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Automate your Field



FLOAT AND DISPLACER TYPE LEVEL SWITCHES



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1. FLOAT & DISPLACER TYPE LEVEL SWITCHES

Float & Displacer Type Level Switches are designed for long life and versatile applications in liquid level control using operating principles of Float /Displacer Mechanisms.

- Ideal for industrial applications such as pump control and high or low alarm duty on tanks and pressure vessels.
- Rugged, industrial level switches specifically designed for variety of applications.
- High Pressure and High Temperature application capabilities in different models.
- Wide variety of Internationally accepted Agency Approvals for Safe Use.
- Versatile switching mechanisms for retro-fit situations.

PRODUCT VARIANTS INCLUDE

VFS Series – VERTICAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES

MVFS Series – MINI VERTICAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES

MHFS Series – MINI HORIZONTAL MOUNTING FLOAT LEVEL SWITCHES

BVFS Series – BEND VERSION TYPE MAGNETIC FLOAT LEVEL SWITCHES

HFS Series – HORIZONTAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES

MLS Series – EXTERNAL CHAMBER LEVEL SWITCHES

CFS Series – CABLE SUSPENDED FLOAT OPERATED LEVEL SWITCHES

DLS Series – DISPLACER TYPE MAGNETIC LEVEL SWITCHES

APPROVALS / CERTIFICATIONS



ISO - 9001 QMS



ATEX Directive
2014/34/EU



Conformité Européenne
Notified Body No.:2460



ABS - Type Approved Product



Pressure Equipment Directive
2014/68/EU



CIMFR / PESO / CCOE

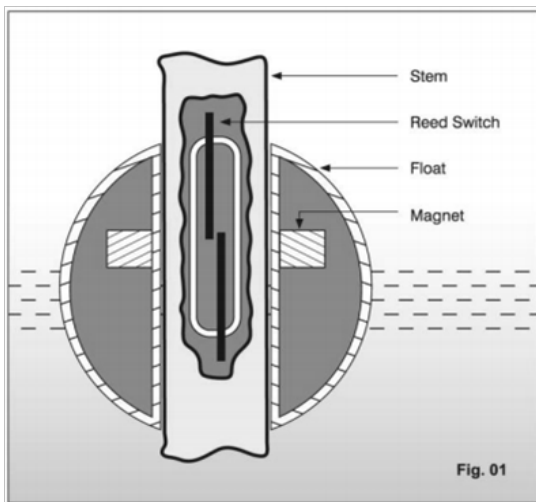
2. VFS SERIES - VERTICAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES

Vertical Float Switches are established and reliable technique in industry for single / multiple liquid level sensing and control in open or pressurized vessels. It offers trouble free service in conductive / non-conductive liquids under widely varying temperatures, pressures, liquid viscosity and corrosive conditions. Besides, it provides high repeatability and effects of shocks / vibrations are minimal.

2.1 CONSTRUCTION & OPERATION

Vertical mounting type float switches operate on below principle.

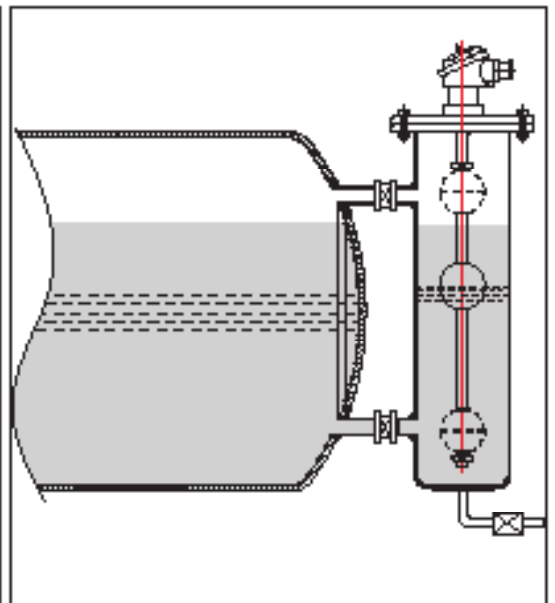
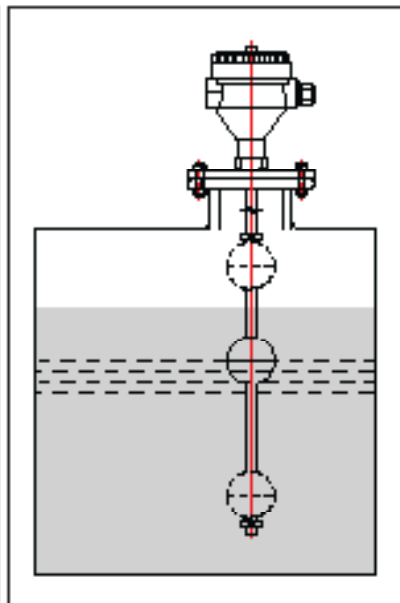
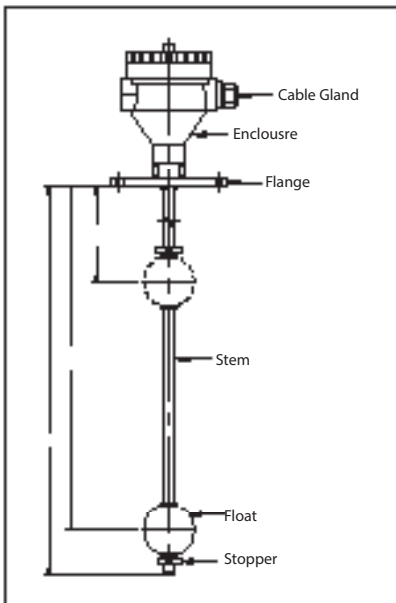
1) Use of magnetic Reed switch as sensing element.
A float encircling a fixed stationary stem is equipped with powerful permanent magnets. As the float rises or lowers with liquid level the magnetic field generated by the magnet that is present within the float actuates a hermetically sealed reed switch mounted inside the stem. This in turn makes or breaks the contact of the reed switch. (Refer fig.01)



Typical VFS Construction

Typical Installation for Tanks

External Chamber Mounting



2.3 GENERAL SPECIFICATIONS

Enclosure	: Cast Al, Weather -proof to IP 65, Ex-proof to Gr. IIA, IIB & Gr.IIC, DIN Polyamide connector
Gland Connection	: Brass, 3/4" ET / 1/2" NPT
Guided Stem MOC	: SS316 / SS304 / Brass / SS316L / PP
Float MOC x Size	: SS316 x Ø 28, Ø 30, Ø 41, Ø 45, Ø 52, Ø 63 : SS316Lx Ø 52 : PU foam x Ø 22, Ø 25, Ø 35 : PP x Ø 46, PVDF x Ø 50
Stem OD	: Ø8, Ø12.7 in SS316 / SS304 / Brass / SS316L, Ø16 in PP
Operating Temperature	: SS316 - float Ø52, Ø40 Up to 150°C, float Ø22, Ø28, Ø30 Up to 100°C, SS316L - float Ø52 up to 150°C , PU foam - float Ø22, Ø25, Ø35 Up to 60°C, PP float, float Ø46 up to 60°C, PVDF: Ø50 upto 120°C.
Operating pressure max.	: SS316 – float Ø52, Ø40 Up to 20Kg/cm ² , float Ø22, Ø28, Ø30 upto 8Kg/cm ² , SS316L float dia. 52mm up to 40Kg/cm ² ,PU foam - float Ø22, Ø25, Ø35 -Atmospheric, PP up to 5kg/cm ² , PVDF up to 5kg/cm ²
Min. specific gravity	: 0.65
No. of floats	: Single / Multiple (Max.4) (More available on request)
Process connections	: Flanged / Threaded / Triclover Flange Special constructions as per application
Preset levels	: 1 to 4 (Factory set) (More available on request)
Switch type	: Glass encapsulated hermetically sealed reed contacts
Switching capacity	: SPST - 15VA / 100VA SPDT - 3VA / 50VA
Differential	: Fixed (10 ± 2mm)
Accuracy / Repeatability	: ± 2mm / ± 1mm
Load	: Resistive / Inductive
Insulation	: 100 Mega-Ohms at 500 VDC
Special Features	: Intrinsically safe to Ex ib Gr IIA-IIB

2.4 ORDERING INFORMATION FOR VERTICAL MOUNTING FLOAT LEVEL SWITCHES

SPECIFY PART NO. → VFS **1** **2** **3** **4** **5** Example: VFS **B** **A** **1** **S1** **1**
 VFS

1 TERMINAL TYPE

B : DIN Polyamide (upto 2 levels)
 C : Weather Proof IP 65/SS304
 D : Weather Proof IP 65/Cast Al.
 E : Ex.Proof IP 65 Gr , IIA , IIB , IIC
 F : Aluminium Junction Box
 G : Polycarbonate Enclosure
 H : Cable
 O : Others

3 DIA OF STEM WITH MATERIAL

1 : Dia. 8mm - SS304
 2 : Dia. 12.7mm - SS304
 3 : Dia. 16.0mm - PP
 4 : Dia. 8mm - PP
 5 : Dia. 8mm - SS316
 6 : Dia. 12.7mm - SS316
 7 : Dia.12.7mm - SS316L
 8 : Dia. 8mm - Brass
 9 : Dia. 12.7mm - Brass
 O : Others

5 ELECTRICAL SPECIFICATIONS

1 : SDN 102
 2 : SDN 104
 3 : SDN 202
 4 : SDN 204

Refer table below



ELECTRICAL SPECIFICATIONS

Model Type	SDN 102	SDN 104	SDN 202	SDN 204
Switching Voltage (Max.)	200 V DC	300 V DC	28 VDC	500 V DC
	125 V AC	240 V AC	28 VAC	250 V AC
Switching Current (Max.)	0.5A	3A	0.25 A	1.5A
Contact Rating	15VA	100VA	3VA	50VA
Contact Form	SPST	SPST	SPDT	SPDT

2 CONNECTION TYPE

SIZE OF FLANGE

A : Dia.75mm-60mm PCD
 B : Dia.75mm-65mm PCD
 C : Dia.100mm-80mm PCD
 D : 2" #150 ANSI
 E : 2 ½" #150 ANSI
 F : 2 ½" BS 10 - E
 G : 2" BS 10 - E
 H : 1 ½" # 150 ANSI
 I : 3" BS 10 - E
 J : 3" #150 ANSI
 K : Dia.45mm-38mm PCD
 L : Dia.58.7mm-51mm PCD
 S : Others

ADAPTER

0 : ¼" BSP
 1 : 1" BSP
 2 : 1 ½" BSP
 3 : 2" BSP
 4 : 2" NPT
 5 : 3/8" BSP
 6 : 1/8" NPT
 10 : Others

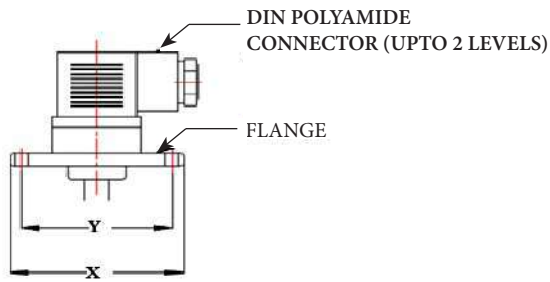
PLEASE NOTE:

Flange / Adapter Material available in variants of Stainless Steel / Mild Steel / Aluminum / Brass.

