

Approvals



ATEX 94/9/EC



PED 97/23/EC



Germany

Technischer Überwachungsverein
Südwestdeutschland e.V.

IBExU

IBExU Institut für
Sicherheitstechnik GmbH



Physikalisch Technische
Bundesanstalt PTB

BWB

Bundesamt für Wehrtechnik
und Beschaffung



Germanischer Lloyd

KEMA

Netherlands

KEMA

LCIE

France

Laboratoire Central des
Industries Electriques



Bureau Veritas

DEMKO

Denmark

DEMKO



Norway

Det Norske Veritas



Russia

Gosgortekhnadzor OGS Oil & Gas Safety



GOST Permission to use Pattern Approval/EX



USA



Factory Mutual Research Corporation

Contents

KSR Level Sensors / Transmitters

Description	4
Applications	5
Compass, Product range	6
Type code	7

KSR Level Sensors / Transmitters

Stainless steel SS 316 Ti	8
PVC, Polypropylene, PVDF	9-11
Stainless steel ECTFE-coated	12
Stainless steel PTFE-lined	12
Food industry design	13
Sanitary design	14
 For hazardous area II 2G EEx d IIC T6-T4	15
 For hazardous area II 1/2G EEx ia IIC T4-T6	16
Guide tube length / Order information	17
Spherical floats	18
Cylindrical floats	19

1001-5

KSR Level Sensors / Transmitters

KSR Level Sensors/Transmitters are used to measure and transmit the level of liquids in conjunction with a KSR Control Unit. It is based on the float principle with magnetic transmission in a 3-wire potentiometer circuit.

A float with a built-in magnetic system actuates small reed contacts through the wall of the guide tube. These reed switches form a resistance measuring chain that continuously generates a voltage proportional to the height of the level.

The resistance measuring chain is closely stepped and is made up from small chips soldered onto a PCB. Due to this assembly the generated voltage is virtually continuous.

Depending on requirements and design different contact separations from 5 to 20 mm are available.

Signal transmission:

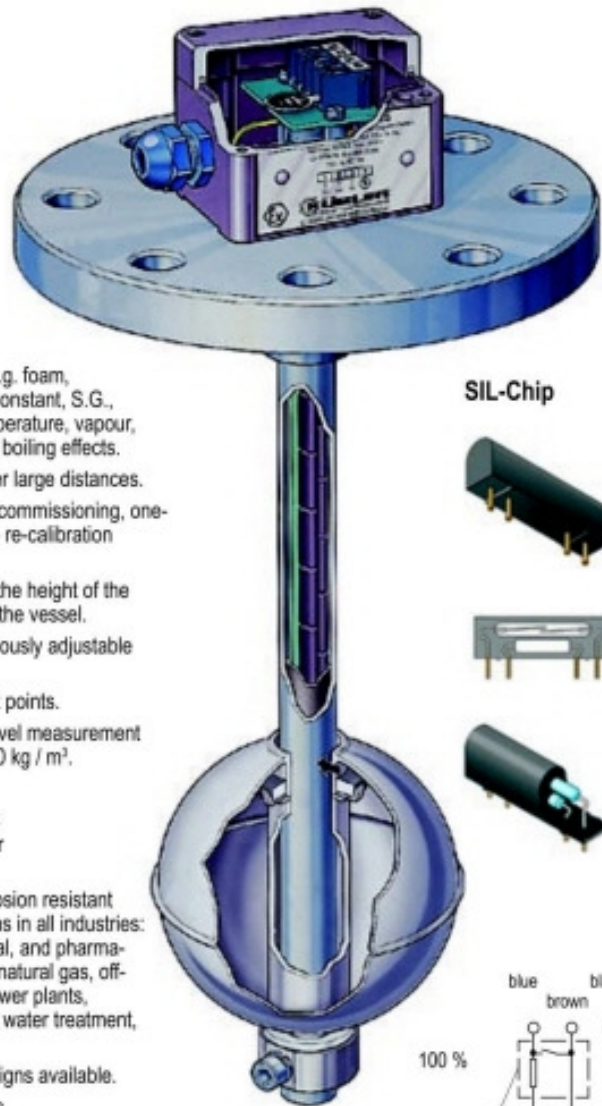
- External control units and set point relays please refer to catalogue 1011 or
- Loop-powered control units in terminal box, 4 ... 20 mA output.

Technical advantages

- The simple operating principle is suitable for a wide variety of applications.
- Continuous measurement of liquid levels independent of physical or chemical

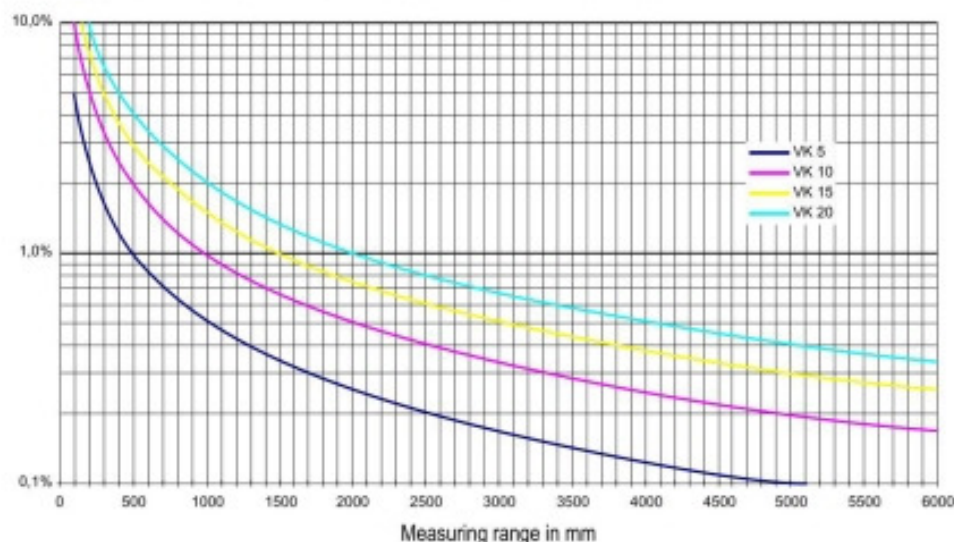
changes of the liquid, e.g. foam, conductivity, dielectric constant, S.G., pressure, vacuum, temperature, vapour, condensation, bubbles, boiling effects.

- Signal transmission over large distances.
- Simple installation and commissioning, one-time calibration only, no re-calibration necessary.
- Display proportional to the height of the level or the contents of the vessel.
- Set point relays continuously adjustable over full range.
- High repeatability of set points.
- Interface and product level measurement possible at $\Delta\text{-S.G.} \geq 50 \text{ kg/m}^3$.
- Application limits:
 $T = -80 \text{ }^\circ\text{C}$ to $+200 \text{ }^\circ\text{C}$
 $P = \text{vacuum to } 100 \text{ bar}$
 $\rho \geq 400 \text{ kg/m}^3$
- High availability of corrosion resistant materials for applications in all industries: Chemical, petrochemical, and pharmaceutical industry, liquid natural gas, offshore, ship-building, power plants, manufacturing industry, water treatment, food and beverages.
- Application specific designs available.
- Explosion-proof designs.
- Programmable head-mounted transmitter units 4 ... 20 (see catalogue 1011).



