



FM-02N

Level Measuring Transmitter for Continual Level Recording

Features

- / Level meas. irrespective of foam, conductivity, pressure and temperature
- / Remote display over extremely large distances
- / Simple assembly, only one-time balancing on commissioning
- / Separation layer measurement of fluids of diff. densities possible
- / Level recording even in narrow spaces, semi-flexible transmitter
- / Measuring transmitter for food applications in 3-A version

Description:

The FM-02N series of level measuring transmitters operates according to the principle of float with magnetic transmission. The float is raised by increasing fluid level in the vessel; subsequently due to the magnetic field of a permanent magnet located within the float it actuates the contacts of a reed contact/resistance chain in the sliding tube. The output signal is therefore a potentiometer value or a 4...20 mA-signal proportional to the level.

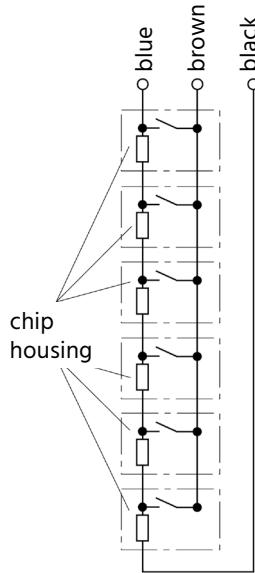
Application:

The FM-02N level measuring transmitters are suited for measuring and monitoring the level of nearly all types of fluid media that are not hostile to the materials being used in vessels up to a height of 10 m.



Function:

A ring magnet mounted inside the float actuates with its magnetic field passing through the sliding tube's wall tiny reed contacts which continually tap the measuring voltage on a resistance measuring chain (voltage dividers). This is proportional to the height of the level. The resistance measuring chain is very closely stepped and consists of small chips that are soldered on a PCB. Due to this type of construction the resulting measuring voltage is almost continual. Depending on the design of the measuring transmitter grids (distance from chip to chip) of 5 to 15 mm are available.



internal circuit diagram level measurement emitter

Accuracy:

Due to the functioning principle of the level measuring transmitter the measuring accuracy cannot be specified as a constant. It rather depends on the measuring length and the grid measuring chain being used. The maximum measuring error can be calculated on the basis of the following equation

$$\frac{\text{Grid}}{\text{Meas. length in mm}} \times 100 \quad \text{e.g.} \quad \frac{12.7 \text{ mm}}{2000 \text{ mm}} \times 100 = 0.635\%$$

Versions:

Every level measuring transmitter consists of following 4 main component groups which are available in different versions depending on the technical requirements:

- sliding tube
- measuring chain
- float
- process connection

Secondary instrumentation such as measuring transmitter, limit value emitter, displays and isolated transmitters (Zener barrier) complete the entire measuring system.

Sliding tube:

The sliding tube is the core of the level measuring transmitter as it holds the measuring chain and it can be supplied in a number of materials, diameters and grid dimensions. Material and diameters:

- st. steel (Ø 12 mm, 14 mm, 16 mm, 18 mm, 40 mm)
- st. steel ECTFE-coated (Ø 11 mm, 17 mm)
- st. steel PFA-coated (Ø 11 mm, 17 mm)
- Titanium (Ø 12 mm, 14 mm, 18 mm)
- Alloy C (Ø 12 mm, 18 mm)
- PVC (Ø 12 mm, 16 mm, 20 mm)
- PP (Ø 12 mm, 16 mm, 20 mm)
- PVDF (Ø 12 mm, 16 mm, 20 mm)

Grid:

Depending on the diameter and the length of the sliding tube and the version of the FM-02N the following grids of the measuring chain can be supplied: 5 mm, 10 mm, 12.7 mm and 15 mm. The steps 5 mm, 10 mm and 15 mm can additionally be supplied as high-temperature- version HTF and HT (please check table below)

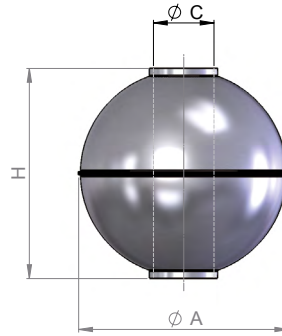
Grid	Resolution (mm)	Temp. range (mm)
5	5 mm	-30...+130°C
5HTF	5 mm	-30...+200°C
5HT	5 mm	-40...+250°C
10	10 mm	-30...+130°C
10HTF	10 mm	-30...+200°C
10HT	10 mm	-40...+250°C
12.7	12.7 mm	-30...+130°C
15	15 mm	-30...+130°C
15HTF	15 mm	-30...+200°C
5HT	5 mm	-40...+250°C
0.2	0,2 mm	-30...+125°C
0.2HT	0,2 mm	-40...+250°C

Float:

Each version has a matching float. However, if the application requires other values in terms of maximum pressure, temperature or low specific gravity, an alternative float can also be fitted in as far as it fits with its bore on the sliding tube of that version. The table 1 and 2 provides an overview of spherical and cylindrical floats, their dimensions, weights and immersion depths.



Table 1: Spherical Float - Dimensions

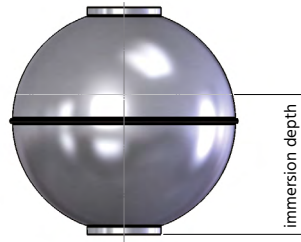


* = Design temperature 200°C, higher temperatures must be calculated
 ** = acc. to Atex (conductive)

Type	Material	ØA	H	ØC	Density min.	Pressure range	Temperature range	L1 min.	U min.	Float distance min.	Weight
		(mm)	(mm)	(mm)	(kg/m ³)	(bar)	(°C)	(mm)	(mm)	(mm)	(g)
K52G15E	st. steel	52	52	15	700	-1...+40*	-156...+250	55	45	70	37
K62G15E	st. steel	62	62	15	600	-1...+25*	-156...+250	60	50	80	58
K72G15E	st. steel	72	71.5	15	530	-1...+25*	-156...+250	65	50	90	83
K83G15E	st. steel	83	82	15	400	-1...+25*	-156...+250	70	55	100	88
K72G24E	st. steel	72	70	24	620	-1...+25*	-156...+250	60	60	90	86
K80G23E1	st. steel	80	75	23	620	-1...+25*	-156...+250	70	60	95	105
K80G23E2	st. steel	80	73	23	750	-1...+40*	-156...+250	50	55	100	145
K98G23E	st. steel	98	96	23	570	-1...+25*	-156...+250	80	70	115	210
K205G56E	st. steel	205	198	56	400	-1...+6	-156...+200	110	140	250	1260
K300G56E	st. steel	300	110	56	500	-1...+3	-156...+200	70	90	160	1700
K44G12T	Titanium	44	44	12	780	-1...+100*	-10...+250	50	40	60	25
K52G14T	Titanium	52	52	14	600	-1...+25	-10...+150	55	45	70	32
K52G15T	Titanium	52	52	15	780	-1...+150*	-10...+250	55	45	70	42
K62G14T	Titanium	62	62	14	450	-1...+25	-10...+150	60	50	80	41
K82G14T	Titanium	82	80	14	500	-1...+16	-10...+150	70	55	100	108
K62G15A	Alloy C	62	62	15	700	-1...+25*	-196...+250	60	50	80	65
K82G15A	Alloy C	82	81	15	500	-1...+16*	-196...+250	70	55	100	95
K72G24A	Alloy C	72	70	24	830	-1...+25*	-196...+250	60	60	90	116
K80G23A	Alloy C	80	75	23	730	-1...+18*	-196...+250	70	60	95	125
K98G23A	Alloy C	98	96	23	550	-1...+16*	-196...+250	80	70	115	208
K53G14EC1	ECTFE coat.	53	53	14	850	-1...+30	-78...+150	70	70	80	46
K53G14EC2**	ECTFE coat.	53	53	14	850	-1...+30	-78...+150	70	70	80	46
K73G23EC1	ECTFE coat.	73	71	23	750	-1...+25	-78...+150	70	70	105	105
K73G23EC2**	ECTFE coat.	73	71	23	750	-1...+25	-78...+150	70	70	105	105
K81G22EC1	ECTFE coat.	81	76	22	700	-1...+25	-78...+150	75	75	110	127
K81G22EC2**	ECTFE coat.	81	76	22	700	-1...+25	-78...+150	75	75	110	127
K53G14PF1	PFA coat.	53	53	14	900	-1...+30*	-100...+250	70	70	80	49
K53G14PF2**	PFA coat.	53	53	14	900	-1...+30*	-100...+250	70	70	80	49
K73G23PF1	PFA coat.	73	71	23	800	-1...+25*	-100...+250	70	70	105	110
K73G23PF2**	PFA coat.	73	71	23	800	-1...+25*	-100...+250	70	70	105	110
K81G22PF1	PFA coat.	81	76	22	750	-1...+25*	-100...+250	75	75	110	132