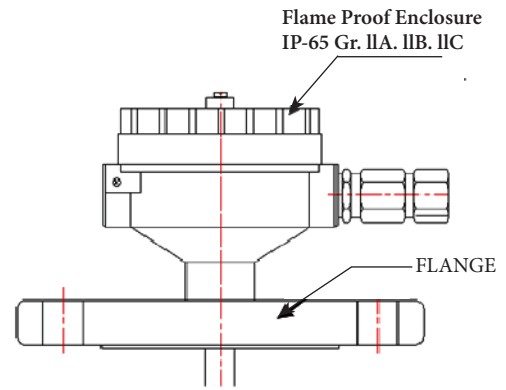
4 FLOAT TYPE

Type	Material	Float	Stem
S1	SS316	Dia. 28mm x 30mm	Dia. 8mm
S2	SS316	Dia. 30mm	Dia. 8mm
S3	SS316	Dia. 41mm x 51mm	Dia. 12.7mm
S4	SS316	Dia. 52mm	Dia. 12.7mm
S5	SS316L	Dia. 52mm	Dia. 12.7mm
S6	SS316	Dia. 63mm	Dia. 16mm
S7	SS316	Dia 45mmX56mm	Dia 12.7mm
P1	PU	Dia. 22mm x 20mm	Dia. 8mm
P2	PU	Dia. 25mm x 23mm	Dia. 8mm
P3	PU	Dia. 35mm x 40mm	Dia. 12.7mm
P4	PP	Dia. 25mm x 27mm	Dia. 8mm
P5	PP	Dia. 46mm x 44mm	Dia. 16mm
P6	PVDF	Dia. 50mm x 60mm	Dia. 16mm
S0	Others	Specify	Specify

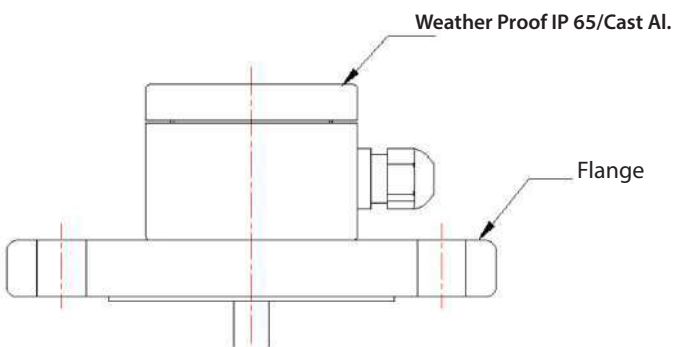
2.5 TERMINAL WITH PROCESS CONNECTION



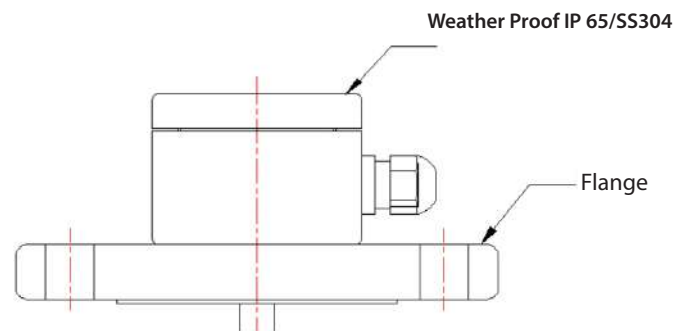
VFS CODE	X mm	Y mm	Flange Rating
B - A	75	60	-
B - B	75	65	-
B - C	100	80	-
B - D	-	-	2" #150 ANSI
B - E	-	-	2 1/2" #150 ANSI
B - F	-	-	2 1/2" BS 10 Table E
B - G	-	-	2" BS 10 Table E
B - H	-	-	1 1/2" #150 ANSI
B - I	-	-	3" BS 10 Table E
B - J	-	-	3" #150 ANSI
B - K	45	38	-
B - L	58.7	51	-
B - S	Others (As requested)		



VFS CODE	Flange Rating
E - D	2" #150 ANSI
E - E	2 1/2" #150 ANSI
E - F	2 1/2" BS 10 Table E
E - G	2" BS 10 Table E
E - I	3" BS 10 Table E
E - J	3" #150 ANSI
E - S	Others (As requested) Example; DN 50 PN 40, DN 65 PN 40, DN 80 PN 40, DN 100 PN 40

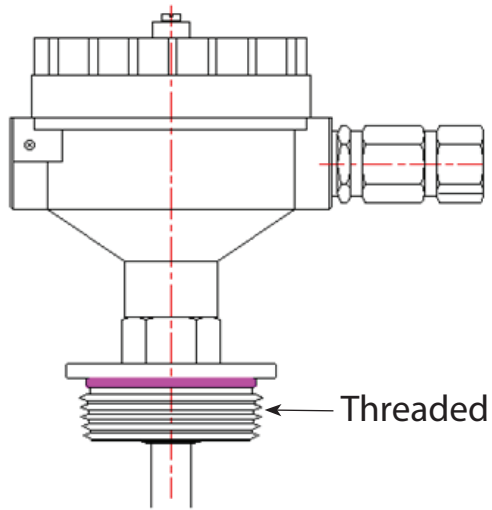


VFS CODE	Flange Rating
D - D	2" #150 ANSI
D - E	2 1/2" #150 ANSI
D - J	3" # 150 ANSI
D - S	4" # 150, Or Others (As requested)

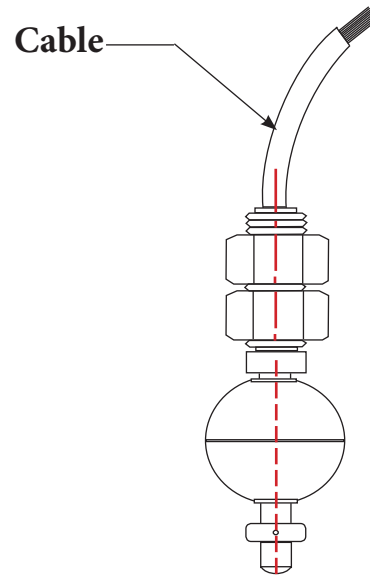


VFS CODE	Flange Rating
C - D	2" #150 ANSI
C - E	2 1/2" #150 ANSI
C - J	3" # 150 ANSI
C - S	4" # 150, Or Others (As requested)

TERMINAL WITH PROCESS CONNECTION



VFS CODE	THREAD TYPE
E - 0	1/4" BSP
E - 5	3/8" BSP
E - 1	1" BSP
E - 2	1 1/2" BSP
E - 3	2" BSP
E - 6	1/8" NPT
E - 4	2" NPT
E - 10	Others (As requested) Example; 2 1/2" BSP, 3" BSP, 2 1/2" NPT, 3" NPT



VFS CODE	THREAD TYPE
H - 10	1/4"
H - 10	M8
H - 10	Others (As requested)

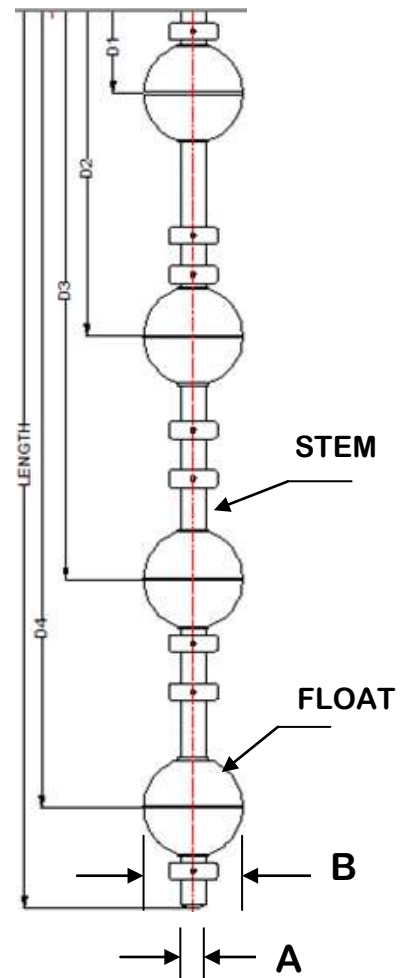
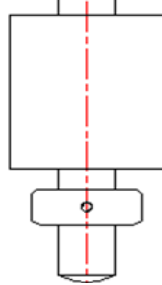
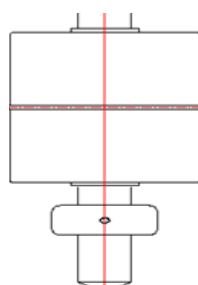
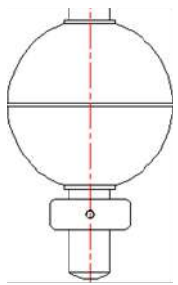
2.6 FLOAT WITH STEM