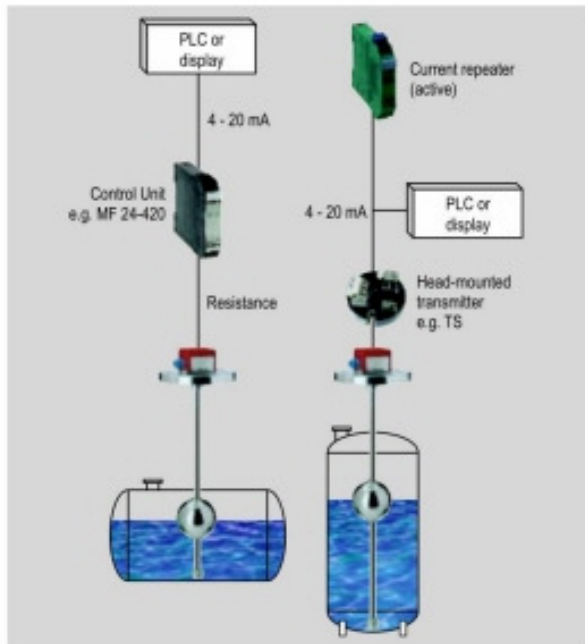
Circuit Diagram Level Sensor

Accuracy of KSR Level Sensors / Transmitters

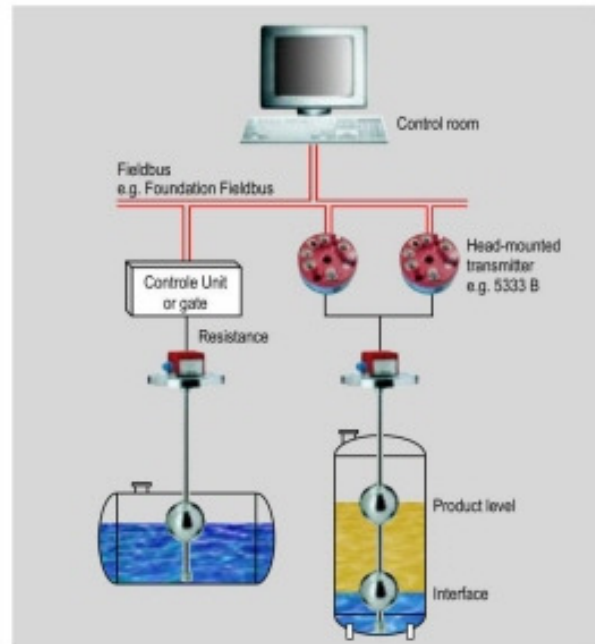


Applications

Standard

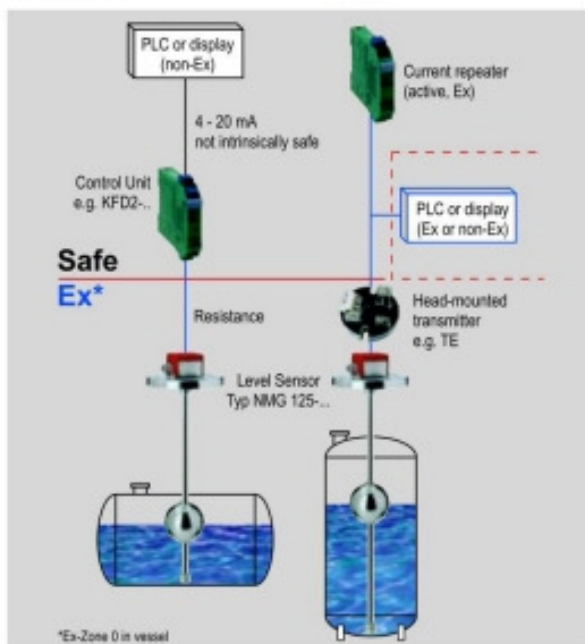


Fieldbus

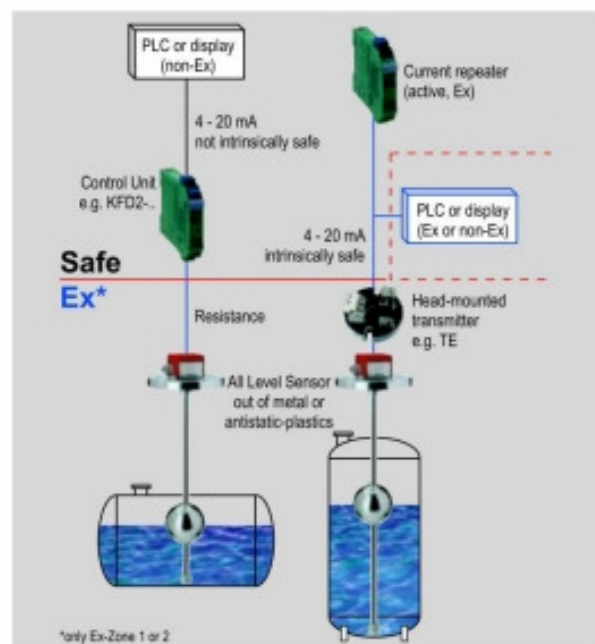


1001-5

Ex-Zone 0



Ex-Zone 1, 2



Compass



This page is intended to guide you through the product range of KSR KUEBLER for level sensors / transmitters.

Please select connecting option and material and turn to the page referred to in the following table.

		Material			
Process Connection		Stainless steel SS 316 Ti (1.4571)	Stainless steel SS 316 Ti (1.4571)	PVC PP PVDF	ECTFE PTFE
	<p>Thread BSP 3/8" BSP 1/2" BSP 1"</p>	Page 8		Page 9 / 10 / 11	
	<p>Thread BSP 1 1/2" BSP 2"</p>	Page 8	Page 15 / 16	Page 9 / 10 / 11	
	<p>Flange DN...PN..</p>	Page 8	Page 15 / 16	Page 9 / 10 / 11	Page 12

