

1016-MINI

TOP MOUNTED LEVEL INDICATOR-MINI

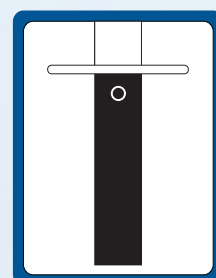
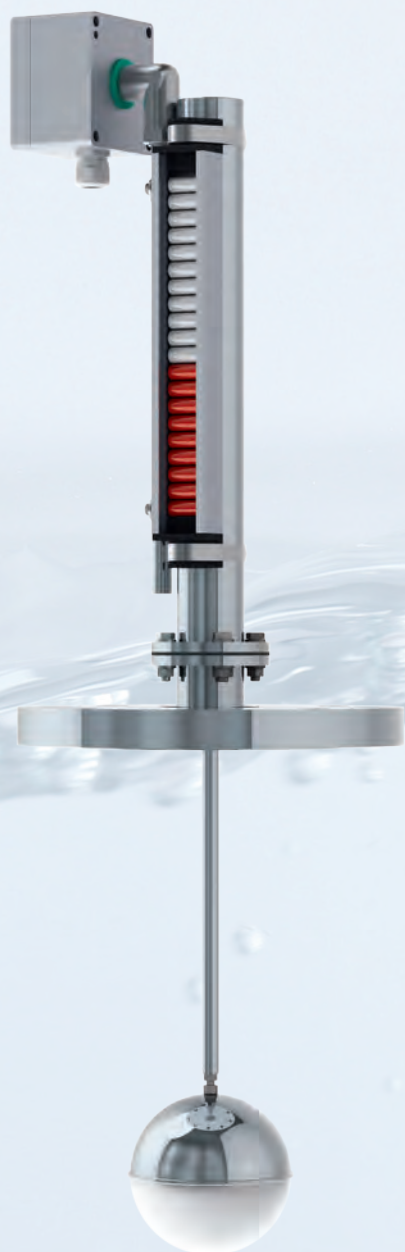


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SWISS

Functional description

Top mounted level indicators form an integral part of the pressure vessel. Via a process connection a standpipe is mounted on top of a tank or a vessel.



The top mounted pipe contains a magnetic system which is connected to a float and buoyancy rod system. The concentrated magnetic field of the permanent magnet transmits the liquid level of the tank below in proportion to the filling height in a contactless way through the wall of the top-mounted standpipe onto externally mounted displaying, recording and switching elements.

Design limits

Specific gravity:	≥ 300 kg/m ³
Design pressure:	-1 bar ... 6 bar
Design temperature:	-196°C ... 150°C

Top Mounted Level Indicator-Mini / Type key

Code 1

Key 1

... -

Version

UNA¹ Top mounted level indicator

UMG¹ Top mounted level indicator with level transmitter

Code 2

Key 1 (for process connection flange)

... -

Flange connection

Key 1 (for process connection other)

... -

Other process connection

FE¹ Flange according to EN

FA¹ Flange according to ANSI

F¹ Flange according to ...

FS¹ Flange according to drawing

GN¹ Male thread G

NPTN¹ Male thread NPT

Code 3

Key 1.1 (only for flange)

... / ... / ... -

Flange connection

Key 1.2 (only for flange)

... / ... / ... -

Flange connection

Key 1.3 (only for flange)

... / ... / ... -

Flange connection

... Flange nominal bore

... Flange pressure rating

... Flange facing

Code 3

Key 1 (for process connection other)

... -

Size

... Threaded connection size

SWISS

Example

Code	1	2	3	4	5	6	7
Key	1	- 1	- 1.1 / 1.2 / 1.3	- 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	- 1	- 1 / 2	- 1 / 2 / 3
Example	UMG	- FE	- 25 / 16 / B1	- ALE / TP43B / V / K5 /	EXIAG	- DU	- L... / A... - V / 40 / 2 -

Black = not possible according to Atex / Blue = possible according to Atex Exia / Blue¹ = possible according to Atex Exia and Exd / Black¹ = possible according to Atex Exd

Top Mounted Level Indicator-Mini / Type key

Code 4

Key 1 ... / ... / ... / ... / ... / ... / ... - Electrical connection level transmitter		Key 2 ... / ... / ... / ... / ... / ... / ... - Control unit		Key 3 ... / ... / ... / ... / ... / ... / ... - Level transmitter tube material quality	
ALE	Aluminium terminal box 64 x 58 x 34 mm (only without control unit)	TP43A ¹	TP5343A	V ¹	Stainless steel
ALF	Aluminium terminal box 80 x 75 x 57 mm	TP43B ¹	TP5343B Ex		
ALDA ¹	Aluminium terminal box Ø 95 x 84 mm	TD35A ¹	TD5335A		
AVA	Stainless steel terminal box Ø 82 x 110 mm	TD35B ¹	TD5335D Ex		
AVDA ¹	Stainless steel terminal box Ø 82 x 110 mm	TP50AP ¹	TP5350AP / PROFIBUS® PA		
AVM	Stainless steel terminal box Ø 50 x 117 mm	TP50BP ¹	TP5350BP Ex / PROFIBUS® PA		
AVDM ¹	Stainless steel terminal box Ø 169 x 117 mm	TP50AF ¹	TP5350AF / FOUNDATION™ Fieldbus		
DAAVDM ¹	Stainless steel terminal box with LED display Ø 169 x 117 mm	TP50BF ¹	TP5350BF Ex / FOUNDATION™ Fieldbus		
APA	Polyester terminal box 80 x 75 x 55 mm	TMT181A ¹	TMT181		
APB	Polyester terminal box 80 x 75 x 55 mm / Exm	TMT181B ¹	TMT181 Ex		
ABA	ABS terminal box 80 x 82 x 55 mm	ZMU ¹	XT42SI Ex		
K	Connection cable	TAMX ¹	Other control unit		
K68	Connection cable IP 68 (≥ G 3/8")	MST ¹	Magnetostrictive / 4 ... 20 mA		
DAALA	Aluminium terminal box with LED display Ø 82 x 100 mm	MSTB ¹	Magnetostrictive / 4 ... 20 mA / Ex		
DAAVDA ¹	Stainless steel terminal box with LED display Ø 82 x 100 mm	MSTH ¹	Magnetostrictive / HART®-Protocol		
		MSTHB ¹	Magnetostrictive / HART®-Protocol / Ex		

Code 4

Key 4 ... / ... / ... / ... / ... / ... / ... - Accuracy		Key 5 (only for connection cable) ... / ... / ... / ... / ... / ... / ... - Length of cable		Key 6 (only for connection cable) ... / ... / ... / ... / ... / ... / ... - Connection cable	
K5 ¹	Accuracy 5 mm / -30 ... 130°C	...	Length of cable in meter	PVC ¹	PVC connection cable
K5HTF ¹	Accuracy 5 mm / -30 ... 200°C			PVCB ¹	PVC connection cable with blue coating
K5HT ¹	Accuracy 5 mm / -40 ... 250°C			SIL ¹	Silicone connection cable
K10 ¹	Accuracy 10 mm / -30 ... 130°C			PUR ¹	PUR connection cable
K10HTF ¹	Accuracy 10 mm / -30 ... 200°C			RAD ¹	Radox connection cable
K10HT ¹	Accuracy 10 mm / -40 ... 250°C				
K15 ¹	Accuracy 15 mm / -30 ... 130°C				
K15HTF ¹	Accuracy 15 mm / -30 ... 200°C				
K15HT ¹	Accuracy 15 mm / -40 ... 250°C				
K1 ¹	Accuracy 0.2 mm / -40 ... 125°C				
K1HT ¹	Accuracy 0.2 mm / -40 ... 250°C				

Code 4

Key 7 (only for connection cable) ... / ... / ... / ... / ... / ... / ... - Connection cable option		Key 8 ... / ... / ... / ... / ... / ... / ... - Approvals level transmitter	
KA ¹	Shielded	EXIAG	Acc. to Exia, atmosphere gas
KB ¹	Shielded / oil-resistant	EXIAGD	Acc. to Exia, atmosphere gas and dust
KC ¹	Shielded / oil-resistant / halogen-free	EXDG ¹	Acc. to Exd, atmosphere gas
KD ¹	Oil-resistant	EXDGD ¹	Acc. to Exd, atmosphere gas and dust
KE ¹	Oil-resistant / halogen-free	EXIADG ¹	Acc. to Exia and Exd, atmosphere gas
KF ¹	Halogen-free	EXIADGD ¹	Acc. to Exia and Exd, atmosphere gas and dust

Example

8		9					10			11		12		13		Code										
1	2	3	-	1	2	3	4	5	6	7	-	1	2	3	-	1	2	-	1	2	Key					
MNB	/	SA1	-	3	/	RU40	/	N	/	1	/	PVCB	/	KA	EXIAG	-	USV	/	98	-	-	-	EX	/	PED	Example

Black = not possible according to Atex / Blue = possible according to Atex Exia / Blue¹ = possible according to Atex Exia and Exd / Black¹ = possible according to Atex Exd

Top Mounted Level Indicator-Mini / Type key

Code 5

Key 1
... -
Electrical connection position of the level transmitter

DO¹ Electrical connection top mounted
DU¹ Electrical connection bottom mounted

Code 6

Key 1
... / ... -
Length of instrument

Key 2
... / ... -
Display indication range

L...¹ Length of instrument in mm A...¹ Display indication range in mm

Code 7

Key 1
... / ... / ... -
Chamber material quality

Key 2
... / ... / ... -
Chamber outside diameter

Key 3
... / ... / ... -
Chamber wall thickness

V¹ Stainless steel 40¹ Ø 40.00 mm 2.00¹ Chamber wall thickness in mm

Code 8

Key 1
... / ... / ... -
Magnetic roller indicator

Key 2
... / ... / ... -
Scale

Key 3
... / ... / ... -
Mag. roller indicator sight extension

MNA	Magnetic roller indicator MNA	SAK	Scale in Aluminium with adhesive foil	PV ¹	Acryl glass extension
MNB ¹	Magnetic roller indicator MNB (Ex)	SA0 ¹	Scale in Aluminium without engraving		
MNAN	Mag. roller indicator MNAN over-roll-protected	SA1 ¹	Scale in Aluminium with engraving in %		
MNBN ¹	Mag. roller indicator MNBN over-roll-prot. (Ex)	SA2 ¹	Scale in Aluminium with engraving in cm		
MNAV	Magnetic roller indicator MNAV	SA3 ¹	Scale in Aluminium with engraving in inch.		
MNBV ¹	Magnetic roller indicator MNBV (Ex)	SA4 ¹	Scale in Aluminium with engraving acc. to customized table		
MNAVN	Magnetic roller indicator MNAVN over-roll-prot.	SV0 ¹	Scale in Stainless steel without engraving		
MNBVN ¹	Mag. roller indicator MNBVN over-roll-prot. (Ex)	SV1 ¹	Scale in Stainless steel with engraving in %		
		SV2 ¹	Scale in Stainless steel with engraving in cm		
		SV3 ¹	Scale in Stainless steel with engraving in inch.		
		SV4 ¹	Scale in Stainless steel with engraving acc. to customized table		

Code 9

Key 1
... / ... / ... / ... / ... / ... -
Number of magnetic switches

Key 2
... / ... / ... / ... / ... / ... -
Magnetic switch

Key 3
... / ... / ... / ... / ... / ... -
Magnetic switch option

...	Number of magnetic switches	RU40	Magnetic switch RU40	R22 ¹	Switch protective circuit with 22 ohm / 0.21 W resistor
		RUD40 ¹	Magnetic switch RUD40	N ¹	Switch protective circuit according to NAMUR EN 60947
		RUV40	Magnetic switch RUV40		
		RUVD40 ¹	Magnetic switch RUVD40		
		ALERU40	Magnetic switch ALERU40		
		ALFRU40	Magnetic switch ALFRU40		

Example

Code	1	2	3	4	5	6	7
Key	1	- 1	- 1.1 / 1.2 / 1.3	- 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	- 1	- 1 / 2	- 1 / 2 / 3
Example	UMG	- FE	- 25 / 16 / B1	- ALE / TP43B / V / K5 /	EXIAG	- DU	- L... / A... - V / 40 / 2 -

Black = not possible according to Atex / Blue = possible according to Atex Exia / Blue¹ = possible according to Atex Exia and Exd / Black¹ = possible according to Atex Exd

Code 9

Key 4 ... / ... / ... / ... / ... / ... - Length of cable	Key 5 ... / ... / ... / ... / ... / ... - Connection cable	Key 6 ... / ... / ... / ... / ... / ... - Connection cable option
... Length of cable in meter	PVC ¹ PVC connection cable PVCB ¹ PVC connection cable with blue coating SIL ¹ Silicone connection cable PUR ¹ PUR connection cable RAD ¹ Radox connection cable	KA ¹ Shielded KB ¹ Shielded / oil-resistant KC ¹ Shielded / oil-resistant / halogen-free KD ¹ Oil-resistant KE ¹ Oil-resistant / halogen-free KF ¹ Halogen-free

Code 9

Key 7 ... / ... / ... / ... / ... / ... - Approvals magnetic switch
EXIAG Acc. to Exia, atmosphere gas EXIAGD Acc. to Exia, atmosphere gas and dust EXDG ¹ Acc. to Exd, atmosphere gas EXDGD ¹ Acc. to Exd, atmosphere gas and dust EXIADG ¹ Acc. to Exia and Exd, atmosphere gas EXIADGD ¹ Acc. to Exia and Exd, atmosphere gas and dust

Code 10

Key 1 ... / ... / ... - Float	Key 2 ... / ... / ... - Diameter	Key 3 ... / ... / ... - Float length
USV ¹ Float in Stainless steel (Key 3 not applicable) UZVS ¹ Float in Stainless steel UZTIS ¹ Float in Titanium	... Acc. to float table on page 396 - 407	... Acc. to float table on page 396 - 407

Code 11

Key 1 ... - Stilling well
60 ¹ Ø 60.30 mm 73 ¹ Ø 73.03 mm 88 ¹ Ø 88.90 mm 114 ¹ Ø 114.30 mm

Code 12

Key 1 ... / ... - Instrument isolation	Key 2 ... / ... - Electrical heat tracing
AIT Armaflex isolation AIT AHT Armaflex isolation AHT SW Rock-wool isolation	H75A Electrical heat tracing 75°C H75B Electrical heat tracing 75°C acc. to EExe H150A Electrical heat tracing 150°C H150B Electrical heat tracing 150°C acc. to EExe