Products available with

1. Single Float
2. Double Float
3. Triple Float
4. Four Floats (as shown)
5. As Requested

Floats are available in different shapes

1. Spherical (SS)
2. Cylindrical (SS & PU/PVDF/PP)



VFS CODE	STEM Material	A (mm)	FLOAT Material	B (mm)
5-S1	SS 316	8	SS 316	28*30
5-S2	SS 316	8	SS 316	30
6-S3	SS 316	12.7	SS 316	41*51
6-S4	SS 316	12.7	SS 316	52
6-S6	SS 316	16	SS 316	63
6-S7	SS316	12.7	SS316	45*56
7-S5	SS 316L	12.7	SS 316L	52
1-S0	SS 304	8	Others	Specify
2-S0	SS 304	12.7	Others	Specify
3-P5	PP	16	PP	46*44
4-P4	PP	8	PP	25*27
8-S0	BRASS	8	Others	Specify
9-S0	BRASS	12.7	Others	Specify
O-P1	PU	8	PU	22*20
O-P2	PU	8	PU	25*23
O-P3	PU	12.7	PU	35*40
O-P6	PVDF	16	PVDF	50*60

2.7 SWITCH DETAILS

The reed switches used, are available in SPST & SPDT type. (Refer fig.02)

SPST - Normally open contact (NO) (Single pole single through)

SPDT - Changeover contact (C/O) (Single pole double through)

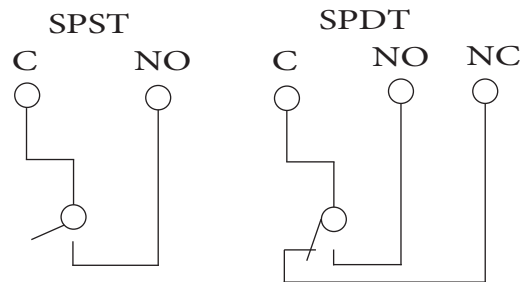
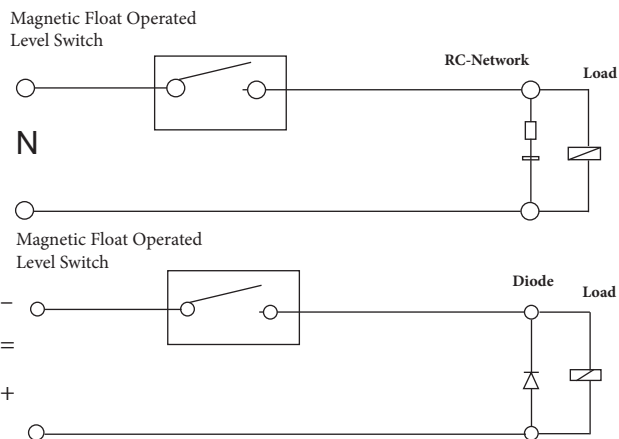
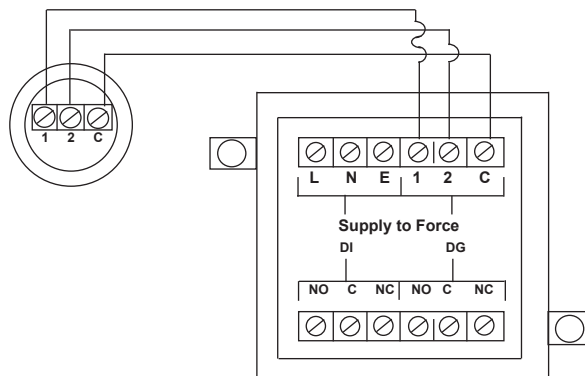


Fig. 02

Arc Suppression- Contact Production Measure For Reed Switches



Level Switch With Automatic Level Controller (provided as optional for specific application)



Type	VFS B-L-1-S1-?	VFS B-L-1-S2-?
Material Type	SS304 /316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 58.7mm X 51mm PCD Flange	∅ 58.7mm X 51mm PCD Flange
Guide Stem	∅ 8 mm	∅ 8 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 28 mm	∅ 30 mm
Specific Gravity	0.8	0.8
Design Pressure	8 Kg/cm ²	8Kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA	200 V DC/240 V AC/0.5A/15VA
Maximum Number of Contacts	Two	Two

OR

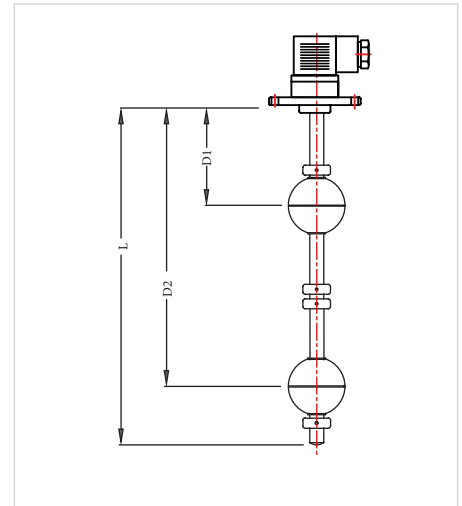
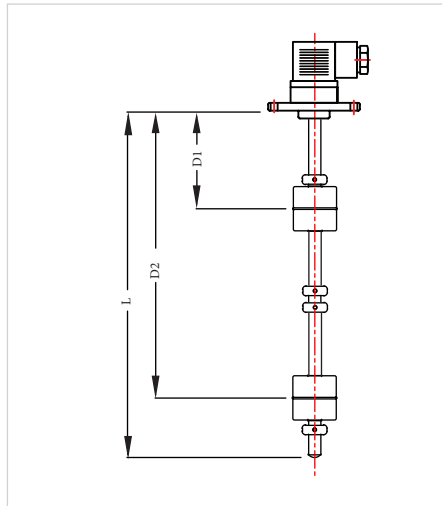
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification

CE/ABS



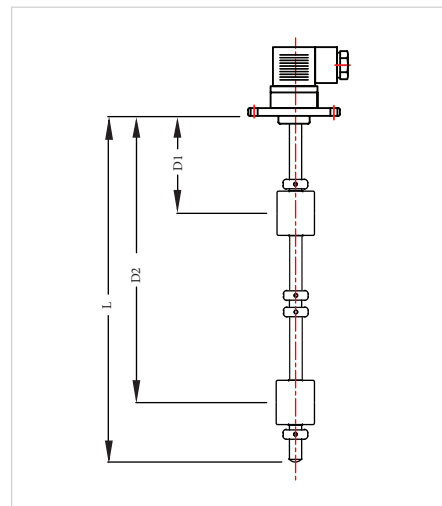
Type	VFS B-L-1-P2-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	58.7mm X 51mm PCD Flange
Guide Stem	∅ 8 mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical
Function	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two

OR

Function	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance =75mm min



Type	VFS B-K-1-S1-?	VFS B-K-1-S2-?
Material Type	SS304 / 316 / 316L	SS304 / 316 / 316L
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 45mm X 38mm PCD Flange	∅ 45mm X 38mm PCD Flange
Guide Stem	∅ 8 mm	∅ 8 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 28 mm	∅ 30 mm
Specific Gravity	0.8	0.8
Design Pressure	8 kg/cm ²	8 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Function	Electrical Specification Options Normally Open - Close	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two	Two

OR

Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One	One

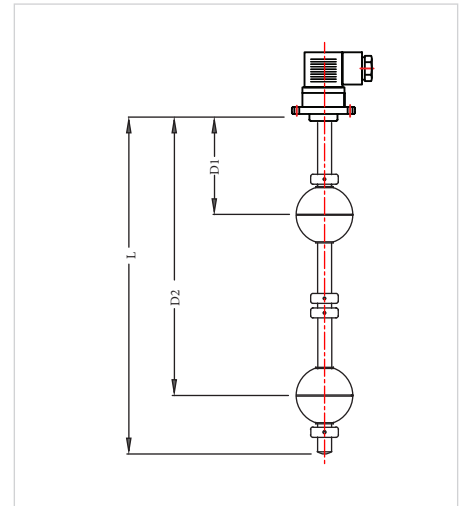
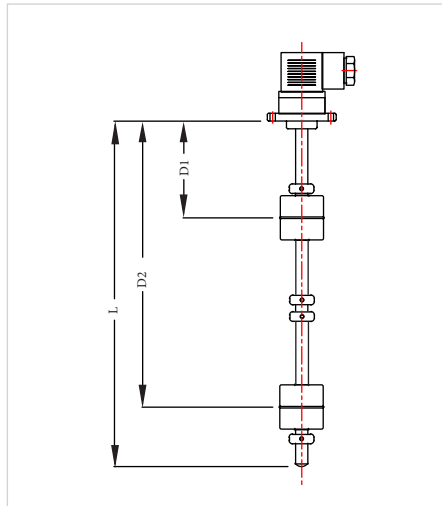
Minimum Measures

D1 ≥ 50mm

Between Contact Distance =75mm min

Approval certification

CE/ABS



Type	VFS B-K-1-P2-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 45mm X 38mm PCD Flange
Guide Stem	∅ 8 mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical
Function	Electrical Specification Options Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two

OR

Function	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One

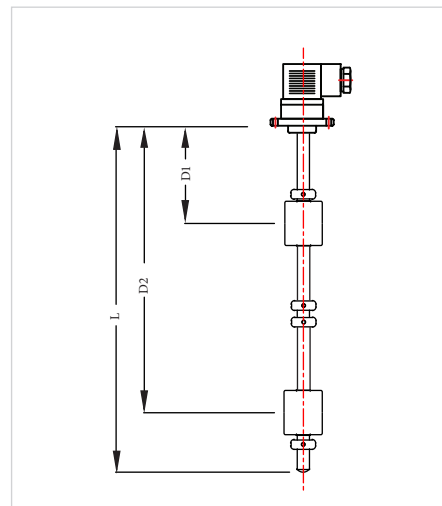
Minimum Measures

D1 ≥ 50mm

Between Contact Distance =75mm min

Approval certification

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Type	VFS B-C-2-S3-?	VFS B-C-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 100mm X 80mm PCD Flange	∅ 100mm X 80mm PCD Flange
Guide Stem	∅ 12.7mm	∅ 12.7mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 52 mm
Specific Gravity	0.8	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Two	Two

