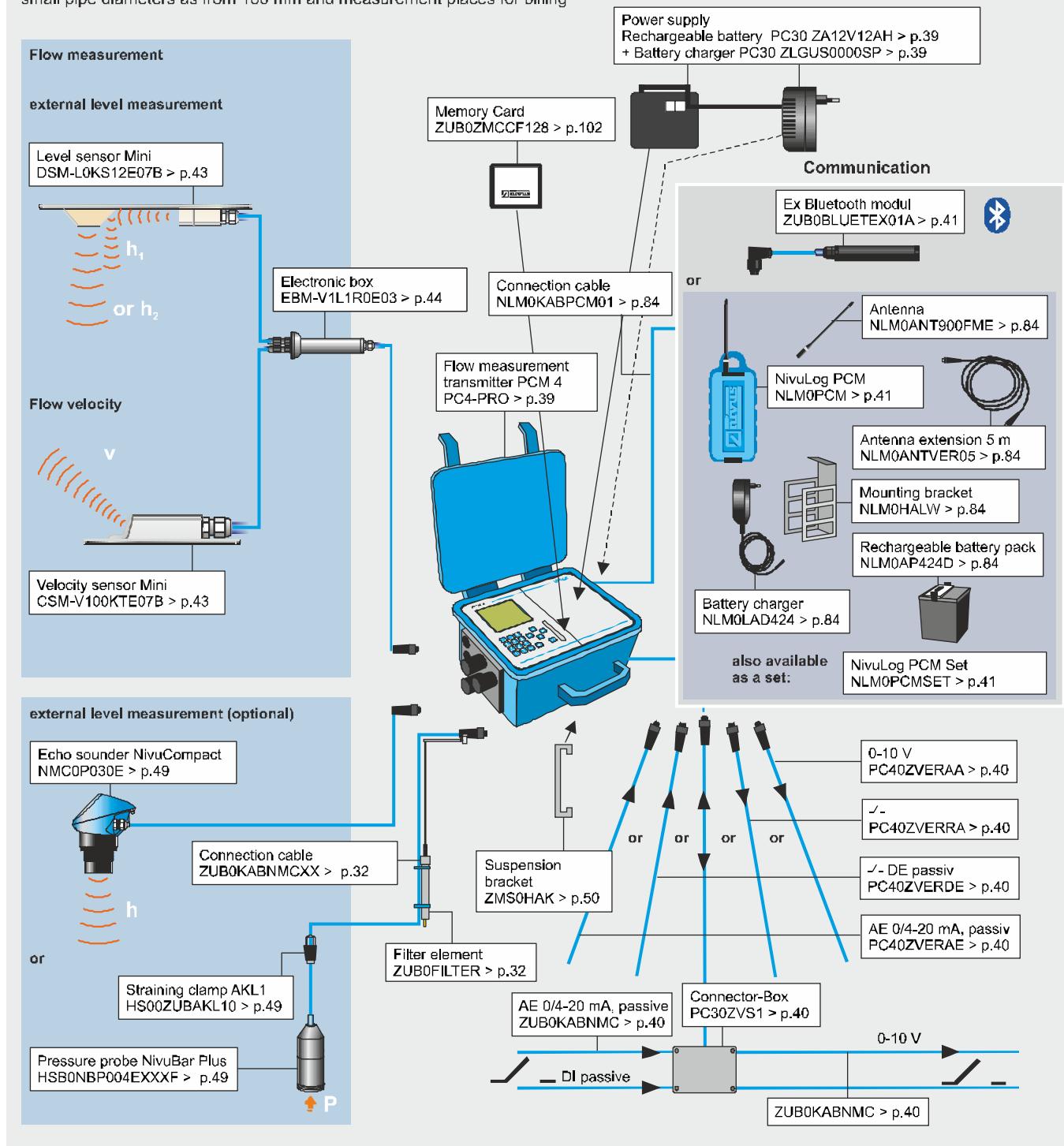
FLOW Portable

Transmitter

2



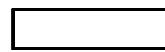
Example: portable flow measurement with lowest discharge volumes; e.g. extraneous water and indirect dischargers; small pipe diameters as from 160 mm and measurement places for billing





PCM 4 For use in non-Ex areas, includes software
NivuSoft for Windows XP / Vista / Windows 7

2



PC4-	Portable Flow Measurement Transmitter
	PRO Standard version
	PROB with Bluetooth / GPRS module connection socket

ZUBO BLUETUP" " " " " " " " " Subsequent installation" of interface on PCM 4 for connection of Bluetooth / GPRS module. " " " " " " " " "(Upgrading possible as of Serial No. 0846PC40000)

Power Supply for PCM 4 and PCM F

<i>PC30 ZA12V12AH</i>	Rechargeable lead battery with cable and connection plug; 12V/12Ah
<i>PC30 ZLGU S000 OSP</i>	Mains adapter and battery charger Supply voltage: 100-240V AC, 50/60 Hz
<i>PC40 ZBBOX020</i>	Battery holder with cable and connection plug for 12 pcs. 1.5 V LR-20 batteries (batteries not part of standard delivery)
<i>PC40 ZBBO XEXT A</i>	External battery box for connection via charger socket
<i>PC40 ZA12 V26A H</i>	Rechargeable lead battery for external battery box 12 V / 26 Ah
<i>PC40 ZLGHF6A</i>	Battery charger for rechargeable lead batteries for use in external battery box. Mains voltage 100-240 V, charging voltage 12 V, charging current 3 A.
<i>PC40 ZVER PS1A</i>	2-wire connection cable for connection of external power supply, cable length 2 m

You can find the communication via GPRS on page 41.

More accompanying products can be found in chapters 4 and 5.



Connection cable for multifunctional socket on PCM 4 or PCM F

<i>PC40_ZVERAE</i>	Connection cable; Analog input (one side with plug, other side with open cable end); e.g. for data logging of self-powered external 0/4 - 20mA signals, cable length 10 m
<i>PC40_ZVERAA</i>	Connection cable; Analog output (one side with plug, other side with open cable end); e.g. for analog signal forwarding, cable length 10 m
<i>PC40_ZVERDE</i>	Connection cable; Digital input (one side with plug, other side with open cable end); e.g. for measurement cable switchover or archiving of pump run times, cable length 10 m
<i>PC40_ZVERRA</i>	Connection cable; Relay output (one side with plug, other side with open cable end); e.g. for sampler control, volume impulse, output of limit values; cable length 10 m

Connector box and connection cable

<i>PC30_ZVS1</i>	Connector box IP 67, 1 m cable and plug for connection to multifunctional socket
------------------	--

The connector box has to be used in case of connecting more than one input or output signal to the multifunctional socket.

<i>ZUBO_KABNMC10</i>	2 poles, cable end sleeves on both sides, cable length 10 m
<i>ZUBO_KABNMC20</i>	2 poles, cable end sleeves on both sides, cable length 20 m
<i>ZUBO_KABNMC30</i>	2 poles, cable end sleeves on both sides, cable length 30 m

You can find the external level sensors on page 49.

Please find additional accessories for installation and operation of our portable flow meters starting from page 50.



Communication via GPRS

Unit Type NivuLog PCM Ex

NLM0 PCM EX

NivuLog PCM Ex; portable data logger with GPRS module (quad band) for detection and transmission of measurement data from PCM Pro, for use in Ex zone 1, protection rating IP67

Delivery:

- 1 pc. data logger with protective cover, type NivuLog PCM Ex;
- 1 pc USB cable for configuration of SIM parameters, type ZUB0 KABUSB02
- 1 pc. connection cable, 2.8 m, between PCM and NivuLog PCM Ex, type NLM0 KABPCM01
- 1 pc. magnet for device initialisation, Type NLM5 MAGNET



NLM0 PCMXSET

NivuLog PCM Ex Starter set for PCM Pro consisting of:

- 1 pc. data logger with protective cover, type NivuLog PCM Ex
- 1 pc. rechargeable battery pack, type NLM0 AP424DA
- 1 pc. battery charger, type NLM0 LAD424
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02
- 1 pc. connection cable, 2.8 m, between PCM and NivuLog PCM Ex, type NLM0 KABPCM01
- 1 pc. antenna extension 5 m, for antenna 900 FME, type NLM0 ANTVER05
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. magnet for device initialisation, type NML5 MAGNET

Unit Type NivuLog PCM

NLM0 PCM

NivuLog PCM; portable data logger with GPRS module (quad band) for detection and transmission of measurement data from PCM 4, protection rating IP67

Delivery:

- 1 pc. data logger with protective cover, type NivuLog PCM
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02
- 1 pc. connection cable, 2.8 m between PCM and NivuLog PCM, type NLM0 KABPCM01
- 1 pc. magnet for device initialisation, type NML5 MAGNET

NLM0 PCM SET

NivuLog PCM Starter set for PCM 4 consisting of:

- 1 pc. data logger with protective cover, Type NivuLog PCM
- 1 pc. rechargeable battery pack, type NLM0 AP424D
- 1 pc. battery charger, type NLM0 LAD424
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02
- 1 pc. connection cable 2.8 m between PCM and NivuLog PCM, Type NLM0 KABPCM01
- 1 pc. antenna extension, 5 m, for antenna 900 FME, type NLM0 ANTVER05
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. magnet for device initialisation, type NML5 MAGNET

Communication via Bluetooth

ZUB0 BLUE TEX01

Bluetooth module for remote control and data transmission, for connection to PCM Pro for use in EX zone 1

ZUB0 BLUET01

Bluetooth module for connection to PCM 4, non Ex area

You can find more communication accessories in chapters 4 and 5.

Data tariffs see price list page 89.



FLOW Portable Sensors

POA Ultrasonic flow velocity sensors or combi sensors for flow velocity and level for connection to PCM Pro and PCM 4.



POA- Sensor with spatial allocation of flow velocities covering a maximum of 16 scan layers

Level Measurement

V200 no Level Measurement

- KT** Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
- KP** Wedge sensor made of high resistant full PEEK, ground plate 1.4571
- KX** Wedge sensor, special construction
- RT** Pipe sensor made of PPO with PEEK sensor face; pipe body 1.4571
- RP** Pipe sensor made of high resistant full PEEK; pipe body 1.4571
- RX** Pipe sensor, special construction



V2H1 with ultrasound from bottom up for Level Measurement

- KT** Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
- KP** Wedge sensor made of high resistant full PEEK, ground plate 1.4571
- KX** Wedge sensor, special construction
- RT** Pipe sensor made of PPO with PEEK sensor face; pipe body 1.4571
- RP** Pipe sensor made of high resistant full PEEK; pipe body 1.4571
- RX** Pipe sensor, special construction

V2D0 with Pressure Measurement Cell¹ for Level Measurement

- KT** Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
- KX** Wedge sensor, special construction

V2U1 with Pressure Measurement Cell¹ and ultrasound from bottom up for Level Measurement

- KT** Wedge sensor made of PPO with PEEK sensor face; ground plate 1.4571
- KX** Wedge sensor, special construction

ATEX Approvals

- 0** none
- E** Zone 1 (Attention: only for PCM Pro)

Cable Length (max. 150 m / with pressure sensor up to 30 m possible)

- 10** 10 m
- 15** 15 m
- 20** 20 m
- 30** 30 m
- 50** 50 m
- 99** 100 m
- XX** Special length upon request

Sensor Connection

- F** Connection to PCM Pro and PCM 4 for Types V2D and V2U, portable version incl. plug and exchangeable filter element

- S** Connection to PCM Pro and PCM 4 for Types V20 and V2H, portable version incl. plug

Pipe Length

- 0** (only for wedge sensor)
- 2** 20 cm (standard) (7.8")
- 3** 30 cm (minimum length for stop valve) (11.8")
- X** Pipe length in dm, price per dm
- G** 20 cm + extension thread (absolutely required for NPP)

POA-



Please find accessories for sensors starting from page 50.



CSM Correlation Sensor Mini: ultrasonic velocity sensor
for connection to Electronic Box EBM



CSM-V100 Sensor with spatially allocated flow velocity measurement

Construction

KT Wedge sensor made of PVDF; ground plate 1.4571

XX Special construction

ATEX Approvals

0 none

E Zone 1

Cable Length

07 7 meters

Sensor Connection

B Connection to Electronic Box

CSM-V100

07

B



You can find sensor accessories on page 50.

DSM Distance Sensor Mini: ultrasonic level sensor
for connection to Electronic Box EBM



DSM-L0 Air-ultrasonic sensor for non-contact level measurement

Construction

K Wedge sensor

X Special construction

Sensor Version

S Standard version made of PPO, ground plate 1.4571

X Special construction

Transmitting Frequency

12 120 kHz

XX Special construction

ATEX Approvals

0 none

E Zone 1

Cable Length

07 7 meters

Sensor Connection

B Connection to Electronic Box

DSM-L0

07

B





EBM Electronic Box Mini; required for connection of CSM and DSM to PCM Pro and PCM 4 and OCM Pro CF



EBM-V1L1 Electronic Box for connection of 1x CSM- and 1x DSM-Sensor incl. suspension bracket and mounting plate; IP68

Construction

R0 Standard construction

XX Special construction

ATEX Approvals

0 none

E Zone 1 (Attention: only for PCM Pro and OCM Pro CF)

Cable Length, max. 150 m

03 3 m

10 10 m

15 15 m

20 20 m

30 30 m

50 50 m

99 100 m

XX Special lengths t

Sensor Connection

S Connection to PCM Pro and PCM 4

K Cable end pre-configured for connection to OCM Pro CF

EBM-V1L1				
-----------------	--	--	--	--

Sensor-Set for PCM Pro

CSM0 SET1 E070 3S

Sensor set ATEX Zone 1, consisting of:

- 1 pc. Flow velocity sensor, type CSM, 7 m cable
- 1 pc. Air-Ultrasonic sensor, type DSM, 7 m cable
- 1 pc. Electronic box, type EBM, 3 m cable



Sensor-Set for PCM 4

CSM0 SET2 0070 3S

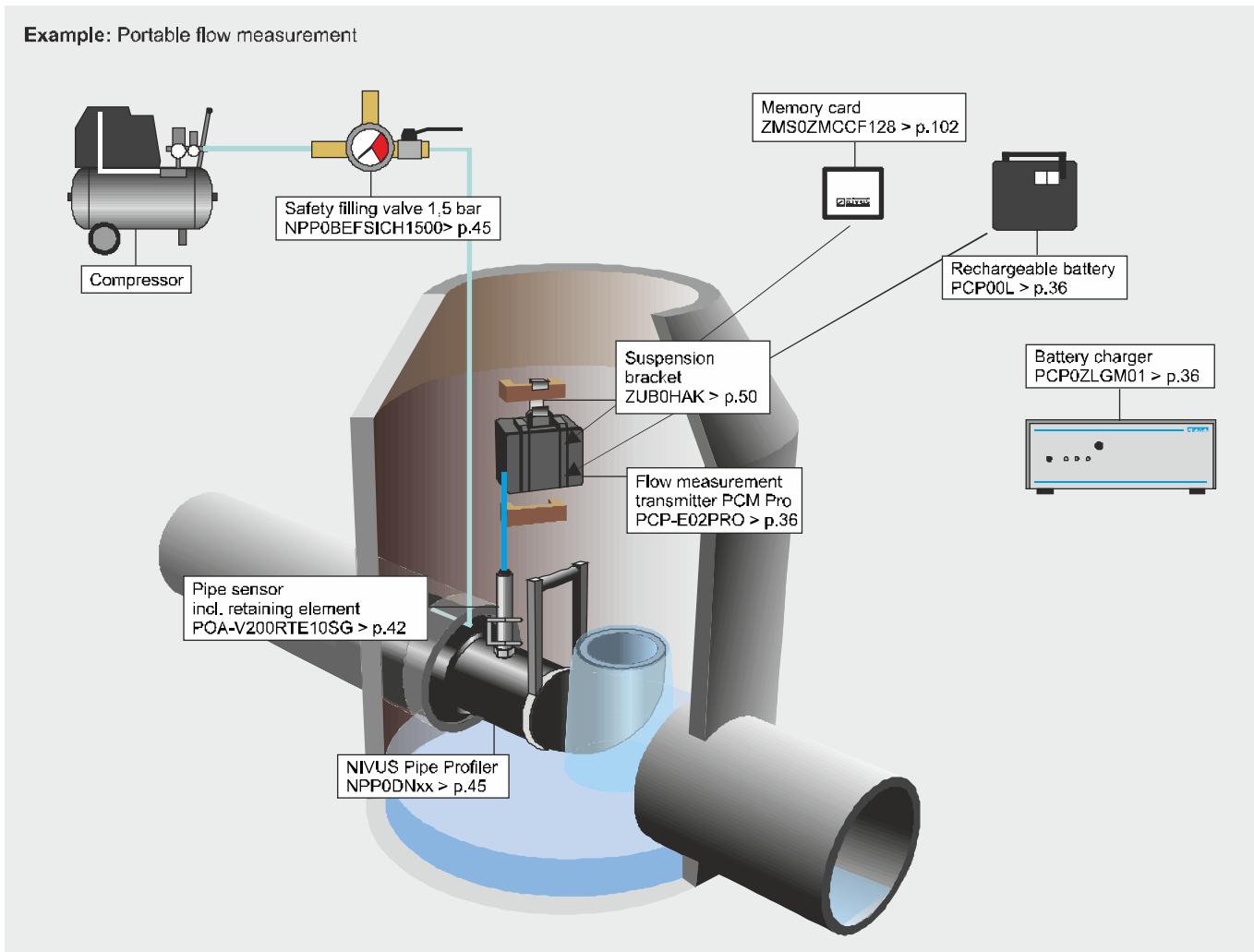
Sensor set consisting of:

- 1 pc. Flow velocity sensor, type CSM, 7 m cable
- 1 pc. Air-Ultrasonic sensor, type DSM, 7 m cable
- 1 pc. Electronic box, type EBM, 3 m cable



**NPP NIVUS Pipe Profiler**

- NPP** Pipe measuring section as extension of the portable flow measurement systems PCM Pro and PCM 4 for flexible implementation of additional measurement tasks in channel systems such as low discharge volumes or poor hydraulic flow conditions

**Example: Portable flow measurement**Price list 2013 - valid as of April 1st 2013

NPP0	Type
150	for inner pipe diameters of 150 - 300 mm
200	for inner pipe diameters of 195 - 500 mm
300	for inner pipe diameters of 265 - 600 mm
350	for inner pipe diameters of 295 - 600 mm
NPP0 DN	

NPP0 BEFS ICH1 500

Safety filling valve 1.5 bar - for NIVUS Pipe Profiler

Please find according pipe sensors (POA-V200 R) for NPP on page 42.