Example

8	9	10	11	12	13	Code
1 / 2 / 3 - 1 / 2 / 3 / 4 / 5 / 6 / 7 - 1 / 2 / 3 - 1 - 1 / 2 - 1 / 2						Key
MNB / SA1	- 3 / RU40 / N / 1 / PVCB / KA	EXIAG - USV / 98	- -	- EX / PED		Example

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Top Mounted Level Indicator-Mini / Type key

Code 13

Key 1 ... / ... / ... - Approvals / 1		Key 2 ... / ... / ... - Approvals / 2	
EX	Acc. to Ex	PEDII ¹ PEDIV ¹	Acc. to PED97/23/EC category II Acc. to PED97/23/EC category IV



Example

Code	1	2	3	4	5	6	7
Key	1	- 1	- 1.1 / 1.2 / 1.3	- 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	- 1	- 1 / 2	- 1 / 2 / 3
Example	UMG	- FE	- 25 / 16 / B1	- ALE / TP43B / V / K5 /	EXIAG	- DU	- L... / A... - V / 40 / 2 -

Black = not possible according to Atex / Blue = possible according to Atex Exia / Blue¹ = possible according to Atex Exia and Exd / Black¹ = possible according to Atex Exd

Notes



Example

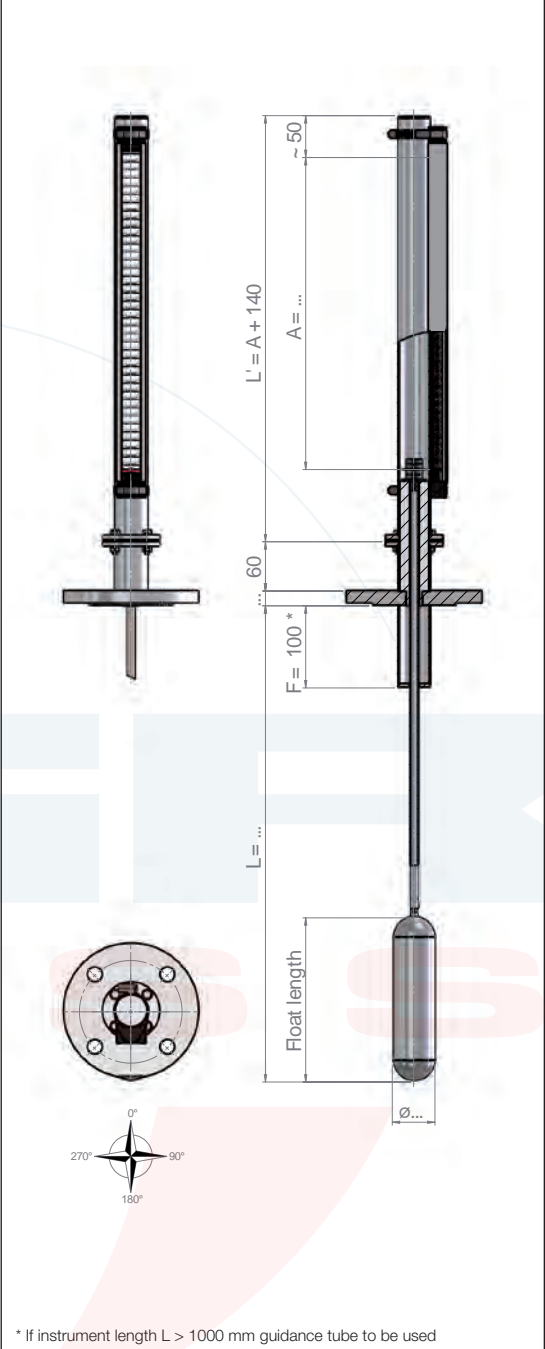
8			9					10			11	12		13	Code											
1	2	3	-	1	2	3	4	5	6	7	-	1	2	3	-	1	2	3	Key							
MNB	/	SA1	-	3	/	RU40	/	N	/	1	/	PVCB	/	KA	EXIAG	-	USV	/	98	-	-	-	EX	/	PED	Example

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Top Mounted Level Indicator-Mini / Stainless steel

Type UNA-.../.../...-L...-V/40/...-MN..-UZ..S/..

Material quality:	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
Length of instrument:	400 ... 6000 mm
Specific gravity:	≥ 400 kg/m ³
Design pressure:	-1 bar ... 6 bar
Design temperature:	-10°C ... 150°C (optional -196°C)
Design	
Chamber:	Ø 40.00 x 2.00 mm
Process connection:	Type key page 386
Chamber end top:	Tube plate
Chamber end bottom:	-
Float:	Page 399 - 407
Option magnetic roller indicator / Page 408	
Aluminium or Stainless steel / Pocaan	-40°C ... 200°C
Option scale / Page 409	
Aluminium / Stainless steel	With adhesive foil / Engraving / Blank
Option magnetic switch / Page 416 - 419	
Aluminium / Stainless steel	-40°C ... 150°C
Option level transmitter / Page 410 - 414	
Accuracy / Reed contacts:	5 / 10 / 15 mm
Accuracy / Magnetostrictive:	0.2 mm
Control unit:	- Programmable - Hart-programmable / SIL2 - Profibus PA - Foundation Fieldbus
Option electrical heat tracing / Page 420	
Holding temperature:	~10°C / Frost protection
Option instrument isolation / Page 420 - 421	
Isolation:	Armaflex isolation / Rock-wool isolation



Approvals / Certificates



ATEX*	
II 1G2D/2GD c	II 2GD c
Liquid temperature Ex max. 150°C	

The top mounted level indicator-mini are based on a modular design and can be arranged individually.
Type key page 386 - 390

* = The approval is dependent on the equipment combination

Top Mounted Level Indicator-Mini / with stilling well

Type UNA-.../...-L-V/40/-MN-UZ..S/...

Material quality: 1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
 Length of instrument: 400 ... 6000 mm
 Specific gravity: $\geq 400 \text{ kg/m}^3$
 Design pressure: -1 bar ... 6 bar
 Design temperature: -10°C ... 150°C (optional -196°C)

Design

Chamber: $\varnothing 40.00 \times 2.00 \text{ mm}$
 Stilling well: Type key page 389
 Process connection: Type key page 386
 Chamber end top: Tube plate
 Chamber end bottom: -
 Float: Page 399 - 407

Option magnetic roller indicator / Page 408

Aluminium or Stainless steel / Pocan -40°C ... 200°C

Option scale / Page 409

Aluminium / Stainless steel With adhesive foil / Engraving / Blank

Option magnetic switch / Page 416 - 419

Aluminium / Stainless steel -40°C ... 150°C

Option level transmitter / Page 410 - 414

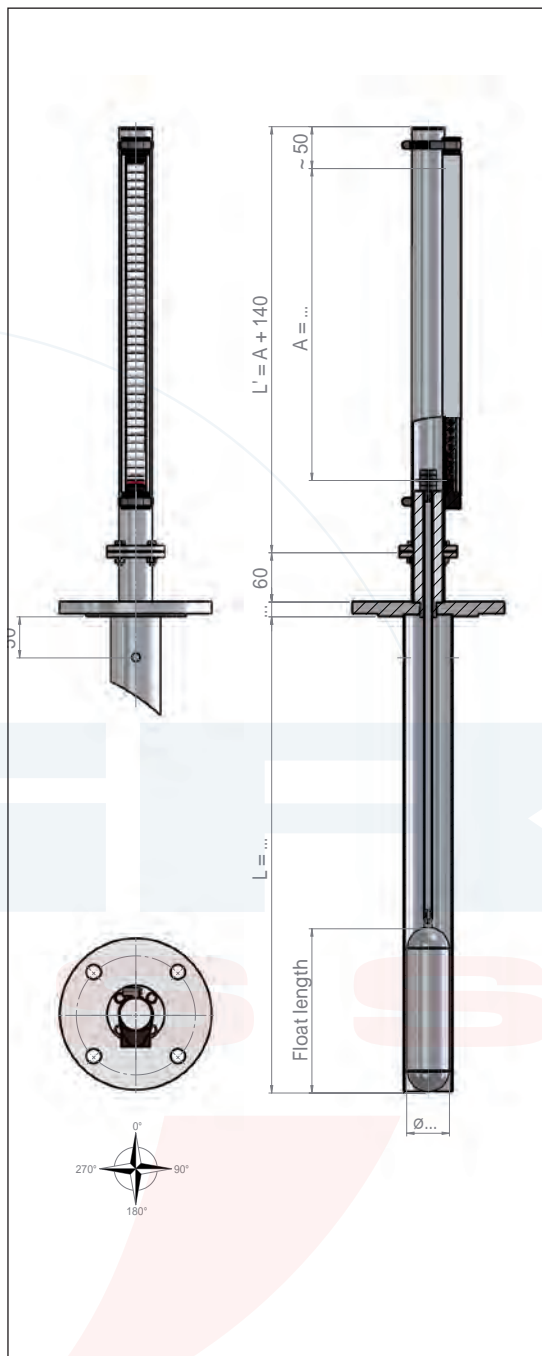
Accuracy / Reed contacts: 5 / 10 / 15 mm
 Accuracy / Magnetostrictive: 0.2 mm
 Control unit:
 - Programmable
 - Hart-programmable / SIL2
 - Profibus PA
 - Foundation Fieldbus

Option electrical heat tracing / Page 420

Holding temperature: $\sim 10^\circ\text{C}$ / Frost protection

Option instrument isolation / Page 420 - 421

Isolation: Armaflex isolation / Rock-wool isolation



Approvals / Certificates



ATEX*

II 1G2D/2GD c

II 2GD c

Liquid temperature Ex max. 150°C

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

* = The approval is dependent on the equipment combination

Top Mounted Level Indicator-Mini / Stainless steel

Type UNA-.../.../...-L...-V/40/...-MN...-USV.../...

Material quality: 1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
 Length of instrument: 400 ... 6000 mm
 Specific gravity: $\geq 300 \text{ kg/m}^3$
 Design pressure: -1 bar ... 6 bar
 Design temperature: -10°C ... 150°C (optional -196°C)

Design

Chamber: $\text{Ø } 40.00 \times 2.00 \text{ mm}$
 Process connection: Type key page 386
 Chamber end top: Tube plate
 Chamber end bottom: -
 Float: Page 396 - 398

Option magnetic roller indicator / Page 408

Aluminium or Stainless steel / Pocaan -40°C ... 200°C

Option scale / Page 409

Aluminium / Stainless steel With adhesive foil / Engraving / Blank

Option magnetic switch / Page 416 - 419

Aluminium / Stainless steel -40°C ... 150°C

Option level transmitter / Page 410 - 414

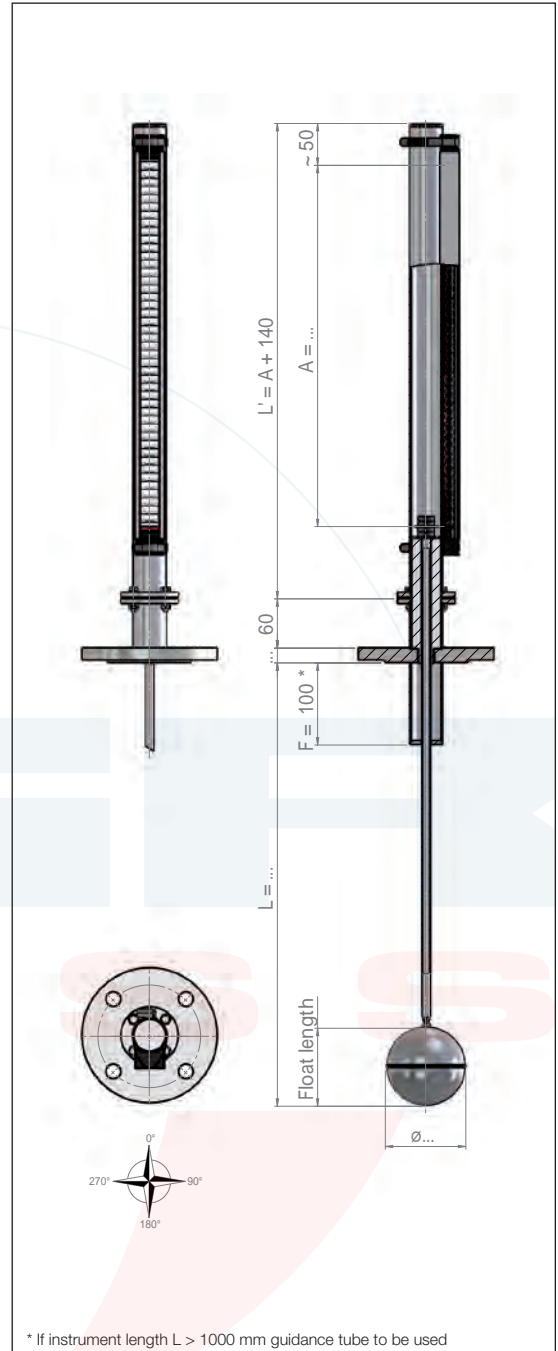
Accuracy / Reed contacts: 5 / 10 / 15 mm
 Accuracy / Magnetostrictive: 0.2 mm
 Control unit:
 - Programmable
 - Hart-programmable / SIL2
 - Profibus PA
 - Foundation Fieldbus

Option electrical heat tracing / Page 420

Holding temperature: $\sim 10^\circ\text{C}$ / Frost protection

Option instrument isolation / Page 420 - 421

Isolation: Armaflex isolation / Rock-wool isolation



Approvals / Certificates



ATEX*

II 1G2D/2GD c II 2GD c

Liquid temperature Ex max. 150°C

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

* = The approval is dependent on the equipment combination

Top Mounted Level Indicator-Mini / with stilling well

Type UNA-.../...-L...-V/40/...-MN...-USV...-

Material quality: 1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
 Length of instrument: 400 ... 6000 mm
 Specific gravity: $\geq 300 \text{ kg/m}^3$
 Design pressure: -1 bar ... 6 bar
 Design temperature: -10°C ... 150°C (optional -196°C)

Design

Chamber: $\varnothing 40.00 \times 2.00 \text{ mm}$
 Stilling well: Type key page 389
 Process connection: Type key page 386
 Chamber end top: Tube plate
 Chamber end bottom: -
 Float: Page 396 - 398