OR

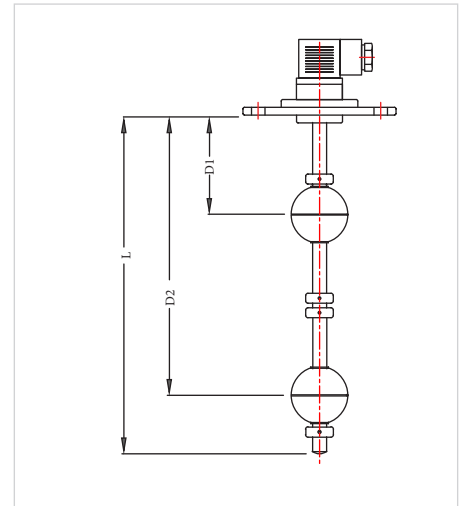
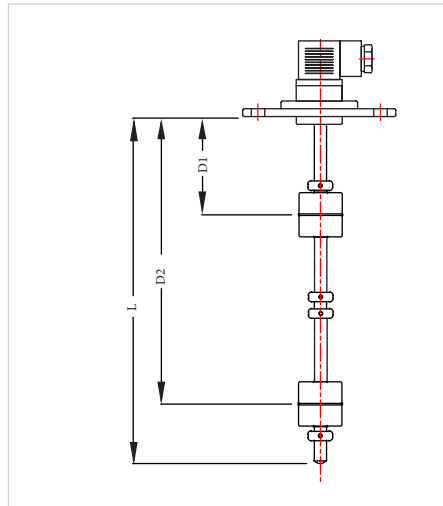
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	One	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

Approval certification

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Type	VFS B-C-2-P2-?
Material Type	304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 100mm X 80mm PCD Flange
Guide Stem	∅ 12.7mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Two

OR

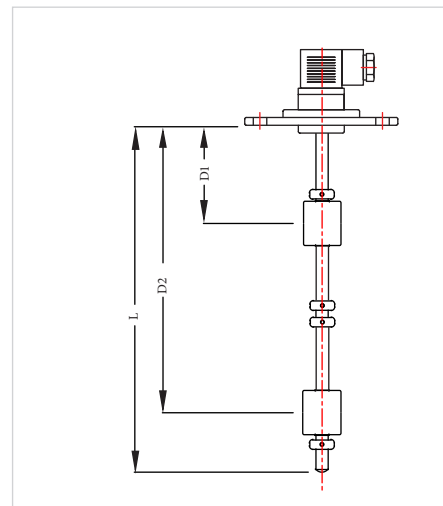
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

Approval certification

CE/ABS



Type	VFS B-B-2-S3-?	VFS B-B-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 75mm X 65mm PCD Flange	∅ 75mm X 65mm PCD Flange
Guide Stem	∅ 12.7mm	∅ 12.7mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 52 mm
Specific Gravity	0.8	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Two	Two

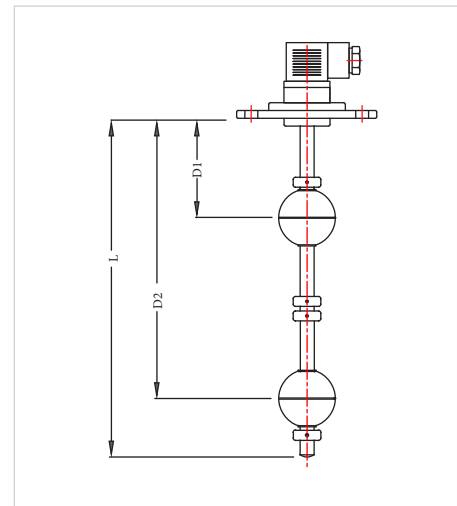
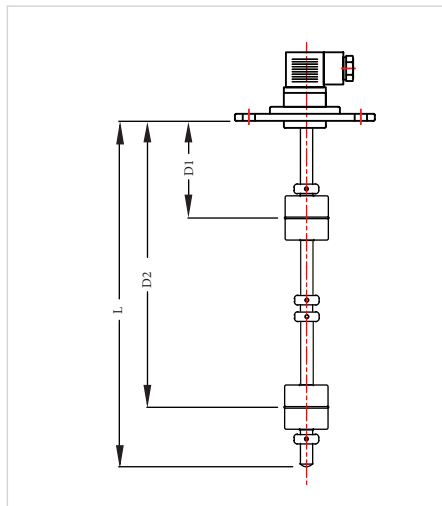
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	One	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification

CE/ABS



Type	VFS B-B-2-P3-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 75mm X 65mm PCD Flange
Guide Stem	∅ 12.7mm
Probe Length	Up to 3000 mm *
Float	∅ 35 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Two

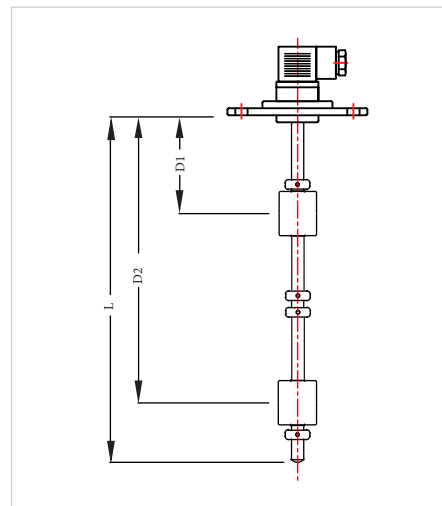
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	One

Minimum Measures

D1 = ≥ 50mm
Between Contact Distance =75mm min

Approval certification

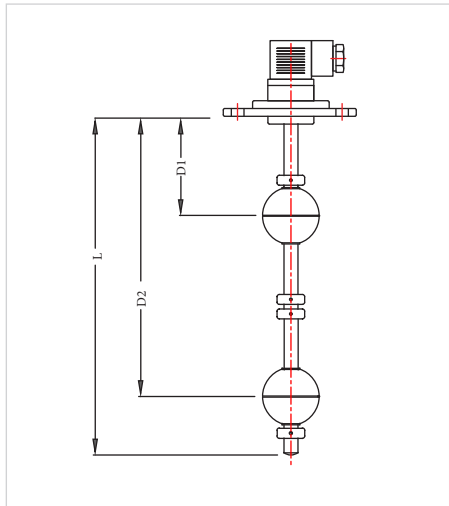
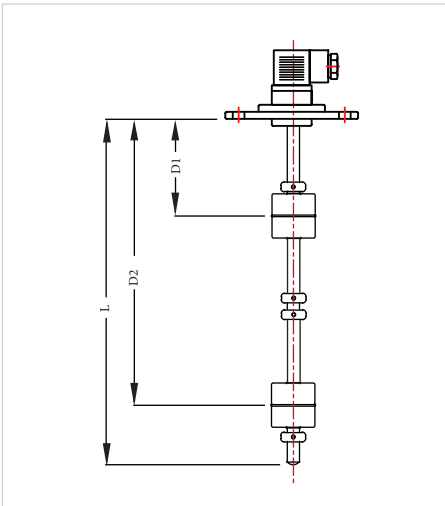
CE/ABS



Type	VFS B-A-2-S3-?	VFS B-A-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 75mm X 60 PCD Flange	∅ 75 X 60 mm PCD Flange
Guide Stem	∅ 12.7mm	∅ 12.7mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 52 mm
Specific Gravity	0.8	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Two	Two

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	One	One

Minimum Measures
D1 ≥ 50mm
Between Contact Distance = 75mm min
Approval certification
ATEX/CE/ABS

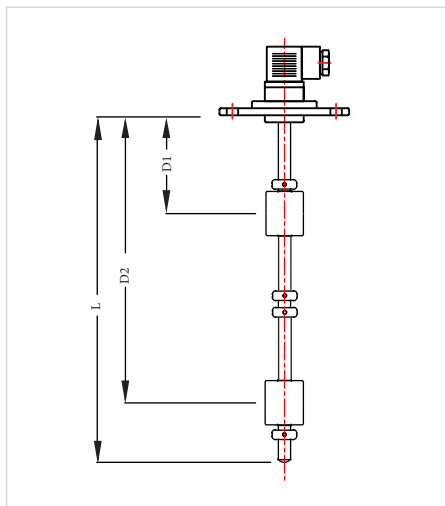


Type	VFS B-A-2-P3-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 75mm X 60mm PCD Flange
Guide Stem	∅ 12.7mm
Probe Length	Up to 3000 mm *
Float	∅ 35 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Two

OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	One

Minimum Measures
D1 ≥ 50mm
Between Contact Distance = 75mm min
Approval certification
CE/ABS



Type	VFS B-C-1-S1-?	VFS B-C-1-S2-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 100mm X 80mm PCD Flange	∅ 100mm X 80mm PCD Flange
Guide Stem	∅ 8mm	∅ 8mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 28 mm	∅ 30 mm
Specific Gravity	0.8	0.8
Design Pressure	8 kg/cm ²	8 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two	Two