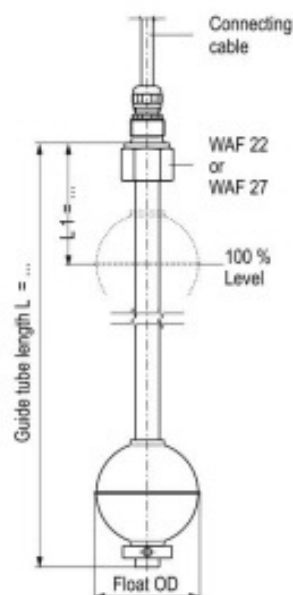
Type code

Code	1st Key	2nd Key	3rd Key
1	Electrical connection	Design process connection	Material process connection
...	- (none) - connecting cable	ER Mounting thread upwards (BSP)	V Stainless steel SS 316 Ti
	A Terminal box Aluminium	R Mounting thread downwards (BSP)	VE Stainless steel electro-polished
	AB Terminal box Polypropylene	ENPT Mounting thread upwards (NPT)	VEC Stainless steel ECTFE-coated
	AP Terminal box Polyester	NPT Mounting thread downwards (NPT)	VTF Stainless steel PTFE-lined
	AVT Terminal box Stainless steel SS 316 Ti with screw cap	MR Dairy fitting acc. to DIN 11851	T Titanium
	ADF Terminal box Aluminium flameproof	F Flange (DIN, ANSI, JIS)	HB Hastelloy B
	ASC4 Coupler plug C 164-232-F-4P	FC Clamp connection acc. to DIN 32676	HC Hastelloy C
	ASC5 Coupler plug C 164-332-F-5P	IS Sanitary nozzle (Ingoldstutzen)	P PVC
	ASC7 Coupler plug C 164-437-F-7P		PP Polypropylene
	ASH Coupler plug Harting HAN 7 D		PF PVDF
	ASQ Coupler plug QUICKON max.4-pin		
2	Size process connection		
...	Thread size in inches		
...	Dairy fitting size DN 50 - DN 150		
DIN	.../ Flange nominal size DN 50 - DN 200	.../ Flange pressure rating PN 6 - PN 100	... Flange face Standard form C optional E,A,F,N
ANSI	2"- 8"	Class 150 - 600	Standard RF optional RTJ,FF,ST,SG
JIS	2"(DN 50) - 8"(DN 200)	5 K- 63 K	Standard RF optional RTJ,FF,ST,SG
Clamp	DN 25 - DN 100; 1"- 4"		
3	Guide tube material	Contact separation	Optional code
...	V Stainless steel SS 316 Ti	K 18 18 mm	HT.. High temperature design* 120°C...+200°C
	VE Stainless steel electro-polished	K 15 15 mm	TT.. Low temperature design* -10°C...-80°C
	VEC Stainless steel ECTFE-coated	K 10 10 mm	*only contact separations 5/10/15 mm
	VTF Stainless steel PTFE-lined	K 5 5 mm	PT100 Temperature probe PT 100 (2-,3- or 4-core)
	T Titanium		..TH.. Temperature switch ...°C - closing or opening
	HB Hastelloy B		
	HC Hastelloy C		
	P PVC		
	PP Polypropylene		
	PF PVDF		
4	Option, Head-mounted transmitter in terminal box see catalogue 1011		
...	TS Standard design type TS		
	TE Ex-design type TE		
	TEH Programmable type TEH-Hart®		
	TD Profibus-Foundation Fieldbus type 5350 B		
5	Guide tube length	OD Guide tube	
...	L.../ length in mm	... OD in mm	
6	Float design see page 18-19		
...	.../ Material (code 3, 1st key)	... Float OD in mm	
7	Connection cable	Cable material	
...	.../ length in Meter	- PVC grey	
		blue PVC blue	
		SIL Silicone	
		ÖL Ölflex	

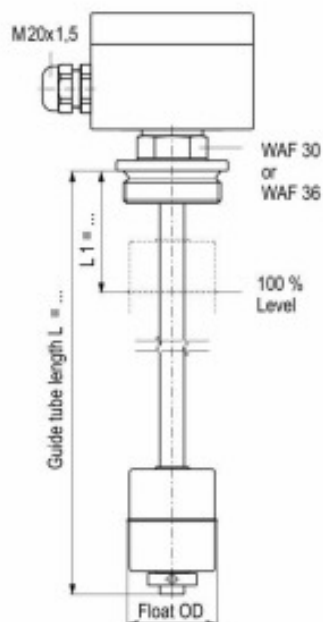
Ordering examples

Code	Connection design / material	Connection size	Guide tube material contact separation	Option	Guide tube length / OD	Float	Cable length / material
	1	2	3	4	5	6	7
	AFV	50/6/F	VK15/TT30	TS	L950/12	V44R	-

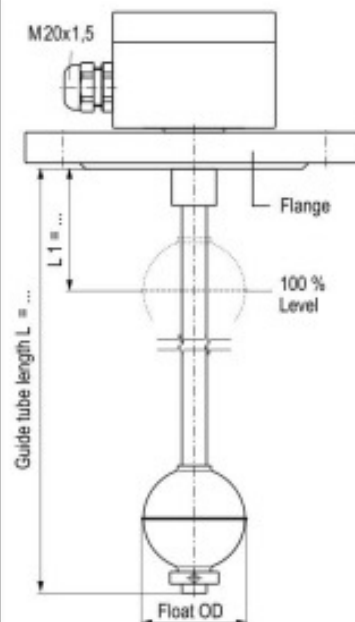
Stainless steel SS 316 Ti (1.4571)



ERV-...-VK-L...-V.R-1..



ARV-...-VK-L...-V.R

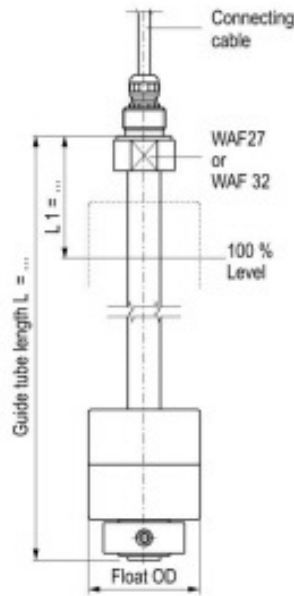


AFV-...-VK-L...-V.R

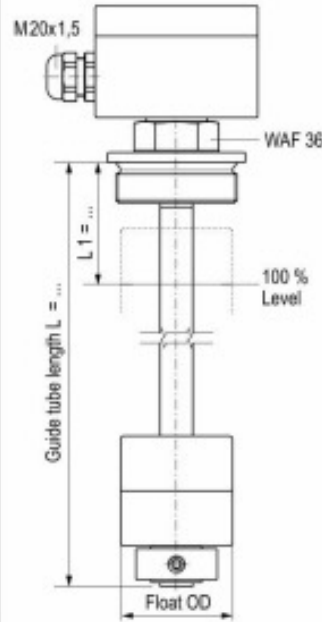
Electrical connection	Cable PVC grey, PVC blue, Silicone, Ölflex		Terminal box Aluminium 80 x 75 x 57 mm Option Polypropylene, Polyester, Stainless steel			
Process connection	Mounting thread upwards BSP 1/2" BSP 1/2"		Mounting thread downwards BSP 1 1/2" or BSP 2"		Mounting flange DIN DN50-DN200, PN6-PN100 ANSI 2"-8", Class 150-600	
Guide tube OD	12 or 14 mm	18 mm	12 or 14 mm	18 mm	12 or 14 mm	18 mm
Guide tube length max.	3000 mm	6000 mm	3000 mm	6000 mm	3000 mm	6000 mm
Float	V44R, V52R, V62R, V83R V80R, V98R, V105R, V120R		guide tube - OD 12 or 14 mm guide tube - OD 18 mm			
Limit S.G. 85% Nominal S.G. 50% Nominal pressure	see KSR Floats page 18/19					
Temperature range Standard	PVC- / Ölflex cable -10°C... +80°C Silicone cable -10°C...+120°C		-20°C...+120°C			
High temperature			Optional code (HT..) +120°C...+200°C			
Low temperature			Optional code (TT..) -20°C... -80°C			
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm					
HT- or TT-Design			K 15 (T..) = 15 mm K 10 (T..) = 10 mm K 5 (T..) = 5 mm			
Overall resistance of measuring chain dependent on length and contact separation						
Cable length	Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, shielded					
Orientation	vertical ± 30°					
Ingress protection	IP 65					
Materials SS 316 (1.4435), 1.4539, Titanium, Hastelloy and others available upon request						
Head-mounted transmitter in terminal box see catalogue 1011						