(Type "POA- G" absolutely required)

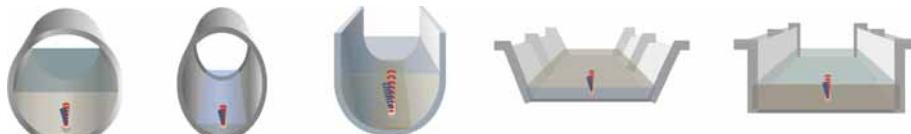


FLOW Portable

Transmitter

2

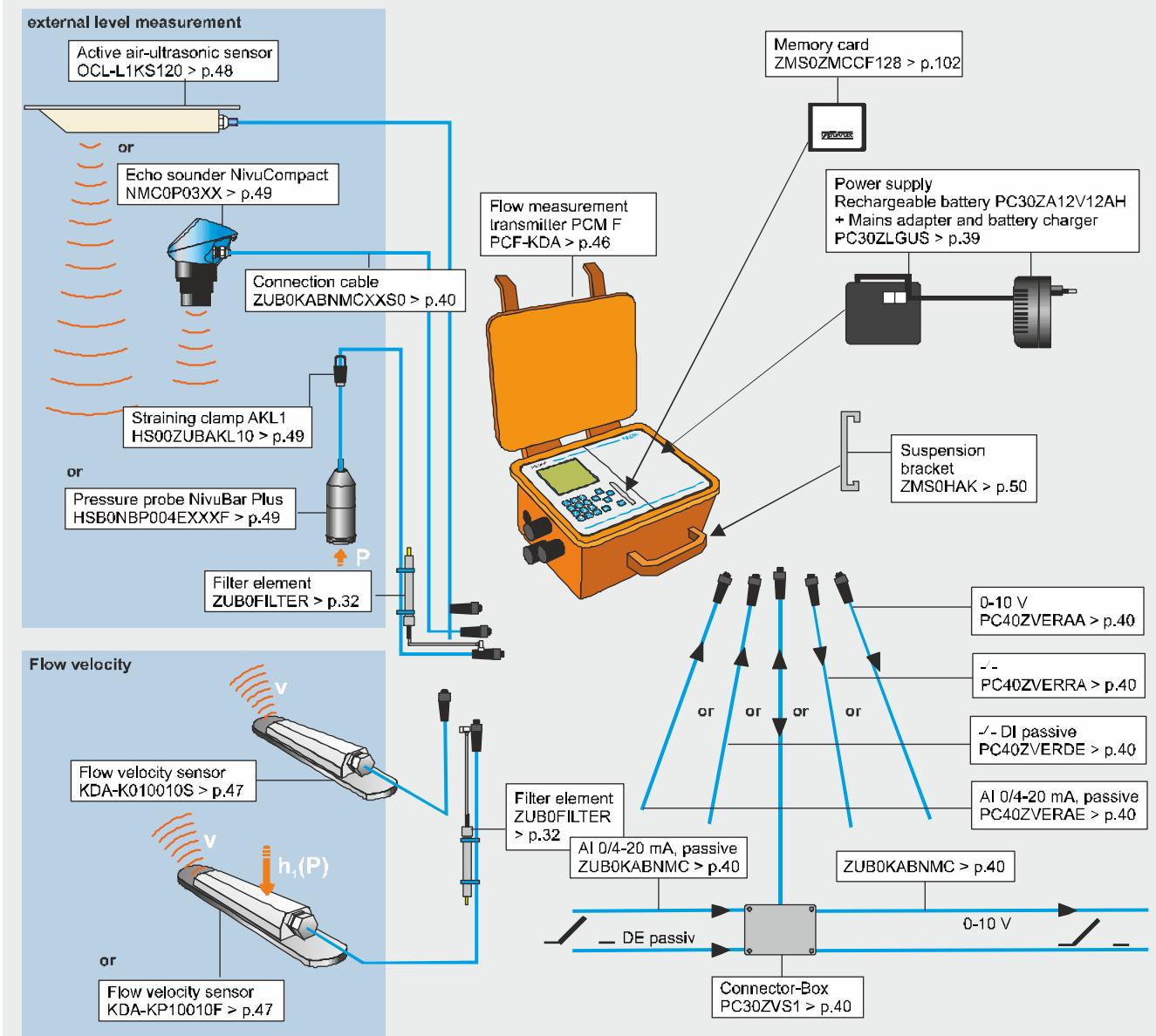
PCM F Portable flow measurement transmitter for open channels and part filled or full pipes by using Doppler technology



PCM F

For use in non-Ex areas, includes software NivuSoft for Windows XP / Vista / Windows 7

Example: Portable flow measurement / Doppler technology



PCF-KDA

Portable Flow Measurement Transmitter

Please find power supply on page 39 and connection cables on page 40

For external level sensors which can be connected to our portable flow measurement units see page 49.

Please find additional accessories for installation and operation of our portable flow meters starting from page 50.



KDA Ultrasonic Doppler for flow velocity or combi sensor for flow velocity and height/level for connection to PCM F.
Retaining element for pipe sensors inclusive.



KDA- Compact Doppler active sensor

Construction

K0 Wedge sensor for fastening on channel bottom or by using the RMS2 pipe mounting system

KP Combi wedge sensor with integrated pressure measurement cell, suitable for simultaneous flow velocity and level measurement. For installation on channel bottom or for fastening using the RMS 2 pipe mounting system.

R0 Pipe sensor for installation with G1½" screw thread

Transmitting Frequency

07 750 KHz, only for pipe sensor

10 1 MHz, only for wedge sensor

ATEX Approvals

0 none

Cable Length (max. 150 m / with pressure sensor up to 30 m possible)

10 10 m

15 15 m

20 20 m

30 30 m

50 50 m

99 100 m

XX Special length upon request

Sensor connection

S Connection to PCM F for Types K0 and R0, incl. plug

F Connection to PCM F for Type KP, incl. plug and exchangeable filter element

Tube length

0 (only for wedge sensor)

2 20 cm (standard)

3 30 cm (minimum length for stop valve)

X Pipe length in dm, price per dm

G 20 cm + extension thread

KDA-



Please find accessories for sensors on page 50.



OCL Active air-ultrasonic sensor for non-contact level measurement
for connection to PCM Pro, PCM 4 and PCM F



OCL-L1 Active air-ultrasonic sensor

Construction

- K** Wedge sensor
X Special construction

Sensor Version

- S** Standard version made of PPO, cable: PUR
X Special construction

Transmitting Frequency

- 12** 120 kHz
XX Special construction

ATEX Approvals

- 0** none
E Zone 1 (Attention: only for PCM Pro)

Cable Length, max. 150 m

- 10** 10 m
15 15 m
20 20 m
30 30 m
50 50 m
99 100 m
XX Special lengths upon request

Sensor Connection

- S** Connection plug for PCM Pro, PCM 4 and PCM F

OCL-L1

S



Please find accessories for sensors on page 50.

You can find CS2 velocity sensors for use in applications with levels up to several meters on page 10.



NivuCompact External level sensors for connection to PCM Pro, PCM 4 and PCM F
NivuBar Plus

NivuCompact Compact echo sounders for ultrasonic level measurement for connection to PCM Pro, PCM 4 and PCM F;
 incl. programming software and interface cable (only for non-Ex versions).
 Power supply: 11-30 V DC (Ex 12-28 V DC)



NMC0	Type	Measurement Ranges
	P03	0,2 to 3 m for fluids
	P06	0,3 to 6 m for fluids
	P10	0,3 to 10 m for fluids
	Enclosure	
	0	Valox (standard)
NMC0	P	PVDF
	ATEX Approval	
	L	none, no relays, 2-wire
	E	Zone 0/1, no relays, 2-wire



Pre-configured cables with plug for connection of NivuCompact to PCM Pro, PCM 4 and PCM F level input

ZUB0KABNMC10S0 Cable length 10 m

ZUB0KABNMC20S0 Cable length 20 m

ZUB0KABNMC30S0 Cable length 30 m

Please find additional accessories in compact echo sounder chapter 3.

NivuBar Plus (II) Hydrostatic level measurement with capacitive, ceramic measurement cell for liquid media in Ex version.
 Submersible probe with integrated 4-20 mA transmitter, firmly connected cable, plug and filter element for connection to PCM Pro, PCM 4 and PCM F.



HSB0	NBP	Submersible probe with ceramic diaphragm for level measurement
		Measurement Ranges
		004 4 m WS
		006 6 m WS
		010 10 m WS (20 m cable recommended)
		ATEX Approval
		E Zone 0
		Cable Length
		010 10 m (not for measurement range 10 m WS)
		020 20 m
		030 30 m
		Construction
		F Connection to PCM Pro, PCM 4, PCM F with plug and exchangeable filter element



HS00 ZUBA KL10 000

AKL 1 straining clamp made of stainless steel 1.4571

For installation accessories please refer to chapter 8.



Accessories

External temperature sensor for high-accurate temperature detection in the medium

ZUBO PCXTSET1 Temperature sensor Ex zone 1 with transmitter box, connection cable and plug for direct connection to PCM Pro and PCM 4

ZUBO PCXTSET2 Temperature sensor Ex zone 1 with transmitter, additional socket for parallel operation of air-ultrasonic sensor type OCL. Connection cable and plug for direct connection to PCM Pro and PCM 4

Pipe Mounting System

ZUBO RMS2 Pipe mounting system 2 for temporary installation of POA, KDA, CSM and DSM wedge sensors in pipe lines with diameters between 200 and 800 mm

ZUBO RMS2EB Additional metal sheet for RMS2 for simultaneous installation of active sensors Types POA wedge sensors and OCL air-ultrasonic sensors, for pipe lines as from 250 mm

ZUBO RMS2 V05 Extension of clamping diameter by 50 mm for RMS2

ZUBO RMS2 V10 Extension of clamping diameter by 100 mm for RMS2

ZUBO RMS2 V15 Extension of clamping diameter by 150 mm for RMS2

ZUBO RMS3 Pipe mounting system 3 for temporary installation of POA, KDA, CSM and DSM wedge sensors in pipe lines with diameters between 160 and 300 mm

ZUBO RMS4 Pipe mounting system 4 for temporary installation of POA, KDA, CSM and DSM wedge sensors in pipe lines with diameters between 160 and 800 mm



Spare parts for Pipe Mounting System

ZUBO RMS2 BSB Base plate RMS 2

ZUBO RMS3 BSB Base plate RMS 3

ZUBO RMS2 SPV Scissors jack for RMS 2

ZUBO RMS3 SPV Scissors jack for RMS 3

Transmitter fastening

ZUBO HAK Suspension bracket with eyelet for PCM; material: stainless steel 1.4571

Sensor accessories

ZUBO SCHUTZKAPPE Protective cap for sensor plug

ZUBO FILTER Replacement filter with plug and connection hose for sensors with pressure measurement cell

ZUBO TELE SKOP Telescopic rod with sensor holder

Sensor adapters

ZUBO KLEM M02 Metal connection box incl. clamps for adaptation of PCM Sensors without pressure cell to OCM Pro CF transmitters (in Ex and Non-Ex areas).

ZUBO KLEM M03 Metal connection box incl. clamps for adaptation of K-configured sensors to PCM (in Ex and Non-Ex areas).

ZUBO KLEM MD03 Metal connection box incl. clamps for adaptation of L-configured sensors to PCM (in Ex- and Non-Ex areas). Incl. pressure compensation element for air humidity absorption.

² = Product group A



Accessories

Measurement system maintenance

PCM5 DISET

Kit for routine maintenance of portable flowmeters type PCM, consisting of:

- 1 lid gasket
- 1 tube of gasket glue + dosage tip
- 2 gasket rings for sensor sockets
- 1 protective cap for sensor sockets

Measurement system inspections

REPO PCPP RÜF01

Factory inspection of a flowmeter type PCM, includes:

- Transmitter inspection (function, leak tightness, firmware)
- Sensor inspection (function, ringdown behaviour, firmware)
- Checking of measurement value inputs in test lab
- Inspection protocol issue

Defects which might arise during inspection will be part of a separate estimate of costs.

No maintenance included

² = Product group A

PVM PD Portable flow velocity measurement unit; measurement range 0-3m/s, 4-digit LCD, membrane keypad, internal rechargeable battery (capacity 4-6 hrs); aluminium enclosure



PVM-PD Portable flow velocity measurement unit

Language

DE	German
FR	French
EN	English (metric)
PL	Polish
US	English (US-Version)

PVM-PD



Sensor for flow velocity detection by ultrasonic impulses for connection to PVM PD

PVS- SENSOR10

Ultrasonic sensor, cable length 10 m; telescopic rod incl. (0,7 to 1,6 m)

PVS- SENSOR15

Ultrasonic sensor, cable length 15 m; telescopic rod incl. (0,7 to 1,6 m)

PVS- SENSOR20

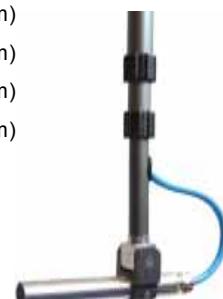
Ultrasonic sensor, cable length 20 m; telescopic rod incl. (0,7 to 1,6 m)

PVS- SENSOR30

Ultrasonic sensor, cable length 30 m; telescopic rod incl. (0,7 to 1,6 m)

PVM0 PDLG 230

Battery Charger 230 V / 12 V for PVM PD





FLOW Portable

Transmitter

2

- PCO-** Portable Flow Measurement Transmitter type PCO for full pipes.
 Flow velocity measurement using high-precision ultrasonic transit time measurement.
 Clamp-on technology. Power supply by rechargeable NiMH battery packs.
 Includes read-out software for Windows: XP, 7



- PCO-** Portable Flow Measurement Transmitter
Construction

P	Plastic housing , IP67 with plug connection for Clamp-on sensors
Analog Outputs	
000	none
1AA	1 Output 0/4 - 20 mA
1AV	1 Output 0 - 10 V
2AA	2 Outputs 0/4 - 20 mA
2AV	2 Outputs 0 - 10 V
Analog Inputs	
0000	none
1EAA	1 Input 0/4 - 20 mA; active, for 2-wire power supply 30 V DC (max. 48 mA)
1EAP	1 Input 0/4 - 20 mA; passive
2EAA	2 Inputs 0/4 - 20 mA; active, 2-wire power supply 30 V DC (max. 48 mA)
2EAP	2 Inputs 0/4 - 20 mA; passive

PCO-	P		



Clamp-on sensors for portable transmitter Type PCO

Clamp-on sensors for flow velocity measurement in full pipelines made of various materials. Cable length 5 m with plug for connection to PCO measurement transmitter; other cable lengths upon request; Measurement range: DN 50 to DN 3000.

NIC0K1P05PCO

1 Sensor pair, material PVC, operating temperature -20 °C to +50 °C

NIC0K1L05PCO

1 Sensor pair, material stainless steel / PEEK, operating temperature -30 °C to +80 °C

Accessories

ZUB0PCOLG

Battery charger PCO 100 - 240 VAC, 50 - 60 Hz, 0,5 A

ZUB0CORAIL

Rail system, consisting of tensioning belt, length 10 m, 2 turnbuckles and split, movable sensor receptacles for easy sensor mounting.

PC00_ZVEASY

Connection cable to NivuLog Easy (one side with plug for multifunctional socket, other side with open cable tip), cable length 10 m

PC00_ZVERAA

Connection cable; analog output (one side with plug for multifunctional socket, other side with open cable tip); e.g. for analog output, cable length 10 m

PC00_ZVERAE

Connection cable; analog input (one side with plug for multifunctional socket, other side with open cable tip); e.g. for UniBar E, cable length 10 m

PC00_ZVS1

Connector-Box IP 67, 1 m cable and plug for connection to multifunctional socket

If using more than one input or output signal the Connector-Box must be connected using the multifunctional socket.