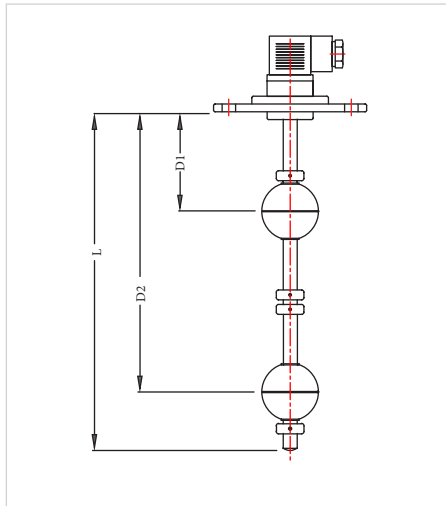
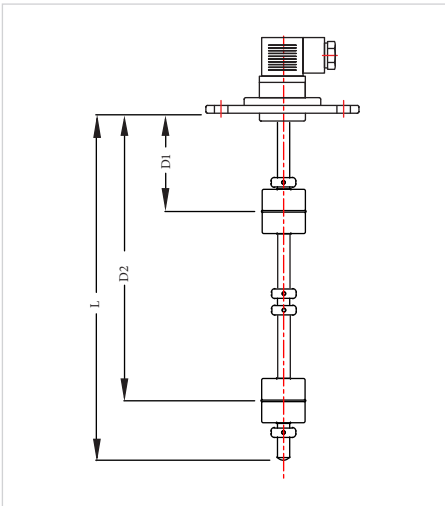
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA	500 VDC/250 V DC/1.5A/50VA
Maximum Number of Contacts	One	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

Approval certification

CE/ABS



Type	VFS B-C-1-P2-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 100mm X 80mm PCD Flange
Guide Stem	∅ 8mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two

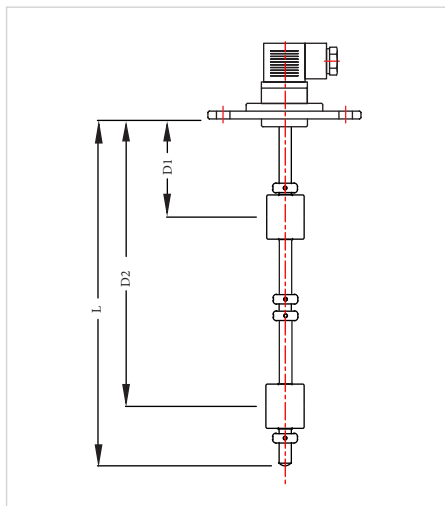
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

Approval certification

CE/ABS



Type	VFS B-B-1-S1-?	VFS B-B-1-S2-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 75 X 65mm PCD Flange	∅ 75mm X 65mm PCD Flange
Guide Stem	∅ 8mm	∅ 8mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 28 mm	∅ 30 mm
Specific Gravity	0.8	0.8
Design Pressure	8 kg/cm ²	8 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two	Two

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One	One

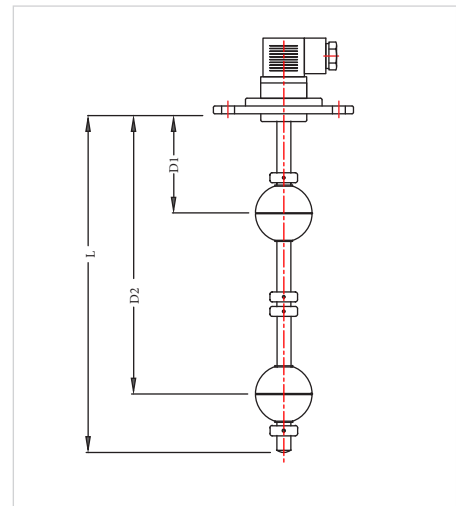
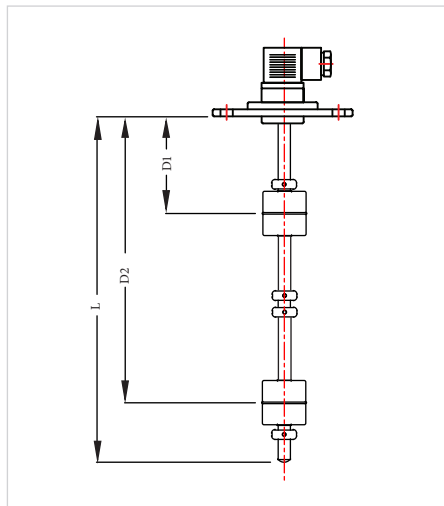
Minimum Measures

D1 ≥ 50mm

Between Contact Distance =75mm min

Approval certification

CE/ABS



Type	VFS B-B-1-P2-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 75mmX 65mm PCD Flange
Guide Stem	∅ 8mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two

OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One

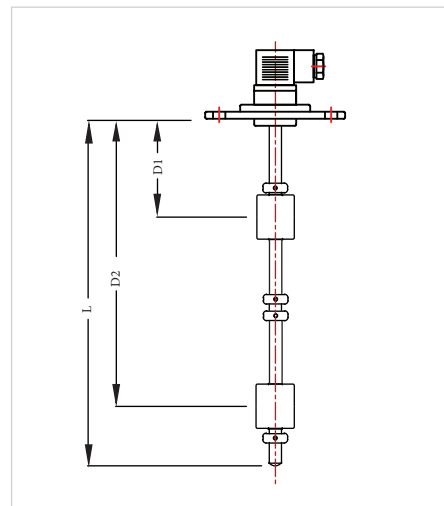
Minimum Measures

D1 ≥ 50mm

Between Contact Distance =75mm min

Approval certification

CE/ABS



Type	VFS B-A-1-S1-?	VFS B-A-1-S2-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	DIN POLYAMIDE	DIN POLYAMIDE
Process Connection	∅ 75mm X 60mm PCD Flange	∅ 75mm X 60mm PCD Flange
Guide Stem	∅ 8mm	∅ 8mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 28 mm	∅ 30 mm
Specific Gravity	0.8	0.8
Design Pressure	8 kg/cm ²	8 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two	Two

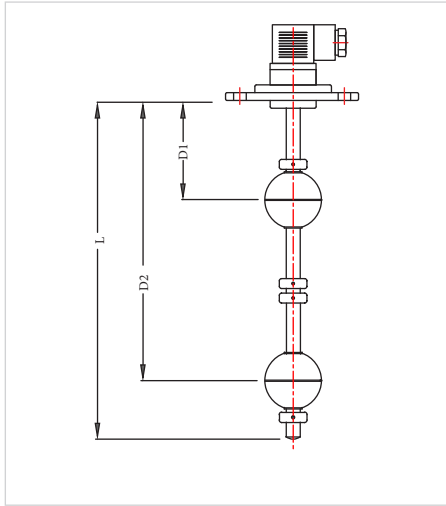
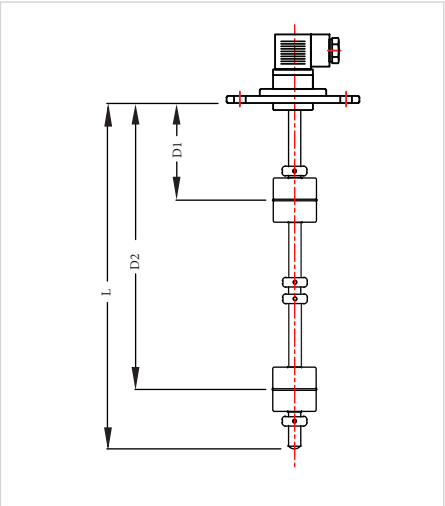
	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V DC/1.5A/50VA	500 VDC/250 V DC/1.5A/50VA
Maximum Number of Contacts	One	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

Approval certification

CE/ABS



Type	VFS B-A-1-P2-?
Material Type	SS304
Float Material	PU
Terminal Type	DIN POLYAMIDE
Process Connection	∅ 75mm X 60mm PCD Flange
Guide Stem	∅ 8mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	200 V DC/125 V AC/0.5A/15VA
Maximum Number of Contacts	Two

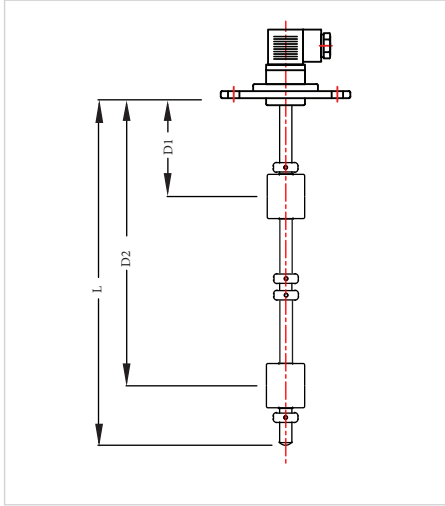
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	28 V DC/28 V AC/0.25A/3VA
Maximum Number of Contacts	One

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

Approval certification

CE/ABS

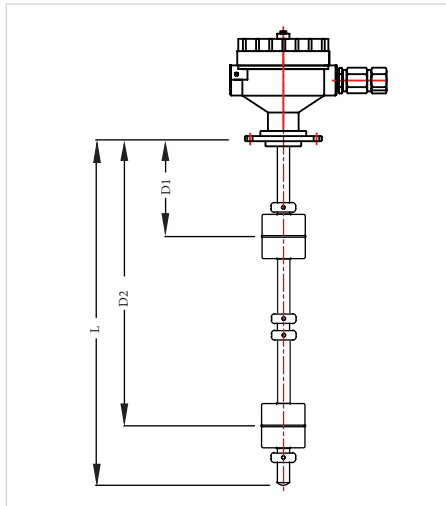
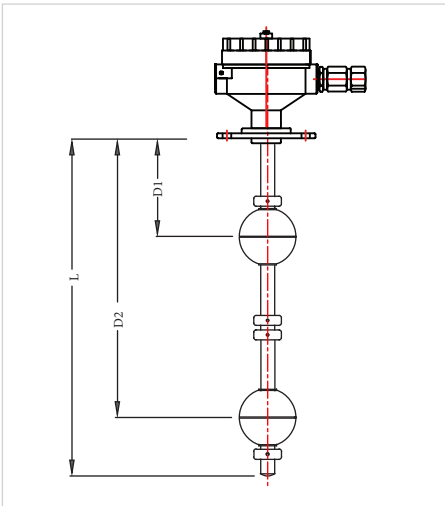