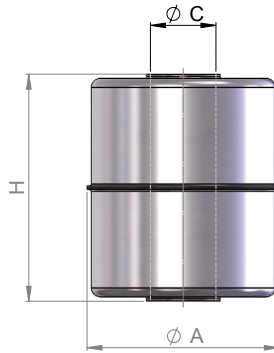
Spherical Float Immersion depth



Type	specific weight of the medium (kg/m ³)											
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
	Immersion depth (mm)											
K52G15E				41.3	35.8	32.4	29.9	28.0	26.4	25.1	23.9	23.0
K62G15E			50.6	42.7	38.2	35.0	32.6	30.5	28.9	27.5	26.3	25.2
K72G15E			51.1	44.8	40.5	37.3	34.8	32.8	31.0	29.6	28.3	27.2
K83G15E	61.3	50.2	44.1	39.7	36.5	33.9	31.8	30.1	28.6	27.3	26.2	25.2
K72G24E				50.6	45.2	41.4	38.6	36.2	34.3	32.7	31.3	30.1
K80G23E1				52.1	46.8	43.0	40.0	37.6	35.7	34.0	32.5	31.2
K80G23E2					54.5	49.7	46.0	43.1	40.7	38.7	37.0	35.5
K98G23E			71.4	62.3	56.3	51.8	48.3	45.4	43.0	41.0	39.2	37.7
K205G56E	149.5	123.8	108.8	98.4	90.6	84.5	79.4	75.3	71.7	68.6	65.9	63.5
K300G56E		70.0	60.0	55.0	50.0	45.0	43.0	40.0	38.0	37.0	36.0	35.0
K44G12T					34.0	30.0	27.5	25.6	24.0	22.7	21.7	20.7
K52G14T			40.8	34.9	31.3	28.7	26.7	25.1	23.8	22.6	21.7	20.8
K52G15T					40.9	36.1	33.0	30.6	28.8	27.2	25.9	24.8
K62G14T		41.9	36.2	32.5	29.7	27.6	25.9	24.5	23.2	22.2	21.3	20.5
K82G14T		59.7	51.0	45.5	41.5	38.4	35.9	33.9	32.1	30.6	29.3	28.2
K62G15A				43.0	42.0	38.1	36.2	33.0	31.1	29.5	28.2	27.0
K82G15A		53.5	46.5	41.8	38.3	35.6	33.3	31.5	29.9	28.6	27.4	26.3
K72G24A						53.0	48.1	44.5	41.8	39.5	37.6	36.0
K80G23A					54.0	48.9	45.1	42.2	39.8	37.8	36.1	34.6
K98G23A			70.7	61.8	55.9	51.5	48.0	45.2	42.8	40.7	39.0	37.4
K53G14EC1						37.1	33.9	31.4	29.5	27.9	26.6	25.4
K53G14EC2**						37.1	33.9	31.4	29.5	27.9	26.6	25.4
K73G23EC1					51.5	46.5	43.0	40.2	37.9	36.0	34.4	33.0
K73G23EC2**					51.5	46.5	43.0	40.2	37.9	36.0	34.4	33.0
K81G22EC1				60.3	52.8	48.0	44.4	41.6	39.3	37.3	35.6	34.2
K81G22EC2**				60.3	52.8	48.0	44.4	41.6	39.3	37.3	35.6	34.2
K53G14PF1						39.6	35.7	33.0	30.9	29.2	27.7	26.5
K53G14PF2**						39.6	35.7	33.0	30.9	29.2	27.7	26.5
K73G23PF1					53.8	48.3	44.5	41.5	39.1	37.1	35.4	33.9
K73G23PF2**					53.8	48.3	44.5	41.5	39.1	37.1	35.4	33.9
K81G22PF1					54.7	49.5	45.7	42.7	40.3	38.3	36.5	35.0
K81G22PF2**					54.7	49.5	45.7	42.7	40.3	38.3	36.5	35.0



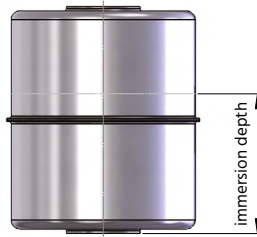
Table 2: Cylindrical Float - Dimensions



* = Design temperature 200°C, higher temperatures must be calculated
 ** = acc. to Atex (conductive)

Type	Material	ØA	H	ØC	Density min.	Pressure range	Temperature range	L1 min.	U min.	Float distance min.	Weight
		(mm)	(mm)	(mm)	(kg/m ³)	(bar)	(°C)	(mm)	(mm)	(mm)	(g)
Z44G15E	st. steel	44	52	15	800	-1...+25*	-156...+250	50	45	70	42
Z44G14T	Titanium	44	52	14	750	-1...+15	-10...+150	50	45	70	35
Z44G15A	Alloy C	44	52	15	1000	-1...+45*	-196...+250	50	45	70	52
Z30G13NB	NBR	30	45	13	700	-1...+6	-20...+80	20	65	60	16
Z40G14NB	NBR	40	120	14	420	-1...+6	-20...+80	25	140	150	45
Z40G15NB	NBR	40	30	15	700	-1...+6	-20...+80	25	50	45	17
Z50G20NB	NBR	50	45	20	1000	-1...+6	-20...+80	30	70	60	65
Z42G14PC	PVC	42	44	14	800	-1...+1	-15...+60	50	40	65	32
Z54G22PC	PVC	54	55	22	750	-1...+1	-15...+60	65	50	75	64
Z78G25PC	PVC	78	80	25	600	-1...+1	-15...+60	80	65	100	164
Z44G13PP	PP	44	43	13	700	-1...+1	-10...+80	50	40	65	25
Z44G21PP	PP	44	69	21	800	-1...+1	-10...+80	50	55	90	45
Z56G21PP	PP	56	54	21	600	-1...+1	-10...+80	65	50	75	50
Z80G24PP	PP	80	79	24	500	-1...+1	-10...+80	80	65	100	126
Z44G13PD	PVDF	44	55	13	850	-1...+1	-10...+100	50	55	70	46
Z56G21PD	PVDF	56	69	21	800	-1...+1	-10...+100	65	60	90	90
Z80G24PD	PVDF	80	79	24	700	-1...+1	-10...+100	80	65	100	192
Z45G14EC1	ECTFE coat.	45	53	14	950	-1...+25	-78...+150	70	70	80	53
Z45G14EC2**	ECTFE coat.	45	53	14	950	-1...+25	-78...+150	70	70	80	53
Z45G14PF1	PFA coat.	45	53	14	1000	-1...+25*	-100...+250	70	70	80	56
Z45G14PF2**	PFA coat.	45	53	14	1000	-1...+25*	-100...+250	70	70	80	56