Rain Gauge Detection of rainfall levels incl. data storage

Rain Gauge

RMT0 200

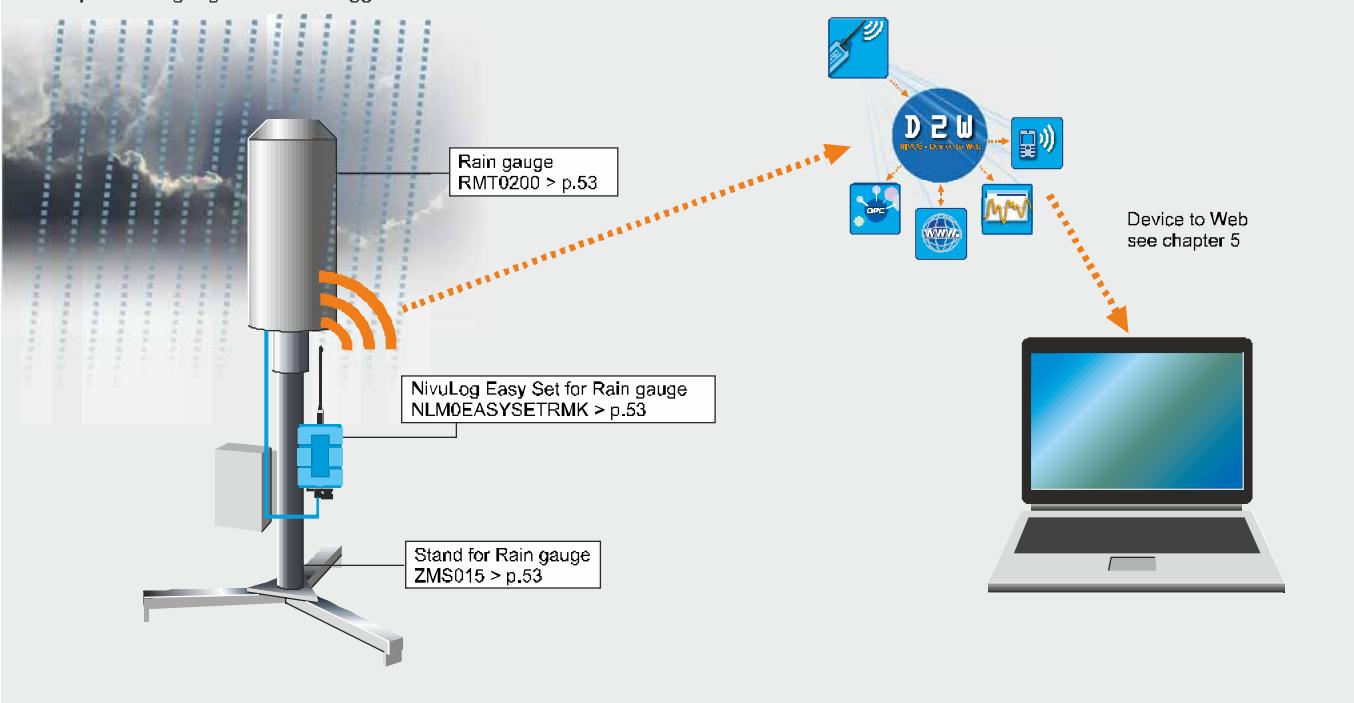
RMT0 202

Rainfall Volume Detection based on the Tipping Scale Principle, Resolution: 0.1 mm

Type RM 200; rain gauge with tipping scale

Type RM 202 with heating; 24 V DC; for winter operation

Example: Rain gauge with Data logger and GPRS transmission



Rain Gauge Accessories

ZMS0 1550 0000

ZMS 155: Stand with ground plate and fastening tube 650 mm

ZMS0 1560 0000

ZMS 156: Stand for field use incl. tensioning system; fastening tube 650 mm

RMT0 ZNTH 0000

Mains adapter for RM 202 with heating; 85-265 V AC

RMT0 ZVOG ELSC H00

Bird protection ring made of stainless steel

Data storage and transmission

NivuLog Easy data logger with GPRS module (quad band) for detection and transmission of rainfall, protection rating IP66

NLM0 EASY SETR MK

Set, consisting of:

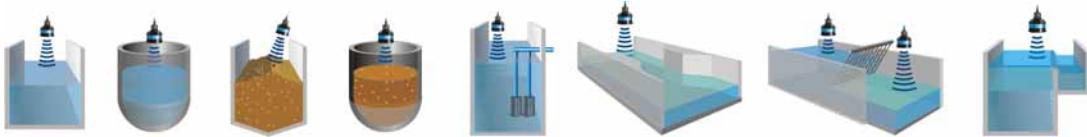
- 1 pc. data logger NivuLog Easy, type NLM0 EASY
- 1 pc. rechargeable battery pack, type NLM0 AP413D+
- 1 pc. battery charger, type NLM0 LADE413D
- 1 pc. connection cable between data logger and rain gauge
- 1 pc. connection cable between data logger and PC
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. USB extension

Data online via D2W can be found on page 89 (Chapter 5)

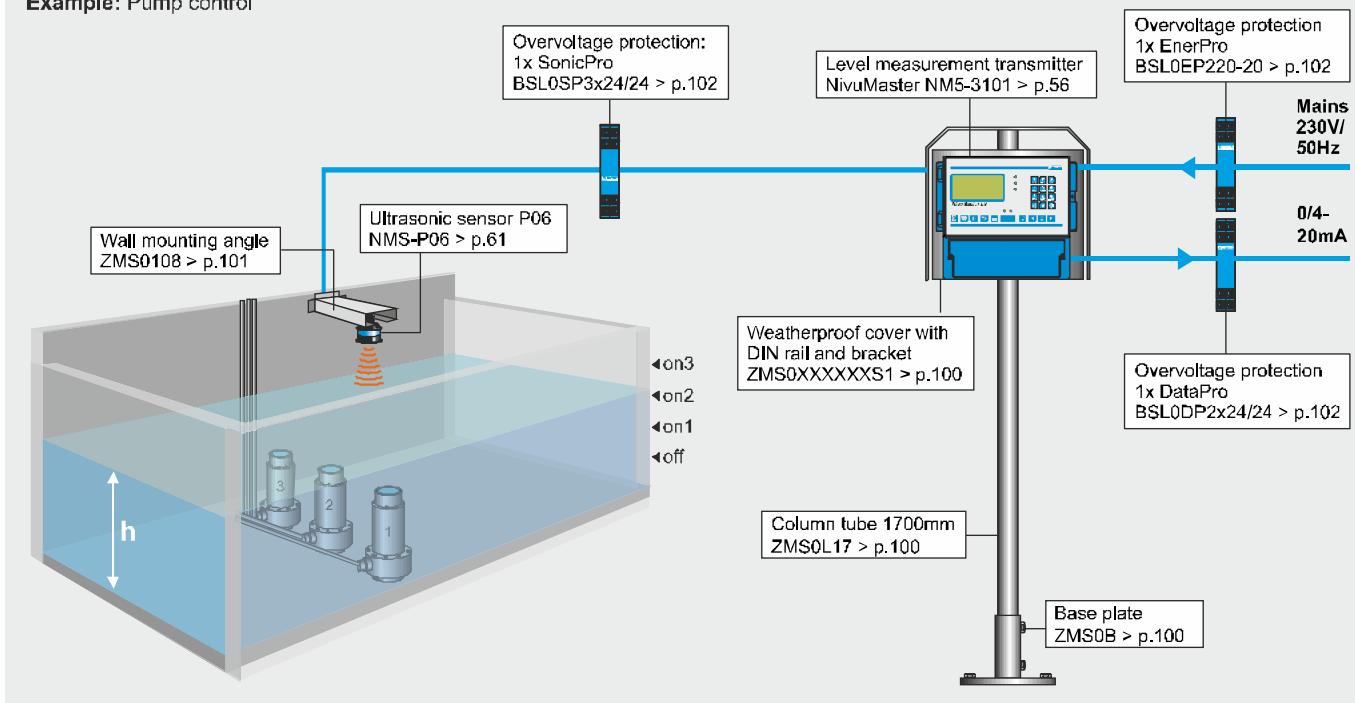
² = Product group A



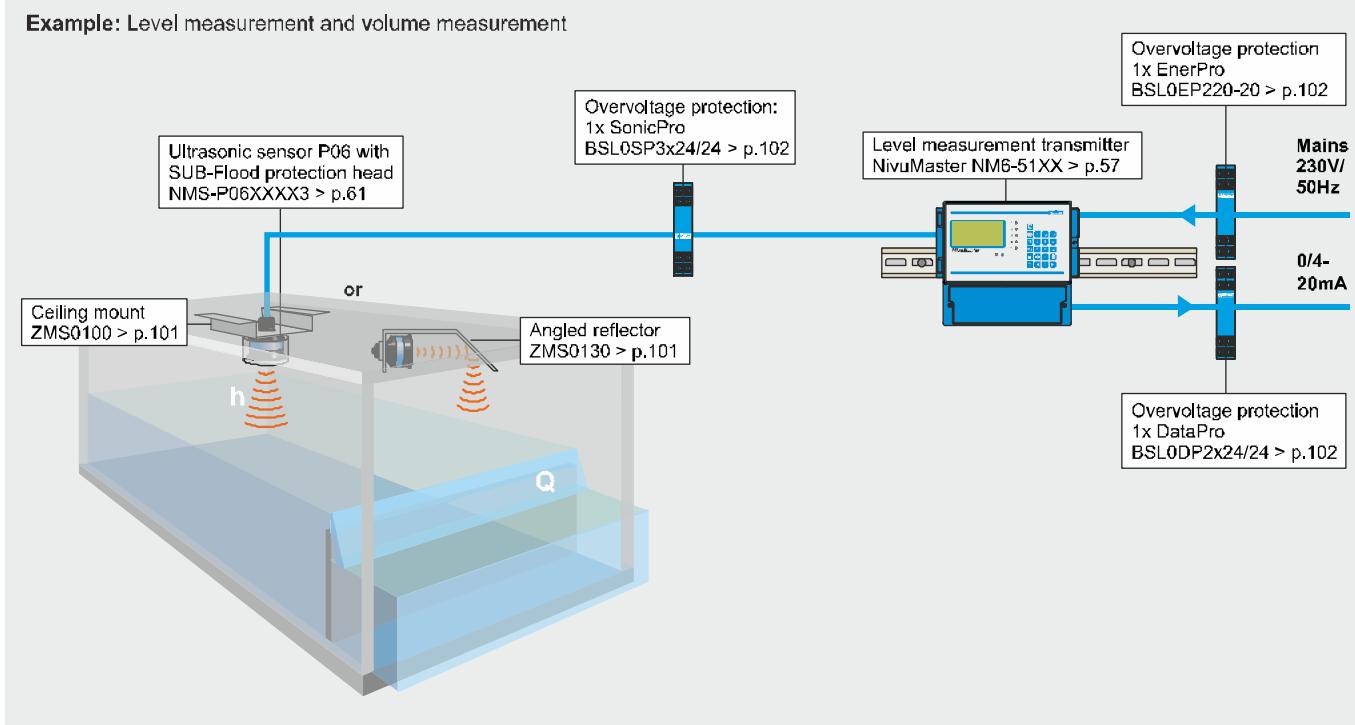
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Example: Pump control



Example: Level measurement and volume measurement





LEVEL Ultrasonic
Transmitter

NivuMaster Measurement transmitter (3 relays) for ultrasonic level measurement

Measurement transmitter for ultrasonic level measurement
incl. Ultra PC programming software and connection cable.

Power Supply: 230 V AC and 24 V DC.

Approval for Ex sensor supply in zone 1 and 2.



NM5- Type Measurement Mode					
3 Rel. Level, trend, flow (not in conjunction with P-25/P-40), pump control and volume calculation of tanks					
Relays: free programmable alarm and control functions					
Hardware	Relays	Output 0/4-20 mA	Input 4-20 mA	Measurement Channel	
31 01	3	1	0	1	
Construction / Enclosure					
65T	IP65 Enclosure with keypad				
19H	19" Plug-In unit without keypad (euro format 10HP/3RU)				
FBO	Panel mount enclosure incl. 19" plug-in unit				
PAT	Panel mount with keypad and large display				
Approval for Ex sensor supply in Zone 0					
65Z	IP65 enclosure with keypad Ex-Zone 0 (only in connection with Ex Zone 0 sensor) Attention! Due to technical reasons the Ex unit is available in 5-relay enclosure IP65 only!				
Language / Menus					
	DE	German			
	EN	English			
	FR	French			
NM5-	3101				

You can find accompanying ultrasonic sensors on page 61.



NivuMaster Measurement transmitter (5 relays) for ultrasonic level measurement

Level measurement transmitter with 5 Relays,
incl. Ultra PC programming software and connection cable.
Power Supply: 230 V AC and 24 V DC.
Approval for Ex sensor supply in zone 1 and 2.



3

NM6-	Type	Measurement Mode			
	5 Rel.	Level, Trend, Flow Measurement (not in conjunction with P-25/P-40), Pump Control, Volume Calculation in Tanks and Comparative Measurement, Averaging (2 ultrasonic inputs). Relays: free programmable Alarm and Control Functions			
	Hardware	Relays	Output 0/4-20 mA	Input 4-20 mA	Measurement Channel
	5101	5	1	0	1
	5111	5	1	1	1
Construction / Enclosure					
	65T	IP65 Enclosure with keypad			
	19H	19" Plug-In unit without keypad (euro format 10HP/3RU)			
	FB0	Panel mount enclosure incl. 19" plug-in unit			
	PAT	Panel mount with keypad and large display			
Language / Menus					
	DE	German			
	EN	English			
	FR	French			
NM6-					

You can find accompanying ultrasonic sensors on page 61.





LEVEL Ultrasonic
Transmitter

NivuMaster Measurement transmitter (5 relays) for screen control and overflow measurement

Level measurement transmitter with 5 Relays,
incl. Ultra PC programming software and connection cable
Power Supply: 230 V AC and 24 V DC.
Approval for Ex sensor supply in zone 1 and 2.



NM		Type	Measurement Mode		
A-		LF-5:2 (RUEB Master) Level, Trend, Flow Measurement on Weirs and Channels (not in conjunction with P-25/P-40) Relays: free programmable Alarm and Control Functions			
B-		LD-5:2 Level, Trend, Comparative Measurement (2 ultrasonic inputs) Relays: free programmable Alarm and Control Functions			
		Hardware	Relays	Output 0/4-20 mA	Input 4-20 mA
		5201	5	2	0
Construction / Enclosure					
65T IP65 Enclosure with keypad 19H 19" Plug-In unit without keypad (euro format 10HP/3RU) FB0 Panel mount enclosure incl. 19" plug-in unit PAT Panel mount with keypad					
Language / Menus					
DE German EN English FR French					
NM	5201				

You can find accompanying ultrasonic sensors on page 61.



NivuMaster Plus Measurement transmitter (6 relays) with pump management

Level measurement transmitter,
incl. Ultra PC programming software and connection cable.
Power Supply: 230 V AC and 24 V DC.
Approval for Ex sensor supply in zone 1 and 2.



3

NM	Type	Measurement Mode			
	9-	Plus	Level measurement, intelligent pump control and pump management via 7 digital inputs, Automatic DST changeover, Relays: free programmable Alarm and Control Functions		
	Hardware	Relays	Output 0/4-20 mA	Input 4-20 mA	Measurement Channel
	6101	6	1	0	1
	6111	6	1	1	1
Construction / Enclosure					
	PAT	Panel mount with keypad and large display			
Language / Menus					
	DE	German			
	EN	English			
	FR	French			
NM	9-	PAT			

You can find accompanying ultrasonic sensors on page 61.



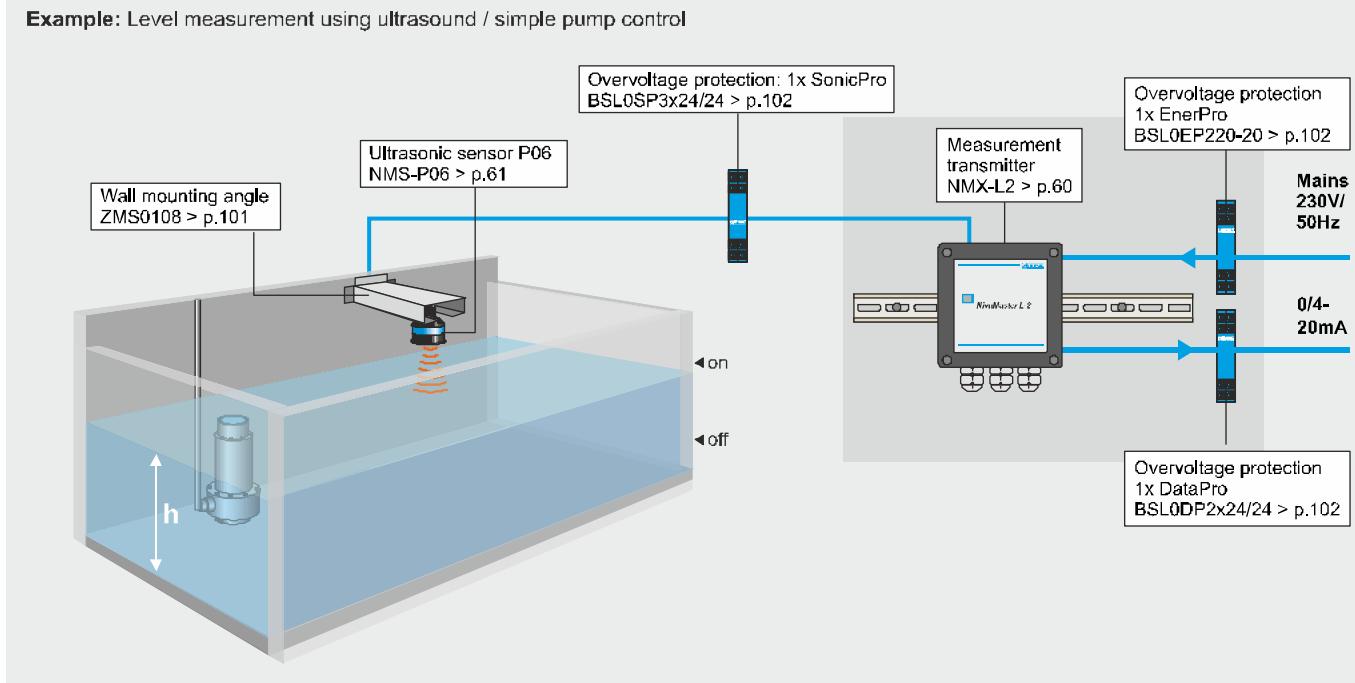
LEVEL Ultrasonic
Transmitter

NivuMaster L-2 Measurement transmitter (2 relays) for level and trend

3



Example: Level measurement using ultrasound / simple pump control



Level measurement transmitter incl. programming software and connection cable.

Power Supply: 230 V AC and 24 V DC.

Approval for Ex sensor supply in zone 1 and 2

NM	Type	Measurement Mode	Measurement Channel			
X-	L-2	Level, Trend	Relays	Output 0/4-20 mA	Input 4-20 mA	
	2101		2	1	0	1
Construction / Enclosure						
	660	IP66 Enclosure without keypad and display				
	66T	IP66 Enclosure with keypad and display				
Language / Menus						
	DE	German				
	EN	English				
	FR	French				
NM	X-					

You can find accompanying ultrasonic sensors on page 61.



P-Series Ultrasonic sensors with integrated temperature compensation, for connection to NivuMaster series transmitters.