OEM Flanges with FLAME PROOF ENCLOSURE

Type	VFS E-C-2-S4-?	VFS E-A-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof IP 65, Gr. IIA, IIB, IIC	Ex. Proof IP 65, Gr. IIA, IIB, IIC
Process Connection	∅ 100mm X 80mm PCD Flange	∅ 75mm X 60mm PCD Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 40 mm
Specific Gravity	0.65	0.8
Design Pressure	8 kg/cm ²	8 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two

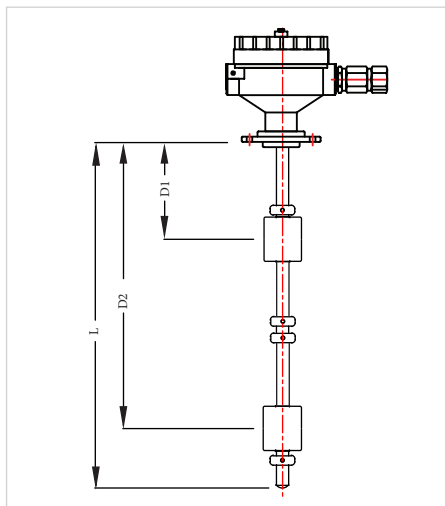
Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-B-2-P3-?
Material Type	SS304
Float Material	PU
Terminal Type	Ex. Proof IP 65, Gr. IIA, IIB, IIC
Process Connection	∅ 75mmX 65mm PCD Flange
Guide Stem	∅ 12.7 mm
Probe Length	Up to 3000 mm *
Float	∅ 35 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two

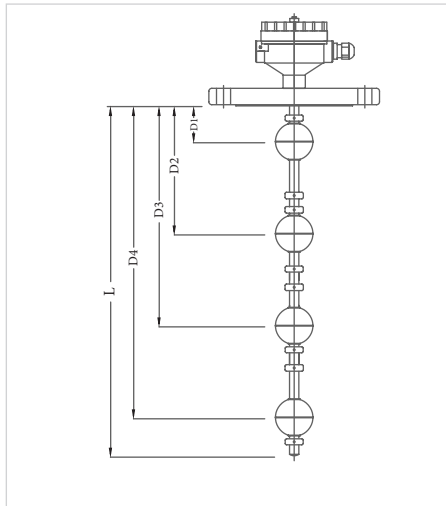
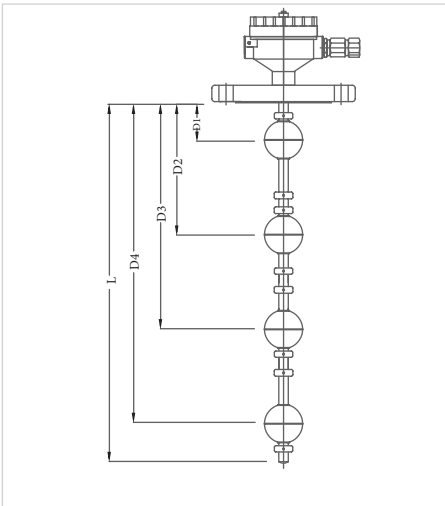
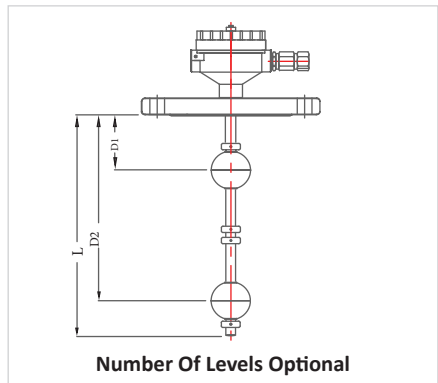
Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-D-2-S4-?	VFS D-D-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65, Gr.IIA, IIB, IIC	Weatherproof IP 65/Cast AL
Process Connection	2" 150 # ANSI Flange	2" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Function	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS

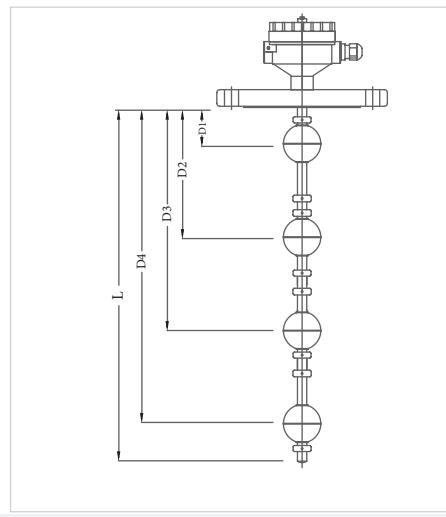
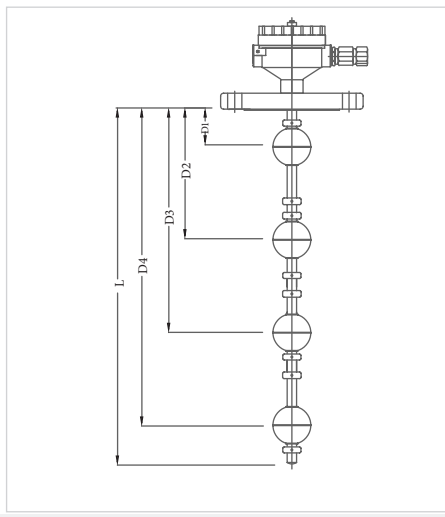
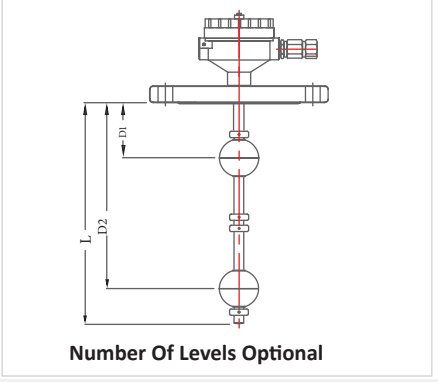


Type	VFS E-E-2-S4-?	VFS D-E -2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof , IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	2½" 150 # ANSI Flange	2½" 150 # ANSI Flange
Guide Stem	∅ 12.7mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Upto 150°C	Upto 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

Function	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS

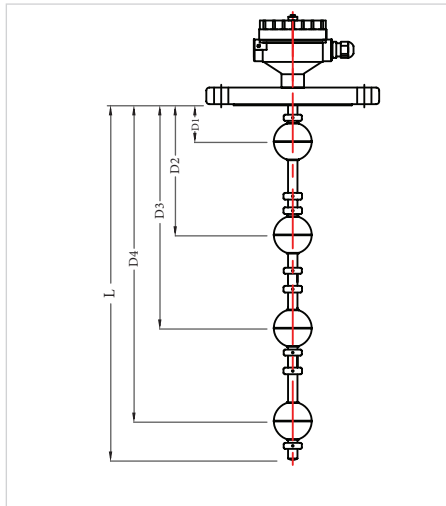
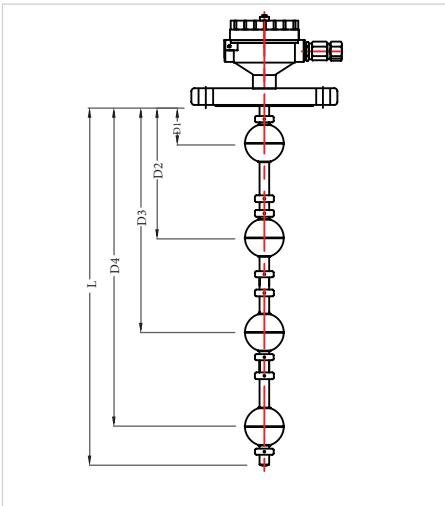
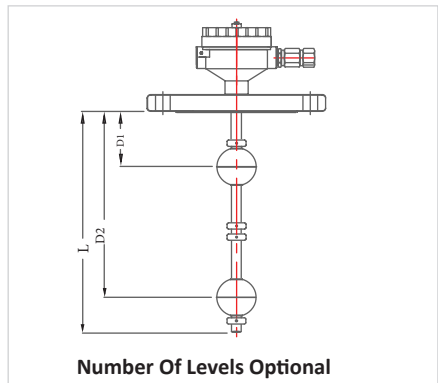


Type	VFS E-J-2-S4-?	VFS D-J-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	3" 150 # ANSI Flange	3" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification
ATEX/CE/ABS



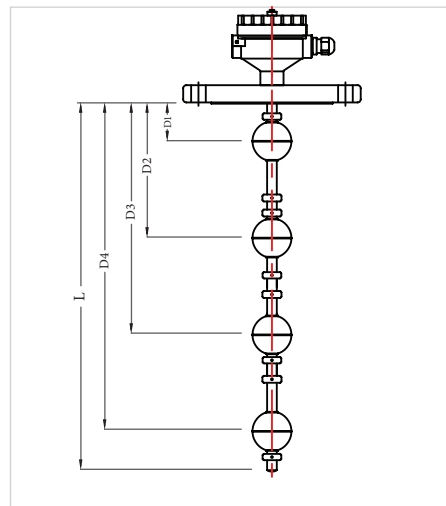
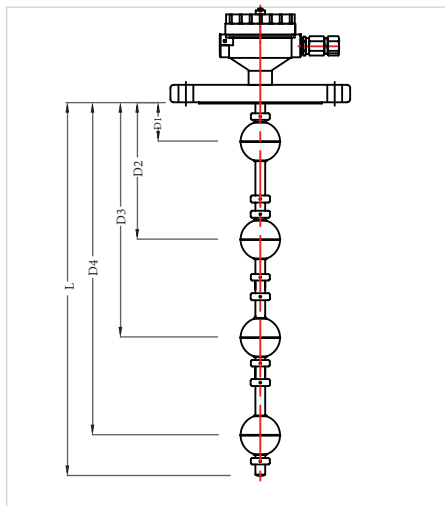
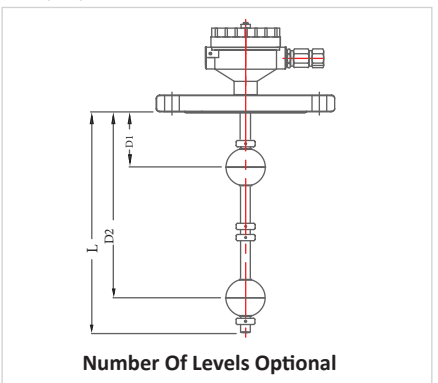
Type	VFS E-S-2-S4-?	VFS D-S-2-S4-?
Material Type	SS304/316	304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	4" 150 # ANSI Flange	4" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification
ATEX/CE/ABS



* For Extended Probe Length, Consult Factory

Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-D-2-S3-?