Option magnetic roller indicator / Page 408

Aluminium or Stainless steel / Pocan -40°C ... 200°C

Option scale / Page 409

Aluminium / Stainless steel With adhesive foil / Engraving / Blank

Option magnetic switch / Page 416 - 419

Aluminium / Stainless steel -40°C ... 150°C

Option level transmitter / Page 410 - 414

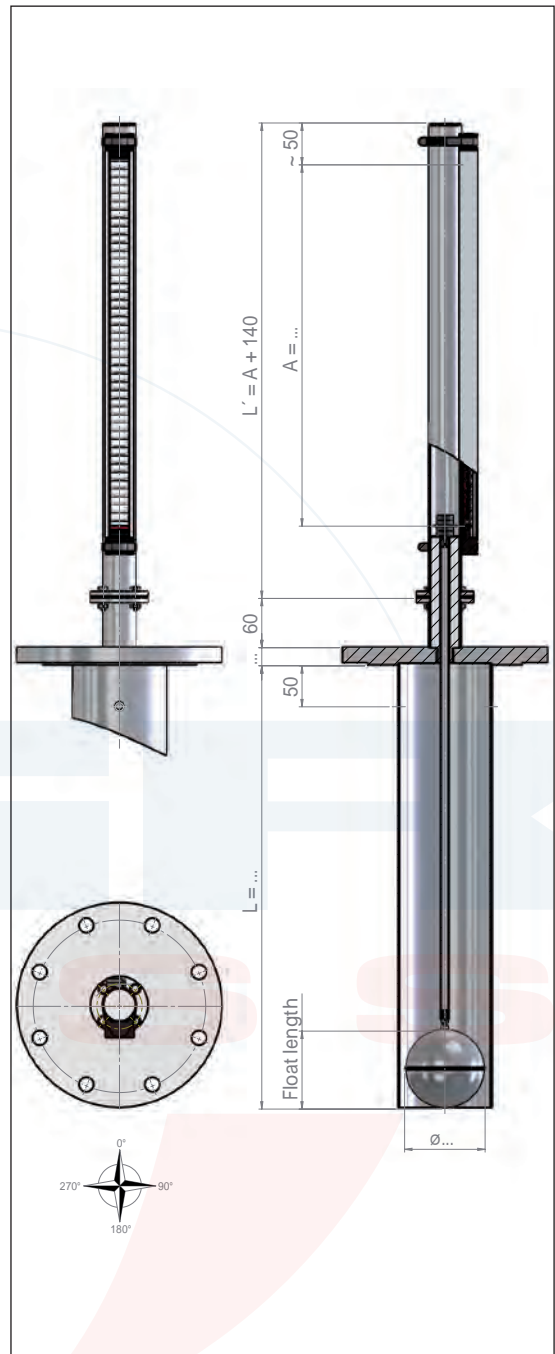
Accuracy / Reed contacts: 5 / 10 / 15 mm
 Accuracy / Magnetostrictive: 0.2 mm
 Control unit:
 - Programmable
 - Hart-programmable / SIL2
 - Profibus PA
 - Foundation Fieldbus

Option electrical heat tracing / Page 420

Holding temperature: $\sim 10^\circ\text{C}$ / Frost protection

Option instrument isolation / Page 420 - 421

Isolation: Armaflex isolation / Rock-wool isolation



Approvals / Certificates



ATEX*

II 1G2D/2GD c II 2GD c

Liquid temperature Ex max. 150°C

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

* = The approval is dependent on the equipment combination

Top Mounted Level Indicator-Mini / Ball float

Ball float

USV/98

Stainless steel 1.4571 (316Ti)

Diameter / height [mm]: 98 / 95
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 16
 Weight [g]: 180
 Flange min.: DN 100



Float USV/98

Specific gravity of the liquid [kg/m³] **300** **400** **500** **600** **700** **800** **900** **1000** **1100** **1200** **1300** **1400** **1500**

L-Mass [mm]	Immersion depth [%]												
400¹	-	-	-	-	80	70	65	60	55	50	50	45	45
500¹	-	-	-	-	-	75	65	60	55	55	50	50	45
600¹	-	-	-	-	-	75	70	65	60	55	50	50	50
700¹	-	-	-	-	-	80	70	65	60	55	55	50	50
800¹	-	-	-	-	-	85	75	65	60	60	55	50	50
900¹	-	-	-	-	-	-	75	70	65	60	55	55	50
1000¹	-	-	-	-	-	-	80	70	65	60	60	55	50
1100²	-	-	-	-	-	-	-	-	-	80	75	70	65
1200²	-	-	-	-	-	-	-	-	-	-	80	75	70
1300²	-	-	-	-	-	-	-	-	-	-	85	75	70
1400²	-	-	-	-	-	-	-	-	-	-	-	80	75
1500²	-	-	-	-	-	-	-	-	-	-	-	85	75

Ball float

USV/105

Stainless steel 1.4571 (316Ti)

Diameter / height [mm]: 105 / 102
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 25
 Weight [g]: 257
 Flange min.: DN 100



Float USV/105

Specific gravity of the liquid [kg/m³] **300** **400** **500** **600** **700** **800** **900** **1000** **1100** **1200** **1300** **1400** **1500**

L-Mass [mm]	Immersion depth [%]												
400¹	-	-	-	-	85	75	65	60	55	55	50	50	45
500¹	-	-	-	-	-	75	70	60	60	55	50	50	45
600¹	-	-	-	-	-	80	70	65	60	55	55	50	50
700¹	-	-	-	-	-	80	70	65	60	60	55	50	50
800¹	-	-	-	-	-	85	75	65	60	60	55	50	50
900¹	-	-	-	-	-	-	75	70	65	60	55	55	50
1000¹	-	-	-	-	-	-	80	70	65	60	55	55	50
1100²	-	-	-	-	-	-	-	-	85	75	70	65	65
1200²	-	-	-	-	-	-	-	-	-	80	75	70	65
1300²	-	-	-	-	-	-	-	-	-	85	75	70	65
1400²	-	-	-	-	-	-	-	-	-	-	80	75	70
1500²	-	-	-	-	-	-	-	-	-	-	80	75	70

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Ball float

Ball float

USV/120

Stainless steel 1.4571 (316Ti)

Diameter / height [mm]: 120 / 116
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 16
 Weight [g]: 220
 Flange min.: DN 125



Float USV/120

Specific gravity of the liquid [kg/m³]

300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	60	55	50	45	45	40	40	35	35	35
500 ¹	-	-	-	65	55	50	45	45	40	40	40	35	35
600 ¹	-	-	-	65	55	50	50	45	45	40	40	35	35
700 ¹	-	-	-	65	60	55	50	45	45	40	40	35	35
800 ¹	-	-	-	70	60	55	50	45	45	40	40	40	35
900 ¹	-	-	-	70	60	55	50	50	45	45	40	40	35
1000 ¹	-	-	-	70	65	55	55	50	45	45	40	40	40
1100 ²	-	-	-	-	85	70	65	60	55	55	50	50	45
1200 ²	-	-	-	-	-	75	65	60	60	55	50	50	45
1300 ²	-	-	-	-	-	80	70	65	60	55	55	50	50
1400 ²	-	-	-	-	-	80	70	65	60	55	55	50	50
1500 ²	-	-	-	-	-	-	75	70	65	60	55	55	50
1600 ²	-	-	-	-	-	-	80	70	65	60	55	55	50
1700 ²	-	-	-	-	-	-	80	70	65	60	60	55	55
1800 ²	-	-	-	-	-	-	85	75	70	65	60	55	55
1900 ²	-	-	-	-	-	-	-	75	70	65	60	60	55
2000 ²	-	-	-	-	-	-	-	80	75	65	65	60	55

SWISS

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

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Top Mounted Level Indicator-Mini / Ball float

Ball float

USV/205

Stainless steel 1.4571 (316Ti)

Diameter / hight [mm]: 205 / 200
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 6
 Weight [g]: 788
 Flange min.: DN 200



Float USV/205

Specific gravity of the liquid [kg/m³]

300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

L-Mass [mm]	Immersion depth [%]												
400 ¹	65	50	45	40	35	35	30	30	30	25	25	25	25
600 ¹	65	55	45	40	35	35	30	30	30	25	25	25	25
800 ¹	65	55	45	40	40	35	30	30	30	30	25	25	25
1000 ¹	70	55	45	40	40	35	35	30	30	30	25	25	25
1200 ²	80	60	50	45	40	40	35	35	30	30	30	30	25
1400 ²	80	65	55	45	45	40	35	35	35	30	30	30	25
1600 ²	-	65	55	50	45	40	35	35	35	30	30	30	30
1800 ²	-	65	55	50	45	40	40	35	35	30	30	30	30
2000 ²	-	70	60	50	45	40	40	35	35	35	30	30	30
2200 ³	-	-	70	60	55	50	45	45	40	40	35	35	35
2400 ³	-	-	75	65	55	50	45	45	40	40	40	35	35
2600 ³	-	-	75	65	60	55	50	45	45	40	40	35	35
2800 ³	-	-	80	70	60	55	50	45	45	40	40	40	35
3000 ³	-	-	85	70	60	55	50	50	45	45	40	40	35
3200 ³	-	-	-	70	65	55	55	50	45	45	40	40	40
3400 ³	-	-	-	75	65	60	55	50	45	45	45	40	40
3600 ³	-	-	-	80	65	60	55	50	50	45	45	40	40
3800 ³	-	-	-	80	70	60	55	55	50	45	45	40	40
4000 ³	-	-	-	85	70	65	60	55	50	50	45	45	40
4200 ³	-	-	-	-	75	65	60	55	50	50	45	45	40
4400 ³	-	-	-	-	75	65	60	55	55	50	45	45	45
4600 ³	-	-	-	-	80	70	60	60	55	50	50	45	45
4800 ³	-	-	-	-	80	70	65	60	55	50	50	45	45
5000 ³	-	-	-	-	85	70	65	60	55	55	50	50	45

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZVS/52/200

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 52 / 200
 Design temperature [°C]: -196 ... 250
 Design pressure [bar]: -1 ... 16
 Weight [g]: 154
 Flange min.: DN 50



Float UZVS/50/200

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	-	-	85	75	70	60	55	55	50	45
500 ¹	-	-	-	-	-	-	80	70	65	60	55	50	50
600 ¹	-	-	-	-	-	-	80	75	70	60	60	55	50
700 ¹	-	-	-	-	-	-	85	75	70	65	60	55	55
800 ¹	-	-	-	-	-	-	-	80	75	65	60	60	55
900 ¹	-	-	-	-	-	-	-	85	75	70	65	60	55
1000 ¹	-	-	-	-	-	-	-	-	80	70	65	65	60
1100 ²	-	-	-	-	-	-	-	-	-	-	-	85	80
1200 ²	-	-	-	-	-	-	-	-	-	-	-	-	85
1300 ²	-	-	-	-	-	-	-	-	-	-	-	-	-
1400 ²	-	-	-	-	-	-	-	-	-	-	-	-	-
1500 ²	-	-	-	-	-	-	-	-	-	-	-	-	-

Cylindrical float

UZVS/52/250

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 52 / 250
 Design temperature [°C]: -196 ... 250
 Design pressure [bar]: -1 ... 16
 Weight [g]: 191
 Flange min.: DN 50



Float UZVS/52/250

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	-	85	75	65	60	55	50	45	45	40
500 ¹	-	-	-	-	-	80	70	65	60	55	50	45	45
600 ¹	-	-	-	-	-	80	70	65	60	55	50	50	45
700 ¹	-	-	-	-	-	85	75	70	60	55	55	50	45
800 ¹	-	-	-	-	-	-	80	70	65	60	55	50	50
900 ¹	-	-	-	-	-	-	80	75	65	60	55	55	50
1000 ¹	-	-	-	-	-	-	85	75	70	65	60	55	50
1100 ²	-	-	-	-	-	-	-	-	-	85	75	70	65
1200 ²	-	-	-	-	-	-	-	-	-	-	80	75	70
1300 ²	-	-	-	-	-	-	-	-	-	-	85	80	75
1400 ²	-	-	-	-	-	-	-	-	-	-	-	80	75
1500 ²	-	-	-	-	-	-	-	-	-	-	-	85	80

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZVS/52/350

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 52 / 350
 Design temperature [°C]: -196 ... 250
 Design pressure [bar]: -1 ... 16
 Weight [g]: 270
 Flange min.: DN 50



Float UZVS/52/350

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	-	75	65	60	55	50	45	40	40	35
500 ¹	-	-	-	-	75	70	60	55	50	45	45	40	35
600 ¹	-	-	-	-	80	70	65	55	50	45	45	40	40
700 ¹	-	-	-	-	80	70	65	60	55	50	45	40	40
800 ¹	-	-	-	-	85	75	65	60	55	50	45	45	40
900 ¹	-	-	-	-	-	75	70	60	55	50	50	45	40
1000 ¹	-	-	-	-	-	80	70	65	60	55	50	45	45
1100 ²	-	-	-	-	-	-	-	80	70	65	60	55	55
1200 ²	-	-	-	-	-	-	-	80	75	70	65	60	55
1300 ²	-	-	-	-	-	-	-	85	80	70	65	60	60
1400 ²	-	-	-	-	-	-	-	-	80	75	70	65	60
1500 ²	-	-	-	-	-	-	-	-	85	75	70	65	60
1600 ²	-	-	-	-	-	-	-	-	-	80	75	70	65
1700 ²	-	-	-	-	-	-	-	-	-	85	75	70	65
1800 ²	-	-	-	-	-	-	-	-	-	85	80	75	70
1900 ²	-	-	-	-	-	-	-	-	-	-	80	75	70
2000 ²	-	-	-	-	-	-	-	-	-	-	85	80	75

Cylindrical float

UZVS/62/250

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 62 / 250
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 6
 Weight [g]: 174
 Flange min.: DN 65