1001-5

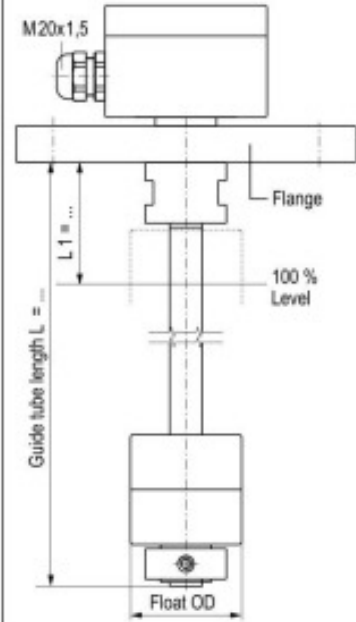
PVC



ERP-...-PK..-L../..-P..R-1..



APRP-2"-PK..-L../..-P..R



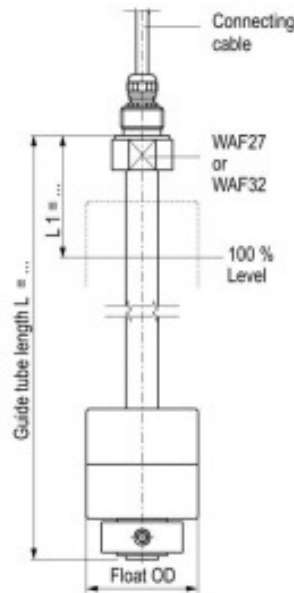
APFP-.../10-PK..-L../..-P..R

Electrical connection	Cable PVC grey, PVC blue, Silicone, Oiflex		Terminal box Polyester 80 x 75 x 55 mm			
Process connection	Mounting thread upwards BSP 1/2"	BSP 1"	Mounting thread downwards BSP 2"		Mounting flange DIN DN65-DN125, PN10 Form A ANSI 2 1/2"-5", Class 150 FF	
Guide tube - OD	16 mm	20 mm	16 mm	20 mm	16 mm	20 mm
Guide tube length max.	3000 mm	5000 mm	3000 mm	5000 mm	3000 mm	5000 mm
Float	P55R P55R/26, P80R		guide tube - OD 16 mm guide tube - OD 20 mm			
Limit S.G. 85%	see KSR Floats page 18/19					
Nominal S.G. 50%						
Nominal pressure	max. 3 bar					
Temperature range	0°C... +60°C					
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm					
Overall resistance of measuring chain dependent on length and contact separation						
Cable length	Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, shielded					
Orientation	vertical ± 30°					
Ingress protection	IP 65					
			Head-mounted transmitter in terminal box see catalogue 1011			

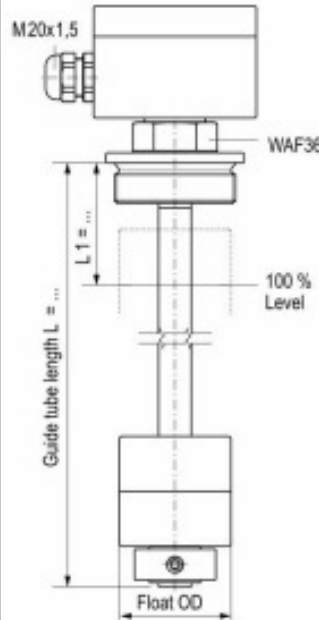
KSR Level Sensors / Transmitters



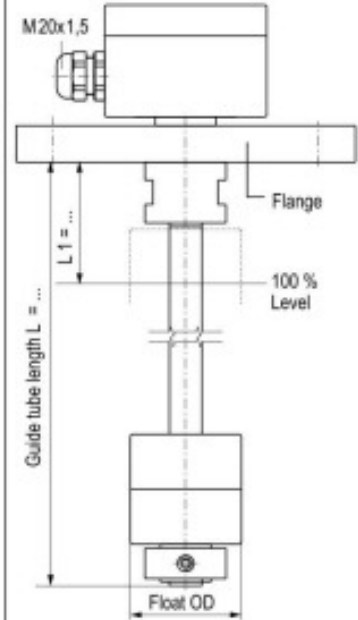
Polypropylene



ERPP-...-PPK.-L../.-PP.R-1..



APRPP-2"-PPK.-L../.-PP.R



APFPP-.../10-PPK.-L../.-PP.R

Electrical connection	Cable PVC grey, PVC blue, Silicone, Ölflex		Terminal box Polyester 80 x 75 x 55 mm			
Process connection	Mounting thread upwards BSP 1/2"	BSP 1"	Mounting thread downwards BSP 2"		Mounting flange DIN DN65-DN125, PN10 Form A ANSI 2 1/2"-5", Class 150 FF	
Guide tube - OD	16 mm	20 mm	16 mm	20 mm	16 mm	20 mm
Guide tube length max.	3000 mm	5000 mm	3000 mm	5000 mm	3000 mm	5000 mm
Float	PP55R PP55R/26, PP80R		guide tube OD 16 mm guide tube OD 20 mm			
Limit S.G. 85% Nominal S.G. 50%	see KSR Floats page 18/19					
Nominal pressure	max. 3 bar					
Temperature range	-10°C... +80°C					
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm					

Overall resistance of measuring chain dependent on length and contact separation

Cable length Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, **shielded**

Orientation vertical ± 30°

Ingress protection IP 65

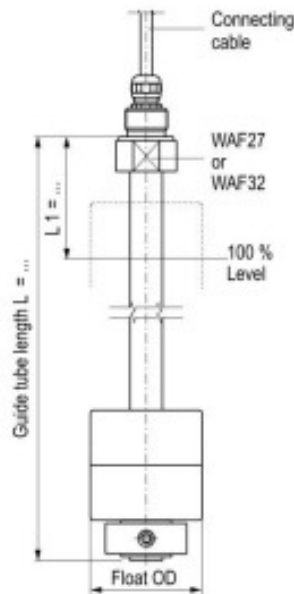
Head-mounted transmitter in terminal box see catalogue 1011

1001-5

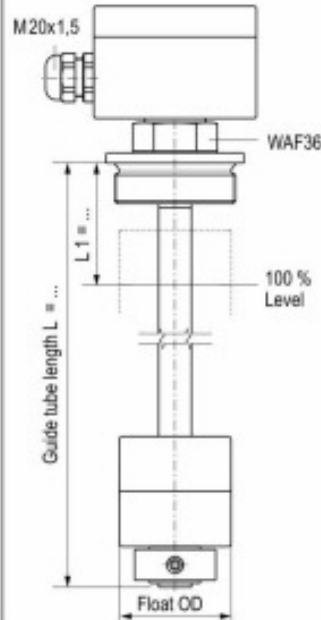
KSR Level Sensors / Transmitters



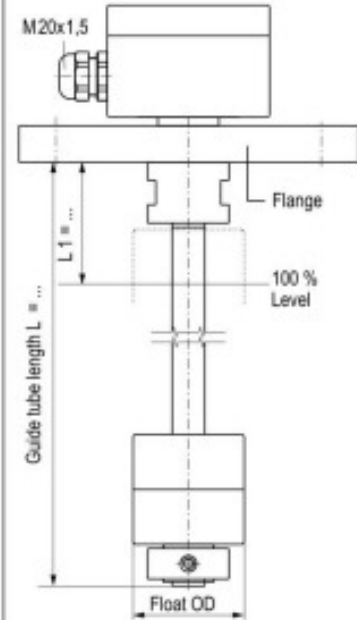
PVDF



ERPF-...-PFK-L...-PF.R-1..