NMS-	Type			
Standard Version				
	P06	0.30 to 6 m for fluids		
	P10	0.30 to 10 m for fluids		
	P15	0.50 to 15 m for fluids		
	P25	0.60 to 25 m for fluids		
	P40	1.2 to 40 m for fluids		
Special Version with low dead zone				
	PM3	0.07 to 2.45 m for fluids; resolution ±1mm especially for level/volume measurement (incl. weatherproof cover and flood protection head)		
	P03	0.125 to 3 m for fluids; resolution ±2mm especially for level measurement Attention: for volume-based (flow rate) applications use PM3!		
	PS6	0.20 to 6 m for fluids		
Cable Length				
	05	5 m		
	10	10 m		
	20	20 m		
	30	30 m		
	50	50 m		
	99	100 m		
	xx	Special cable length upon request		
Sensor Body				
	0	Valox (standard)		
	P	PVDF		
ATEX Approvals				
	0	none		
	E	Zone 1		
	Z	Zone 0 (only in conjunction with Ex zone 0 transmitter)		
Extensions				
	0	none		
	2	SUB - Flood protection head 1" only for P03		
	3	SUB - flood protection head 86 mm only for PS6, P06, P10 and P15		
NMS-	0			

There are many extensions optionally available not mentioned particularly in the list. These extensions, such as Teflon or soft foam coatings or various flange versions, can be purchased however.

Please note that not each combination is useful or possible in technical respects. In case of doubt please consult the head office.



i-Serie Intelligent ultrasonic i-series sensor (IP 68) with integrated measurement transmitter for contact-free measurement of distance, level, space, volume or flow rate of liquids or bulk solids.



NMI-	Type	Measurement range	
	Standard Construction		
	03	0.125 to 3 m	
	06	0.3 to 6 m	
	10	0.3 to 10 m	
	15	0.5 to 15 m	
	Cable Length		
	05	5 m	
	10	10 m	
	20	20 m	
	30	30 m	
	50	50 m	
	99	100 m	
	xx	Special cable length upon request	
	Construction		
	0	Standard	
		000 Standard	
	1	SUB flood protection head	(no coating possible)
		000 Standard	
	2	Flange (PTFE coating 0.25 mm)	
		002 2" ANSI	
		003 3" ANSI	
		004 4" ANSI	
		006 6" ANSI	
		008 8" ANSI	
		050 DN50	
		080 DN80	
		100 DN100	
		150 DN150	
		200 DN200	
	5	Front thread mount	
		015 Front thread 1.5"	(only for i-3 and i-6)
		020 Front thread 2"	(only for i-10)
	Coatings		
		0 no coating	
		1 foamed material	(only for standard construction; i-6, i-10 and i-15)
		2 PTFE 0,25 mm	(only for flange construction)
		4 PVDF enclosure	(not for SUB and flange construction, as well as i-3 standard construction)
	ATEX Approvals		
		0 Zone 1	
		1 Zone 0	
	Connection		
		H	HART / 4-20 mA
NMI-			

i-Series accessories with HART protocol

ZUBO HART BOX03 HART modem for programming and diagnostics of i-Series sensors.
Integrated into box with clamping connector for direct connection to sensor line.
Incl. CD and activation converter for programming and echo diagnostic software HartPC.

ZUBO HART PC Activation converter for programming and echo diagnostic software HartPC.

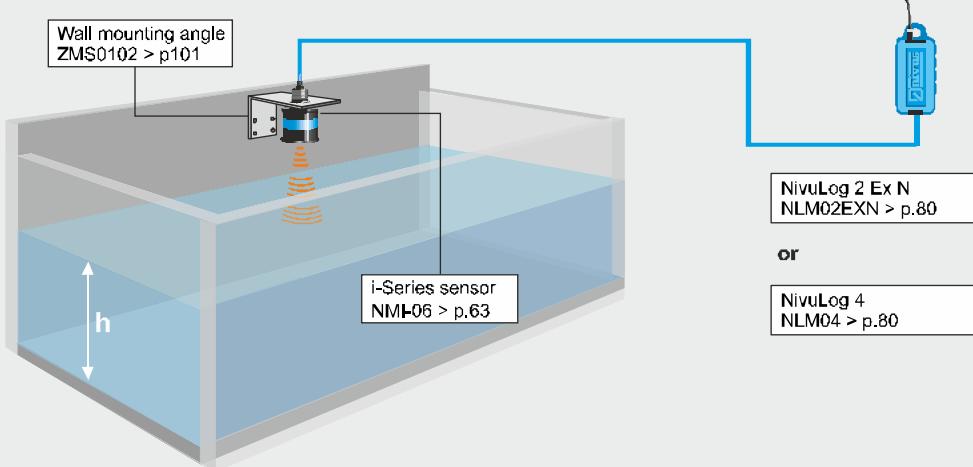
² = Product group A



i-Series Intelligent ultrasonic sensor with pre-configured plug, Ex zone 1, for direct connection NivuLog 2 Ex N and NivuLog 4 measurement systems as well as to PCM series units.

NM10	Type	Measurement range				
Standard construction						
03		0.125 to 3 m				
06		0.3 to 6 m				
10		0.3 to 10 m				
15		0.5 to 15 m				
Cable Length						
05		5 m				
10		10 m				
20		20 m				
30		30 m				
xx		Special cable length upon request				
Construction						
0		Standard				
1		SUB flood protection head				
ATEX Approvals						
001		Zone 1				
Connection						
		via HART /4-20 mA				
Plug Type						
	NL	NivuLog				
	PC	PCM				
NM10			001	H		

Example: Level measurement using ultrasound



Accessories for i-Series sensors with HART protocol on NivuLog 2 Ex N, NivuLog 4 or PCM series units

ZUBO HART BOX01 HART modem for programming and diagnostics of i-Series sensors. Integrated in box with 30 cm connection cable and plug for temporary connection to **NivuLog 2 Ex N** and **NivuLog 4**. Incl. CD and activation converter for programming and echo diagnostic software HartPC.

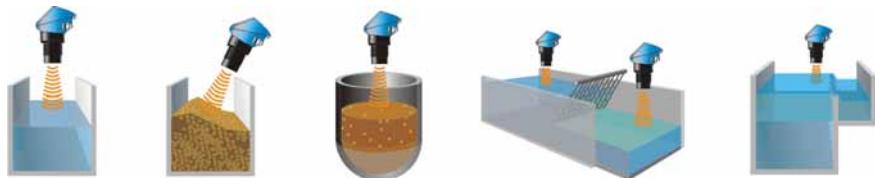
ZUBO HART BOX02 HART modem for programming and diagnostics of i-Series sensors. Integrated in box with 30 cm connection cable and plug for temporary connection to **PCM Pro** and **PCM 4**. Incl. CD and activation converter for programming and echo diagnostic software HartPC.

² = Product group AA

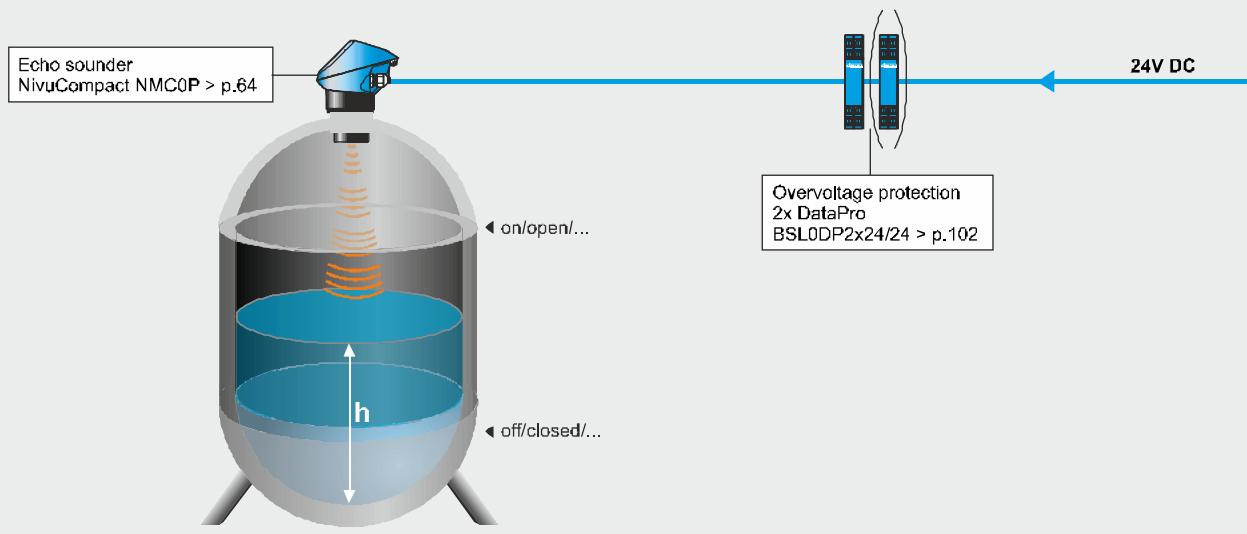
NivuCompact

Compact echo sounder for ultrasonic level measurement

3



Example: Level measurement



NivuCompact Compact echo sounder IP67 with on-site display and keypad; incl. programming software and interface cable
(only for non-Ex versions)
Power Supply: 11-30 V DC (Ex 12-28 V DC).

NMC0	Type	Measurement range
	P03	0.2 to 3 m for fluids
	P06	0.3 to 6 m for fluids
	P10	0.3 to 10 m for fluids
	Enclosure	
	0	Valox (standard)
	P	PVDF
	ATEX Approvals	
	L	none, no relays, 2-wire
	O	none, 2 relays, 2/3-wire
	E	Zone 0/1, no relays, 2-wire
NMC0		





Transmitter accessories

NM00 PROGR-VER01	Handheld programmer for NivuMaster in 19" version
USNO FL10	Spring rail with 32 poles with terminal clamps for installation of NivuMaster 19" into panel mount
NM00 KABEL9POL00	Interface cable for NM serial as well as NivuCompact
ZUBO ZENERMOVAEK	Surge arrestor type 9002/13-280-093-001 ATEX for connection to pressure sensor NivuBar Plus (II) and AE NivuMaster with optional analog input via AI converter in zone 1 / 2
NM00 AE-CON00	AE-Converter for connection of Ex-pressure probe to NivuMaster analog input
USMO ZENER	Surge arrestor type 9002/13-280-110-001 for power supply of NivuCompact Ex in zones 0 / 1 / 2

3

Sensor accessories

NM00 SUB- SET0	Upgrading kit flood protection head for PS6, P06, P10, P15 sensors incl. silicone glue
NM00 SUB- SET3	Upgrading kit flood protection head for P03 sensors with screw thread
USNO AUSR -VA1	Adjustment fitting with 2" screw thread made of stainless steel V2A for ultrasonic sensors with 1" thread
ZUBO NIPS ET00	1" Nipple set consisting of PVC bushing, 1" PVC screw nut and cable gland M20x1.5
ZUBO MUT1 .500	1.5" BSP/NPT PVC screw nut
ZUBO MUT2 .000	2" BSP/NPT PVC screw nut
ZUBO RE2/ 1.5" NMC	Reducer PVC, 2" BSP outer thread to 1.5"- BSP inner thread for NivuCompact 3/6
ZUBO DN10 01.5 PVC	Flange DN100 made of PVC with R 1.5" thread; PN10
ZUBO DN15 01.5 PVC	Flange DN150 made of PVC with R 1.5 " thread; PN10
ZUBO DN20 01.5 PVC	Flange DN200 made of PVC with R 1.5" thread; PN10

Please find wall mounting angle / accessories for sensor fastening in chapter "Accessories"

² = Product group A



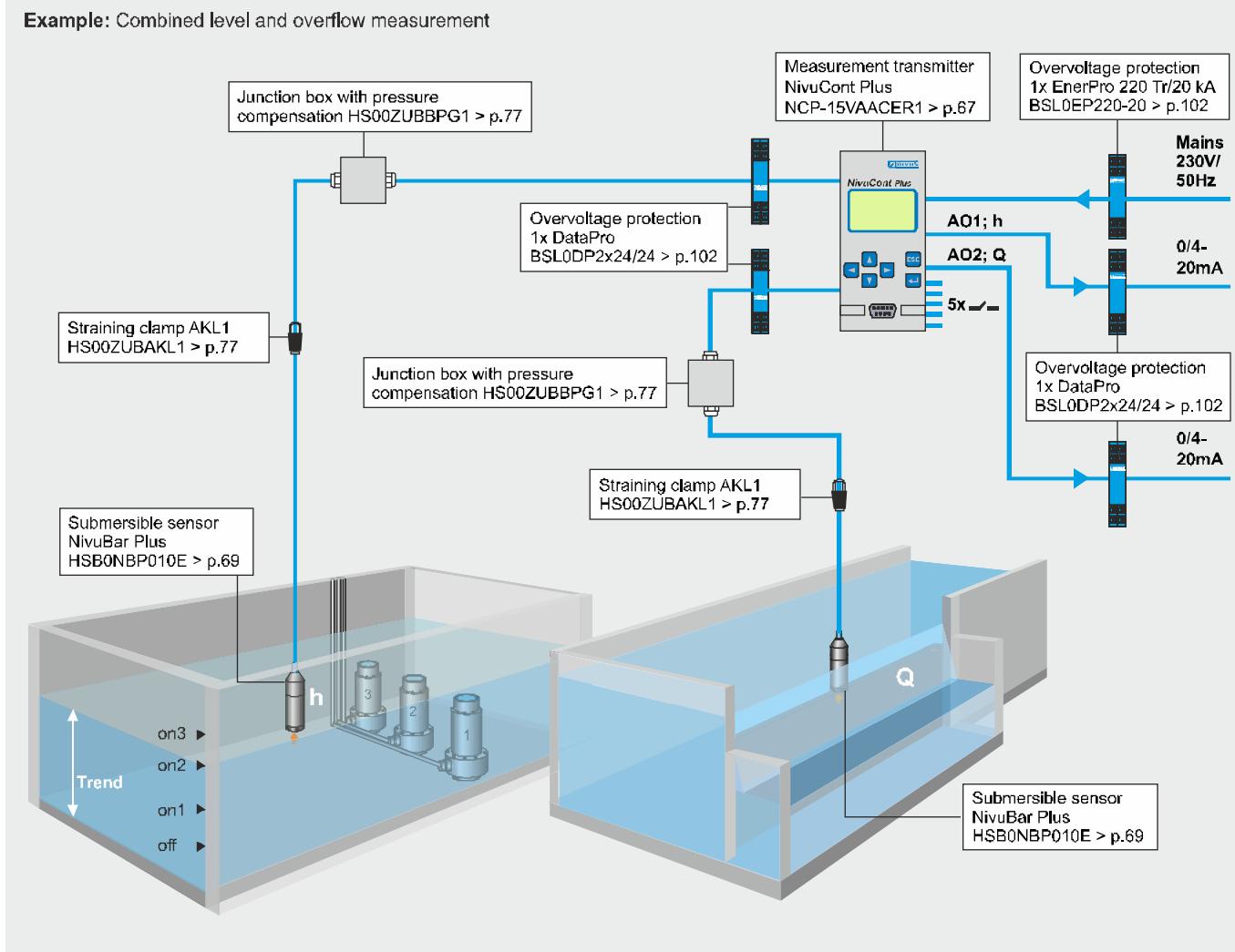
NivuCont Plus

Multifunctional transmitter for 2- and 3-wire sensors



3

Example: Combined level and overflow measurement





NivuCont Plus Multifunctional measurement transmitter for combined level and overflow measurement. For 2- and 3-wire sensors



3

NCP-	Type				
	10	1 Input 4-20 mA; 1 output 0/4-20 mA,			
	12	1 Input 4-20 mA; 1 output 0/4-20 mA, 2 potential-free limit-/error message contacts, switching capacity 5 A/230 V (ohm resistive load)			
	15	1 Input 4-20 mA; 1 output 0/4-20 mA, 5 potential-free limit/error message contacts, switching capacity 5 A/230 V (ohm resistive load)			
		Construction / Enclosure			
	19	Plug-in unit in euro format			
	VA	Field enclosure IP65 also for DIN rail mounting			
	FB	Panel mount IP30			
		Power Supply			
	AC	85 - 264 V AC / 50 - 60 Hz			
	DC	18 - 36 V DC			
	SP	12 V DC			
		ATEX Approvals			
	0	none			
	E	Intrinsically safe sensor supply for Ex zone 0 / 1			
		Serial Interface			
	R	RS232			
		Extensions			
	0	no Extension			
	1	two analog inputs and two analog outputs for 2 separate measurements, total, difference, average			
		Software Extensions			
	00	none (standard software)			
	0B	Trend and control of basin purification			
	0M	Volume and flow calculation			
	0K	Combination of trend and control basin purification and volume as well as flow calculation			
NCP-		R			

Please find accessories on page 77.