Cylindrical Float Immersion depth



Type	specific weight of the medium (kg/m ³)											
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
	Immersion depth (mm)											
Z44G15E					43.4	38.6	34.7	31.6	29.0	26.7	24.8	23.2
Z44G14T					35.5	31.6	28.4	25.8	23.7	21.9	20.3	18.9
Z44G15A							43.0	39.1	35.9	33.1	30.7	28.7
Z30G13NB				39.8	34.8	31.0	27.9	25.3	23.2	21.4	19.9	18.6
Z40G14NB	103.0	86.7	72.2	61.9	54.2	48.1	43.3	39.4	36.1	33.3	31.0	28.9
Z40G15NB				22.5	19.7	17.5	15.7	14.3	13.1	12.1	11.1	10.5
Z50G20NB							39.4	35.8	32.8	30.3	28.1	26.3
Z42G14PC					32.5	28.9	26.0	23.6	21.7	20.0	18.6	17.3
Z54G22PC					41.9	37.2	33.5	30.5	27.9	25.8	23.9	22.3
Z78G25PC			63.8	54.6	47.8	42.5	38.3	34.8	31.9	29.4	27.3	25.5
Z44G13PP				29.0	25.4	22.6	20.3	18.5	16.9	15.6	14.5	13.5
Z44G21PP					56.0	49.7	44.8	40.7	37.3	34.4	32.0	29.8
Z56G21PP			43.6	37.4	32.7	29.1	26.2	23.8	21.8	20.1	18.7	17.5
Z80G24PP		58.8	49.0	42.0	36.7	32.7	29.4	26.7	24.5	22.6	21.0	19.6
Z44G13PD						41.5	37.4	34.0	31.1	28.7	26.7	24.9
Z56G21PD					58.9	52.4	47.1	42.8	39.3	36.2	33.7	31.4
Z80G24PD			64.0	56.0	49.8	44.8	40.7	37.3	34.4	32.0	29.9	29.9
Z45G14EC1							40.8	37.1	34.0	31.4	29.2	27.2
Z45G14EC2**							40.8	37.1	34.0	31.4	29.2	27.2
Z45G14PF1							43.1	39.2	35.9	33.2	30.8	28.8
Z45G14PF2**							43.1	39.2	35.9	33.2	30.8	28.8



Output Signal:

In the basic version the FM-02N provides at its cable heads or terminals a potentiometer signal. The resistance change is proportional to filling or to empty level. By a head transmitter (firmly mounted in the terminal box) or a remote transmitter in a cabinet or wall mounted as the proven Profimess UM-01, the resistance reading can be converted into a 4...20 mA 2-wire signal. This transmitter can also be approved according to ATEX for use in explosion-proof areas upon request, and provides in this case an intrinsically safe circuit. It can also be HART®-capable or satisfy the Fieldbus Foundation®- or the Profibus® protocol on request. A flameproof enclosure for Ex-d applications can also be installed.

Switching contacts Level:

In addition to the level-proportional output signal the FM-02N can be equipped with a level switching contact. This is defined as NO or NC with increasing level. The following switching values are based on:

Function	Closer - NO	Opener - NC	Switch
Switch. voltage	230 V	230 V	230 V
Switch. current	1.0 A	0.5 A	0.5 A
Switch. load	100 VA	40 VA	40 VA

Switching Contacts Temp.:

In addition to the level-proportional output signal the FM-02N can be equipped with a temperature switching contact. This is defined as NO or NC with increasing temperature. The following switching values are based on:

Function	Closer - NO	Opener - NC
Switch. rating	230 V / 0.5 A / 40 VA	230 V / 0.5 A / 40 VA
Range	+80...+160°C	+50...+160°C
Graduation	all 5 K	all 5 K
Accuracy	± 5 K	± 5 K
Hysteresis	30 K ± 15 K	30 K ± 15 K

Temperature Sensors:

In the sliding tube of the FM-02N an additional temperature sensor can be installed as a Pt100 or Pt1000. The measuring resistors meet the following specifications:

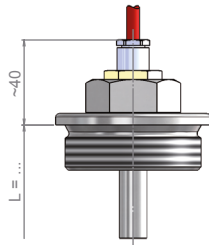
Function	Pt100	Pt1000
Operating temperature	-70...+400°C	-70...+400°C
Tolerance	Class B	Class B
Properties	acc. to IEC 751	acc. to IEC 751
Wiring	2-, 3-, or 4-wire	2-, 3-, or 4-wire

Process Connection:

Various options are available as mechanical and electrical connections to the transducer. The following pages offer an overview about which version suits to which process connections. Depending on whether the float fits through the threaded bore or not, the connecting threads are directed in different versions. "Up" installation through the interior, or "down" for the installation from the outside. If the electrical connection is realized via a cable, the maximum temperature on the cable sheath must be taken into account. Standard cable with PVC sheath ranges from -20...+80°C, the version with silicone sheath ranges from -60...+180°C. Other materials such as Teflon cord can also be offered on request for temperatures up to +200°C.

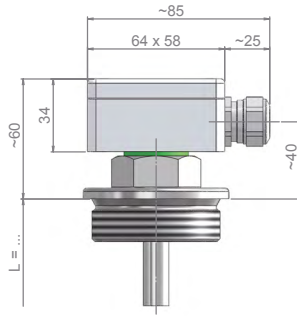


Conn. Type K
connecting cable



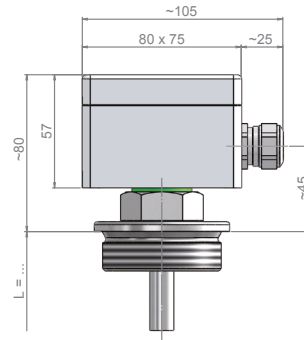
Material: acc. to cable definition
Cable gland: PG or M
Protect. cl.: IP55 (optional IP68)
Amb.temp.: -40...+200°C

Conn. Type E
Aluminium terminal box



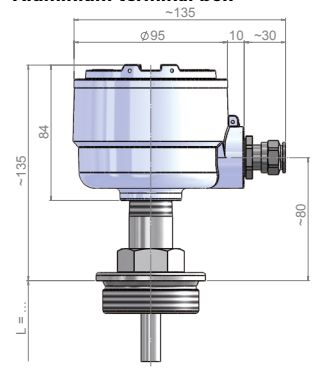
Material: Al coated RAL 7001
Cable gland: M20 x 1.5
Protection class: IP65
Amb.temp.: -40...+100°C

Conn. Type F
Aluminium terminal box



Material: Al coated RAL 7001
Cable gland: M20 x 1.5
Protection class: IP65
Amb.temp.: -40...+100°C

Conn. Type DA (Exd)
Aluminium terminal box

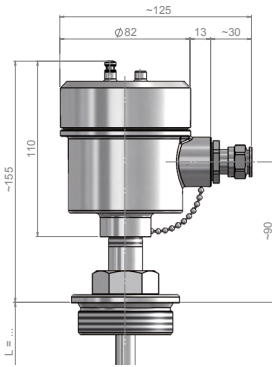


Material: Al coated RAL 9006
Cable gland: M20 x 1.5
Protection class: IP68
Amb.temp.: -40...+100°C

Version	● = combinable			○ = not combinable	
VAG38PVC	●	●	●	●	●
VAG38SIL	●	●	●	●	●
VAG112G	●	●	●	●	●
VAG2G	●	●	●	●	●
VAF80D18	●	●	●	●	●
VAF80D40	●	●	●	●	●
VAF80FLEX	●	●	●	●	●
VAG25FLEX	●	●	●	●	●
VAWG38SIL	●	●	●	●	●
VAWF80G	●	●	●	●	●
VABHH	●	●	●	●	●
VABHV	●	●	●	●	●
VASG38SIL	●	●	●	●	●
VASMRG	●	●	●	●	●
MG38PVC	●	●	●	●	○
MG112G	●	●	●	●	○
PAFG112G	○	●	●	●	○
PAFG2G	○	●	●	●	○
TG38SIL	●	●	●	●	●
TG2G	●	●	●	●	●
ALCG38SIL	●	●	●	●	●
ALCG112G	●	●	●	●	●
PVCG1PVC16	●	●	●	●	○
PVCG1PVC20	●	●	●	●	○
PPG1PVCD16	●	●	●	●	○
PPG1PVCD20	●	●	●	●	○
PPG2PVCD16	●	●	●	●	○
PPF80GD20	●	●	●	●	○
PPFG112G	●	●	●	●	○
PPFG2G	●	●	●	●	○
PVDFG1SILD16	●	●	●	●	○
PVDFG1SILD20	●	●	●	●	○
VAEBF50G	○	●	●	●	●
VAEBF80G	○	●	●	●	●
VAPBF50G	○	●	●	●	●
VAPBF80G	○	●	●	●	●

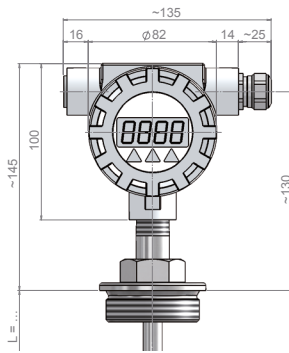


Conn. type VA (Exd)
st. steel terminal box



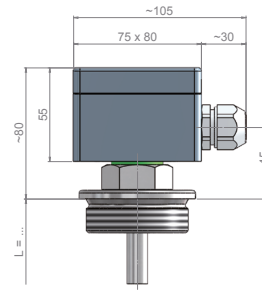
Material: st. steel A4 (SS316)
Cable gland: M20 x 1.5
Protect. class: IP67 (Exd / IP68)
Amb.temp.: -40...+85°C