APRPF-2"-PFK-L...-PF.R

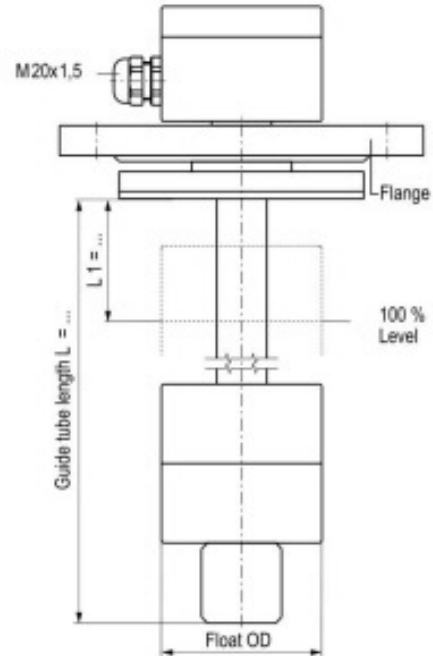
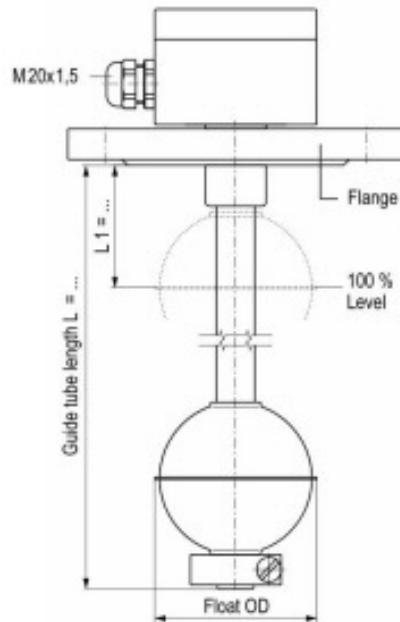


APFPF-.../10-PFK-L...-PF.R

Electrical connection	Cable PVC grey, PVC blue, Silicone, Ölflex		Terminal box Polyester 80 x 75 x 55 mm			
Process connection	Mounting thread upwards BSP 1/2"	BSP 1"	Mounting thread downwards BSP 2"		Mounting flange DIN DN65-DN125, PN10 Form A ANSI 2 1/2"-5", Class 150 FF	
Guide tube - OD	16 mm	20 mm	16 mm	20 mm	16 mm	20 mm
Guide tube length max.	3000 mm	5000 mm	3000 mm	5000 mm	3000 mm	5000 mm
Float	PF55R guide tube OD 16 mm PF55R/26, PF80R guide tube OD 20 mm					
Limit S.G. 85% Nominal S.G. 50%	see KSR Floats page 18/19					
Nominal pressure	max. 3 bar					
Temperature range	-10°C... +100°C					
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm					
Overall resistance of measuring chain dependent on length and contact separation						
Cable length	Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, shielded					
Orientation	vertical ± 30°					
Ingress protection	IP 65					
			Head-mounted transmitter in terminal box see catalogue 1011			

1001-5

**Stainless steel SS 316 Ti (1.4571), ECTFE-coated or PTFE-lined
Option: anti-static**



AFVEC-.../...-VECK.-L.../18-VEC.R

AFVTF-.../...-VTFK.-L.../25-TF.R

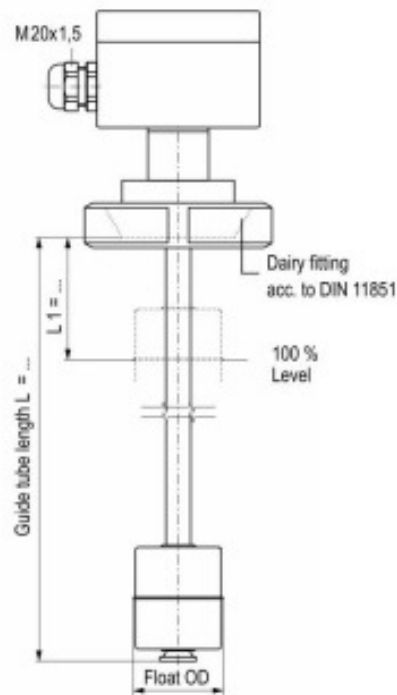
Electrical connection	Terminal box Aluminium 80 x 75 x 57 mm, Option: Polypropylene, Polyester, Stainless steel	
Process connection	Mounting flange to DIN DN50-DN200, PN6-PN100 or to ANSI 2"-8", Class 150-600	
Guide tube - OD	18 mm	25 mm, PTFE-lining = 3.5 mm thick
Guide tube length max.	4000 mm	5000 mm
Float	VEC81R, VEC99R, VEC106R, VEC121R	TF80R, TF90R
Limit S.G. 85% Nominal S.G. 50%	see KSR Floats page 18/19	
Nominal pressure	see KSR Floats page 18/19	max. 3 bar
Temperature range	dep. on liquid	
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm	
Overall resistance of measuring chain dependent on length and contact separation		
Cable length	Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, shielded	
Orientation	vertical ± 30°	
Ingress protection	IP 65	
	Head-mounted transmitter in terminal box see catalogue 1011	