Float UZVS/62/250

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	-	55	50	45	40	40	35	35	30	30
500 ¹	-	-	-	-	60	55	45	45	40	35	35	30	30
600 ¹	-	-	-	-	60	55	50	45	40	40	35	35	30
700 ¹	-	-	-	-	65	55	50	45	45	40	35	35	30
800 ¹	-	-	-	-	65	60	55	50	45	40	40	35	35
900 ¹	-	-	-	-	70	60	55	50	45	40	40	35	35
1000 ¹	-	-	-	-	70	65	55	50	45	45	40	40	35
1100 ²	-	-	-	-	-	85	75	70	60	55	55	50	45
1200 ²	-	-	-	-	-	-	80	70	65	60	55	50	50
1300 ²	-	-	-	-	-	-	80	75	70	65	60	55	50
1400 ²	-	-	-	-	-	-	85	80	70	65	60	55	55
1500 ²	-	-	-	-	-	-	-	80	75	70	65	60	55
1600 ²	-	-	-	-	-	-	-	85	75	70	65	60	55
1700 ²	-	-	-	-	-	-	-	-	80	75	70	65	60
1800 ²	-	-	-	-	-	-	-	-	85	75	70	65	60
1900 ²	-	-	-	-	-	-	-	-	85	80	75	70	65
2000 ²	-	-	-	-	-	-	-	-	-	80	75	70	65

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZVS/72/250

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 72 / 250
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 10
 Weight [g]: 325
 Flange min.: DN 80



Float UZVS/72/250

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400¹	-	-	-	-	65	60	55	50	45	40	40	35	35
500¹	-	-	-	-	70	60	55	50	45	40	40	35	35
600¹	-	-	-	-	70	60	55	50	45	45	40	35	35
700¹	-	-	-	-	70	65	55	50	45	45	40	40	35
800¹	-	-	-	-	75	65	60	55	50	45	40	40	35
900¹	-	-	-	-	75	65	60	55	50	45	45	40	40
1000¹	-	-	-	-	75	70	60	55	50	45	45	40	40
1100²	-	-	-	-	-	85	75	65	60	55	55	50	50
1200²	-	-	-	-	-	-	75	70	65	60	55	50	50
1300²	-	-	-	-	-	-	80	70	65	60	55	55	50
1400²	-	-	-	-	-	-	80	75	70	65	60	55	50
1500²	-	-	-	-	-	-	85	75	70	65	60	55	55
1600²	-	-	-	-	-	-	-	80	70	65	60	60	55
1700²	-	-	-	-	-	-	-	80	75	70	65	60	55
1800²	-	-	-	-	-	-	-	85	75	70	65	60	55
1900²	-	-	-	-	-	-	-	-	80	75	65	65	60
2000²	-	-	-	-	-	-	-	-	80	75	70	65	60

Cylindrical float

UZVS/82/250

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 82 / 250
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 16
 Weight [g]: 370
 Flange min.: DN 100



Float UZVS/82/250

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400¹	-	-	-	65	60	50	45	40	40	35	35	30	30
500¹	-	-	-	70	60	50	45	45	40	35	35	30	30
600¹	-	-	-	70	60	55	50	45	40	35	35	35	30
700¹	-	-	-	70	60	55	50	45	40	40	35	35	30
800¹	-	-	-	75	65	55	50	45	40	40	35	35	30
900¹	-	-	-	75	65	55	50	45	45	40	35	35	35
1000¹	-	-	-	75	65	60	50	50	45	40	40	35	35
1100²	-	-	-	-	80	70	65	55	50	50	45	40	40
1200²	-	-	-	-	80	70	65	60	55	50	45	45	40
1300²	-	-	-	-	85	75	65	60	55	50	50	45	40
1400²	-	-	-	-	-	75	70	60	55	55	50	45	45
1500²	-	-	-	-	-	80	70	65	60	55	50	45	45
1600²	-	-	-	-	-	80	75	65	60	55	50	50	45
1700²	-	-	-	-	-	85	75	70	60	55	55	50	45
1800²	-	-	-	-	-	85	75	70	65	60	55	50	50
1900²	-	-	-	-	-	-	80	70	65	60	55	55	50
2000²	-	-	-	-	-	-	80	75	65	60	60	55	50

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZVS/82/300

Stainless steel 1.4571 (316Ti)

Diameter / length [mm]: 82 / 300
 Design temperature [°C]: -196 ... 200
 Design pressure [bar]: -1 ... 16
 Weight [g]: 450
 Flange min.: DN 100



Float UZVS/82/300

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400¹	-	-	-	65	55	50	45	40	35	35	30	30	30
500¹	-	-	-	65	55	50	45	40	35	35	30	30	30
600¹	-	-	-	65	55	50	45	40	40	35	35	30	30
700¹	-	-	-	65	60	50	45	40	40	35	35	30	30
800¹	-	-	-	70	60	55	45	45	40	35	35	30	30
900¹	-	-	-	70	60	55	50	45	40	35	35	35	30
1000¹	-	-	-	70	60	55	50	45	40	40	35	35	30
1100²	-	-	-	85	70	65	55	50	50	45	40	40	35
1200²	-	-	-	-	75	65	60	55	50	45	40	40	35
1300²	-	-	-	-	75	70	60	55	50	45	45	40	40
1400²	-	-	-	-	80	70	60	55	50	50	45	40	40
1500²	-	-	-	-	80	70	65	60	55	50	45	45	40
1600²	-	-	-	-	85	75	65	60	55	50	45	45	40
1700²	-	-	-	-	85	75	65	60	55	50	50	45	40
1800²	-	-	-	-	-	75	70	65	55	55	50	45	45
1900²	-	-	-	-	-	80	70	65	60	55	50	45	45
2000²	-	-	-	-	-	80	70	65	60	55	50	50	45

SWISS

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZTIS/52/200

Titanium

Diameter / length [mm]: 52 / 200
 Design temperature [°C]: -30 ... 150
 Design pressure [bar]: -1 ... 16
 Weight [g]: 109
 Flange min.: DN 50



Float UZTIS/52/200

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	-	75	65	60	55	50	45	45	40	40
500 ¹	-	-	-	-	80	70	65	60	55	50	45	40	40
600 ¹	-	-	-	-	85	75	65	60	55	50	50	45	40
700 ¹	-	-	-	-	-	80	70	65	60	55	50	45	45
800 ¹	-	-	-	-	-	80	75	65	60	55	50	50	45
900 ¹	-	-	-	-	-	85	75	70	65	60	55	50	50
1000 ¹	-	-	-	-	-	-	80	70	65	60	55	55	50
1100 ²	-	-	-	-	-	-	-	-	-	-	80	75	70
1200 ²	-	-	-	-	-	-	-	-	-	-	-	85	75
1300 ²	-	-	-	-	-	-	-	-	-	-	-	-	85
1400 ²	-	-	-	-	-	-	-	-	-	-	-	-	80
1500 ²	-	-	-	-	-	-	-	-	-	-	-	-	85

Cylindrical float

UZTIS/52/250

Titanium

Diameter / length [mm]: 52 / 250
 Design temperature [°C]: -30 ... 150
 Design pressure [bar]: -1 ... 16
 Weight [g]: 138
 Flange min.: DN 50



Float UZVS/52/250

Specific gravity of the liquid [kg/m³]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	-	-	-	70	60	55	50	45	40	40	35	35
500 ¹	-	-	-	-	70	65	55	50	45	45	40	35	35
600 ¹	-	-	-	-	75	65	60	55	50	45	40	40	35
700 ¹	-	-	-	-	80	70	60	55	50	45	45	40	40
800 ¹	-	-	-	-	80	70	65	60	55	50	45	40	40
900 ¹	-	-	-	-	85	75	65	60	55	50	45	45	40
1000 ¹	-	-	-	-	-	75	70	65	55	55	50	45	45
1100 ²	-	-	-	-	-	-	-	85	80	70	65	60	60
1200 ²	-	-	-	-	-	-	-	-	80	75	70	65	60
1300 ²	-	-	-	-	-	-	-	-	-	80	75	70	65
1400 ²	-	-	-	-	-	-	-	-	-	85	75	70	65
1500 ²	-	-	-	-	-	-	-	-	-	-	80	75	70

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 10 x 0.5 mm / ² = Guidance rod 10 x 1.0 mm / ³ = Guidance rod 16 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZTIS/52/350

Titanium

Diameter / length [mm]:	52 / 350
Design temperature [°C]:	-30 ... 150
Design pressure [bar]:	-1 ... 16
Weight [g]:	193
Flange min.:	DN 50



Float UZTIS/52/350

Specific gravity of the liquid [kg/m³] 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

L-Mass [mm]	Immersion depth [%]													
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	
400 ¹	-	-	-	65	55	50	45	40	35	35	30	30	30	
500 ¹	-	-	-	70	60	50	45	40	40	35	35	30	30	
600 ¹	-	-	-	70	60	55	50	45	40	35	35	30	30	
700 ¹	-	-	-	75	65	55	50	45	40	40	35	35	30	
800 ¹	-	-	-	75	65	60	50	45	45	40	35	35	30	
900 ¹	-	-	-	80	70	60	55	50	45	40	40	35	35	
1000 ¹	-	-	-	85	70	65	55	50	45	45	40	35	35	
1100 ²	-	-	-	-	-	80	75	65	60	55	50	50	45	
1200 ²	-	-	-	-	-	85	75	70	65	60	55	50	45	
1300 ²	-	-	-	-	-	-	80	70	65	60	55	50	50	
1400 ²	-	-	-	-	-	-	85	75	70	65	60	55	50	
1500 ²	-	-	-	-	-	-	-	80	70	65	60	55	55	
1600 ²	-	-	-	-	-	-	-	80	75	70	65	60	55	
1700 ²	-	-	-	-	-	-	-	85	75	70	65	60	55	
1800 ²	-	-	-	-	-	-	-	-	80	75	70	65	60	
1900 ²	-	-	-	-	-	-	-	-	85	75	70	65	60	
2000 ²	-	-	-	-	-	-	-	-	-	80	75	70	65	

Cylindrical float

UZTIS/76/200

Titanium

Diameter / length [mm]:	76 / 200
Design temperature [°C]:	-30 ... 150
Design pressure [bar]:	-1 ... 1
Weight [g]:	148
Flange min.:	DN 80



Float UZTIS/76/200

Specific gravity of the liquid [kg/m³] 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

L-Mass [mm]	Immersion depth [%]													
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	
400 ¹	-	-	-	50	45	40	35	35	30	30	25	25	25	
500 ¹	-	-	-	55	50	40	40	35	35	30	30	25	25	
600 ¹	-	-	-	55	50	45	40	35	35	30	30	30	25	
700 ¹	-	-	-	60	50	45	40	40	35	35	30	30	25	
800 ¹	-	-	-	60	55	50	45	40	35	35	30	30	30	
900 ¹	-	-	-	65	55	50	45	40	35	35	35	30	30	
1000 ¹	-	-	-	65	55	50	45	40	40	35	35	30	30	
1100 ²	-	-	-	-	75	70	60	55	50	50	45	40	40	
1200 ²	-	-	-	-	80	70	65	60	55	50	45	45	40	
1300 ²	-	-	-	-	85	75	65	60	55	50	50	45	45	
1400 ²	-	-	-	-	-	80	70	65	60	55	50	45	45	
1500 ²	-	-	-	-	-	80	75	65	60	55	50	50	45	
1600 ²	-	-	-	-	-	85	75	70	65	60	55	50	50	
1700 ²	-	-	-	-	-	-	80	70	65	60	55	55	50	
1800 ²	-	-	-	-	-	-	80	75	70	65	60	55	50	
1900 ²	-	-	-	-	-	-	85	75	70	65	60	55	55	
2000 ²	-	-	-	-	-	-	-	80	70	65	60	60	55	

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 11 x 0.5 mm / ² = Guidance rod 11 x 1.0 mm / ³ = Guidance rod 17 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZTIS/76/250

Titanium

Diameter / length [mm]: 76 / 250
 Design temperature [°C]: -30 ... 150
 Design pressure [bar]: -1 ... 1
 Weight [g]: 186
 Flange min.: DN 80



Float UZTIS/76/250

Specific gravity of the liquid [kg/m³]

300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

L-Mass [mm]	Immersion depth [%]												
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
400¹	-	-	55	45	40	35	35	30	30	25	25	25	20
500¹	-	-	55	50	40	40	35	30	30	25	25	25	20
600¹	-	-	60	50	45	40	35	30	30	30	25	25	25
700¹	-	-	60	50	45	40	35	35	30	30	25	25	25
800¹	-	-	65	55	45	40	40	35	30	30	30	25	25
900¹	-	-	65	55	50	45	40	35	35	30	30	25	25
1000¹	-	-	70	55	50	45	40	35	35	30	30	25	25
1100²	-	-	-	75	65	60	50	45	45	40	35	35	35
1200²	-	-	-	80	70	60	55	50	45	40	40	35	35
1300²	-	-	-	80	70	65	55	50	45	45	40	40	35
1400²	-	-	-	85	75	65	60	55	50	45	40	40	35
1500²	-	-	-	-	75	70	60	55	50	45	45	40	40
1600²	-	-	-	-	80	70	65	55	55	50	45	40	40
1700²	-	-	-	-	85	75	65	60	55	50	45	45	40
1800²	-	-	-	-	85	75	70	60	55	50	50	45	45
1900²	-	-	-	-	-	80	70	65	60	55	50	45	45
2000²	-	-	-	-	-	80	70	65	60	55	50	50	45
2100³	-	-	-	-	-	-	-	-	-	80	75	70	65
2200³	-	-	-	-	-	-	-	-	-	85	80	75	70
2300³	-	-	-	-	-	-	-	-	-	-	85	75	70
2400³	-	-	-	-	-	-	-	-	-	-	85	75	75
2500³	-	-	-	-	-	-	-	-	-	-	85	80	75
2600³	-	-	-	-	-	-	-	-	-	-	-	80	75
2700³	-	-	-	-	-	-	-	-	-	-	-	85	80
2800³	-	-	-	-	-	-	-	-	-	-	-	-	80
2900³	-	-	-	-	-	-	-	-	-	-	-	-	85

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 11 x 0.5 mm / ² = Guidance rod 11 x 1.0 mm / ³ = Guidance rod 17 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZTIS/76/300

Titanium

Diameter / length [mm]: 76 / 300
 Design temperature [°C]: -30 ... 150
 Design pressure [bar]: -1 ... 1
 Weight [g]: 218
 Flange min.: DN 80