Conn. type ADI
Aluminium terminal box



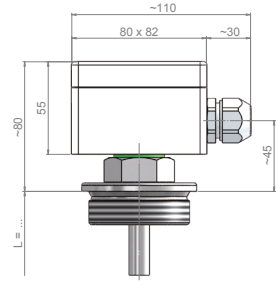
Material: aluminium
Cable gland: M20 x 1.5
Protection class: IP65
Amb.temp.: -40...+60°C
Display: 7-Segment LED red

Conn. type PA
Polyester terminal box



Material: Polyester
Cable gland: M20 x 1.5
Protection class: IP65
Amb.temp.: -10...+100°C

Conn. type BA
ABS terminal box



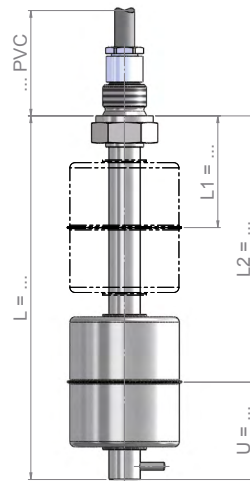
Material: ABS
Cable gland: M20 x 1.5
Protection class: IP65
Amb.temp.: -10...+80°C

Version	● = combinable		○ = not combinable	
VAG38PVC	●	●	○	○
VAG38SIL	●	●	○	○
VAG112G	●	●	○	○
VAG2G	●	●	○	○
VAF80D18	●	●	○	○
VAF80D40	●	●	○	○
VAF80FLEX	●	●	○	○
VAG25FLEX	●	●	○	○
VAWG38SIL	●	●	○	○
VAWF80G	●	●	○	○
VABHH	●	●	○	○
VABHV	●	●	○	○
VASG38SIL	●	●	○	○
VASMRG	●	●	○	○
MG38PVC	○	●	●	●
MG112G	○	●	●	●
PAFG112G	●	●	●	●
PAFG2G	●	●	●	●
TG38SIL	●	●	○	○
TG2G	●	●	○	○
ALCG38SIL	●	●	○	○
ALCG112G	●	●	○	○
PVCG1PVC16	○	●	●	●
PVCG1PVC20	○	●	●	●
PPG1PVCD16	○	●	●	●
PPG1PVCD20	○	●	●	●
PPG2PVCD16	○	●	●	●
PPF80GD20	○	●	●	●
PPFG112G	○	●	●	●
PPFG2G	○	●	●	●
PVDFG1SILD16	○	●	●	●
PVDFG1SILD20	○	●	●	●
VAEBF50G	●	●	●	○
VAEBF80G	●	●	●	○
VAPBF50G	●	●	●	○
VAPBF80G	●	●	●	○

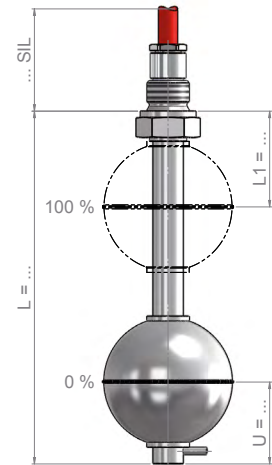


Level transmitter made of st. steel with thread facing upwards

Version: VAG38PVC



Version: VAG38SIL



Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	PVC connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	ø 12 mm for grid 10 mm, 12.7 mm & 15 mm, ø 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	Z44G15E
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1. . . +25 bar
Design temp. /	-20. . . +80°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7

Option

Temp. sensor / Pt100 / Pt1000 IEC 751 Cl. B

Option

Temp. contacts / NO or NC

min. Dimens. / L1 ≥ 50 mm, U = 45 mm

poss.

Approvals / ATEX, PED, GOST, GL, BV, ABS, WHG

Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	silicone connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	ø 12 mm for grid 10 mm, 12.7 mm & 15 mm, ø 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	K52G15E
sp. Weight /	≥ 700 kg/m ³
Design press. /	-1. . . +40 bar
Design temp. /	-40. . . +180°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF

Option

Temp. sensor / Pt100 / Pt1000 IEC 751 Cl. B

Option

Temp. contacts / NO or NC

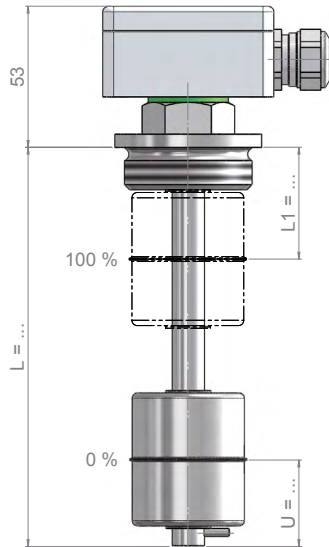
min. Dimens. / L1 ≥ 55 mm, U = 45 mm

poss.

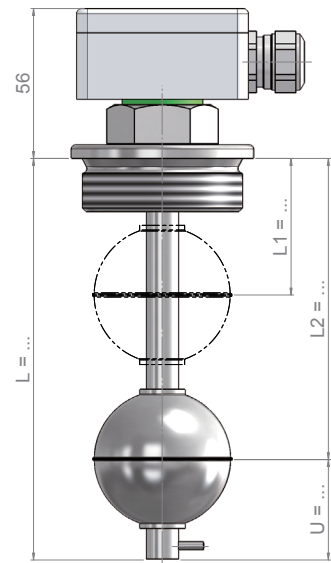
Approvals / ATEX, PED, GOST, GL, BV, ABS, WHG

**Level transmitter made of st. steel with downward facing thread**

Version: VAG112G



Version: VAG2G

**Technical Specifications:**

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	G1 1/2"-male downwards
Sliding tube /	∅ 12 mm for grid 10 mm, 12.7 mm & 15 mm, ∅ 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	Z44G15E
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1. . . +25 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 50 mm, U = 45 mm
poss.	
Approvals/	ATEX, PED, GOST, GL, BV, ABS, WHG

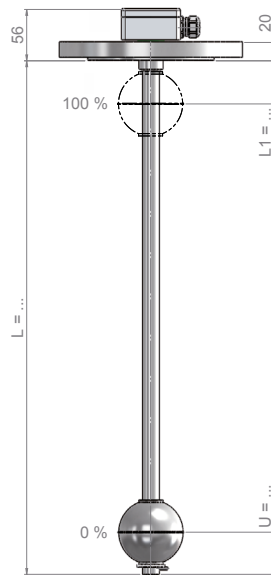
Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	G2"-male downwards
Sliding tube /	∅ 12 mm for grid 10 mm, 12.7 mm & 15 mm, ∅ 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	K52G15E
sp. Weight /	≥ 700 kg/m ³
Design press. /	-1. . . +40 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 55 mm, U = 45 mm
poss.	
Approvals/	ATEX, PED, GOST, GL, BV, ABS, WHG

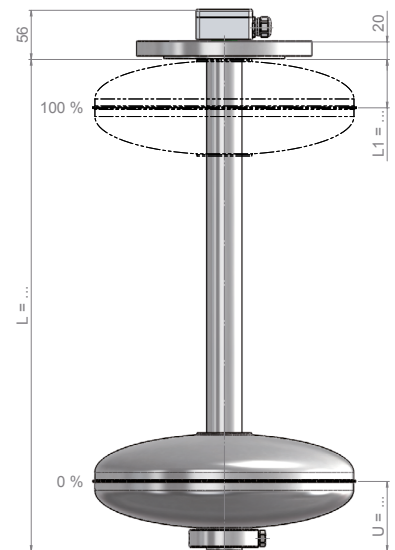


Level transmitter made of st. steel with flange connection

Version: VAF80D18



Version: VAF80D40



Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN80 / PN16 / Form B1
Sliding tube /	∅ 18 mm
insert. Length /	≤ 6000 mm
Float /	K72G24E
sp. Weight /	≥ 620 kg/m ³
Design press. /	-1. . +16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 60 mm, U = 60 mm
poss.	
Approvals/	ATEX, PED, GOST, GL, BV, ABS, WHG