1001-5

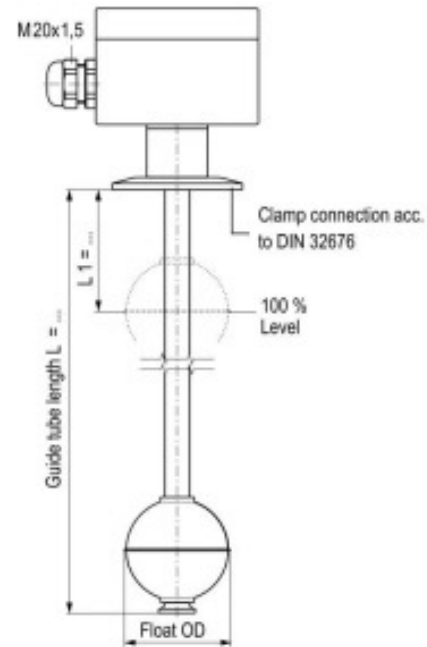
KSR Level Sensors / Transmitters



Food industry design - Stainless steel SS 316 L



AMRV-...-VEK_-L_/_-VE.R

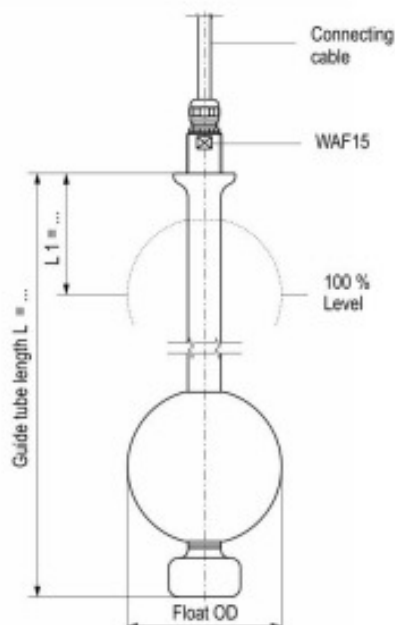


AFCV-...-VEK_-L_/_-VE.R

Electrical connection	Terminal box Aluminium 80 x 75 x 57 mm, Option: Polypropylene, Polyester, Stainless steel	
Process connection	Dairy fitting acc. to DIN 11851 DN50-DN150	Clamp connection acc. to DIN 32676 DN25-DN100 or 1"-4"
Guide tube - OD	12 mm, 14 mm, 18 mm	
Guide tube length max.	3000 mm guide tube OD 12 and 14 mm, 6000 mm guide tube OD 18 mm	
Float	VE44R, VE52R, VE62R, VE83R VE80R, VE98R, VE105R, VE120R	guide tube OD 12 and 14 mm guide tube OD 18 mm
Limit S.G. 85%	see KSR Floats page 18/19	
Nominal S.G. 50%	see KSR Floats page 18/19	
Nominal pressure		
Temperature range	-20°C...+120°C	
High temperature	Optional code (HT..) +120°C...+200°C	
Low temperature	Optional code (TT..) -20°C... -80°C	
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm	
HT- or TT-Design	K 15 (.T.) = 15 mm K 10 (.T.) = 10 mm K 5 (.T.) = 5 mm	
Overall resistance of measuring chain dependent on length and contact separation		
Cable length	Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, shielded	
Orientation	vertical ± 30°	
Ingress protection	IP 65	
	Head-mounted transmitter in terminal box see catalogue 1011	

1001-5

Sanitary design - Stainless steel SS 316 L



ERV-3/6"-VK.-L../17-V80R2/3A/..-1..

Electrical connection	Cable: PVC grey, PVC blue, Silicone, Ölflex	Option: Terminal box
Process connection	Mounting thread upwards BSP 3/8"	Mounting flange to DIN or ANSI Dairy fitting acc. to DIN 11851 Clamp connection acc. to DIN 32676 Sanitary nozzle (Ingoldstutzen)
Guide tube - OD	17.2 mm	Stainless steel 316 L (1.4435) or Uranus B6 (1.4539) - ground and polished
Guide tube length max.	5000 mm	
Float	V80R2/3A/..	Stainless steel 316 L (1.4435) or Uranus B6 (1.4539) - ground and polished
Limit S.G. 85%	715 kg/m ³	
Nominal S.G. 50%	1220 kg/m ³	
Nominal pressure	25 bar	
Temperature range Standard	PVC- / Ölflex cable -10°C... +80°C Silicone cable	-20°C...+120°C -10°C...+120°C
High temperature		Optional code (HT..) +120°C...+200°C
Low temperature		Optional code (TT..) -20°C... -80°C
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm	
HT- or TT-Design		K 15 (.T.) = 15 mm K 10 (.T.) = 10 mm K 5 (.T.) = 5 mm
Overall resistance of measuring chain dependent on length and contact separation		
Cable length	Distance between level sensor/transmitter and control unit max. 2000 m, 3-core, shielded	
Orientation	vertical ± 30°	
Ingress protection	IP 65	

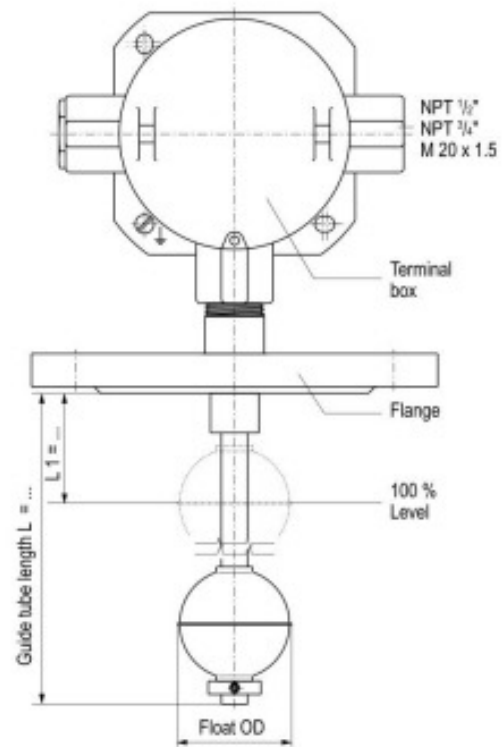
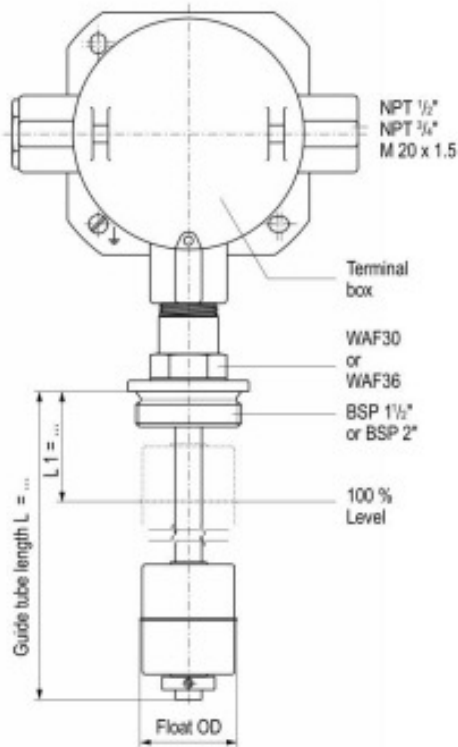
Head-mounted transmitter in terminal box see catalogue 1011

1001-5

KSR Level Sensors / Transmitters



Ex II 2G EEx d IIC T6-T4 LCIE 03 ATEX 6156 X
Stainless steel SS 316 Ti (1.4571)



AF-ADF-RV...VK...L...-V.R

AF-ADF-FV...-VK...L...-V.R

Electrical connection	Terminal box Aluminium	
Process connection	Mounting thread downwards BSP 1 1/2" or BSP 2"	Mounting flange DIN DN50-DN350, PN6-PN40 ANSI 2"-14", Class 150-300
Guide tube - OD	12 mm, 14 mm, 18 mm,	
Guide tube length max.	3000 mm guide tube OD 12 and 14 mm, 6000 mm guide tube OD 18 mm	
Float	V44R, V52R, V62R, V83R V80R, V98R, V105R, V120R	guide tube OD 12 and 14 mm guide tube OD 18 mm
Limit S.G. 85% Nominal S.G. 50% Nominal pressure	see KSR Floats page 18/19	
Temperature range	T4 - 120°C, T5 - 95°C, T6 - 80°C	
Contact separation	K 18 = 18 mm K 15 = 15 mm K 10 = 10 mm K 5 = 5 mm	
Overall resistance of measuring chain dependent on length and contact separation		
Connection cable	3-core, shielded	
Orientation	vertical ± 30°	
Ingress protection	IP 65	
	Head-mounted transmitter in terminal box see catalogue 1011	