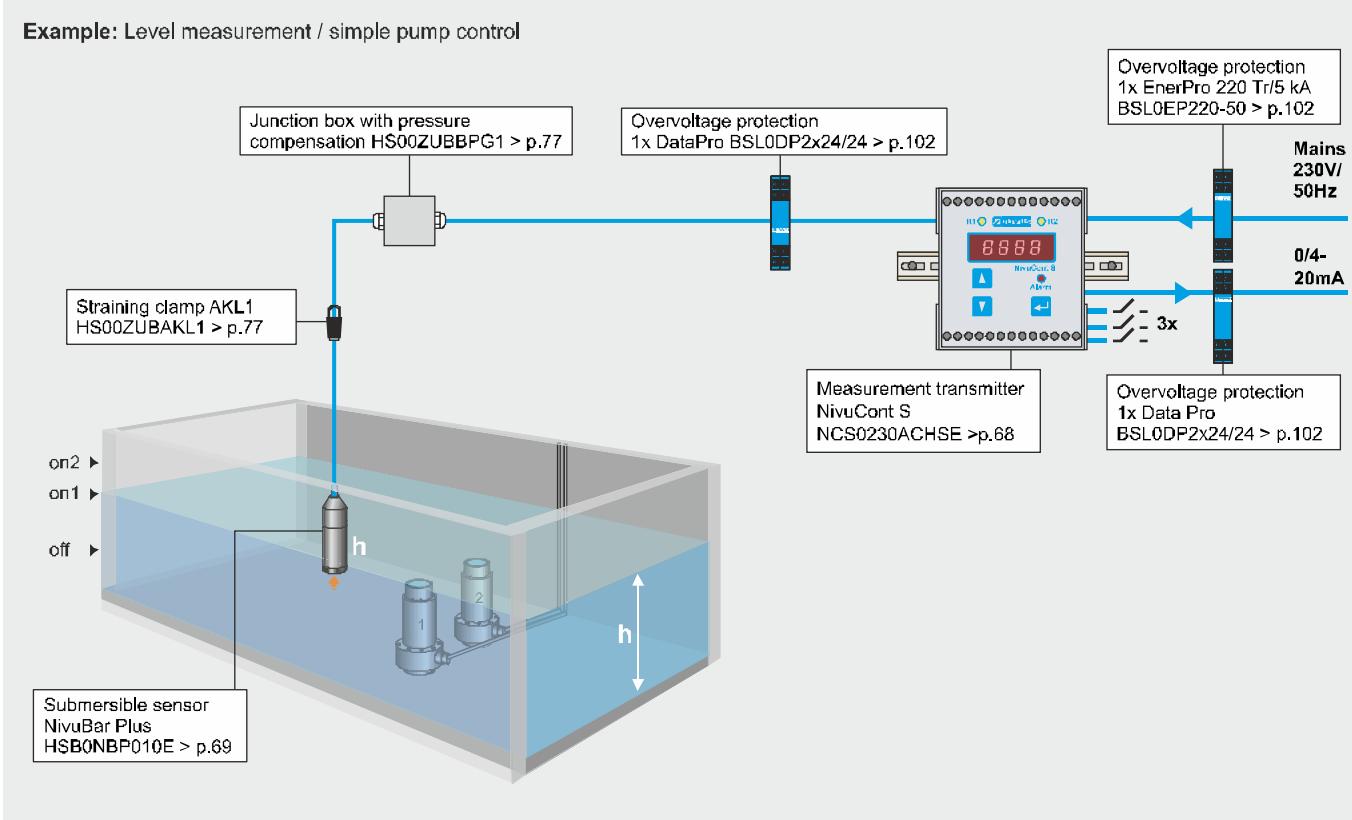


LEVEL Hydrostatic, Pressure
Transmitter

NivuCont S Transmitter for 2- and 3-wire sensor supply



3



NivuCont S For 2- and 3-wire sensor supply, 3 relays (2x limit value / pump exchange, 1x error message); input 4-20 mA, output 0/4-20 mA.



NCS0	Type	
	Power Supply	
	230AC	230 V AC; 50/60 Hz
	024DC	24 V DC stabilised
	Enclosure	
	FT	Panel mount installation IP40 (front), IP20 (clamps); available as Ex version only
	HS	DIN rail mounting IP40 (enclosure), IP20 (clamps)
	ATEX Approvals	
	0	none
	E	Zone 0
NCS0		

NivuBar Plus (II)

Hydrostatic level device with capacitive ceramic cell for liquids.
Submersible sensor with integrated 4-20 mA-transmitter and hermetically sealed cable.



3

HSB0	Type						
	NBP	Submersible sensor with ceramic membrane for level measurement					
Measurement Range							
<p>001 1 m (3 ft) water column</p> <p>002 2 m (6 ft) water column</p> <p>004 4 m (13 ft) water column</p> <p>006 6 m (20 ft) water column</p> <p>010 10 m (33 ft) water column (20 m cable recommended)</p> <p>xxx Special measurement range [max. 100 meter WC]</p>							
ATEX Approvals							
<p>E Zone 0 / 1</p> <p>Cable Length</p> <p>010 10 m (33 ft)</p> <p>020 20 m (66 ft)</p> <p>030 30 m (100 ft)</p> <p>050 50 m (165 ft)</p> <p>099 100 m (330 ft)</p> <p>xxx Special cable length upon request</p> <p>Construction</p> <p>K Standard</p>							
HSB0	NBP	E		K			

Please find accessories on page 77.



LEVEL Hydrostatic
Submersible sensor

NivuBar H (III) Hydrostatic level device with capacitive ceramic cell for liquids. Communication via HART protocol. Submersible sensor with integrated 4-20 mA-transmitter and hermetically sealed cable.



HSB0	Type		
	NBH	Submersible sensor with ceramic membrane for level measurement and HART communication.	
		Measurement Range	
	010	10 m (33 ft) water column adjustable; min. 20 % FS	
	020	20 m (66 ft) water column adjustable; min. 20 % FS	
	xxx	Special measurement range [max. 100 meter WC]	
		ATEX Approvals	
	0	none	
	E	Zone 0 / 1	
		Cable Length	
	010	10 m (33 ft) (only recommended at measurement range <10 m WC)	
	020	20 m (66 ft)	
	030	30 m (100 ft)	
	050	50 m (165 ft)	
	099	100 m (330 ft)	
	xxx	Special cable length upon request	
		Construction	
	K	Standard	
HSB0	NBH		<input type="text" value="K"/>



Please find accessories on page 77.



NivuBar G (II) **Hydrostatic level device with capacitive ceramic cell for liquids.**
Submersible sensor with integrated 4-20 mA-transmitter and
hermetically sealed cable



HSB0	Type																			
	NBP	Submersible sensor with ceramic membrane for level measurement																		
Measurement Range																				
001 1 m (3 ft) water column 002 2 m (6 ft) water column 004 4 m (13 ft) water column xxx Special measurement range																				
ATEX Approvals																				
E Zone 0 / 1 Cable Length <table> <tr> <td>005</td> <td>5 m (16 ft)</td> </tr> <tr> <td>010</td> <td>10 m (33 ft)</td> </tr> <tr> <td>020</td> <td>20 m (66 ft)</td> </tr> <tr> <td>030</td> <td>30 m (100 ft)</td> </tr> <tr> <td>050</td> <td>50 m (165 ft)</td> </tr> <tr> <td>099</td> <td>100 m (330 ft)</td> </tr> <tr> <td>xxx</td> <td>Special cable length upon request</td> </tr> </table> Construction <table> <tr> <td>G</td> <td>1" thread on end of probe</td> </tr> </table>					005	5 m (16 ft)	010	10 m (33 ft)	020	20 m (66 ft)	030	30 m (100 ft)	050	50 m (165 ft)	099	100 m (330 ft)	xxx	Special cable length upon request	G	1" thread on end of probe
005	5 m (16 ft)																			
010	10 m (33 ft)																			
020	20 m (66 ft)																			
030	30 m (100 ft)																			
050	50 m (165 ft)																			
099	100 m (330 ft)																			
xxx	Special cable length upon request																			
G	1" thread on end of probe																			
HSB0	NBP	E		G																

Please find accessories on page 77.



LEVEL Hydrostatic
Submersible sensor

AquaBar (II) Hydrostatic level measurement with stainless steel diaphragm and piezoresistive measurement cell for clean fluids.
Submersible sensor with integrated 4-20 mA transmitter and fixed cable.



HSB0	Type										
	AB	Submersible probe with stainless steel diaphragm for level measurement									
	Measurement Unit										
	W Water column										
	Measurement Ranges										
	002 2 m (6 ft) water column 004 4 m (13 ft) water column 006 6 m (20 ft) water column 010 10 m (33 ft) water column (20 m cable recommended) xxx Special measurement range [max. 100 m WC]										
ATEX Approvals											
0 none Cable Length 010 10 m 020 20 m 030 30 m 050 50 m 099 100 m xxx Special cable length upon request											
Construction											
K Standard											
HSB0	AB	W	0	K							

Please find accessories on page 77.



AquaBar BS

Hydrostatic level measurement for depth measurement in wells and open water bodies. Diaphragm and enclosure made of stainless steel.
 Integrated 4-20 mA transmitter and fixed cable



3

HSB0	Type	Submersible probe with piezoresistive measurement cell			
	BS				
Measurement Unit					
W Water column					
Measurement Ranges					
	004	4 m (13 ft) water column			
	006	6 m (20 ft) water column			
	010	10 m (33 ft) water column (min. 20 m cable recommended)			
	020	20 m (66 ft) water column (min. 30 m cable recommended)			
	xxx	Special measurement range [max. 160 Meter WC]			
ATEX Approvals					
	0	none			
Cable Length					
	010	10 m			
	020	20 m			
	030	30 m			
	050	50 m			
	099	100 m			
	xxx	Special cable length upon request			
Construction					
	K	Standard			
HSB0	BS	W	0	K	



Please find accessories on page 77.



LEVEL Hydrostatic
Screw-in probe

UniBar E (II)

Pressure transmitter as screw-in probe with stainless steel piezoresistive measurement cell in rugged stainless steel enclosure and with integrated 4-20 mA-transmitter for clean fluids or gases.



HSB0	Type				
	UE	Pressure transmitter with stainless steel diaphragm 1.4404			
Measurement Unit					
B bar					
	W	Water column			
Measurement Ranges					
	001	1 bar / 1 m (3 ft) water column			
	002	2 bar / 2 m (6 ft) water column			
	004	4 bar / 4 m (13 ft) water column			
	006	6 bar / 6 m (20 ft) water column			
	010	10 bar / 10 m (33 ft) water column			
	020	20 bar / 20 m (66 ft) water column			
	xxx	Special measurement range			
ATEX Approvals					
	0	none			
	E	Zone 0			
Gasket					
	V	Viton			
Enclosure / Connection					
	U	Stainless steel non-rotatable			
	K	Plug connector according to DIN ISO 4400			
	E	Ex Display (LED, integrated)			
Mechanic Connection / Process Connection					
	05	G½" thread DIN 3852 open connection with 12 mm drilling			
HSB0	UE		V		05

Please find accessories on page 77.



HydroBar G (II) Pressure transmitter with capacitive ceramic measuring cell, for clear fluids and sludge.
 Screw-in probe with integrated 4-20 mA transmitter.



3

HSB0	Type								
	HG	Pressure transmitter with ceramic diaphragm							
Measurement Unit									
B bar									
W Water column									
Measurement Ranges									
001 1 bar / 1 m (3 ft) water column									
002 2 bar / 2 m (6 ft) water column									
004 4 bar / 4 m (13 ft) water column									
006 6 bar / 6 m (20 ft) water column									
010 10 bar / 10 m (33 ft) water column									
020 20 bar / 20 m (66) water column									
xxx Special measurement range									
ATEX Approvals									
0 none									
E Zone 0									
Gasket									
V Viton									
Enclosure									
U Stainless steel non-rotatable									
E Stainless steel with rotatable Ex display									
Mechanic Connection / Process Connection									
15 G1½" thread according to DIN ISO 228									
SO Special construction									
HSB0	HG		V						

Please find accessories on page 77.



LEVEL Hydrostatic, Pressure

Submersible sensor with data logger

Level Data Collector

Level measuring system for data transmission via GPRS to server-based Internet portal D2W; incl. AquaBar II submersible probe or with NivuBar Plus II submersible probe.

NLM0PDS0 Type

- | | |
|----------|---|
| G | Level transmitter incl. rod antenna, data transmission via GPRS |
| U | Level transmitter, data transmission via USB interface |

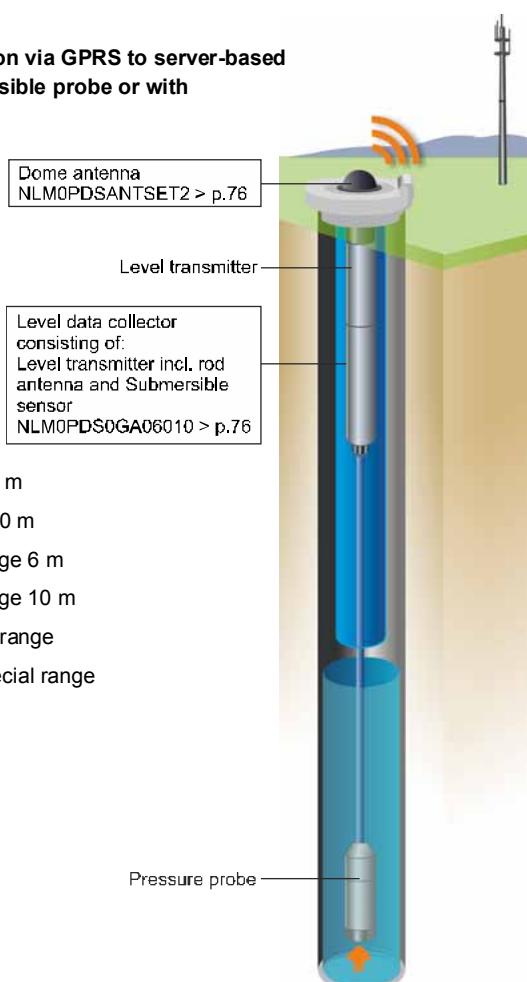
2-wire pressure probe Type

- | | |
|------------|--|
| A06 | AquaBar II submersible probe, range 6 m |
| A10 | AquaBar II submersible probe, range 10 m |
| N06 | NivuBar Plus II submersible probe, range 6 m |
| N10 | NivuBar Plus II submersible probe, range 10 m |
| Axx | AquaBar II submersible probe, special range |
| Nxx | NivuBar Plus II submersible probe, special range |

Cable Length

- | | |
|------------|------|
| 010 | 10 m |
| 020 | 20 m |
| 030 | 30 m |
| 050 | 50 m |

NLM0PDS0



Accessories for Level Data Collector

NLM0 PDS ANTSTAB	Rod antenna, model Mini GSM 900/1800
NLM0 PDS ANTSET2	Antenna set 2" for Level Data Collector consisting of: dome antenna and preconfigured antenna cable, length 140 mm
NLM0 PDSANTSET3	Antenna set 3"/4" for Level Data Collector consisting of: dome antenna and preconfigured antenna cable, length 170 mm
NLM0 PDSANTSET6	Antenna set 5"/6" for Level Data Collector consisting of: dome antenna and preconfigured antenna cable, length 200 mm
NLM0 ZPDSE4	Adapter suspension plate 3" for Level Data Collector for installation in 3" mast cap
NLM0 ZPDSE5	Adapter suspension plate 4" for Level Data Collector for installation in 4" mast cap
NLM0 ZPDSE6	Adapter suspension plate 5" for Level Data Collector for installation in 5" mast cap
NLM0 ZPDSE7	Adapter suspension plate 6" for Level Data Collector for installation in 6" mast cap





Accessories for NivuCont Plus

- NCP0 FKLE MM32 EXO* Spring contact strip with 32 poles for NCP 19" with terminal clamps -straight- for Ex
NCP0 FKLEMM0 Spring contact strip with 48 poles for NCP 19" with terminal clamps -straight-

Accessories for pressure probes

- HS00 ZUBAKL10* AKL 1 straining clamp made of stainless steel 1.4571 for submersible probes with cable diameters of 7.5 - 10.5 mm



- HS00 ZUBA1500* Locking sleeve (carrier) G1.5" made of stainless steel for NivuBar Plus (II) pressure sensor
HSB0 ZUBKLB1 KLB1 connector box IP66 for 2-wire pressure probes with overvoltage protection and pressure compensation; material: Aluminium
HS00 ZUBBPG10 BPG Ex Junction box IP 65 with pressure compensation element, material: Plastic
HS00 NB00AD01P65 Junction box IP65, no pressure compensation element, material: plastic
HS05 ZUBDRUCKA00 Pressure compensation for junction boxes, not submersible
HS00 ZENER-NBP00 Surge arrestor type 9001/51-280-091-141 ATEX for connection of Pressure and Submersible probes in zone 1/2 for: NivuBar Plus II; NivuBar G II; HydroBar G II; UniBar E and NivuBar H III to SPS inputs.



Accessories for pressure probes using HART protocol

- HSB0 HIF1.010* HART Interface Module for connection of PC via RS232 interface
HSB0 HSW0.100 HART configuration software on CD ROM for NIVUS pressure probes
HSB0 HAM300.0 HART module HAM-300, adapter module for installation in mA-loop

² = Product group A



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Accessories NivuLog Easy	84
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Calibration set	86

You can find the **NivuLog PCM Ex** data logger and appropriate accessories in **chapter 2**