SS304/316
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41 mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

VFS D-D-2-S3-?

SS304/316
 SS 316
 Weather Proof IP 65 /Cast Al
 2" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Function
 Switching Capacity
 Maximum Number of Contacts

Electrical Specification Options
 Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Function
 Switching Capacity
 Maximum Number of Contacts

OR
 Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

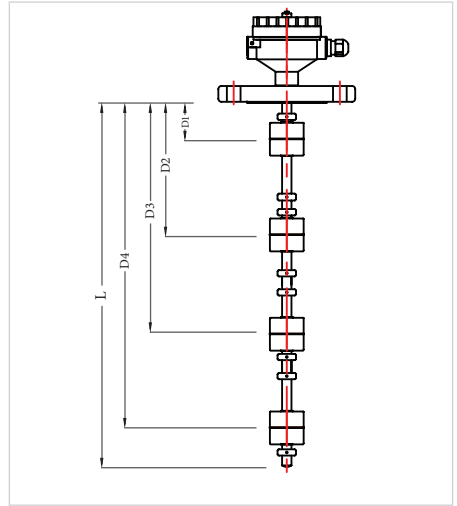
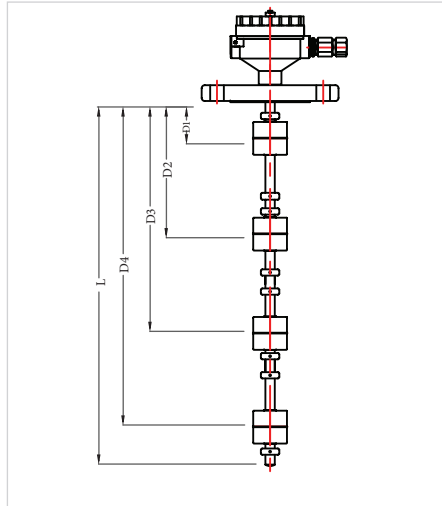
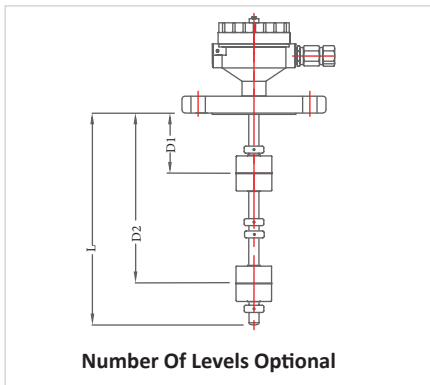
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance =75mm min

Approval certification

ATEX/CE/ABS

**Type**

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-E-2-S3-?

SS304/316
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2 1/2" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41 mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

VFS D-E-2-S3-?

SS304/316
 SS 316
 Weather Proof IP 65 /Cast Al
 2 1/2" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41 mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Function
 Switching Capacity
 Maximum Number of Contacts

Electrical Specification Options
 Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Function
 Switching Capacity
 Maximum Number of Contacts

OR
 Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

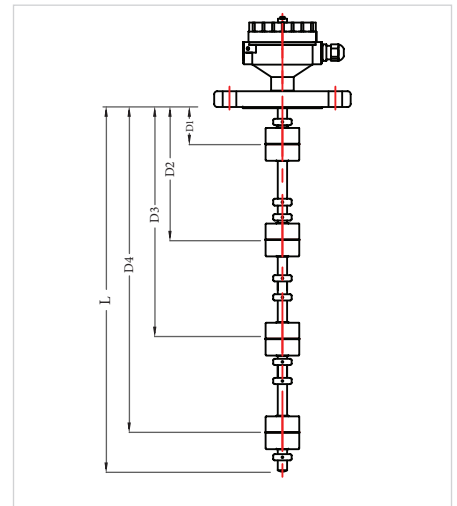
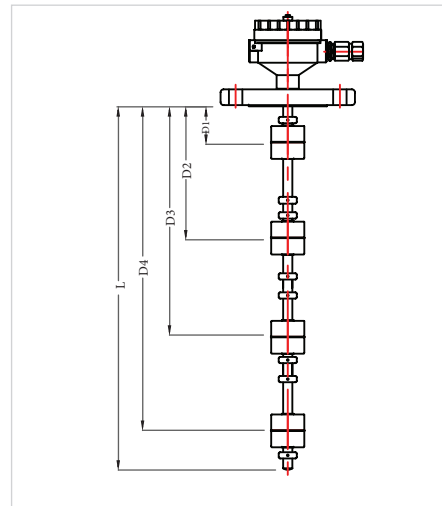
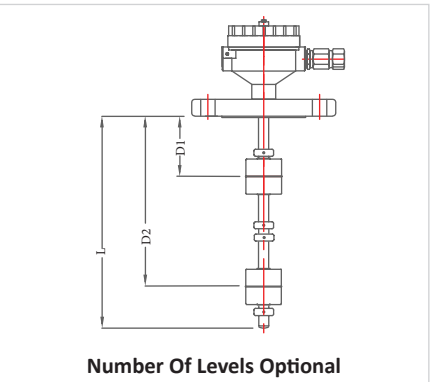
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance =75mm min

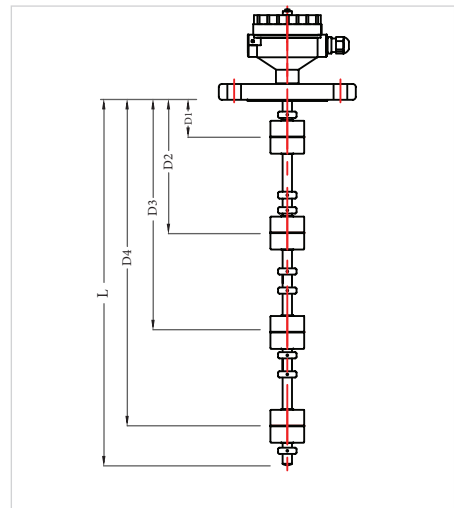
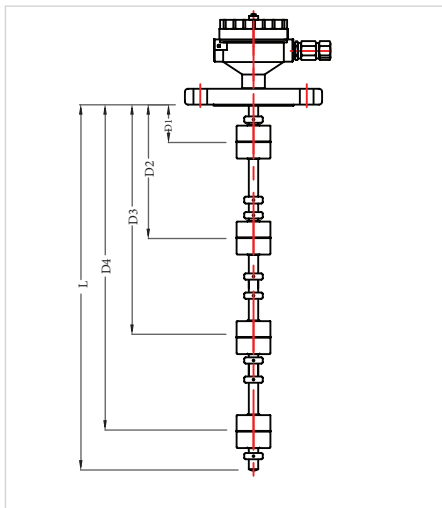
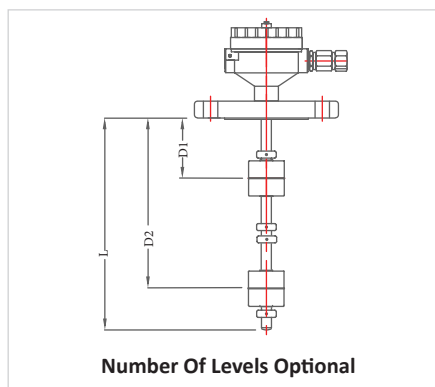
Approval certification

ATEX/CE/ABS



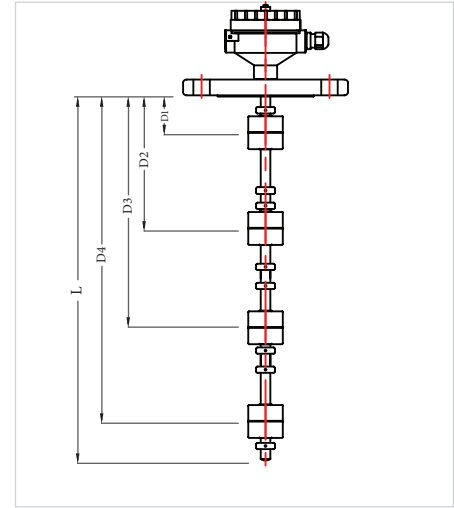
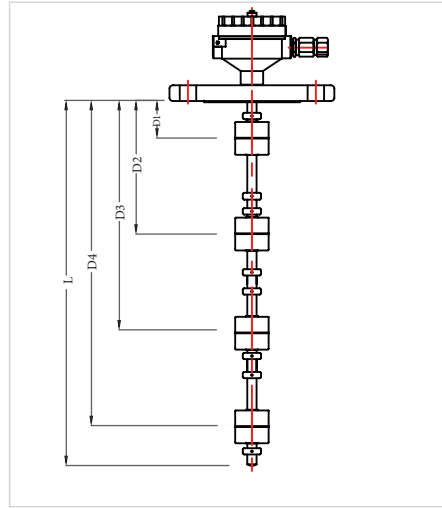
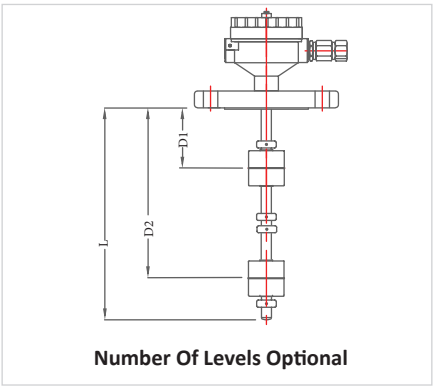
Type	VFS E-J-2-S3-?	VFS D-J-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	3" 150 # ANSI Flange	3" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-S-2-S3-?	VFS D-S-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	4" 150 # ANSI Flange	4" 150 # ANSI Flange
Guide Stem	∅ 12.7mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65 (Flame Proof)	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS



Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-D-2-P3-?