Float UZTIS/76/300	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Specific gravity of the liquid [kg/m³]													
L-Mass [mm]	Immersion depth [%]												
400 ¹	-	60	50	40	35	35	30	25	25	25	20	20	20
500 ¹	-	65	50	45	40	35	30	30	25	25	20	20	20
600 ¹	-	65	55	45	40	35	30	30	25	25	25	20	20
700 ¹	-	70	55	45	40	35	30	30	25	25	25	20	20
800 ¹	-	70	55	50	40	35	35	30	30	25	25	25	20
900 ¹	-	70	60	50	45	40	35	30	30	25	25	25	20
1000 ¹	-	75	60	50	45	40	35	30	30	30	25	25	25
1100 ²	-	-	80	65	55	50	45	40	40	35	30	30	30
1200 ²	-	-	80	70	60	50	45	45	40	35	35	30	30
1300 ²	-	-	85	70	60	55	50	45	40	40	35	35	30
1400 ²	-	-	-	75	65	55	50	45	40	40	35	35	30
1500 ²	-	-	-	75	65	60	50	50	45	40	40	35	35
1600 ²	-	-	-	80	70	60	55	50	45	40	40	35	35
1700 ²	-	-	-	80	70	65	55	50	45	45	40	40	35
1800 ²	-	-	-	85	75	65	60	55	50	45	40	40	35
1900 ²	-	-	-	-	75	65	60	55	50	45	45	40	40
2000 ²	-	-	-	-	80	70	60	55	50	50	45	40	40
2100 ³	-	-	-	-	-	-	-	80	75	70	65	60	55
2200 ³	-	-	-	-	-	-	-	85	75	70	65	60	55
2300 ³	-	-	-	-	-	-	-	-	80	75	70	65	60
2400 ³	-	-	-	-	-	-	-	-	80	75	70	65	60
2500 ³	-	-	-	-	-	-	-	-	85	80	70	65	65
2600 ³	-	-	-	-	-	-	-	-	-	80	75	70	65
2700 ³	-	-	-	-	-	-	-	-	-	80	75	70	65
2800 ³	-	-	-	-	-	-	-	-	-	85	80	75	70
2900 ³	-	-	-	-	-	-	-	-	-	-	80	75	70
3000 ³	-	-	-	-	-	-	-	-	-	-	85	75	70
3100 ³	-	-	-	-	-	-	-	-	-	-	85	80	75
3200 ³	-	-	-	-	-	-	-	-	-	-	-	80	75
3300 ³	-	-	-	-	-	-	-	-	-	-	-	85	80

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 11 x 0.5 mm / ² = Guidance rod 11 x 1.0 mm / ³ = Guidance rod 17 x 1.0 mm

Top Mounted Level Indicator-Mini / Cylindrical float

Cylindrical float

UZTIS/76/350

Titanium

Diameter / length [mm]: 76 / 350
 Design temperature [°C]: -30 ... 150
 Design pressure [bar]: -1 ... 1
 Weight [g]: 258
 Flange min.: DN 80



Float UZTIS/76/350

Specific gravity of the liquid [kg/m³]

300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500

L-Mass [mm]	Immersion depth [%]												
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
400 ¹	-	60	45	40	35	30	30	25	25	20	20	20	20
500 ¹	-	60	50	40	35	30	30	25	25	20	20	20	20
600 ¹	-	60	50	40	35	35	30	25	25	25	20	20	20
700 ¹	-	65	50	45	40	35	30	30	25	25	20	20	20
800 ¹	-	65	55	45	40	35	30	30	25	25	25	20	20
900 ¹	-	70	55	45	40	35	30	30	25	25	25	20	20
1000 ¹	-	70	55	50	40	35	35	30	30	25	25	20	20
1100 ²	-	-	70	60	50	45	40	35	35	30	30	25	25
1200 ²	-	-	75	60	55	45	40	40	40	35	30	30	25
1300 ²	-	-	75	65	55	50	45	40	35	35	30	30	30
1400 ²	-	-	80	65	55	50	45	40	40	35	35	30	30
1500 ²	-	-	80	70	60	50	45	45	40	35	35	30	30
1600 ²	-	-	85	70	60	55	50	45	40	35	35	35	30
1700 ²	-	-	-	75	65	55	50	45	40	40	35	35	30
1800 ²	-	-	-	75	65	60	50	45	45	40	35	35	35
1900 ²	-	-	-	80	70	60	55	50	45	40	40	35	35
2000 ²	-	-	-	80	70	60	55	50	45	40	40	35	35
2100 ³	-	-	-	-	-	-	80	70	65	60	55	50	50
2200 ³	-	-	-	-	-	-	80	75	65	60	55	55	50
2300 ³	-	-	-	-	-	-	85	75	70	65	60	55	50
2400 ³	-	-	-	-	-	-	-	80	70	65	60	55	55
2500 ³	-	-	-	-	-	-	-	80	75	70	65	60	55
2600 ³	-	-	-	-	-	-	-	85	75	70	65	60	55
2700 ³	-	-	-	-	-	-	-	85	80	70	65	60	60
2800 ³	-	-	-	-	-	-	-	-	80	75	70	65	60
2900 ³	-	-	-	-	-	-	-	-	80	75	70	65	60
3000 ³	-	-	-	-	-	-	-	-	85	80	70	65	65
3100 ³	-	-	-	-	-	-	-	-	-	80	75	70	65
3200 ³	-	-	-	-	-	-	-	-	-	80	75	70	65
3300 ³	-	-	-	-	-	-	-	-	-	85	80	70	70
3400 ³	-	-	-	-	-	-	-	-	-	-	80	75	70
3500 ³	-	-	-	-	-	-	-	-	-	-	80	75	70
3600 ³	-	-	-	-	-	-	-	-	-	-	85	80	75
3700 ³	-	-	-	-	-	-	-	-	-	-	85	80	75
3800 ³	-	-	-	-	-	-	-	-	-	-	-	80	75
3900 ³	-	-	-	-	-	-	-	-	-	-	-	85	80
4000 ³	-	-	-	-	-	-	-	-	-	-	-	85	80
4100 ³	-	-	-	-	-	-	-	-	-	-	-	-	80
4200 ³	-	-	-	-	-	-	-	-	-	-	-	-	80
4300 ³	-	-	-	-	-	-	-	-	-	-	-	-	85
4400 ³	-	-	-	-	-	-	-	-	-	-	-	-	85
4500 ³	-	-	-	-	-	-	-	-	-	-	-	-	-

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

¹ = Guidance rod 11 x 0.5 mm / ² = Guidance rod 11 x 1.0 mm / ³ = Guidance rod 17 x 1.0 mm

Top Mounted Level Indicator-Mini / Magnetic roller indicator

Type

**MNA / MNB
MNAN / MNBN**

Electrical connection:
Ingress protection class:

Aluminium anodized
IP67

MNA / MNB / MNAN / MNBN

Indication

- Material quality: Pocan
- Colour: White / Red

End part: Ryton, black

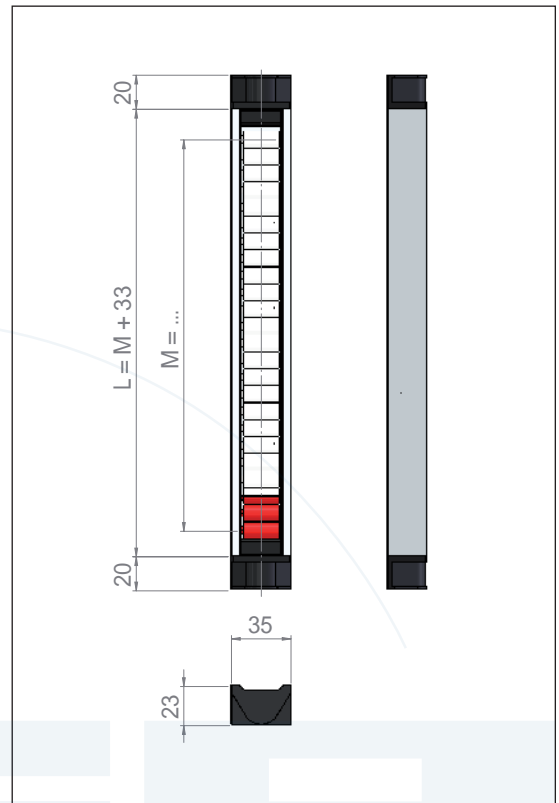
Sight cover - MNA / MNAN: Macrolon
- MNB / MNBN: Glass

Ambient temperature: -40°C ... 200°C

MNAN / MNBN (over-roll-protected): Roller rotation max. 180°

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS



Type

**MNAV / MNBV
MNAVN / MNBVN**

Electrical connection:
Ingress protection class:

Aluminium with Stainless steel covered
IP67

MNAV / MNBV / MNAVN / MNBVN

Indication

- Material quality: Pocan
- Colour: White / Red

End part: Ryton, black

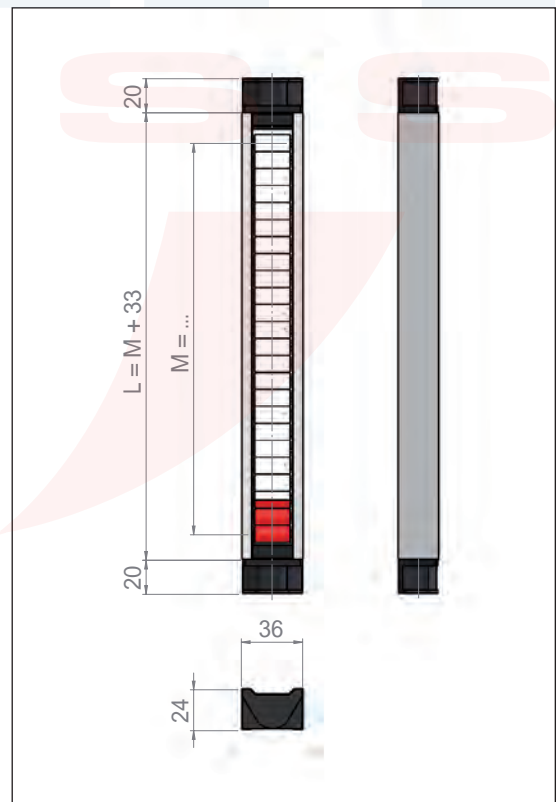
Sight cover - MNAV / MNAVN: Macrolon
- MNBV / MNBVN: Glass

Ambient temperature: -40°C ... 200°C

MNAVN / MNBVN (over-roll-protected): Roller rotation max. 180°

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS



The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

Type **SAK / SA.. / SV..**

SAK

Scale: Adhesive foil (black)
 Angle profile: Aluminium
 Scaling: in cm (0 cm .. 10 cm .. 20 cm .. 30 cm ..)
 Width: 40 mm
 Ambient temperature: -40°C ... 200°C

SA0 / SA1 / SA2 / SA3 / SA4

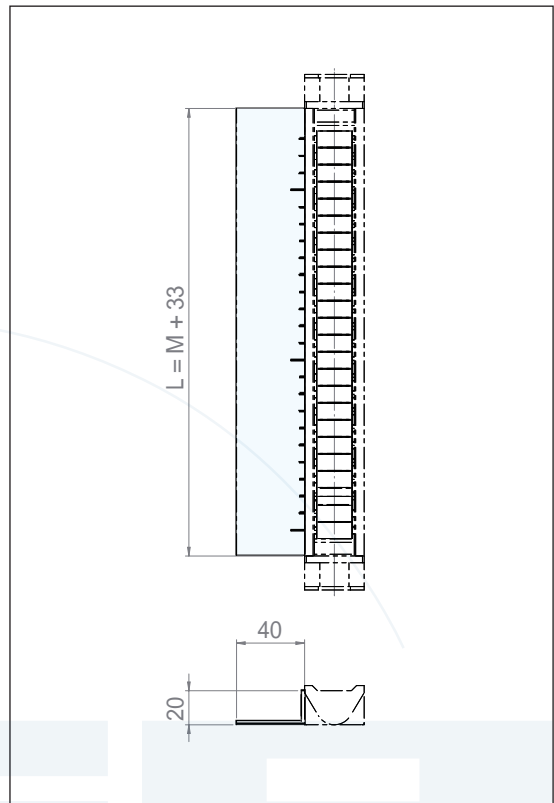
Scale: Engraved
 Angle profile: Aluminium
 Scaling: Blank / % / cm / inch. / ..
 Width: 40 mm
 Ambient temperature: -40°C ... 200°C

SV0 / SV1 / SV2 / SV3 / SV4

Scale: Engraved
 Angle profile: Stainless steel
 Scaling: Blank / % / cm / inch. / ..
 Width: 40 mm
 Ambient temperature: -40°C ... 400°C

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS

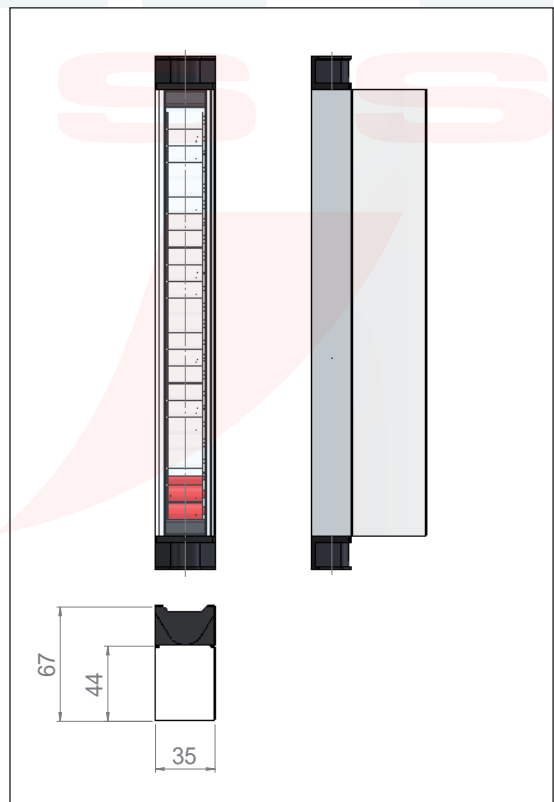


Type **Magnetic roller indicator sight extension PV**

Material quality: Acryl glass
 Width: 35 mm
 Depth: 67 mm
 Ambient temperature: -40°C ... 100°C
 Mounting: on magnetic roller indicator