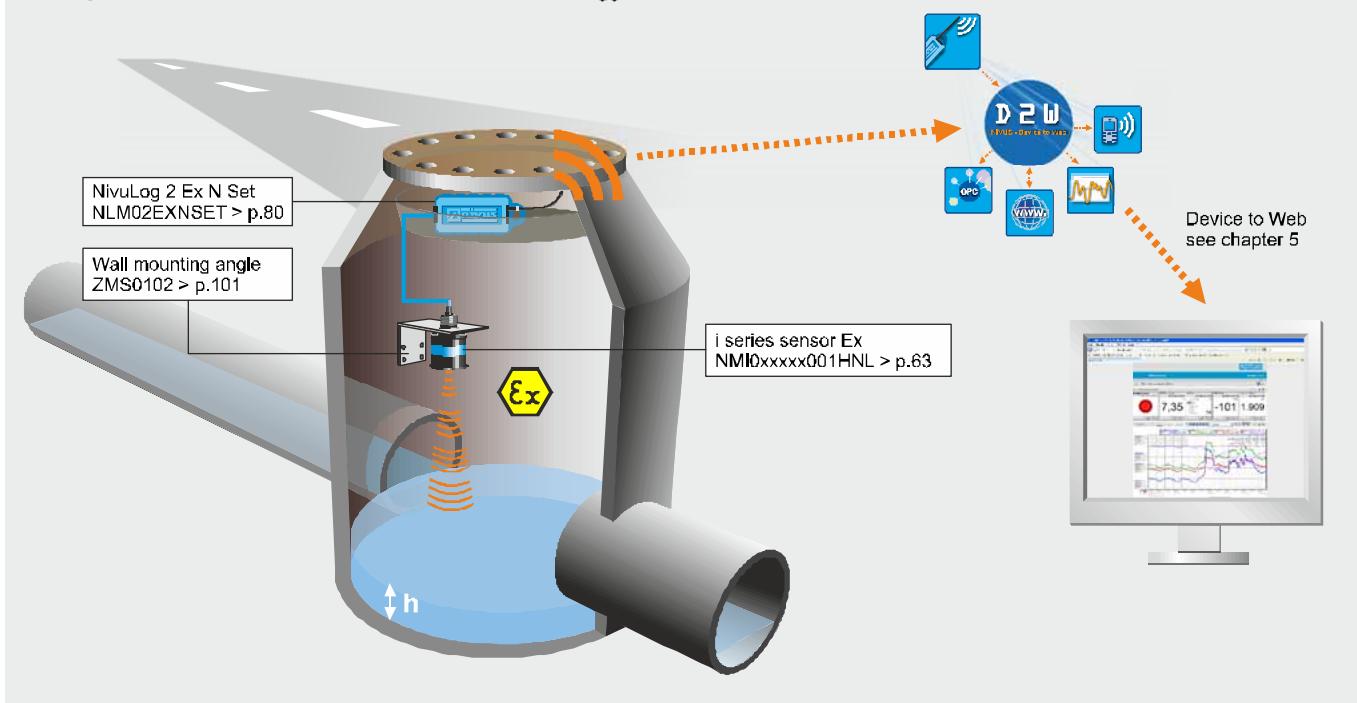


NivuLog

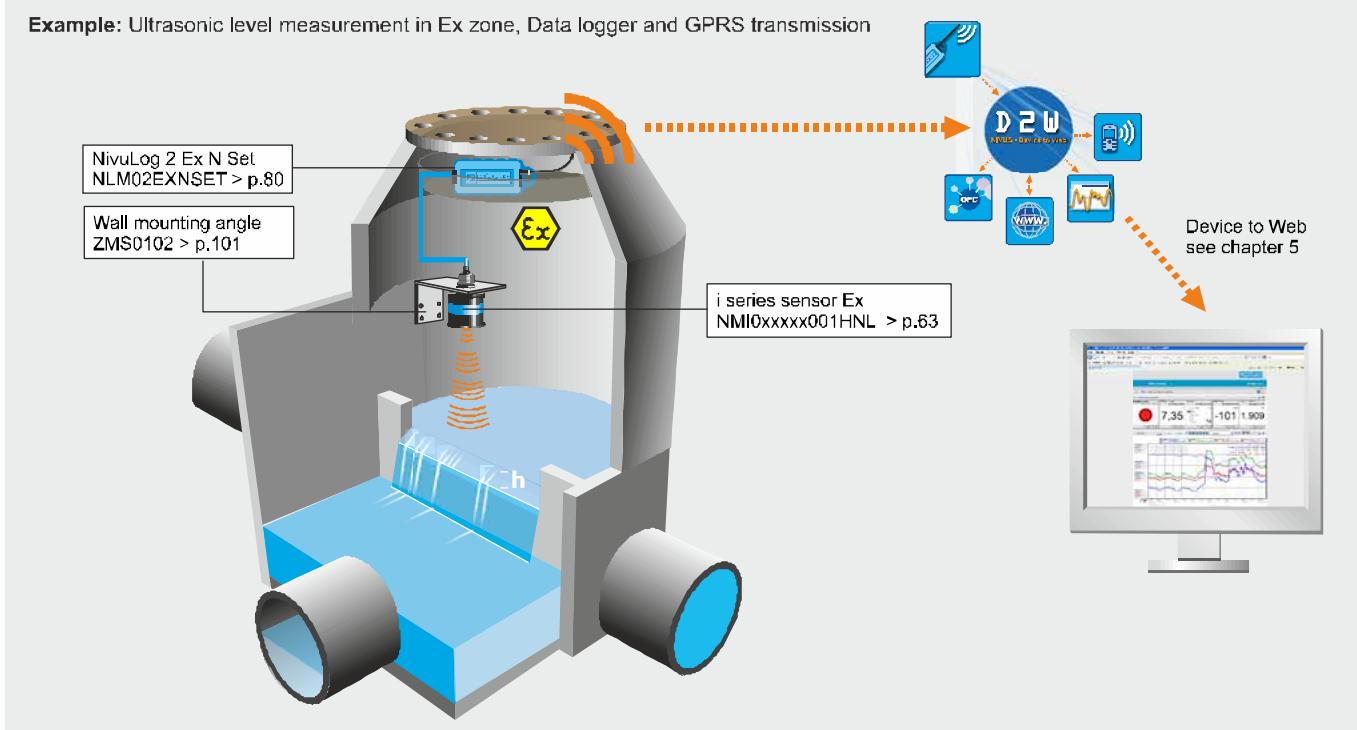
Portable GPRS data logger



Example: Ultrasonic level measurement in Ex zone, Data logger and GPRS transmission



Example: Ultrasonic level measurement in Ex zone, Data logger and GPRS transmission





NivuLog Battery-powered GPRS data logger with fully configurable inputs.

NivuLog 2 Ex N

NLM0 2EXN

NivuLog 2 Ex N; portable data logger in protective cover with GPRS module (quad band) for recording and transmission of 2 analog or 2 digital signals (2 multifunctional inputs), for use in Ex zone 1, protection rating IP67

- 1 pc. data logger with protective cover
- 1 pc. antenna, type NLM0ANT900FME
- 1 pc. antenna extension 5 m for antenna 900 FME, type NLM0 ANTVER05
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02



NLM0 2EXN SET

NivuLog 2 Ex N-Set for recording and transmission of data, consisting of:

- 1 pc. data logger with protective cover
- 1 pc. rechargeable battery pack, type NLM0 AP424DAN
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. antenna extension 5 m for antenna 900 FME, type NLM0 ANTVER05
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. USB connection cable for configuration, type ZUB0 KABUSB02
- 1 pc. rechargeable battery pack, type NLM0 LAD424

NivuLog 4

NLM0 4

NivuLog 4; portable data logger with GPRS module (quad band) for recording and transmission of 4 analog or 4 digital signals (4 multifunctional inputs), protection rating IP67; standard delivery:

- 1 pc. data logger with protective cover
- 1 pc. antenna, type NLM0ANT900FME
- 1 pc. antenna extension 5 m for antenna 900 FME, type NLM0 ANTVER05
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02



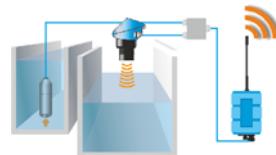
NLM0 4SET

NivuLog 4-Set for recording and transmission of data, consisting of:

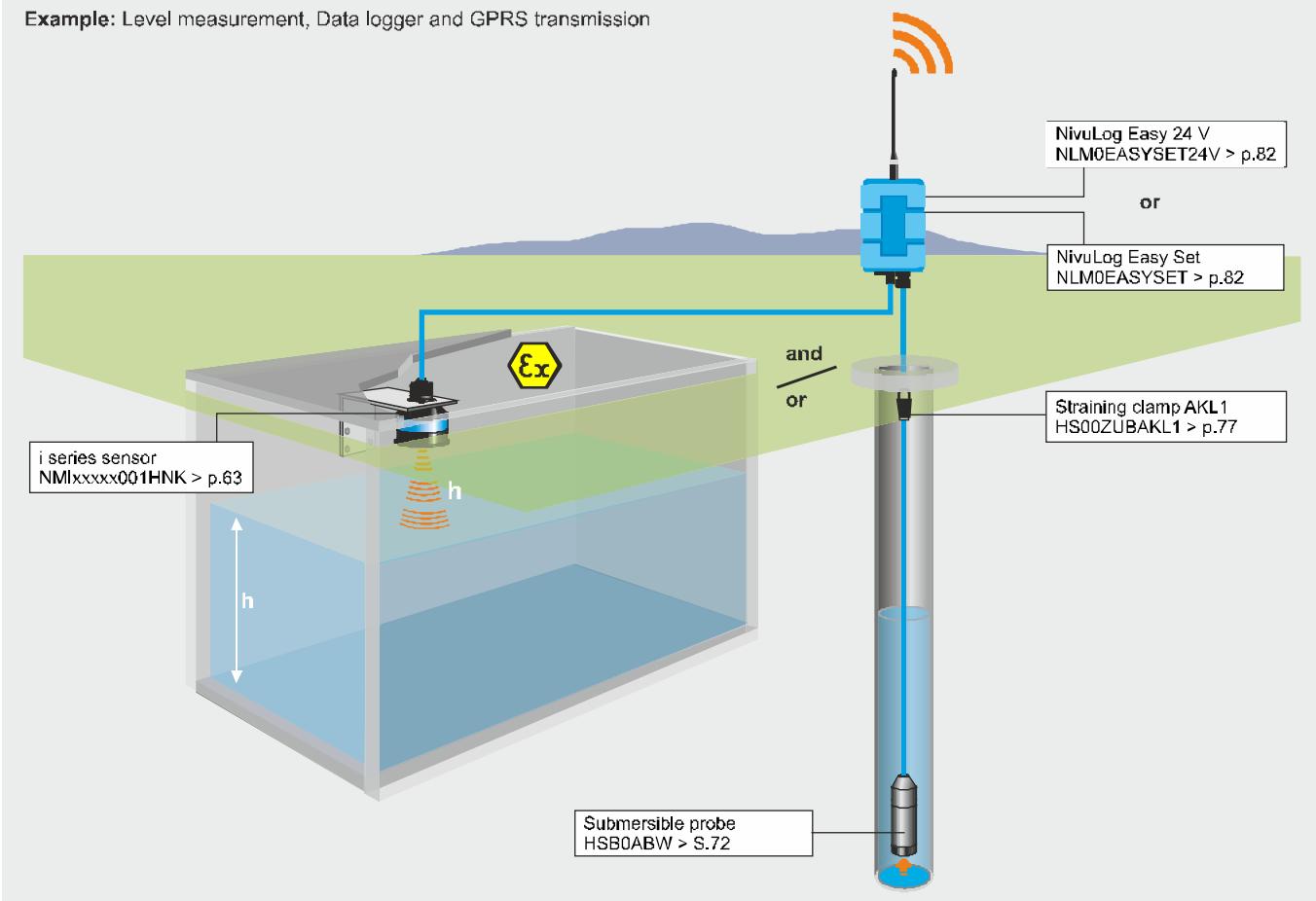
- 1 pc. data logger with protective cover
- 1 pc. rechargeable battery pack, type NLM0 AP424D
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. antenna extension for antenna 900 FME, 5m, type NLM0 ANTVER05
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. battery charger, type NLM0 LAD424
- 1 pc. USB connection cable for configuration, type ZUB0 KABUSB02

² = Product group A

NivuLog Portable GPRS data logger



Example: Level measurement, Data logger and GPRS transmission





TELECONTROL Recording of measurement data └ GPRS Data logger

Data logger with GPRS module (quad band) for recording and transmission of 4 analog or 4 digital signals (4 multifunctional inputs), protection rating IP66. Sensor power supply 15 V DC, 66 mA



NivuLog Easy

NLM0 EASY

Standard delivery:

- 1 pc. data logger, type NivuLog Easy
- 1 pc. toolpen to open the enclosure, type NLM0 TOOL PEN
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. connection plug, 10 pins

NLM0 EASY SET

NivuLog Easy Set, consisting of:

- 1 pc. data logger, type NivuLog Easy
- 1 pc. toolpen to open the enclosure, type NLM0 TOOL PEN
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. rechargeable battery pack, type NLM0 AP413D+
- 1 pc. battery charger, type NLM0LAD413D+
- 1 pc. mounting bracket, type NLM0 HALW
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. connection plug, 10 pins

4

Data logger with GPRS module (quad band) for connection of ultrasonic 2-wire sensors and for use of Ex surge arrestors, 4 multifunctional inputs, protection rating IP66. Sensor power supply 24 V DC, 41 mA.



NLM0 EASY V24

Standard delivery:

- 1 pc. data logger, type NivuLog Easy 24 V
- 1 pc. toolpen to open the enclosure, type NLM0 TOOL PEN
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. connection plug, 10 pins

NLM0 EASY SET V24

NivuLog Easy Set; consisting of:

- 1 pc. data logger, type NivuLog Easy 24 V
- 1 pc. toolpen to open the enclosure, type NLM0 TOOL PEN
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. rechargeable battery pack, type NLM0 AP413D
- 1 pc. battery charger, type NLM0 LAD413D+
- 1 pc. mounting bracket, type NLM0 HALEASY
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. connection plug, 10 pins

² = Product group A



NivuLog Easy Sun

NLM0 EASY SUN

NivuLog Easy Sun; robust solar module with cover made of armoured glass, integrated data logger type NivuLog Easy, GPRS module (quad band), rechargeable buffer battery, solar control and antenna.

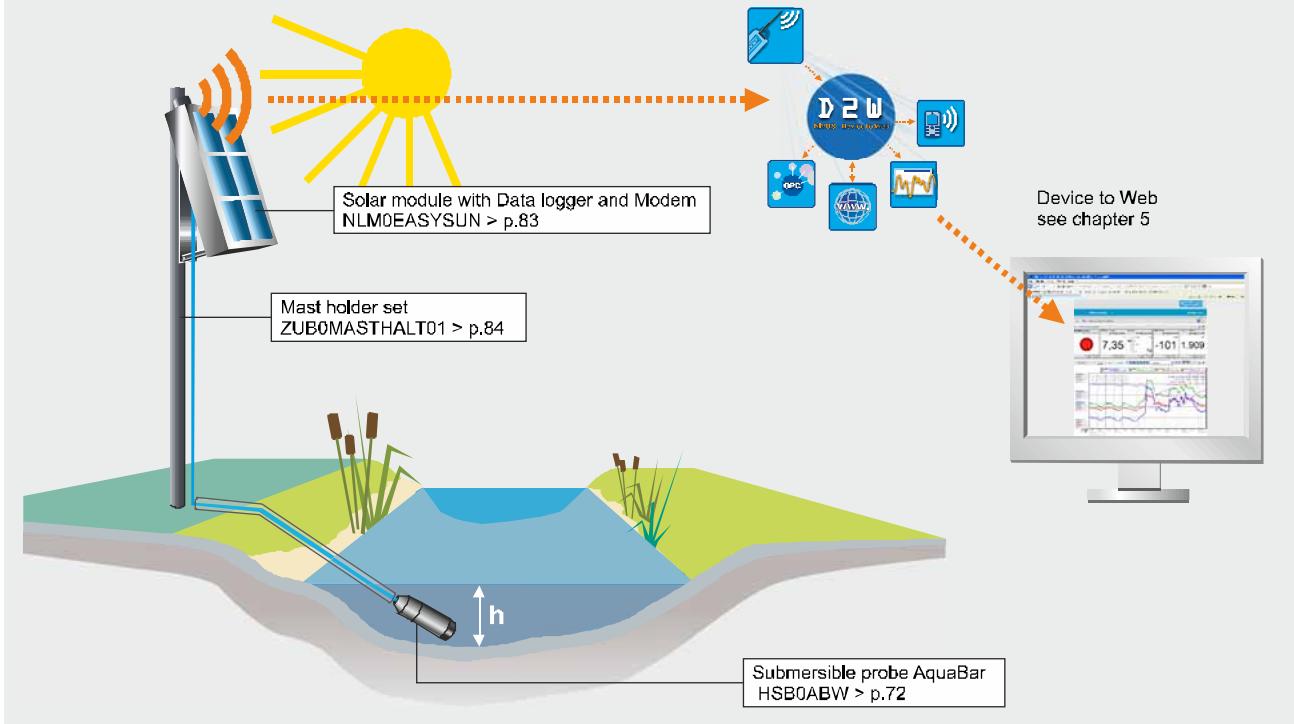
NLM0 EASY SUN V24

NivuLog Easy Sun 24 V for connection of ultrasonic 2-wire sensors and for use of Ex surge arrestors; robust solar module with cover made of armoured glass, integrated data logger type NivuLog 24 V, GPRS module (quad band), rechargeable buffer battery, solar control and antenna.