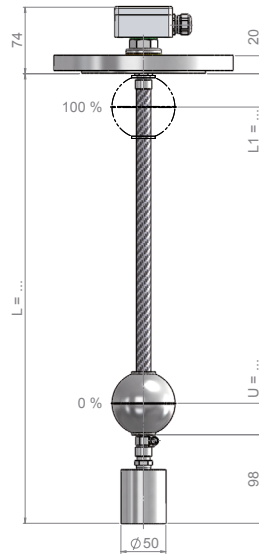
Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN80 / PN16 / Form B1
Sliding tube /	∅ 40 mm
insert. Length /	≤ 10.000 mm
Float /	K300G56E
sp. Weight /	≥ 500 kg/m ³
Design press. /	-1. . +3 bar
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 70 mm, U = 90 mm
poss.	
Approvals/	ATEX, PED, GOST, GL, BV, ABS, WHG

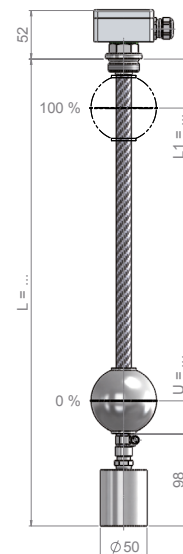


Level transmitter made of st. steel - flexible

Version: VAF80FLEX



Version: VAG25FLEX



Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN80 / PN16 / Form B1
Sliding tube /	∅ 16 mm
insert. Length /	≤ 10.000 mm
Float /	K72G24E
sp. Weight /	≥ 620 kg/m ³
Design press. /	-1. . . +16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	12.7
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option

Temp. contacts / NO or NC

min. Dimens. / L1 ≥ 60 mm, U = 60 mm
poss.

Approvals/ ATEX, PED, GOST

Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	G1"-male downwards
Sliding tube /	∅ 16 mm
insert. Length /	≤ 10.000 mm
Float /	K72G24E
sp. Weight /	≥ 620 kg/m ³
Design press. /	-1. . . +25 bar
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	12.7
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option

Temp. contacts / NO or NC

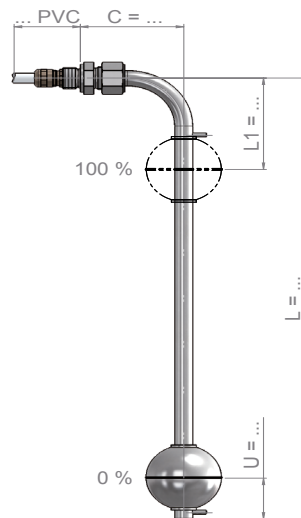
min. Dimens. / L1 ≥ 60 mm, U = 60 mm
poss.

Approvals/ ATEX, PED, GOST

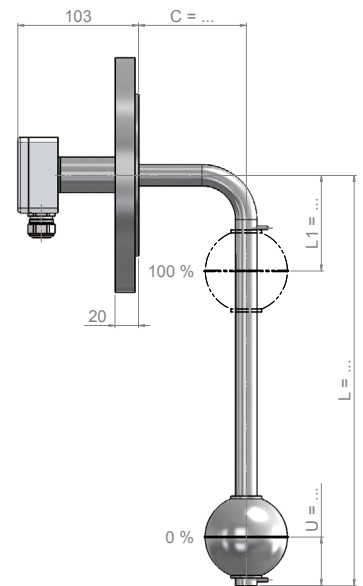


Level transmitter made of st. steel - angled

Version: VAWG38SIL



Version: VAWF80G



Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	silicone connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	ø 12 mm for grid 10 mm, 12.7 mm & 15 mm, ø 14 mm for grid 5 mm
insert. Length /	≤ 3000 mm
Float /	K52G15E
sp. Weight /	≥ 700 kg/m ³
Design press. /	-1. . . +40 bar
Design temp. /	-40. . . +180°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 55 mm, U = 45 mm, C ≥ 70 mm
poss.	
Approvals /	ATEX, PED, GOST, GL, BV, ABS

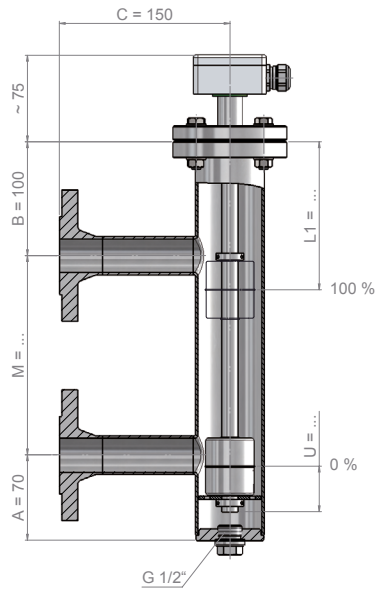
Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN80 / PN16 / Form B1
Sliding tube /	ø 18 mm
insert. Length /	≤ 6000 mm
Float /	K72G24E
sp. Weight /	≥ 620 kg/m ³
Design press. /	-1. . . +16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 60 mm, U = 60 mm, C ≥ 70 mm
poss.	
Approvals /	ATEX, PED, GOST, GL, BV, ABS

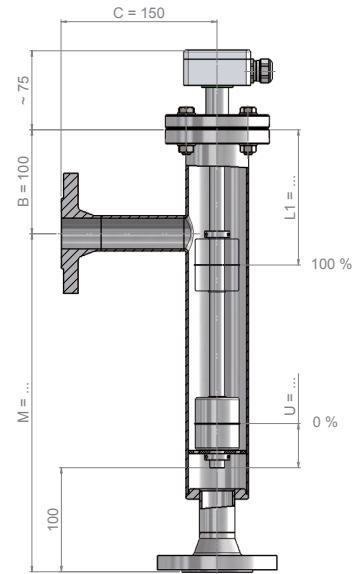


Level transmitter made of st. steel - with bypass housing

Version: VABHH



Version: VABHV



Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN25 / PN16 / Form B1
Bypass /	∅ 60.3 mm
Mittenabstand /	M ≤ 1000 mm
Float /	Z44G15E
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1...+16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 130 mm, U = 45 mm
poss.	
Approvals/	ATEX, PED, GOST, GL, BV, ABS

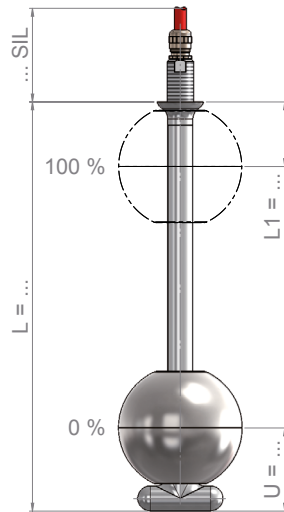
Technical Specifications:

Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti)
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN25 / PN16 / Form B1
Bypass /	∅ 60.3 mm
Mittenabstand /	M ≤ 1000 mm
Float /	Z44G15E
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1...+16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 130 mm, U = 45 mm
poss.	
Approvals/	ATEX, PED, GOST, GL, BV, ABS

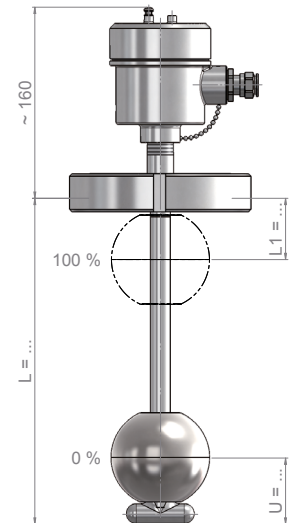


Level transmitter made of st. steel - 3A sanitary standard

Version: VASG38SIL



Version: VASMRG



Technical Specifications:

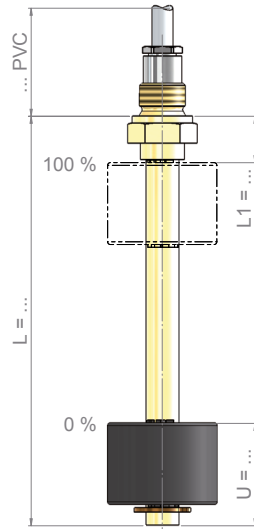
Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti) roughness depth wetted $\leq 0.4 \mu\text{m}$
El. Connection /	silicone connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	$\varnothing 16 \text{ mm}$
insert. Length /	$\leq 5000 \text{ mm}$
Float /	K80G23E2
sp. Weight /	$\geq 750 \text{ kg/m}^3$
Design press. /	-1. . . +40 bar
Design temp. /	-40. . . +180°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical $\pm 30^\circ$
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	$L1 \geq 50 \text{ mm}$, $U = 55 \text{ mm}$
poss.	
Approvals /	ATEX, PED, GOST, GL, BV, ABS, 3A

Technical Specifications:

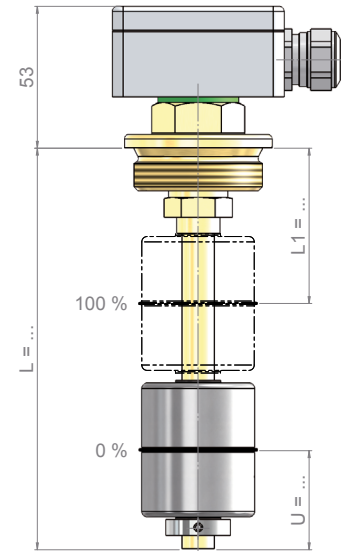
Material /	1.4404 / 1.4435 / 1.4571 (316L / 316Ti) roughness depth wetted $\leq 0.4 \mu\text{m}$
El. Connection /	Type VA st. steel terminal box
Process conn. /	cone acc. to 11851 with groove nut
Sliding tube /	$\varnothing 16 \text{ mm}$
insert. Length /	$\leq 5000 \text{ mm}$
Float /	K80G23E2
sp. Weight /	$\geq 750 \text{ kg/m}^3$
Design press. /	-1. . . +6 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP67
Mount. pos. /	vertical $\pm 30^\circ$
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	$L1 \geq 50 \text{ mm}$, $U = 55 \text{ mm}$
poss.	
Approvals /	ATEX, PED, GOST, GL, BV, ABS, 3A

**Level transmitter made of brass**

Version: MG38PVC



Version: MG112G

**Technical Specifications:**

Material /	brass, float made of BUNA
El. Connection /	PVC connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	∅ 12 mm for grid 10 mm, 12.7 mm & 15 mm, ∅ 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	Z40G15NB
sp. Weight /	≥ 700 kg/m ³
Design press. /	-1...+6 bar
Design temp. /	-10...+80°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 30 mm, U = 50 mm
poss.**Approvals/** PED, GOST, GL, BV, ABS**Technical Specifications:**

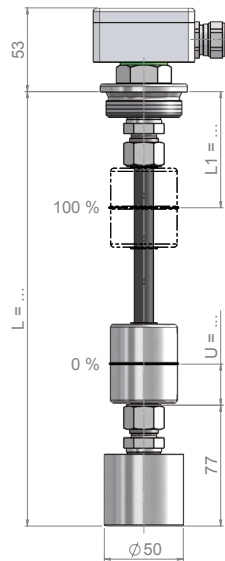
Material /	brass, float made of BUNA
El. Connection /	Type E Aluminium terminal box
Process conn. /	G1 1/2"-male downwards
Sliding tube /	∅ 12 mm for grid 10 mm, 12.7 mm & 15 mm, ∅ 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	Z44G15E
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1...+25 bar
Design temp. /	-10...+150°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 65 mm, U = 45 mm
poss.**Approvals/** PED, GOST, GL, BV, ABS

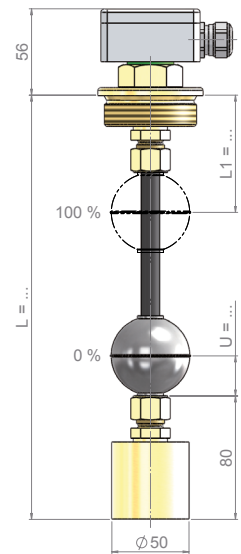


Level transmitter made of Polyamide - flexible

Version: PAFG112G



Version: PAFG2G



Technical Specifications:

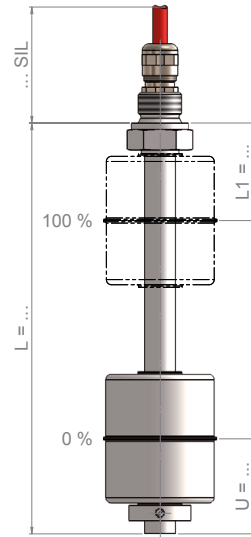
Material /	Polyamide / st. steel
El. Connection /	Type E Aluminium terminal box
Process conn. /	G1 1/2"-male downwards
Sliding tube /	ø 12 mm
insert. Length /	≤ 5000 mm
Float /	Z44G15E
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1. .+.1 bar
Design temp. /	-10. .+.80°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	12.7
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. / L1 ≥ 70 mm, U = 45 mm	
poss.	
Approvals/	GOST

Technical Specifications:

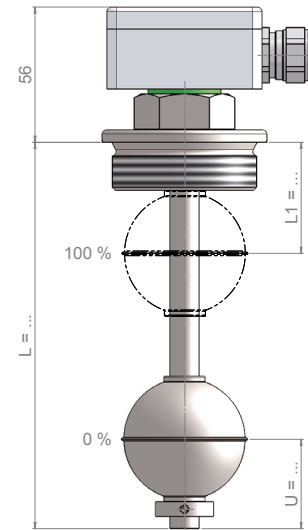
Material /	Polyamide / brass / st. steel
El. Connection /	Type E Aluminium terminal box
Process conn. /	G2"-male downwards
Sliding tube /	ø 12 mm
insert. Length /	≤ 5000 mm
Float /	K52G15E
sp. Weight /	≥ 700 kg/m ³
Design press. /	-1. .+.1 bar
Design temp. /	-10. .+.80°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	12.7
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. / L1 ≥ 70 mm, U = 45 mm	
poss.	
Approvals/	GOST

**Level transmitter made of Titanium**

Version: TG38SIL



Version: TG2G

**Technical Specifications:**

Material /	Titanium
El. Connection /	silicone connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	∅ 12 mm for grid 10 mm, 12.7 mm & 15 mm, ∅ 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	Z44G14T
sp. Weight /	≥ 750 kg/m ³
Design press. /	-1...+15 bar
Design temp. /	-10...+150°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

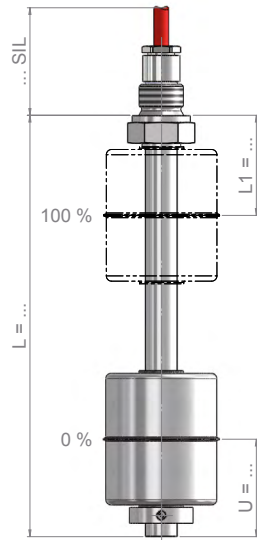
Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 50 mm, U = 45 mm
poss.**Approvals/** ATEX, PED, GOST, WHG**Technical Specifications:**

Material /	Titanium
El. Connection /	Type E Aluminium terminal box
Process conn. /	G2"-male downwards
Sliding tube /	∅ 12 mm for grid 10 mm, 12.7 mm & 15 mm, ∅ 14 mm for grid 5 mm
insert. Length /	≤ 5000 mm
Float /	K52G14T
sp. Weight /	≥ 600 kg/m ³
Design press. /	-1...+25 bar
Design temp. /	-10...+150°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

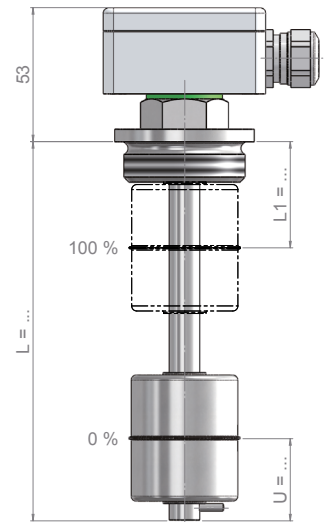
Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 55 mm, U = 45 mm
poss.**Approvals/** ATEX, PED, GOST, WHG

Level transmitter made of Alloy C

Version: ALCG38SIL



Version: ALCG112G



Technical Specifications:

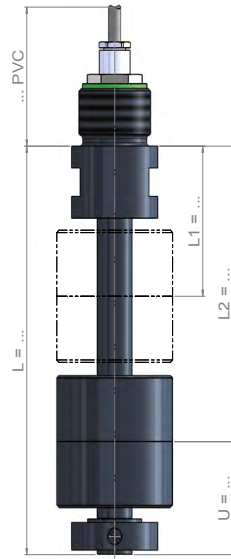
Material /	Alloy C
El. Connection /	silicone connecting cable
Process conn. /	G3/8"-male upwards
Sliding tube /	∅ 12 mm
insert. Length /	≤ 3000 mm
Float /	Z44G15A
sp. Weight /	≥ 1000 kg/m ³
Design press. /	-1. . . +45 bar
Design temp. /	-40. . . +180°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HTF, 10HTF, 15HTF, 10HT, 15HT
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 50 mm, U = 45 mm
poss.	
Approvals/	ATEX, PED, GOST, WHG

Technical Specifications:

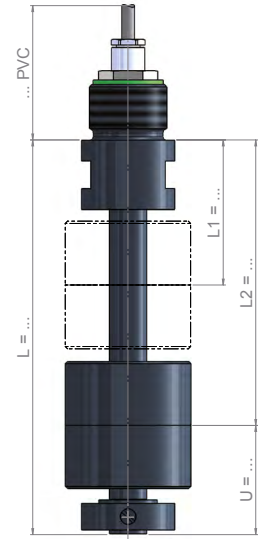
Material /	Alloy C
El. Connection /	Type E Aluminium terminal box
Process conn. /	G1 1/2"-male downwards
Sliding tube /	∅ 12 mm
insert. Length /	≤ 3000 mm
Float /	K52G15A
sp. Weight /	≥ 1000 kg/m ³
Design press. /	-1. . . +45 bar
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HTF, 10HTF, 15HTF, 10HT, 15HT
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 50 mm, U = 45 mm
poss.	
Approvals/	ATEX, PED, GOST, WHG

**Level transmitter made of PVC**

Version: PVCG1PVC16



Version: PVCG1PVC20

**Technical Specifications:**

Material /	PVC
El. Connection /	PVC connecting cable
Process conn. /	G1"-male upwards
Sliding tube /	∅ 16 mm
insert. Length /	≤ 3000 mm
Float /	Z54G22PC
sp. Weight /	≥ 750 kg/m ³
Design press. /	-1...+1 bar
Design temp. /	-15...+60°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 65 mm, U = 50 mm
poss.**Approvals/** PED, WHG**Technical Specifications:**

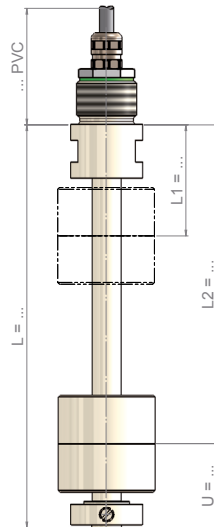
Material /	PVC
El. Connection /	PVC connecting cable
Process conn. /	G1"-male upwards
Sliding tube /	∅ 20 mm
insert. Length /	≤ 6000 mm
Float /	Z78G25A
sp. Weight /	≥ 600 kg/m ³
Design press. /	-1...+1 bar
Design temp. /	-15...+60°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 80 mm, U = 65 mm
poss.**Approvals/** PED, WHG

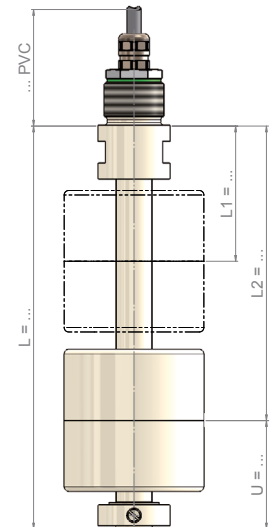


Level transmitter made of Polypropylene

Version: PPG1PVCD16



Version: PPG1PVCD20



Technical Specifications:

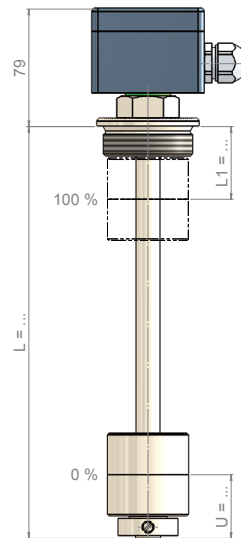
Material /	Polypropylene
El. Connection /	PVC connecting cable
Process conn. /	G1"-male upwards
Sliding tube /	∅ 16 mm
insert. Length /	≤ 3000 mm
Float /	Z56G21PP
sp. Weight /	≥ 600 kg/m ³
Design press. /	-1. . .+1 bar
Design temp. /	-10. . .+80°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12,7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 65 mm, U = 50 mm
poss.	
Approvals/	PED, WHG

Technical Specifications:

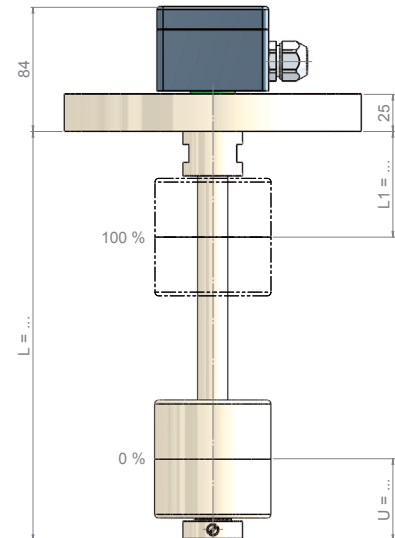
Material /	Polypropylene
El. Connection /	PVC connecting cable
Process conn. /	G1"-male upwards
Sliding tube /	∅ 20 mm
insert. Length /	≤ 6000 mm
Float /	Z80G24PP
sp. Weight /	≥ 500 kg/m ³
Design press. /	-1. . .+1 bar
Design temp. /	-10. . .+80°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12,7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 80 mm, U = 65 mm
poss.	
Approvals/	PED, WHG

**Level transmitter made of Polypropylene**

Version: PPG2PVCD16



Version: PPF80GD20

**Technical Specifications:**

Material /	Polypropylene
El. Connection /	Type PA Polyester terminal box
Process conn. /	G2"-male upwards
Sliding tube /	∅ 16 mm
insert. Length /	≤ 3000 mm
Float /	Z56G21PP
sp. Weight /	≥ 600 kg/m ³
Design press. /	-1...+1 bar
Design temp. /	-10...+80°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 65 mm, U = 50 mm
poss.**Approvals/** PED, WHG**Technical Specifications:**

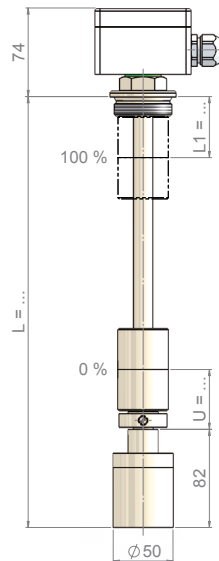
Material /	Polypropylene
El. Connection /	Type PA Polyester terminal box
Process conn. /	Flange EN DN80 / PN10 / Form A
Sliding tube /	∅ 20 mm
insert. Length /	≤ 6000 mm
Float /	Z80G24PP
sp. Weight /	≥ 500 kg/m ³
Design press. /	-1...+1 bar
Design temp. /	-10...+80°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option**Temp. contacts /** NO or NC**min. Dimens. /** L1 ≥ 80 mm, U = 65 mm
poss.**Approvals/** PED, WHG

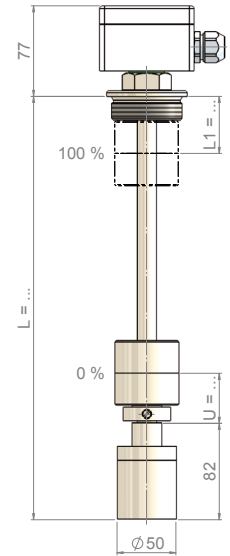


Level transmitter made of Polypropylene - flexible

Version: PPF112G



Version: PPF2G



Technical Specifications:

Material /	Polypropylene
El. Connection /	Type PA Polyester terminal box
Process conn. /	G1 1/2"-male upwards
Sliding tube /	ø 16 mm
insert. Length /	≤ 3000 mm
Float /	Z44G21PP
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1. . .+1 bar
Design temp. /	-10. . .+80°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	12.7
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. / L1 ≥ 50 mm, U = 55 mm	
poss.	
Approvals/	PED, WHG

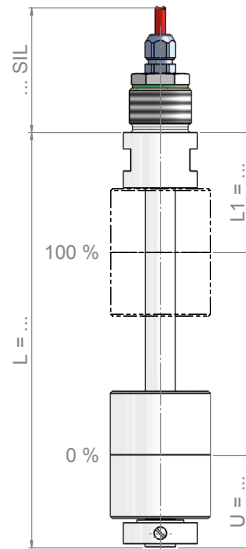
Technical Specifications:

Material /	Polypropylene
El. Connection /	Type PA Polyester terminal box
Process conn. /	G2"-male upwards
Sliding tube /	ø 16 mm
insert. Length /	≤ 3000 mm
Float /	Z56G21PP
sp. Weight /	≥ 600 kg/m ³
Design press. /	-1. . .+1 bar
Design temp. /	-10. . .+80°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	12.7
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. / L1 ≥ 65 mm, U = 50 mm	
poss.	
Approvals/	PED, WHG

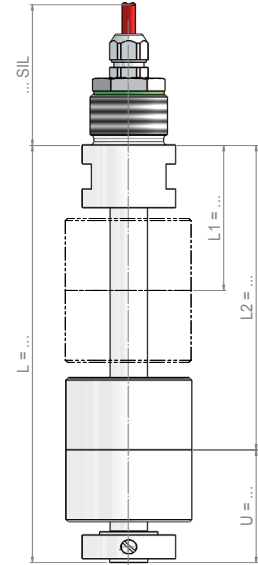


Level transmitter made of PVDF

Version: PVDFG1SILD16



Version: PVDFG1SILD20



Technical Specifications:

Material /	PVDF
El. Connection /	silicone connecting cable
Process conn. /	G1"-male upwards
Sliding tube /	∅ 16 mm
insert. Length /	≤ 3000 mm
Float /	Z56G21PD
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1. . . +1 bar
Design temp. /	-10. . . +100°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 65 mm, U = 60 mm
poss.	
Approvals/	PED, WHG

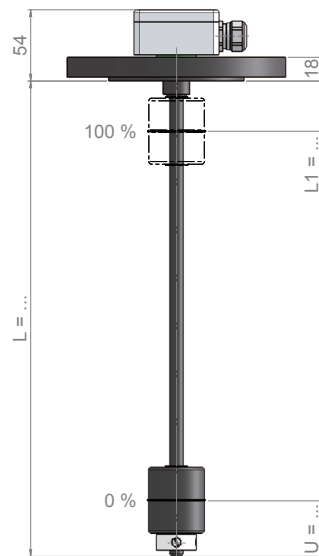
Technical Specifications:

Material /	PVDF
El. Connection /	silicone connecting cable
Process conn. /	G1"-male upwards
Sliding tube /	∅ 20 mm
insert. Length /	≤ 3000 mm
Float /	Z80G24PD
sp. Weight /	≥ 700 kg/m ³
Design press. /	-1. . . +1 bar
Design temp. /	-10. . . +100°C
Protection class /	IP55 (optional IP68)
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 80 mm, U = 65 mm
poss.	
Approvals/	PED, WHG

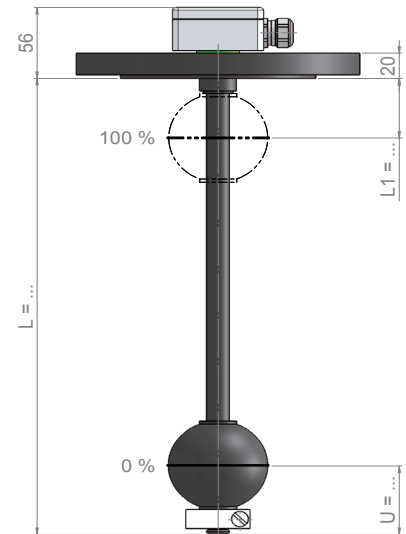


Level transmitter made of st. steel - ECTFE coated

Version: VAEBF50G



Version: VAEBF80G



Technical Specifications:

Material /	st. steel ECTFE-coated
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN50 / PN16 / Form B1
Sliding tube /	∅ 11 mm
insert. Length /	≤ 3000 mm
Float /	Z45G14EC1
sp. Weight /	≥ 950 kg/m ³
Design press. /	-1. . .+16 bar (depending on temp.)
Design temp. /	-40. . .+150°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	10, 10HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 70 mm, U = 70 mm
poss.	
Approvals/	ATEX, PED, GOST, WHG

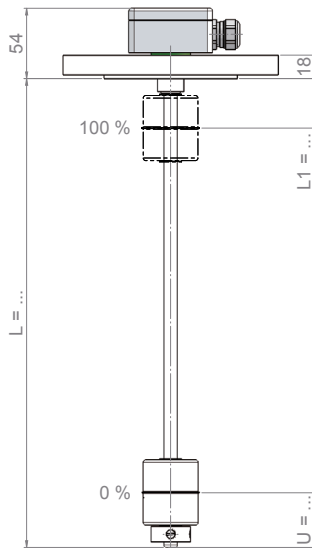
Technical Specifications:

Material /	st. steel ECTFE-coated
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN50 / PN16 / Form B1
Sliding tube /	∅ 17 mm
insert. Length /	≤ 3000 mm
Float /	K73G23EC1
sp. Weight /	≥ 750 kg/m ³
Design press. /	-1. . .+16 bar (depending on temp.)
Design temp. /	-40. . .+150°C
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B
Option	
Temp. contacts /	NO or NC
min. Dimens. /	L1 ≥ 70 mm, U = 70 mm
poss.	
Approvals/	ATEX, PED, GOST, WHG

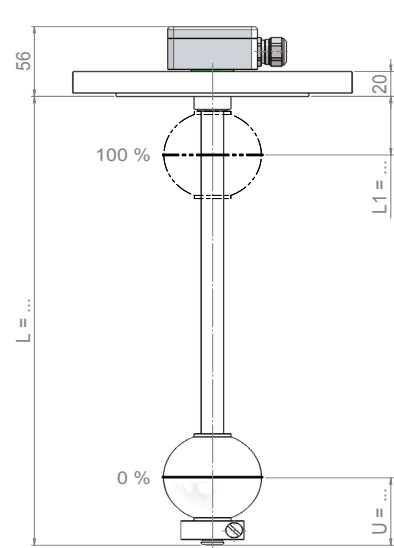


Level transmitter made of st. steel - PFA coated

Version: VAPBF50G



Version: VAPBF80G



Technical Specifications:

Material /	st. steel PFA-coated
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN50 / PN16 / Form B1
Sliding tube /	∅ 11 mm
insert. Length /	≤ 3000 mm
Float /	Z45G14PF1
sp. Weight /	≥ 1000 kg/m ³
Design press. /	-1...+16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	10, 10HTF, 10HT
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option

Temp. contacts / NO or NC

min. Dimens. / L1 ≥ 70 mm, U = 70 mm
poss.

Approvals/ ATEX, PED, WHG

Technical Specifications:

Material /	st. steel PFA-coated
El. Connection /	Type E Aluminium terminal box
Process conn. /	Flange EN DN50 / PN16 / Form B1
Sliding tube /	∅ 17 mm
insert. Length /	≤ 3000 mm
Float /	K73G23PF1
sp. Weight /	≥ 800 kg/m ³
Design press. /	-1...+16 bar (depending on temp.)
Design temp. /	see table Grid
Protection class /	IP65
Mount. pos. /	vertical ±30°
Grid /	5, 10, 12.7, 15, 5HT, 10HT, 15HT, 5HTF, 10HTF, 15HTF
Option	
Temp. sensor /	Pt100 / Pt1000 IEC 751 Cl. B

Option

Temp. contacts / NO or NC

min. Dimens. / L1 ≥ 70 mm, U = 70 mm
poss.

Approvals/ ATEX, PED, WHG