Approvals / Certificates

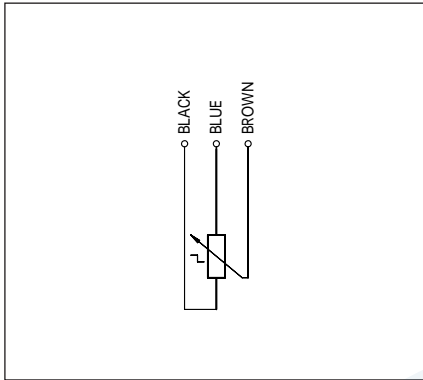
ATEX / GOST / GL / BV / DNV / ABS



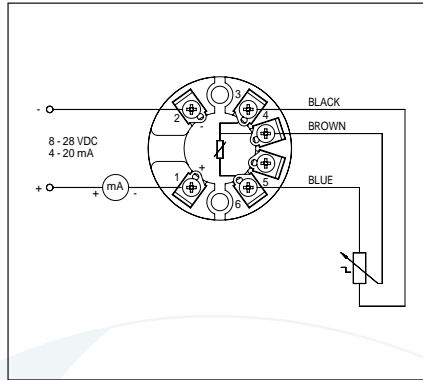
The top mounted level indicator-mini are based on a modular design and can be arranged individually.
Type key page 386 - 390

Top Mounted Level Indicator-Mini / Level transmitter

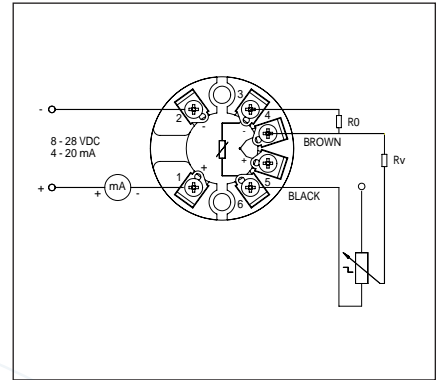
Connection diagram



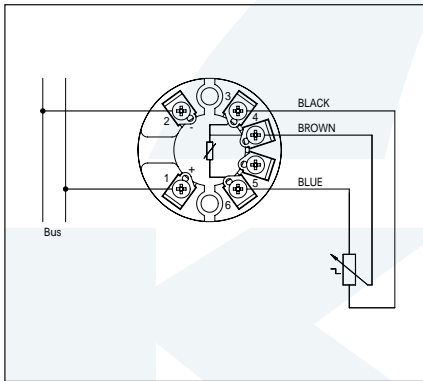
without Control unit



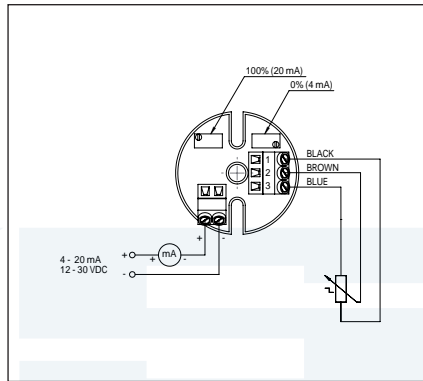
Control unit TP5343..



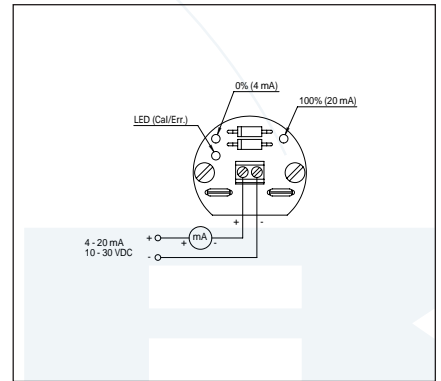
Control unit TD5335..



Control unit TP5350..



Control unit XT42SI Ex



Control unit Magnetostriktiv

Some further data according to chapter Control Units 1011

Approvals / Certificates



ATEX-Approval for accuracy K5.. / K10.. / K15..*

II 1/2G Ex ia c IIC T6 - T4	II 1/2G Ex ia c IIC T6 - T3 bzw. Ex d ia c IIC T6 - T4	II 2G Ex d c IIC T6 - T4
II 1/2G Ex d ia c IIC T6 - T4	II 2D Ex td A21 c IP6* T80°C - T190°C bzw. T125	
Liquid temperature Exia max. 180°C / Exd max. 120°C		
Type of protection intrinsic safety Ex ia IIC switch bzw. temperature switch	$I_i \leq 100 \text{ mA}$	
Type of protection intrinsic safety Ex ia IIC temperature probe	$U_i \leq 28 \text{ V}$	$I_i \leq 100 \text{ mA}$ $P_i \leq 700 \text{ mW}$
Type of protection intrinsic safety Ex ia IIC with option /N (NAMUR EN 60947)	$U_i \leq 15 \text{ VDC}$	$I_i \leq 60 \text{ mA}$
Type of protection „moulding“	$U_N \leq 250 \text{ VDC/AC}$	$P_{SN} \leq 50 \text{ W/VA}$ $P_{FN} \leq 700 \text{ mW}$
Type of protection „moulding“ with option /N (NAMUR EN 60947)	$U_N \leq 15 \text{ VDC}$	$I_N \leq 60 \text{ mA}$
Type of protection „moulding“ with option /R22 (resistor)	$U_N \leq 250 \text{ VDC/AC}$	$I_N \leq 100 \text{ mA}$

ATEX-Approval for accuracy K1..*

II 1/2G Ex ia c IIC T6 - T2	II 1G Ex ia IIC T4 - T2	
II 1/2G Ex ia IIC T6 - T2	II 2G Ex d IIC T4	
Type of protection intrinsic safety Ex ia IIC	$U_i \leq 30 \text{ V}$	$I_i \leq 200 \text{ mA}$ $P_i \leq 1000 \text{ mW}$
Temperature class	T6	T5
Ambient temperature(T_a)	-20°C ... 40°C	-20°C ... 55°C
Liquid temperature(T_l)	-20°C ... 60°C	-20°C ... 60°C

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

* = The approval is dependent on the equipment combination

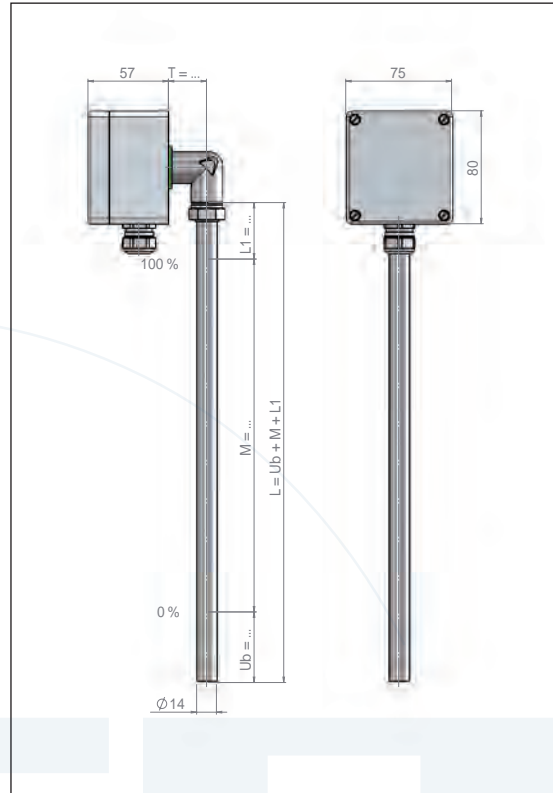
Type ALF../V/.../M..

Electrical connection: Aluminium anodized
 Cable entry: M20 x 1.5
 Ingress protection class: IP 65
 Ambient temperature: -40°C ... 100°C
 Level transmitter tube material quality: Stainless steel
 Mounting: Tension strap
 Minimum measures: T: 27 mm / L1: 40 mm / Ub: 50 mm

Accuracy
 Accuracy: 5 / 10 / 15 mm
 Ambient temperature
 - K5 / K10 / K15: -30°C ... 130°C
 - K5HTF / K10HTF / K15HTF: -30°C ... 200°C
 - K5HT / K10HT / K15HT: -40°C ... 250°C

Option control unit / Page 410
 Control unit:
 - Programmable
 - Hart-programmable / SIL2
 - Profibus PA
 - Foundation Fieldbus

Approvals / Certificates
 ATEX / GOST / GL / BV / DNV / ABS



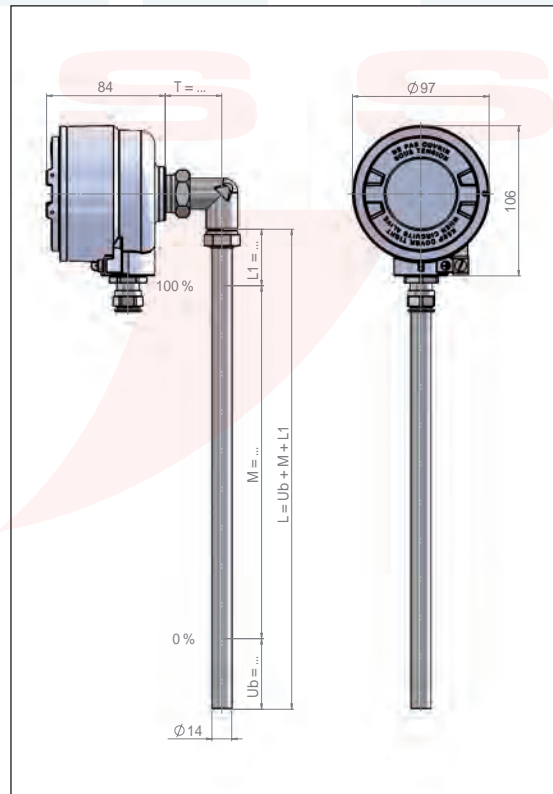
Type ALDA../V/.../EXDG-M..

Electrical connection: Aluminium coated RAL 9006
 Cable entry: M20 x 1.5
 Ingress protection class: IP 68
 Ambient temperature: -40°C ... 100°C
 Level transmitter tube material quality: Stainless steel
 Mounting: Tension strap
 Minimum measures: T: 50 mm / L1: 40 mm / Ub: 50 mm

Accuracy
 Accuracy: 5 / 10 / 15 mm
 Ambient temperature
 - K5 / K10 / K15: -30°C ... 130°C
 - K5HTF / K10HTF / K15HTF: -30°C ... 200°C
 - K5HT / K10HT / K15HT: -40°C ... 250°C

Option control unit / Page 410
 Control unit:
 - Programmable
 - Hart-programmable / SIL2
 - Profibus PA
 - Foundation Fieldbus

Approvals / Certificates
 ATEX / GOST / GL / BV / DNV / ABS



The top mounted level indicator-mini are based on a modular design and can be arranged individually.
Type key page 386 - 390

Top Mounted Level Indicator-Mini / Level transmitter

Type **DAALA/..V/..-M..**

Electrical connection:	Aluminium anodized
Cable entry:	M20 x 1.5
Ingress protection class:	IP 65
Ambient temperature:	-40°C ... 60°C
Display:	4-digit LED display in red / Free scaling
Current input:	4 ... 20 mA
Level transmitter tube material quality:	Stainless steel
Mounting:	Tension strap
Minimum measures:	T: 50 mm / L1: 40 mm / Ub: 50 mm

Accuracy: 5 / 10 / 15 mm

Ambient temperature	
- K5 / K10 / K15:	-30°C ... 130°C
- K5HTF / K10HTF / K15HTF:	-30°C ... 200°C
- K5HT / K10HT / K15HT:	-40°C ... 250°C

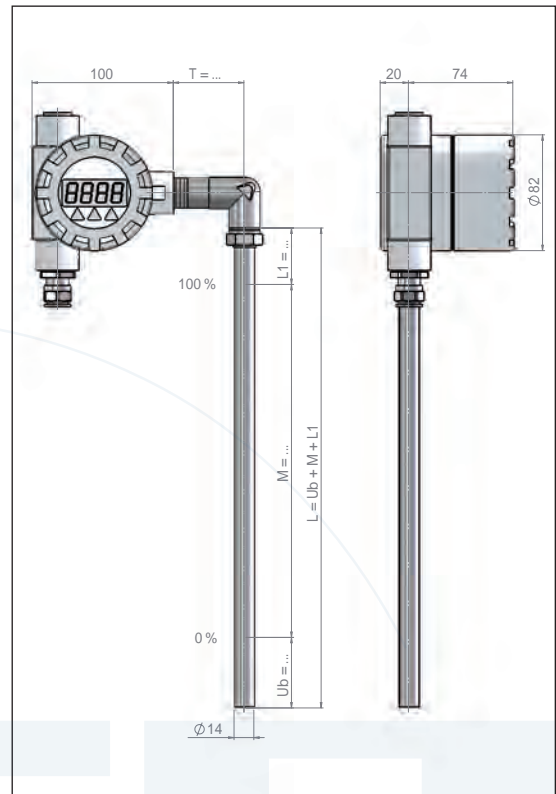
Option control unit / Page 410

Control unit:

- Programmable
- Hart-programmable / SIL2
- Profibus PA
- Foundation Fieldbus

Approvals / Certificates

ATEX / GOST



Type **DAAVDA/..V/..EXIADG-M..**

Electrical connection:	Stainless steel electropolished
Cable entry:	M20 x 1.5
Ingress protection class:	IP 68
Ambient temperature:	-40°C ... 60°C
Display:	4-digit LED display in red / Free scaling
Current input:	4 ... 20 mA
Level transmitter tube material quality:	Stainless steel
Mounting:	Tension strap
Minimum measures:	T: 50 mm / L1: 40 mm / Ub: 50 mm

Accuracy: 5 / 10 / 15 mm

Ambient temperature	
- K5 / K10 / K15:	-30°C ... 130°C (Exd 120°C)
- K5HTF / K10HTF / K15HTF:	-30°C ... 180°C (Exd 120°C)
- K5HT / K10HT / K15HT:	-40°C ... 180°C (Exd 120°C)