² = Product group A

4

Example: hydrostatic level measurement, data logger with solar module and GPRS transmission





Accessories for NivuLog Easy

<i>NLMO ZUBO AZD0 3</i>	Junction box for Ex surge arrestor type: HS00 ZENE R-NB P00 incl. pressure compensation for direct connection of hydrostatic level measurements
<i>NLMO AP41 3D</i>	Rechargeable battery pack for NivuLog Easy; rechargeable Lithium-Ion battery; Nominal voltage: 3.7 V; charging voltage: 4.2 V; capacity: 13.2 Ah
<i>NLMO AP41 3D+</i>	Rechargeable battery pack for NivuLog Easy rechargeable Lithium-Ion battery, rechargeable even at temperatures below 0 °C Nominal voltage 3.7 V; charging voltage: 4.2 V; capacity 13.6 Ah
<i>NLMO AP40 3D</i>	Battery pack for NivuLog Easy; rechargeable lead gel battery, nominal voltage 4.0 V, capacity 2.5 Ah
<i>NLMO BP43 4R</i>	Battery pack for NivuLog Easy, not rechargeable; capacity: 26 Ah
<i>NLMO LAD4 13D+</i>	Battery charger for battery types NLMO 413D and NLMO 413D+
<i>NLMO NETZ G01</i>	Power adapter for connection of NivuLog Easy to mains power (Attention: a rechargeable battery must be installed even in case of mains-powered operation) Input voltage: 90-264 V AC Output voltage: 12 V DC Output current: 0.5 A

Accessories for antenna

<i>NLMO ANT9 00FM E</i>	Rod antenna for connection to devices Type NivuLog
<i>NLMO ANTV ER05</i>	Antenna extension 5 m
<i>ZUBO EMAT R01</i>	GSM round antenna incl. holder for installation in dirt pan, wall mount or installation on switching cabinets
<i>ZUBO EMAT R02</i>	GSM round antenna for installation in dirt pan, on switching cabinets or similar
<i>NLMO ANT9 00KU P</i>	Dome antenna 900 FME, suitable for NivuLog Easy

Accessories for solar module

<i>ZUBO MAST HALT 01</i>	Robust mast holder set for fastening and adjustment of the solar measurement station on a mast. Material: stainless steel 1.4571 For mast diameters of 70-90 mm Adjustable angle: 20°, 29°, 37° or 45°
--------------------------	---

Individual components of data loggers NLM02EXN, NLM04 and NLM0H2S

<i>NLMO AP42 4DA</i>	Rechargeable battery pack for NivuLog PCM Ex and NivuLog H2S
<i>NLMO AP42 4DAN</i>	Rechargeable battery pack for NivuLog 2 Ex N
<i>NLMO AP42 4D</i>	Rechargeable battery pack for NivuLog 4 and NivuLog PCM
<i>NLMO LAD4 24</i>	Battery charger for rechargeable battery packs NLMO AP424D, -424DA and -424DAN
<i>NLMO ZUBO AZD01</i>	Junction box with connection cable, plug and pressure compensation for NivuLog 2 Ex N or NivuLog 4 for connection of up to 2 sensors
<i>NLMO ZUBO AZD02</i>	Junction box with connection cable, plug and pressure compensation for NivuLog 4 for connection of up to 4 sensors
<i>NLMO KAB1 0</i>	10 m sensor connector cable for NivuLog 2 Ex N or NivuLog 4 incl. plug for connection to the data logger
<i>NLMO KAB2 0</i>	20 m sensor connector cable for NivuLog 2 Ex N or NivuLog 4 incl. plug for connection to the data logger
<i>NLMO KAB3 0</i>	30 m sensor connector cable for NivuLog 2 Ex N or NivuLog 4 incl. plug for connection to the data logger
<i>NLMO HALW</i>	Mounting bracket
<i>NLM5 SCHU TZ01</i>	Spare protective cover for NivuLog 2 Ex N, NivuLog 4, NivuLog PCM Ex and NLMO H2S
<i>NLM5 WART 01</i>	Maintenance and gasket set
<i>NLMO KABPCM01</i>	Connection cable 2.8 m between PCM and NivuLog PCM

² = Product group A



NivuLog H2S

Battery-powered GPRS data loggers with built-in H₂S sensor 0-1000 ppm, for use in Ex zone 1, protection rating IP67

NLM0 H2S EX

NivuLog H2S 1000 - standard delivery:

- 1 pc. data logger in protective cover, type NivuLog H2S
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02
- 1 pc. antenna extension, 5 m for antenna type NLM0 ANTVER05
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. magnet for device initialisation, type NLM5 MAGNET
- 1 pc. maintenance and gasket set, type NLM5 WART01

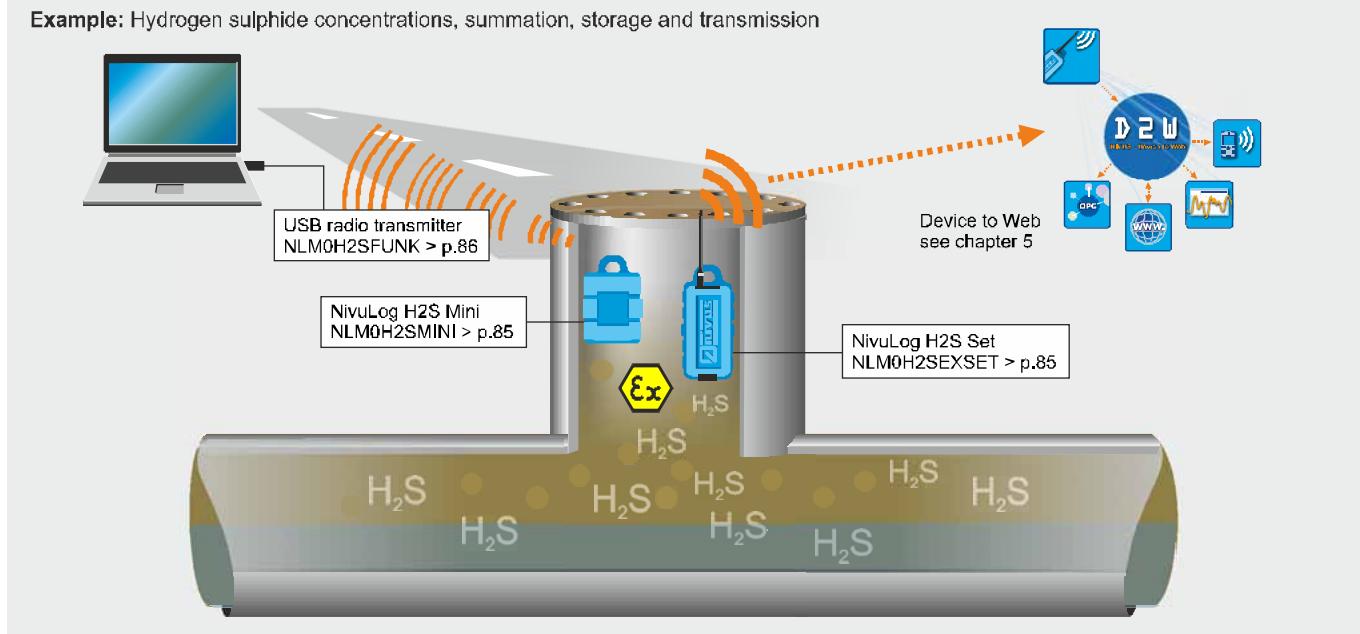
NLM0 H2SEX SET

NivuLog H2S 1000 Set; consisting of:

- 1 pc. data logger in protective cover, type NivuLog H2S
- 1 pc. rechargeable battery pack, type NLM0 AP424DA
- 1 pc. battery charger, type NLM0 LAD424
- 1 pc. antenna, type NLM0 ANT900FME
- 1 pc. USB cable for configuration of SIM parameters, type ZUB0 KABUSB02
- 1 pc. antenna extension, 5 m for antenna type NLM0 ANTVER05
- 1 pc. maintenance and gasket set, type NLM5 WART01
- 1 pc. magnet for device initialisation, type NLM5 MAGNET

4

Example: Hydrogen sulphide concentrations, summation, storage and transmission



NivuLog H2S Mini

**Battery-powered data loggers with built-in H₂S sensor 0-1000 ppm.
Data transmission via short-range radio**

NLM0 H2S MINI 1000

NivuLog H2S Mini 1000; standard delivery:

- 1 pc. data logger in protective cover, type H2S Mini 1000
- 1 pc. calibration adapter
- 1 pc. USB radio transmitter, type NLM0 H2SFUNK

² = Product group A



Accessories / maintenance H2S units (device must be returned to NIVUS)

REPO NLMH 2SSE NSO H2S sensor replacement incl. spare sensor for data logger type NivuLog H2S
(if required, but min. every 24 months)

REPO NLMH 2SKA LIB Calibration flat rate for H2S sensor (if required, but min. every 6 months)

REPO NLMH 2SDI CHT Gasket replacement incl. spare gasket (if required, but min. every 6 months)

REPO NLMH 2SMI NIW Maintenance flat rate for data logger NivuLog H2S Mini
(if required, but min. every 24 months)
- Battery replacement
- Protective cover replacement
- H2S sensor replacement
- Cleaning
- Calibration

NLMO KALIB SET Test gas calibration set H2S 30 ppm for calibration of H2S sensors
Transport case with foam padding. Aluminium one-way bottle with screw connection for extraction device for reactive gases.
Calibration gas for 20 calibrations
Calibration gas: 30 ppm H2S in N2
Volume: 1.7 l
Pressure: 34 bar
Case (l/w/h): 540x390x130 mm, ABS black, 3 kg

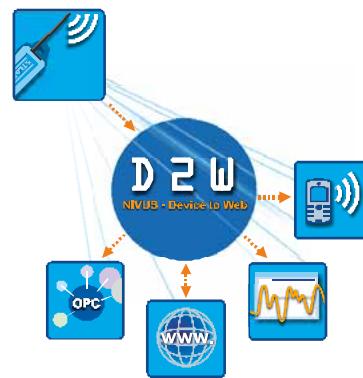
Delivery:
- Calibration adapter
- Pressure hose
- Calibration gas
- Flow controller
- Transport case

NLMO H2S FUNK USB radio transmitter for NivuLog H2S Mini

^a = Product group A



Device to Web	88
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Device2Web

Internet portal

D2WF LAT1

Business package for using the system
NIVUS Device2Web on a NIVUS Server.
Flat rate for 1 instrument
Term: the use of the D2W is coupled with the lifetime of the logger
Data volume: unlimited
Number of users: unlimited
This position does not contain fees for the transmitted data volume or SMS transmission.

Package price on purchases of more pieces possible upon request.

NLMO PROT 01

Software for logging of single-chamber stormwater treatment plants
Price per plant

NLMO TRAI NING 01

NIVUS D2W Training Level 1
User training if using the NIVUS server
Training, device lessons, troubleshooting

Customer server

NLMO SWL0 1

Online installation and activation of D2W software on customer server.
The basis software contains the following modules:
- graphics module
- statistics module
- alarms
- user and device administration

Software option for customer server

NLMO OPCTOOL

Activation and setup of OPC interface for software connection between NIVUS D2W and customer system on customer server

NLMO POSTOOL

Help tool for device localization on customer server, contains:
- indication of device positions on a map
- geofencing using alarm radii
- geofencing using longitudes and latitudes

NLMO PDFTOOL

PDF print function
Creates pdf documents for evaluation purposes on the customer server and allows automatic transmission using adjustable intervals.

NLMO PLCSKRIPT

Creation of a PLC script to individually adjust measurement place functions as well as customer-based calculation of readings on a customer server.

NLMO XMLTOOL

XML tool for configuration and data request as well as for simultaneous device modification of multiple units / modules on the customer server.

NLMO FTPTOOL

FTP client on customer server for data output in CSV/TSV format. Adjustable server profiles, selectable profiles for individual modules.

NLMO SSLTOOL

Module for SSL encryption on customer server. The SSL certificate must be provided by the customer.

NLMO PAIDTOOL

Indication and transparent overview on available credits on customer server.

NLMO WART SERV

Annual automatic maintenance of all existing D2W software components.
(14 % of total price).

NLMO TRAI NING 02

NIVUS D2W Training Level 2
User training if using the customer server
Training, device lessons, troubleshooting
This training is highly recommended after the software has been installed on the customer server.



The costs of the data packs are calculated to exactly cover the services described below for a period of 5 years. Modified device settings result in increased data volumes, which will be invoiced at 0.285 €/100kB. The prepaid credits will be charged with these extra costs. The total price is payable immediately after activation.

Data tariffs NivuLog Prepaid - for NivuLog Easy and NivuLog Easy Sun

D2WP PAID NBAS AP	Data Pack	Server used:	Services:
	BASIC:	NIVUS	15 min recording interval 1x transmission to server per day 100 high-priority error message per SMS
D2WP PAID NCLAS AP	Data Pack	Server used:	Services:
	CLASSIC:	NIVUS	5 min recording interval 2x transmission to server per day 100 high-priority error message per SMS
D2WP PAID NONL AP	Data Pack	Server used:	Services:
	ONLINE:	NIVUS	2 min recording interval Online connection to server 100 high-priority error message per SMS
D2WP PAID KBAS AP	Data Pack	Server used:	Services:
	BASIC:	CUSTOMER	15 min recording interval 1x transmission to server per day 100 high-priority error message per SMS
D2WP PAID KCLAS AP	Data Pack	Server used:	Services:
	CLASSIC:	CUSTOMER	5 min recording interval 2x transmission to server per day 100 high-priority error message per SMS
D2WP PAID KONL AP	Data Pack	Server used:	Services:
	ONLINE:	CUSTOMER	2 min recording interval Online connection to server 100 high-priority error message per SMS

5

Data tariffs NivuLog Prepaid - for data loggers NivuLog 2 Ex N, NivuLog PCM, NivuLog PCM Ex and NivuLog 4

D2WP PAID NFELD AP	Data Pack	Server used:	Services:
	FELD	NIVUS	15 min recording interval 2x transmission to server per day 100 high-priority error message per SMS
D2WP PAID KFELD AP	Data Pack	Server used:	Services:
	FELD	CUSTOMER	15 min recording interval 2x transmission to server per day 100 high-priority error message per SMS

² = Product group A

The minimum volume per month is 1/60 of the data pack price.

This volume is deducted from the prepaid credits independent of the volume(s) actually used.



NivuSoft

Software for measurement data processing

SWON SPRO

Software NivuSoft Professional

For operating systems Windows XP / Vista / 7

Software for project and document management , visualisation of measurement data, evaluation of measurement data, calculating functions for weirs and channels, any formula can be entered, calculation of flow rates (min., max., average values), import and export of .txt and .csv files.

Simulation of theoretical flow parameters compared to measured data.

Comfortable reporting functions to create a complete documentation on projects, measurement places and measurement data.

SWON STRA ININ G

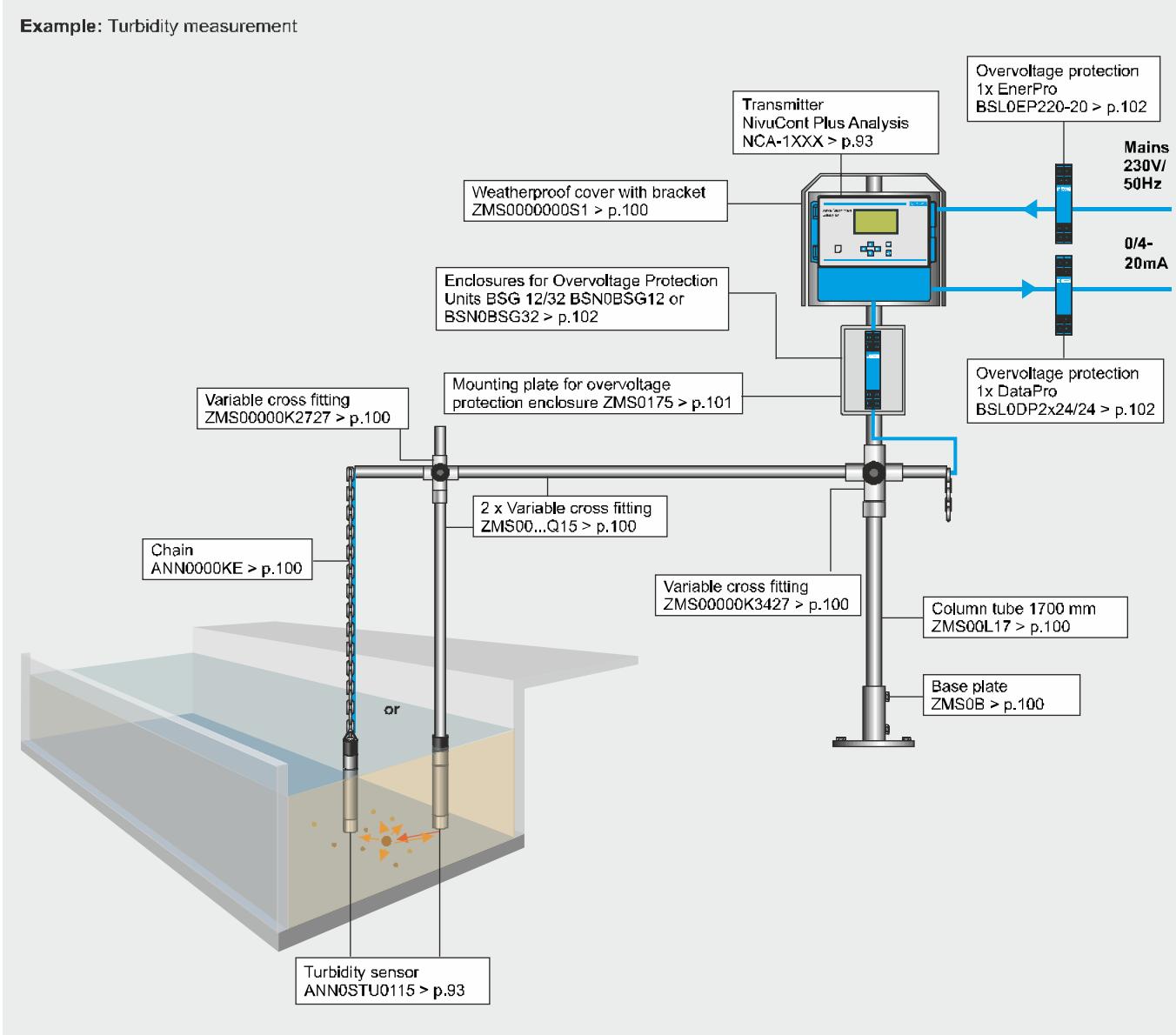
NivuSoft Professional software training

² = Product group A

NivuCont Plus Analysis	93
Turbidity sensor	93
pH-Electrodes	93
NivuScope 2	95
Sensors	95

NivuCont Plus Analysis for turbidity and pH measurement

Example: Turbidity measurement



NivuCont Plus Analysis

Multifunctional transmitter for turbidity and pH measurement



NCA-	Digital outputs		
10	without potential-free limit / error message contacts		
12	2 potential-free limit / error message contacts		
15	5 potential-free limit / error message contacts		
Enclosure			
VA	wall mount IP65		
Power supply			
AC	85-264 V AC / 50-60 Hz		
DC	18-36 V DC		
Configuration			
0T0	1 Input for turbidity sensor, 1 analog output 0/4-20 mA		
1AT	1 Input for turbidity sensor, 1 input for pH-Probe, 2 Analog outputs 0/4-20 mA		
0A0	1 Input for pH-probe, 1 analog output 0/4-20 mA		
NCA-	VA	0R	

6

Turbidity sensor

ANNO STUO 1150 000

Turbidity sensor according to ISO7027 (90°-diffused light),
cable length 15 m (IP68); incl. fastening kit**pH-Electrodes**

ANNO SPHO 165R ING

pH-probe without temperature sensor, with coax plug head, L = 165 mm,
circular gap diaphragm

PC30 PHVE R150 000

Preamplifier for pH-probe, 2-wire (4-20mA), cable 15 m (IP68)