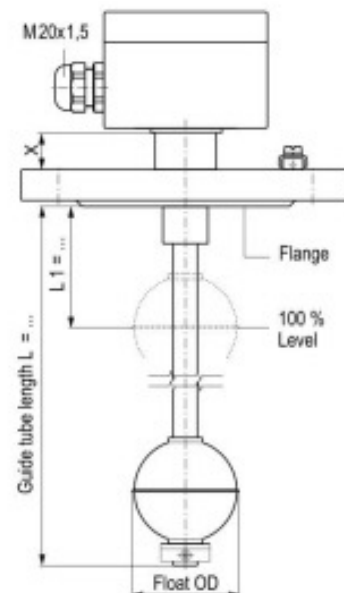
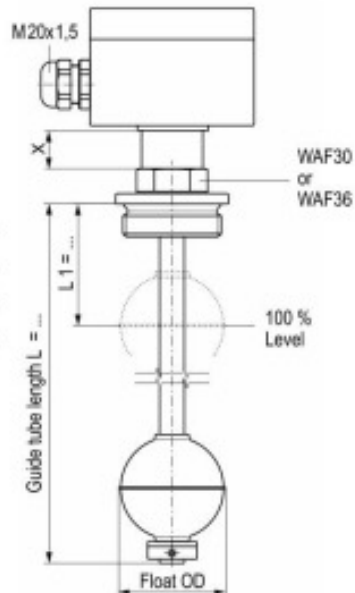
1001-5

KSR Level Sensors / Transmitters



II 1/2G EEx ia IIC T4-T6 KEMA 01 ATEX 1052 X
II 2D T80°C IP6X
Stainless steel SS 316 Ti (1.4571)

Process temperature	Raised terminal box
	X
< 60 °C	0 mm
< 100 °C	60 mm



NMG125-ARV...-VK...-L...-V...R- (MU)

NMG125-AFV...-VK...-L...-V...R- (MU)

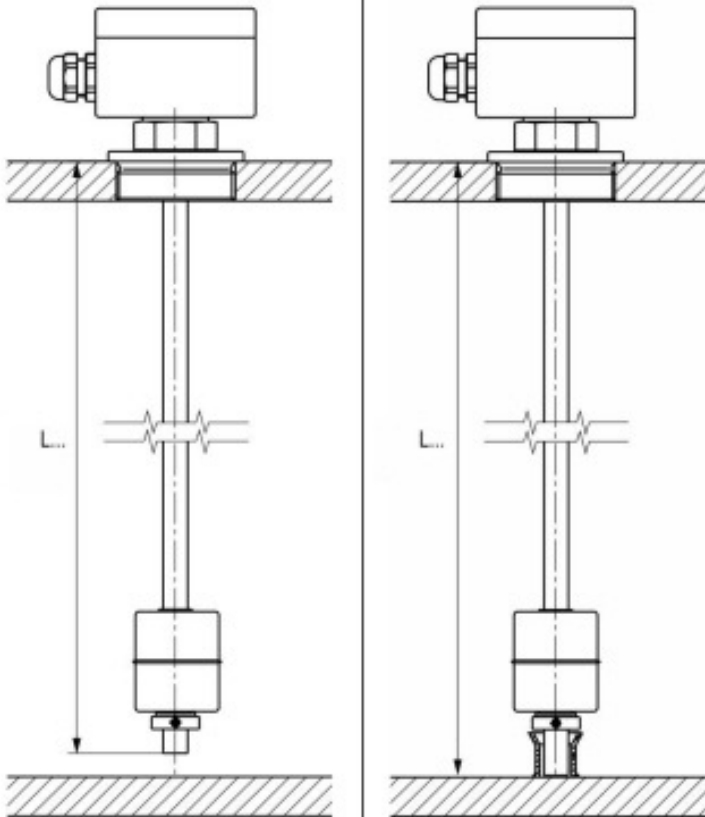
Electrical connection	Terminal box Aluminium 80 x 75 x 57 mm, Option Stainless steel, Polyester		
Process connection	Mounting thread downwards BSP 1 1/2" or BSP 2"	Mounting flange DIN DN50-DN200, PN6-PN100 ANSI 2"-8", Class 150-600	
Guide tube - OD	12 mm, 14 mm, 18 mm		
Guide tube length max.	see option A and B on page 17		
Float	V44R, V52R, V62R, V83R V80R, V98R, V105R, V120R	guide tube OD 12 and 14 mm guide tube OD 18 mm	
Limit S.G. 85%	see KSR Floats page 18/19		
Nominal S.G. 50%			
Nominal pressure			
Temperature class		T4	T5
Surface temperature	max.	135°C	100°C
Process temperature	max.	100°C	65°C
Ambient temperature at terminal box	max.	60°C	60°C
Temperature class		T6	
Surface temperature	max.	85°C	
Process temperature	max.	50°C	
Ambient temperature at terminal box	max.	60°C	
Contact separation	..K 18 = 18 mm ..K 15 = 15 mm ..K 10 = 10 mm ..K 5 = 5 mm		
Overall resistance of measuring chain	3.2 kOhm ... 50 kOhm	Optional code MU approx. 1000 Ohm	
Control circuit	for hazardous area EEx ia IIC, only for use in certified intrinsically safe circuits Transmitter external with max. 120 mA, max. 28 V Head-mounted transmitter acc. to certificate of transmitter		
Type code MU	only for use in certified intrinsically safe circuits with max. 50 mA, max. 20 V		
Connection cable	3-core, shielded		
Orientation	vertical ± 30°		
Ingress protection	IP 65		
	Materials Titanium and Hastelloy upon request		
	Head-mounted transmitter in terminal box see catalogue 1011		

1001-5

KSR Level Sensors / Transmitters



Limitation of max. guide tube length for
KSR Level Sensor/Transmitter type NMG125....

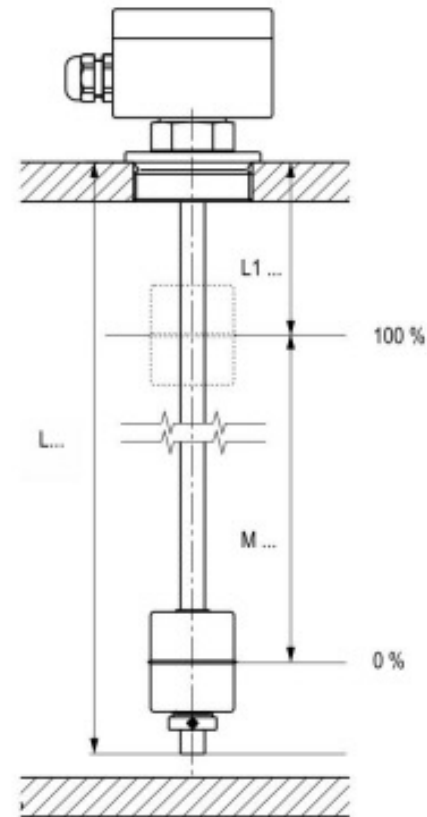


Option A
Mounted on top of tank

Option B
Mounted on top of tank and
fixed at bottom of tank

max. length	Guide tube	max. length
660 mm	OD 12 x 1	3500 mm
940 mm	OD 14 x 1	5000 mm
1600 mm	OD 14 x 2	6000 mm
3000 mm	OD 18	6500 mm