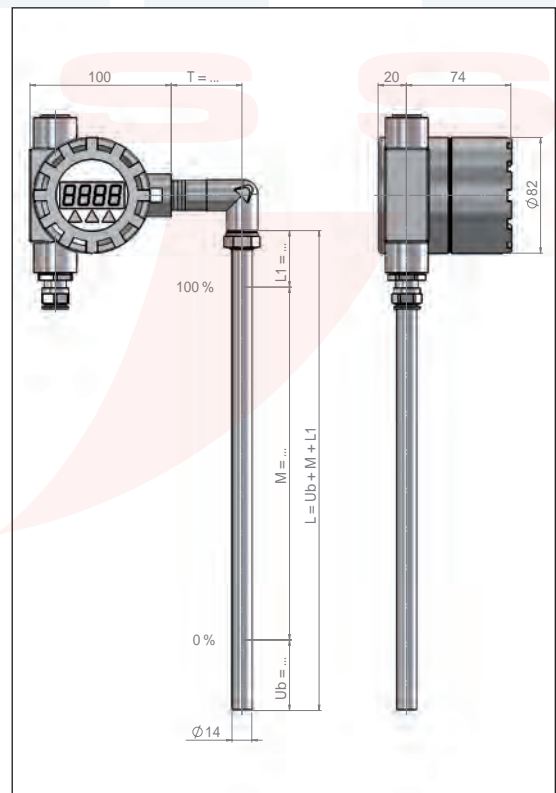
Option control unit / Page 410

Control unit:

- Programmable
- Hart-programmable / SIL2
- Profibus PA
- Foundation Fieldbus

Approvals / Certificates

ATEX / GOST



The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

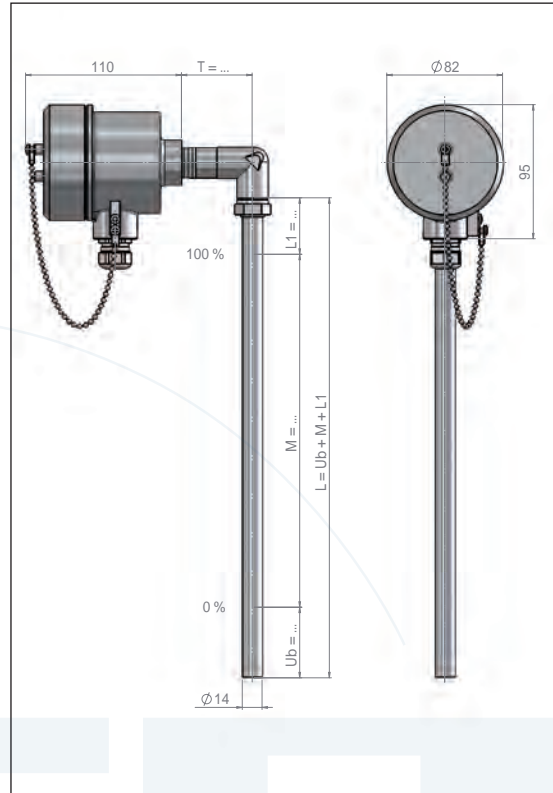
Type AVA/..V/..-M..

Electrical connection: Stainless steel A4 (SS316)
 Cable entry: M20 x 1.5
 Ingress protection class: IP 67
 Ambient temperature: -40°C ... 85°C
 Level transmitter tube material quality: Stainless steel
 Mounting: Tension strap
 Minimum measures: T: 50 mm / L1: 40 mm / Ub: 50 mm

Accuracy
 Accuracy: 5 / 10 / 15 mm
 Ambient temperature
 - K5 / K10 / K15: -30°C ... 130°C
 - K5HTF / K10HTF / K15HTF: -30°C ... 200°C
 - K5HT / K10HT / K15HT: -40°C ... 250°C

Option control unit / Page 410
 Control unit:
 - Programmable
 - Hart-programmable / SIL2
 - Profibus PA
 - Foundation Fieldbus

Approvals / Certificates
 ATEX / GOST / GL / BV / DNV / ABS



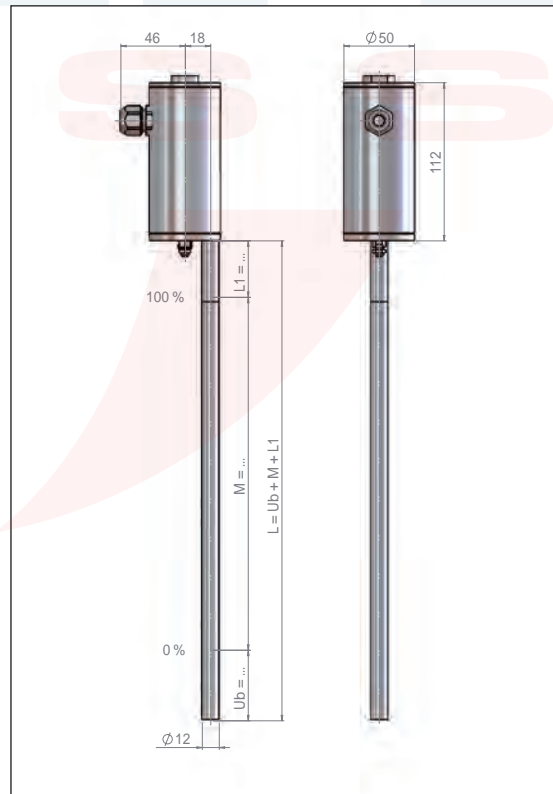
Type AVM/..V/...-M..

Electrical connection: Stainless steel A4 (SS316)
 Cable entry: M16 x 1.5
 Ingress protection class: IP 68
 Ambient temperature: -40°C ... 85°C
 Level transmitter tube material quality: Stainless steel
 Mounting: Tension strap
 Minimum measures: L1: 40 mm / Ub: 50 mm

Accuracy
 Accuracy: 0.2 mm
 Ambient temperature
 - K1: -40 ... 125°C
 - K1HT: -40 ... 250°C

Control unit
 - MST / MSTB: - Programmable
 4 ... 20 mA, 10 ... 30 VDC
 - MSTH / MSTHB: - Hart-programmable
 4 ... 20 mA, 10 ... 30 VDC

Approvals / Certificates
 ATEX / GOST / IECEx / SIL2



The top mounted level indicator-mini are based on a modular design and can be arranged individually.
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Top Mounted Level Indicator-Mini / Level transmitter

Type

AVDM/..V/../EXIADG-M..

Electrical connection:	Stainless steel A4 (SS316)
Cable entry:	M20 x 1.5
Ingress protection class:	IP 68
Ambient temperature:	-40°C ... 85°C
Level transmitter tube material quality:	Stainless steel
Mounting:	Tension strap
Minimum measures:	L1: 40 mm / Ub: 50 mm

Accuracy

Accuracy: 0.2 mm

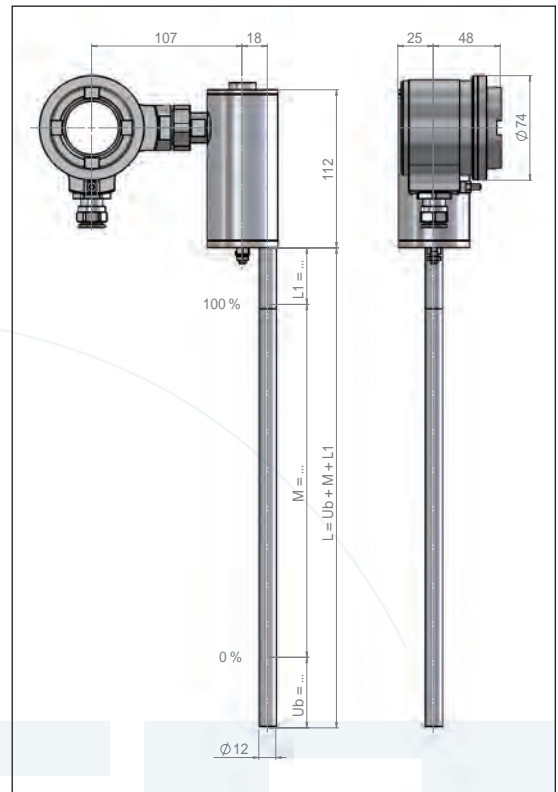
Ambient temperature
- K1: ATEX temperature page 410

Control unit

- MSTB:	- Programmable 4 ... 20 mA, 10 ... 30 VDC
- MSTHB:	- Hart-programmable 4 ... 20 mA, 10 ... 30 VDC

Approvals / Certificates

ATEX / GOST / IECEx / SIL2



Type

DAAVDM/..V/../EXIADG-M..

Electrical connection:	Stainless steel A4 (SS316)
Cable entry:	M20 x 1.5
Ingress protection class:	IP 68
Ambient temperature:	-40°C ... 85°C
Level transmitter tube material quality:	Stainless steel
Mounting:	Tension strap
Minimum measures:	L1: 40 mm / Ub: 50 mm

Accuracy

Accuracy: 0.2 mm

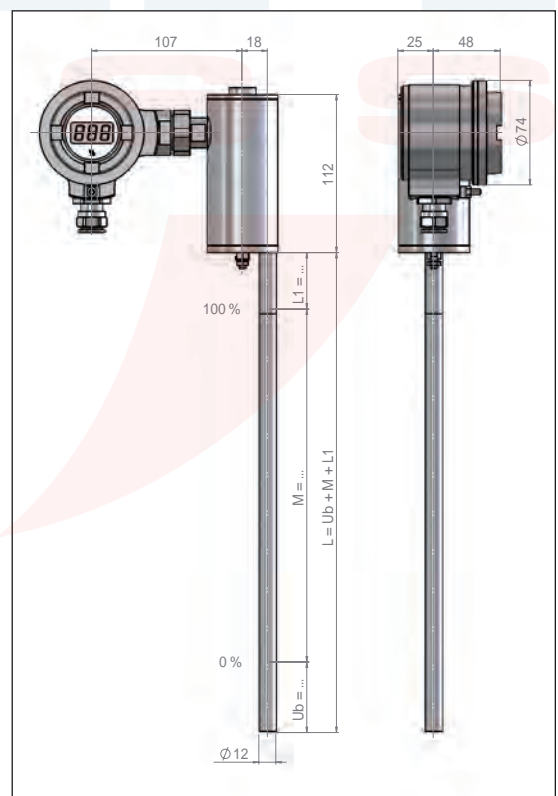
Ambient temperature
- K1: ATEX temperature page 410

Control unit

- MSTB:	- Programmable 4 ... 20 mA, 10 ... 30 VDC
- MSTHB:	- Hart-programmable 4 ... 20 mA, 10 ... 30 VDC

Approvals / Certificates

ATEX / GOST / IECEx / SIL2



The top mounted level indicator-mini are based on a modular design and can be arranged individually.

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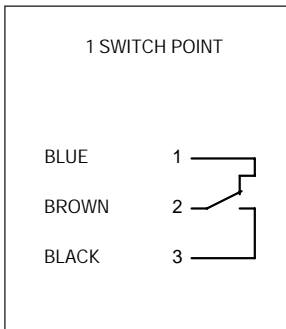
Notes



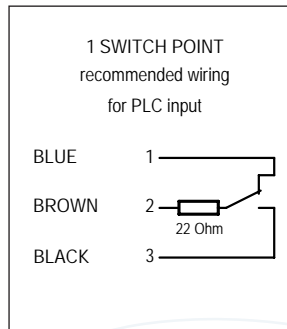
The top mounted level indicator-mini are based on a modular design and can be arranged individually.
Type key page 386 - 390

Top Mounted Level Indicator-Mini / Magnetic switch

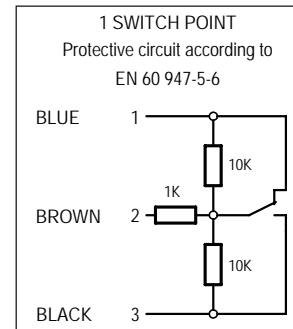
Connection diagram



Change over



Change over
with resistor



Change over
with NAMUR EN 60947

KUBLER

SWISS

Approvals / Certificates



ATEX*

II 2G	Ex ia IIC T6 - T1	II 2G	Ex d IIC T6 - T4
II 2D	Ex tD A21 IP6* T80°C - T300°C	II 2D	Ex tD A21 IP6* T80°C - T120°C

Liquid temperature Exia max. 180°C / Exd max. 120°C

Type of protection intrinsic safety Ex ia IIC switch bzw. temperature switch	$I_i \leq 100 \text{ mA}$		
Type of protection intrinsic safety Ex ia IIC temperature probe	$U_i \leq 28 \text{ V}$	$I_i \leq 100 \text{ mA}$	$P_i \leq 700 \text{ mW}$
Type of protection intrinsic safety Ex ia IIC with option /N (NAMUR EN 60947)	$U_i \leq 15 \text{ VDC}$	$I_i \leq 60 \text{ mA}$	
Type of protection „moulding“	$U_N \leq 250 \text{ VDC/AC}$	$P_{SN} \leq 50 \text{ W/VA}$	$P_{FN} \leq 700 \text{ mW}$
Type of protection „moulding“ with option /N (NAMUR EN 60947)	$U_N \leq 15 \text{ VDC}$	$I_N \leq 60 \text{ mA}$	
Type of protection „moulding“ with option /R22 (resistor)	$U_N \leq 250 \text{ VDC/AC}$	$I_N \leq 100 \text{ mA}$	

The top mounted level indicator-mini are based on a modular design and can be arranged individually.