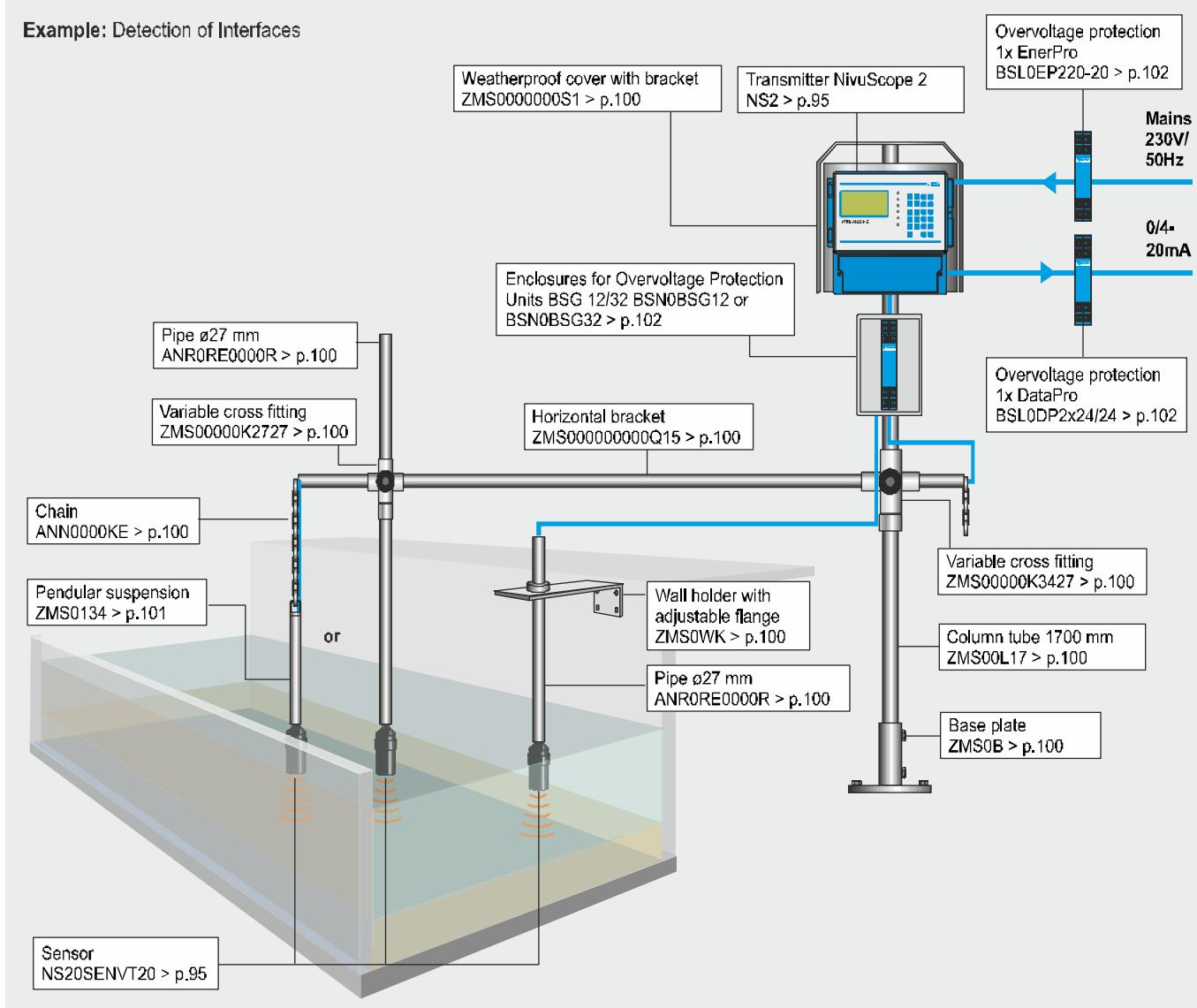
Please find additional installation accessories in chapter 8.



NivuScope 2 Continuous ultrasonic interface, sludge level detection and level measurement



Example: Detection of Interfaces





NivuScope 2

NS20 2006 5TDE

NivuScope 2, continuous ultrasonic interface detection, 2-channel-system for sludge level detection or level measurement, power supply 24 V DC and 115/230 V AC

NS20 2V06 5TDE

NivuScope 2, NivuScope 2, continuous ultrasonic interface detection, 2-channel-system for sludge level detection or level measurement, Profibus type V0; power supply 24 V DC and 115/230 V AC

NS20 2V16 5TDE

NivuScope 2, continuous ultrasonic interface detection, 2-channel-system for sludge level detection or level measurement, Profibus type V1; power supply 24 V DC and 115/230 V AC

NS20 2M06 5TDE

NivuScope 2, continuous ultrasonic interface detection, 2-channel-system for sludge level detection or level measurement, Modbus; power supply 24 V DC and 115/230 V AC

NS20 SENV T10

Sensor with integrated wiper for NivuScope 2, measurement range: 0,3 to 10 m, 10 m cable length



NS20 SENV T20

Sensor with integrated wiper for NivuScope 2, measurement range: 0,3 to 10 m, 20 m cable length

NS20 SENV T30

Sensor with integrated wiper for NivuScope 2, measurement range: 0,3 to 10 m, 30 m cable length

Please find mounting accessories in chapter 8.





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Identification, Certificates & Confirmations

Identification

Metal adhesive film (70x32mm) / black letters on silver background / pc.
Metal stickers, dimensions and letters see above / pc.
Tags / labels etc. provided by customer / pc.

Certificates and confirmations

Certificate of origin
Confirmation following DIN 50049-2.1; price per order
Confirmation following DIN 50049-2.2; price per order

Instruction manuals

(each unit is shipped with an instruction manual)

each additional copy:
German
English
French

² = Product group A



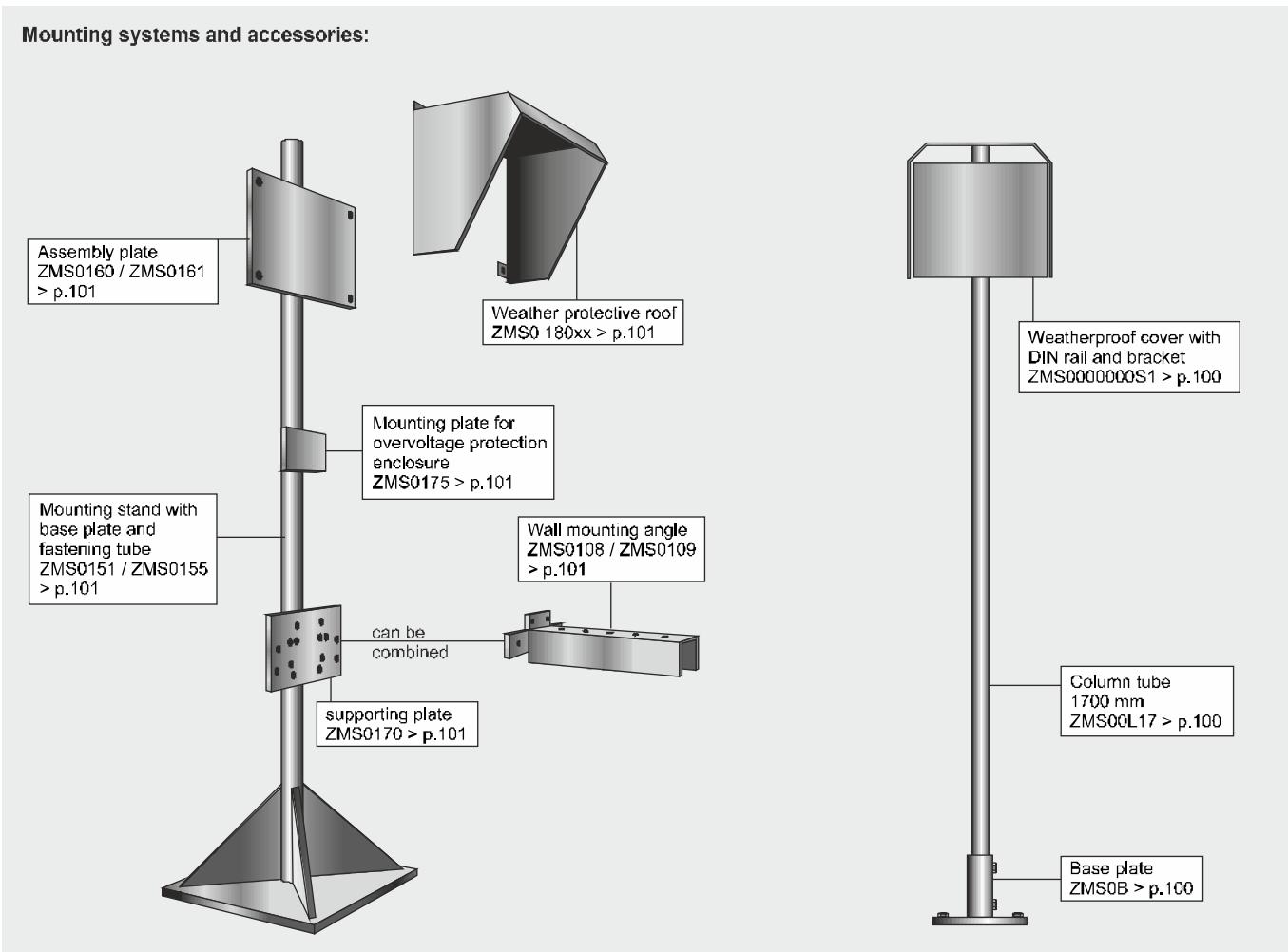
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Accessories made of stainless steel for sensor and transmitter fastening

Mounting systems and accessories:





ACCESSORIES Mounting Set

Column made of 1.4571 for measurement transmitter Type NivuMaster, OCM F, NFP, NivuCont Plus und HydraulicCalculator Plus (wall mount enclosure 160 x 192 x 105,5 / hxwxd), consisting of base plate, upright tube and weatherproof cover; optional fastening material.

Column holder

ZMSO B000	Base plate with hole for tube ø 34 mm (also suitable for wall installation)
ZMSO W000	Wall holder with hole for tube ø34 mm

Column tube

ZMSO OL17	Length = 1700 mm; ø34 mm
ZMSO OL05	Length = 500 mm; ø34 mm

Horizontal bracket

ZMSO 0000 0000 Q15	Length = 1500 mm; ø27 mm
ZMSO 0000 0000 Q10	Length = 1000 mm; ø27 mm

Variable cross fitting for mounting of horizontal bracket

ZMSO 0000K3427	Variable cross fitting with hand wheel, ø34 mm - ø27 mm
ZMSO 0000M34	Fixation bushing, ø34 mm

Variable cross fitting for installation of submersible tubes

ZMSO 0000K2727	Variable cross fitting with hand wheel, ø27 mm - ø27 mm
ZMSO 0000M27	Fixation bushing, ø27 mm

Weatherproof cover

ZMSO 000000S1	Weatherproof cover 300 x 280 x 270 (HxBxT) with bracket
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Chain, stainless steel - for submersible fittings

ANNO 00KE	Chain (V4A); L=3m, 2x locking peg (V4A) for submersible fittings
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Submersible pipes

ANRO RE00 00R	Submersible pipe ø27 mm; 1500 mm, 3/4" thread, incl. mast cap and 1" bushing
ANRO RE00 00L	2 Pipes ø27 mm; tot. length 3000 mm, 3/4" thread, incl. mast cap and 1" bushing

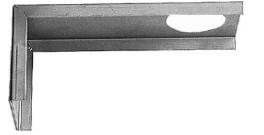
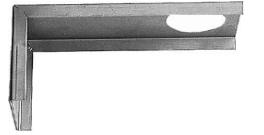
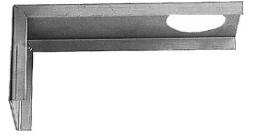
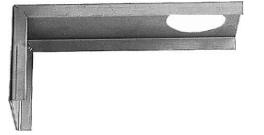
Submersible pipe fitting

ZMSO WK	Wall holder with adjustable flange for submersible pipes, Material: 1.4571, L=230 mm, incl. plug-in lug and fastening material
ZMSO WP	Wall holder for pendular suspension of submersible pipes, material: 1.4571; ball bearing mounted; L=230 mm



Vario Mounting Set for sensors and transmitter enclosures

Vario Mounting Set

ZMS0 1000	ZMS 100 ceiling mount for US sensors R1"	
ZMS0 1020	ZMS 102 wall mounting angle 300 mm for US sensors R1", distance to wall infinitely adjustable	
ZMS0 1080	ZMS 108 wall mounting angle 600 mm for US sensors R1", distance to wall infinitely adjustable	
ZMS0 1090	ZMS 109 wall mounting angle 1000 mm for US sensors R1", distance to wall infinitely adjustable	
ZMS0 1200	ZMS 120 wall mounting angle for compact echo sounder R2", distance wall <-> sensor center: 185 mm	
ZMS0 1210	ZMS 121 wall mounting angle for compact echo sounder R2", distance wall <-> sensor center: 332 mm or 480 mm	
ZMS0 1220	ZMS 122 wall mounting angle for probes R1", distance wall <-> sensor center: 185 mm	
ZMS0 1230	ZMS 123 wall mounting angle for compact echo sounder 1.5" or 2"; distance wall <-> sensor center: 450 mm / 650 mm / 805 mm	
ZMS0 1300	ZMS 130 angled reflector for US sensors R1", 1.5" und 2"	
ZMS0 1310	ZMS 131 wall mounting angle for conductive rod sensors R1.5" and NivuCompact 3/6, distance wall <-> sensor center: 185 mm	
ZMS0 1320	ZMS 132 wall mounting angle for pressure bell switch T202, T208, distance wall <-> sensor center: 83 mm	
ZMS0 1330	ZMS 133 wall mounting angle + protective cover for pressure bell switch T202, T208	
ZMS0 1340	ZMS 134 pendular suspension for ultrasonic sensor with 1" thread L= 500 mm, material: stainless steel	
ZMS0 1350	ZMS 135 pendular suspension for ultrasonic sensor with 3/4" thread L= 500 mm, material: stainless steel	
ZMS0 1400	ZMS 140 cable cover, 1000 mm (with holes)	
ZMS0 1410	ZMS 141, bendable cable cover plate, length approx. 1000 mm, suitable as cover for up to 3 sensor cables of flow velocity and level sensors	
ZMS0 1510	ZMS 151 mounting stand with base plate and fastening tube, height 1700 mm	
ZMS0 1550	ZMS 155 mounting stand with base plate and fastening tube, height 650 mm	
ZMS0 1600	ZMS 160 Assembly plate for 1 wall mount enclosure W0, WB or VB	
ZMS0 1610	ZMS 161 Assembly plate for 2 wall mount enclosures W0, W10, WB or VB	
ZMS0 1700	ZMS 170 supporting plate for fastening of mounting angle ZMS 108	
ZMS0 1750	ZMS 175 mounting plate for overvoltage protection enclosure	
ZMS0 1800	ZMS 180 Weather protective roof for ZMS 160	
ZMS0 1810	ZMS 181 Weather protective roof for ZMS 161	
ZMS0 1820	ZMS 182 Weather protective roof for ZMS 160; for W0 enclosure	
ZMS0 1900	ZMS 190 weatherproof cover for US sensors R1"	





ACCESSORIES Overvoltage protection and cables

Data storage for measurement transmitter

ZUBO ZMCCF128	Compact Flash memory card 128 MB
ZUBO ZMCCFADA	Adapter for Compact Flash memory card for PCMCIA slot
ZUBO ZMCCFUSB	Compact Flash memory card reader for USB connection



Spares for NivuLog family

NLM5 MAGNET	Spare magnet for device initialization
ZUBO KABUSB01	USB connector cable for NivuLog Easy
NLM5 SCHUTZ01	Spare protective cover for NivuLog 2 Ex N, NivuLog 4 and NivuLog PCM Ex
NLM5 WART01	Maintenance and gasket set for NivuLog 2 Ex N, NivuLog 4 and NivuLog PCM Ex

Overvoltage Protection for Power Lines

BSL0 IPTR 0000 000	IsoPro 220 / 380 Tr 100.000 A working current
BSL0 IPTR -PK0 000	IsoPro 220 / 380 Tr / Pk 100.000 A working current with potential-free contact
BSL0 EP22 0-20 000	EnerPro 220 Tr / 20kA
BSL0 EP22 0-50 000	EnerPro 220Tr / 5kA



Overvoltage Protection for Data Lines

BSL0 DP2X24/24	DataPro 2x1 24 V / 24 V for 2-wire data lines and KDA sensors
BSL0 DP2X24/24EX	DataPro 2x1 24 V / 24 V for 2-wire data lines, ATEX approval zone 1
BSL0 DP2X12/12	DataPro 2x1-12V/12V-11μH-Tr(N), 20.000 A leakage current, 2-wired, for sensor lines from POA, CS2 and OCL sensors
BSL0 DP2X12/12EX	DataPro 2x1-12V/12V-11μH-Tr(N), 20.000 A leakage current, 2-wired, for sensor lines from POA-, CS2-, KDA- and OCL sensors, ATEX approval zone 1
BSL0 DPTAE/NAP00	DataPro TAE/N-aP; on-wall installation for data lines of post modem
BSL0 SP3X24/24	SonicPro 3x1-24/24, 20 kA for ultrasonic sensors Type P-xx as well as POA-, CS2-, KDA- and OCL sensors
BSL0 SP3X24/24EX	SonicPro 3x1-24/24, 20 kA or ultrasonic sensors Type P-xx as well as POA-, CS2-, KDA- and OCL sensors; ATEX approval for zone 1



Overvoltage Protection (low voltage)

BSL0 EP1-2400	EnerPro 24-Tr, 20.000 A working current, high-performance surge arrestor for power supplies
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Enclosures for Overvoltage Protection Units

BSN0 BSG12000	BSG 12 (for max. 3 pcs. of overvoltage protection units)
BSN0 BSG20000	BSG 20 Ex (for max. 3 pcs. of overvoltage protection units)
BSN0 BSG32000	BSG 32 (for max. 4 pcs. of overvoltage protection units)
BSN0 BSG42000	BSG 42 (for max. 9 pcs. of overvoltage protection units)

Cable for echo sounder sensors (P-Series)

KAB7 LIYCY3x075SO	Special cable length LIYCY 3 x 0.75 mm ² ; per m (minimum order value 50,- €)
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Price list 2013 - valid as of April 1st 2013

Accessories for 19" transmitters

NC05 -FKLEMM0	Spring contact strip with 48 poles for NivuCont Plus in 19"-version with screw terminal connection -straight-
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Protective clothing

ZUBO WARN	Visibility jacket, knitwear; neon-yellow with 2 horizontal stripes (DIN EN 471) incl. bag; printed NIVUS logo
ZUBO OVER	Overall, white, Polypropylene; sizes L - XXL with printed NIVUS logo

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