Order information
100% level

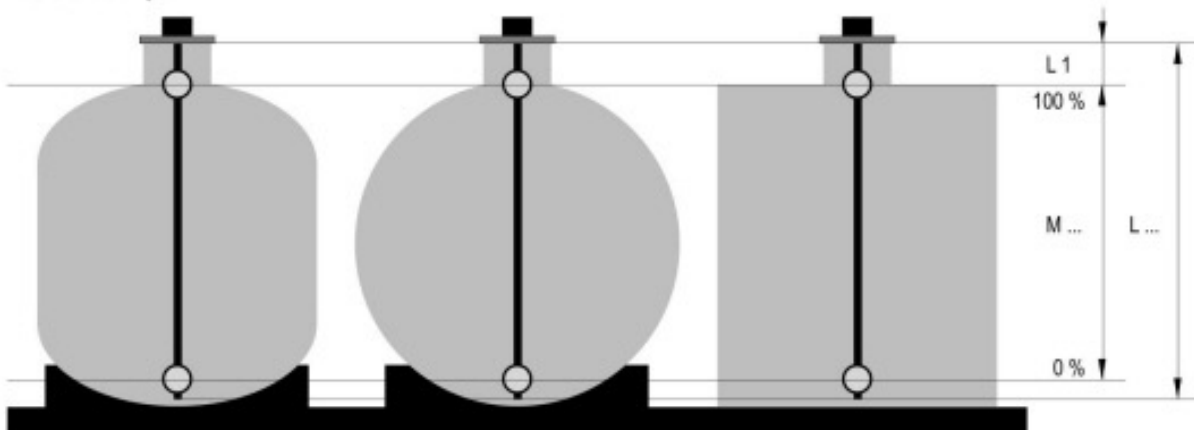


Please always provide **dimension L1** and **insertion length L**.
(It is not possible to change the measuring range after manufacture).

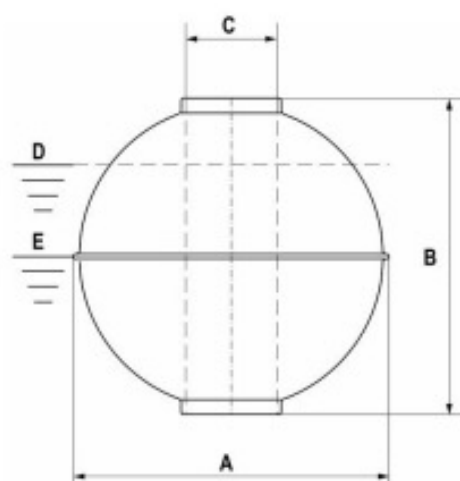
L1 = 100%-level (distance flange face to waist of float)
M = Measuring range (distance 0% - 100%)
L = Insertion length of level sensor/transmitter

1001-5

Installation examples



Spherical floats



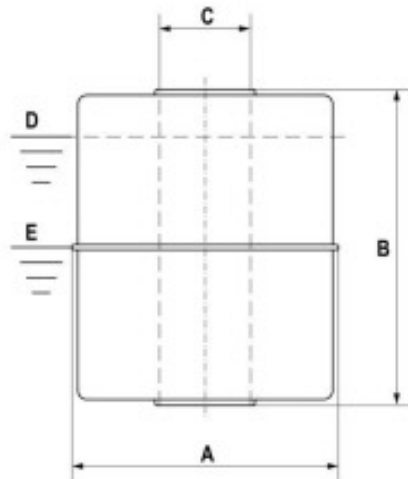
D = Limit S.G.
at 85% immersed float

E = Nominal S.G.
at 50% immersed float

Material	Type Code 6	A	B	C	Max. operating pressure	Max. operating temperature	Weight	Volume	Limit S.G. (D) 85%	Nominal S.G. (E) 50%
		mm	mm	mm	bar	°C	g	cm ³	kg/m ³	kg/m ³
Stainless steel SS 316 Ti (1.4571)	V52R	52	52	15	40	250	35	57	727	1236
	V62R	62	61	15	32	250	52	102	597	1015
	V83R	83	81	15	25	250	89	254	412	701
	V80R	80	76	23	25	250	104	198	617	1049
	V98R	98	96	23	25	250	202	423	561	954
	V105R	105	103	23	25	250	234	529	520	884
	V120R	120	117	23	25	250	272	811	394	671
	V120R/38	120	116	38	25	250	332	726	537	914
	V200R	200	192	56	16	250	1710	3460	581	989
	V300R	300	294	56	16	250	3820	13120	342	582
Titanium Grade 2 (3.7035)	T52R	52	52	15	25	250	30	57	623	1060
	T52R/0,6	52	52	15	60	250	38	57	790	1342
	T52R/0,8	52	52	15	80	250	48	57	997	1696
	T62R	62	62	15	25	250	42	102	482	820
	T83R	83	81	15	25	250	75	254	343	583
	T80R	80	76	23	25	250	146	198	866	1473
	T98R	98	96	23	25	250	193	423	536	912
	T105R	105	103	23	25	250	187	529	416	707
	T120R	120	117	23	25	250	217	811	315	535
Stainless steel SS 316 Ti (1.4571) ECTFE-coated	VEC81R	81	77	22	25	dep. on liquid	128	238	634	1077
	VEC99R	99	97	22	25	dep. on liquid	245	441	653	1111
	VEC106R	106	104	22	25	dep. on liquid	278	549	595	1011
	VEC121R	121	118	22	3	dep. on liquid	310	837	435	740

1001-5

Cylindrical floats



D = Limit S.G.
at 85% immersed float

E = Nominal S.G.
at 50% immersed float

Material	Type Code 6	A mm	B mm	C mm	Max.operating pressure bar	Max.operating temperature °C	Weight g	Volume cm ³	Limit S.G. (D) 85% kg/m ³	Nominal S.G. (E) 50% kg/m ³
Stainless steel SS 316 Ti	V44R	44	52	15	16	250	38	60	740	1258
Titanium Grade 2 (3.7035)	T44R	44	52	15	16	250	32	60	645	1098
PVC	P55R	55	54	22	3	60	68	99	805	1369
	P55R/26	55	80	26	3	60	109	148	869	1477
	P80R	80	79	25	3	60	162	330	577	981
Polypropylene	PP55R	55	54	22	3	80	50	99	592	1007
	PP55R/26	55	80	26	3	80	79	148	630	1071
	PP80R	80	79	25	3	80	123	330	438	745
PVDF	PF55R	55	69	22	3	100	88	128	809	1375
	PF55R/26	55	80	26	3	100	143	148	1140	1938
	PF80R	80	79	25	3	100	198	330	706	1200
PTFE	TF80R	80	100	28	3	dep. on liquid	250	441	667	1134
	TF90R	90	100	28	3	dep. on liquid	285	575	584	992