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* = The approval is dependent on the equipment combination

Type **RU40/./././././.**
RU40/././././././EXIAG

Housing: Aluminium anodized
 Ingress protection class: IP 65
 Mounting: Free positionable on the chamber

Ambient temperature
 - with PVC connection cable: -20°C ... 80°C
 - with Silikon connection cable: -40°C ... 150°C
 - with PUR connection cable: -40°C ... 80°C
 - with Radox connection cable: -35°C ... 120°C

Switch function

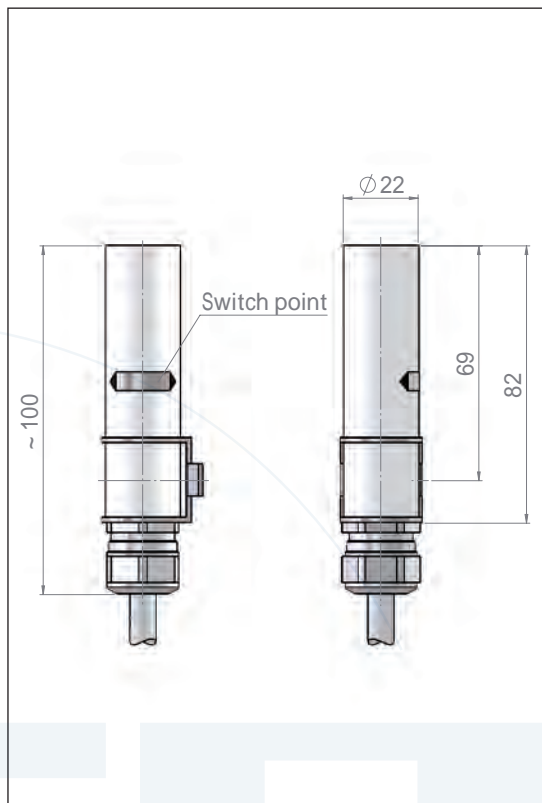
Function: Change over
 Switch behaviour: Bistable
 Switching capacity: 230 V / 0.5 A / 40 VA
 Switching capacity / ATEX Exia: Exia 100 mA / Exia NAMUR 60 mA
 Switching hysteresis: 5 mm ... 7 mm

Options

- Switch option .. /R22: 22 Ohm Resistor
 - Switch option .. /N: NAMUR EN 60947

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS / SIL1



Type **RUD40/./././././EXDG**

Housing: Aluminium anodized
 Ingress protection class: IP 65
 Mounting: Free positionable on the chamber

Ambient temperature:
 - with PVC connection cable: -20°C ... 80°C
 - with Silikon connection cable: -40°C ... 120°C
 - with PUR connection cable: -40°C ... 80°C
 - with Radox connection cable: -35°C ... 120°C

Switch function

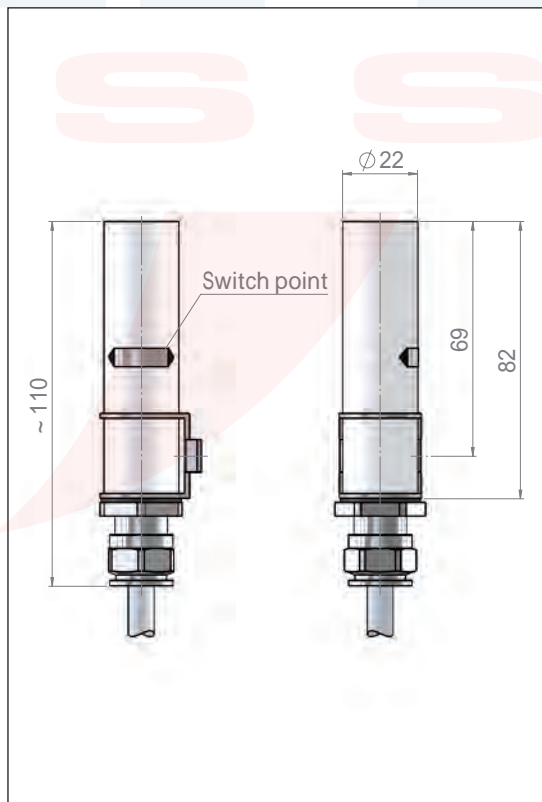
Function: Change over
 Switch behaviour: Bistable
 Switching capacity: U_N 250 V / P_{SN} 50 W/VA / P_{FN} 700 mW
 - NAMUR EN 60947: U_N 15 VDC / I_N 60 mA
 - with resistor: U_N 250 V / I_N 100 mA
 Switching hysteresis: 5 mm ... 7 mm

Options

- Switch option .. /R22: 22 Ohm Resistor
 - Switch option .. /N: NAMUR EN 60947

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS / SIL1



The top mounted level indicator-mini are based on a modular design and can be arranged individually.

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Type **ALERU40/..**
ALERU40/..EXIAG

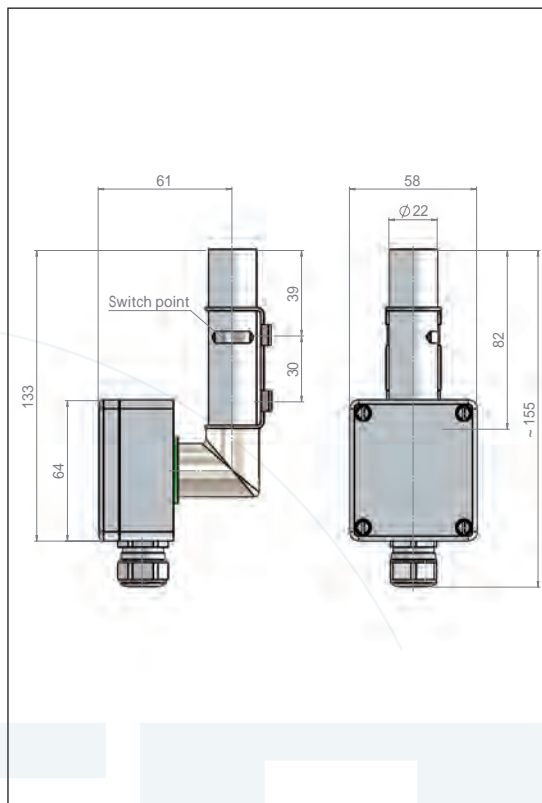
Housing: Aluminium anodized
 Cable entry: M20 x 1.5
 Ingress protection class: IP 65 (optional IP 66)
 Mounting: Free positionable on the chamber
 Ambient temperature: -40°C ... 130°C

Switch function
 Function: Change over
 Switch behaviour: Bistable
 Switching capacity: 230 V / 0.5 A / 40 VA
 Switching capacity / ATEX Exia: Exia 100 mA / Exia NAMUR 60 mA
 Switching hysteresis: 5 mm ... 7 mm

Options
 - Switch option .. /R22: 22 Ohm Resistor
 - Switch option .. /N: NAMUR EN 60947

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS / SIL1



Type **ALFRU40/..**
ALFRU40/..EXIAG

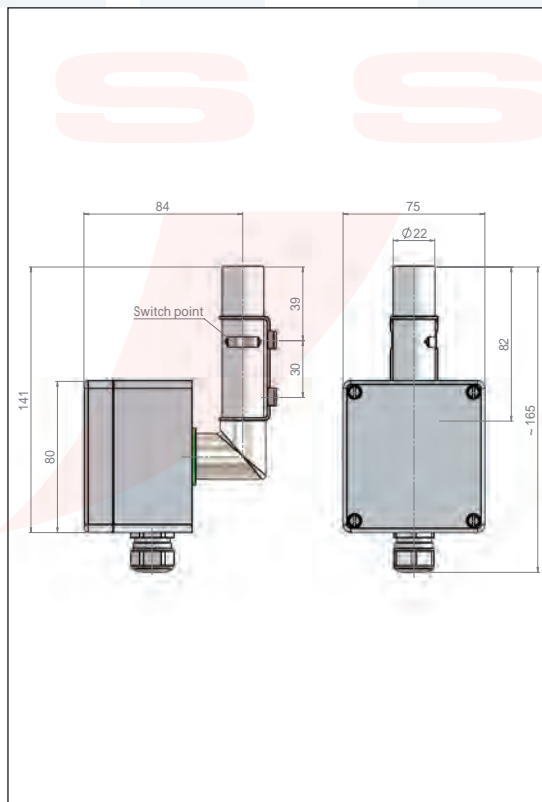
Housing: Aluminium anodized
 Cable entry: M20 x 1.5
 Ingress protection class: IP 65 (optional IP 66)
 Mounting: Free positionable on the chamber
 Ambient temperature: -40°C ... 130°C

Switch function
 Function: Change over
 Switch behaviour: Bistable
 Switching capacity: 230 V / 0.5 A / 40 VA
 Switching capacity / ATEX Exia: Exia 100 mA / Exia NAMUR 60 mA
 Switching hysteresis: 5 mm ... 7 mm

Options
 - Switch option .. /R22: 22 Ohm Resistor
 - Switch option .. /N: NAMUR EN 60947

Approvals / Certificates

ATEX / GOST / GL / BV / DNV / ABS / SIL1



The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

Top Mounted Level Indicator-Mini / Isolation / Heat tracing

Type

AIT AHT

Armaflex isolation AIT

Material quality:	Cellular plastic based on synthetic rubber
Fire behaviour:	Self-extinguishing, not drippy, not flammable
Nominal thickness:	32 mm
Ambient temperature:	-50°C ... 105°C
UV-resistance:	No

Armaflex isolation AHT

Material quality:	Cellular plastic based on synthetic rubber
Fire behaviour:	Self-extinguishing, not drippy, not flammable
Nominal thickness:	25 mm
Ambient temperature:	-50°C ... 150°C
UV-resistance:	Yes

Type

H..A H..B

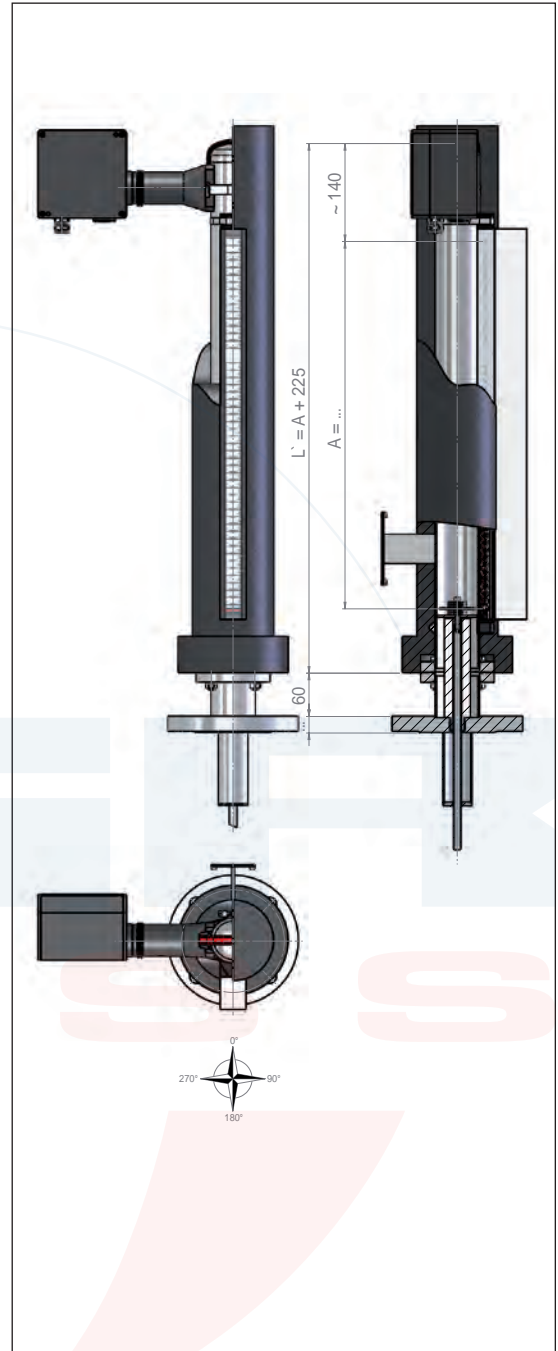
Self-regulating antifreeze heat tracing

Type:	H75A H75B acc. to EExe / T4
Terminal box:	GFK black with cable entry M25
Protective shell:	Fluoropolymer
Power supply:	230V AC
Power output:	76 W/m at 10°C
Holding temperature:	~10°C / Frost protection (32 mm Isolation necessary)
Steam-flushing:	No
Ambient temperature:	-40°C ... 75°C
Approvals / Certificates:	ATEX / DNV

Self-regulating antifreeze heat tracing

Type:	H150A H150B acc. to EExe / T2
Terminal box:	GFK black with cable entry M25
Protective shell:	Fluoropolymer
Power supply:	230V AC
Power output:	50 W/m at 10°C
Holding temperature:	~10°C / Frost protection (32 mm Isolation necessary)
Steam-flushing:	Yes
Minimale Ambient temperature:	-40°C ... 150°C
Approvals / Certificates:	ATEX / DNV

Approvals / Certificates



The top mounted level indicator-mini are based on a modular design and can be arranged individually.

Type key page 386 - 390

Type

SW

Rock-wool isolation SW

Material quality:

Rock-wool with chrome-nickel cover
(Removable)

Nominal thickness:

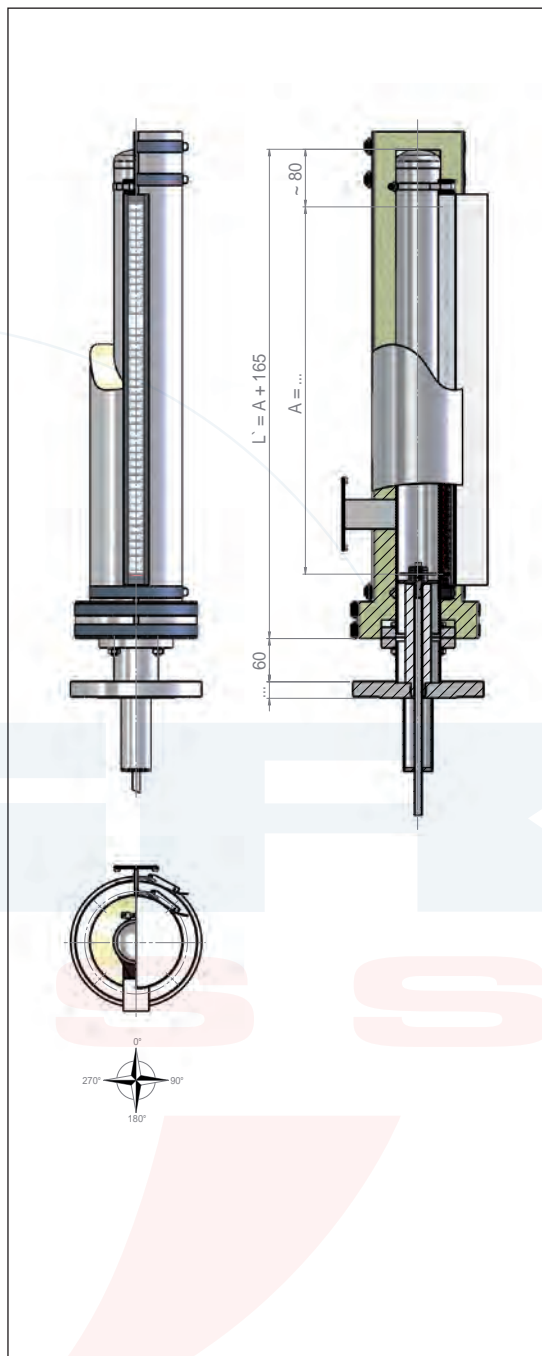
~50 mm

Ambient temperature:

-50°C ... 750°C

UV-resistance:

Yes



The top mounted level indicator-mini are based on a modular design and can be arranged individually.
Type key page 386 - 390