SS304/316
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 2 kg/cm²
 Up to 150°C
 IP 65
 Vertical

VFS D-D-2-P3-?

SS304/316
 SS 316
 Weather Proof IP 65 /Cast Al
 2" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 2 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

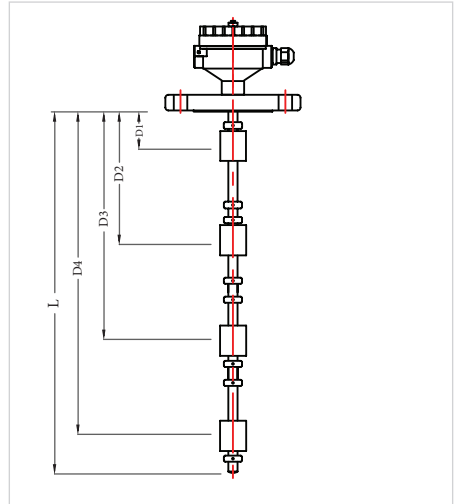
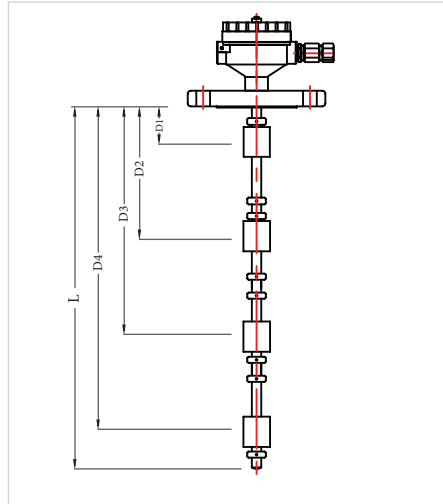
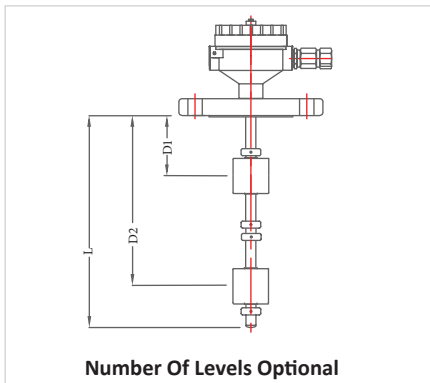
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 ≥ 50mm
 Between Contact Distance =75mm min

Approval certification

ATEX/CE/ABS



Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-E-2-P3-?

SS304
 PU
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2½" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 2 kg/cm²
 Up to 60°C
 IP 65
 Vertical

VFS D-E-2-P3-?

SS304
 PU
 Weather Proof IP 65 /Cast Al
 2½" 150 # ANSI Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 2 kg/cm²
 Up to 60°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

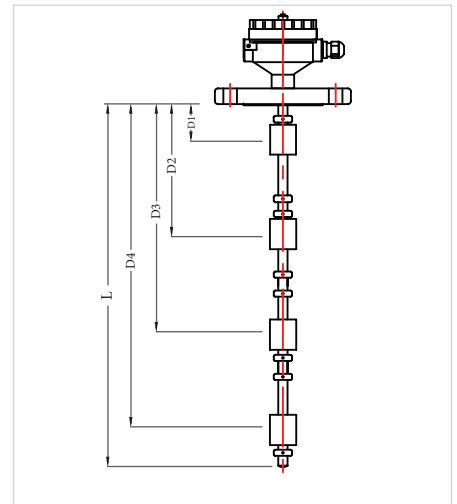
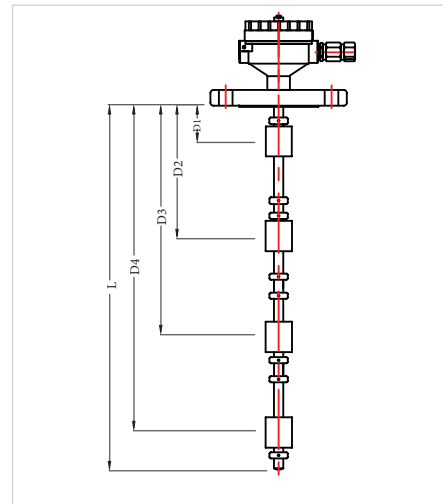
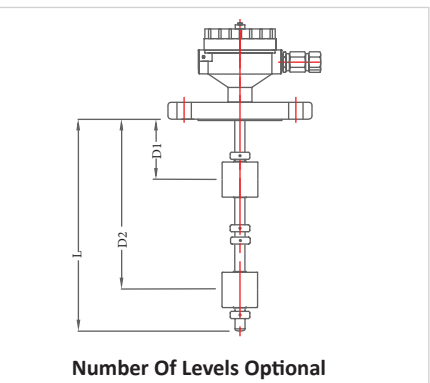
Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

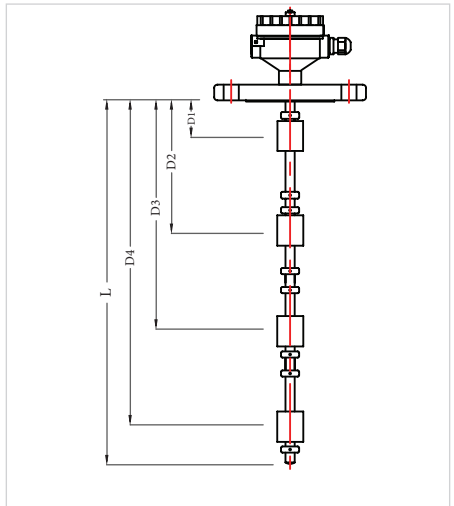
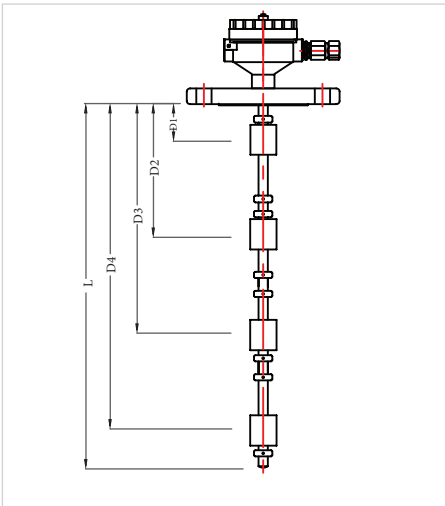
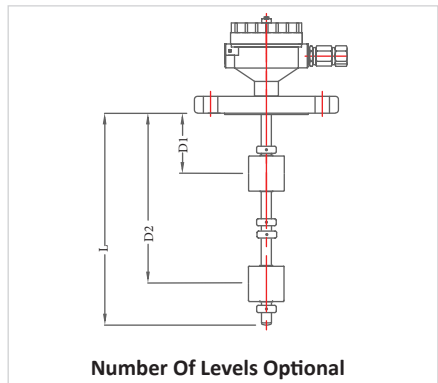
D1 ≥ 50mm
 Between Contact Distance =75mm min



Type	VFS E-J-2-P3-?	VFS D-J-2-P3-?
Material Type	SS304	SS304
Float Material	PU	PU
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	3" 150 # ANSI Flange	3" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 35 mm	∅ 35 mm
Specific Gravity	0.8	0.8
Design Pressure	2 kg/cm ²	2 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS

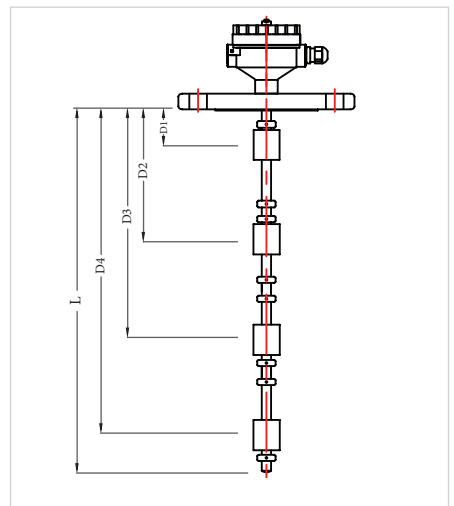
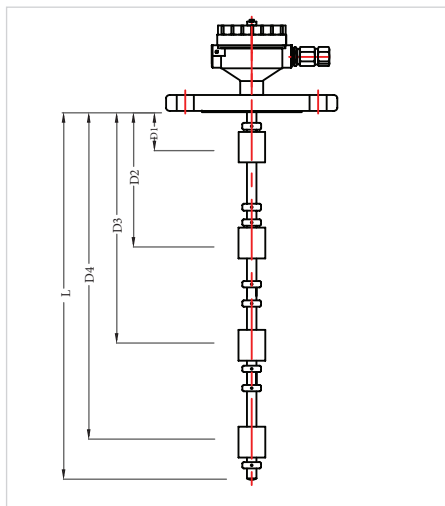
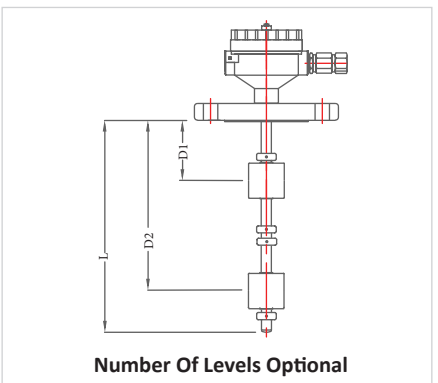


Type	VFS E-S-2-P3-?	VFS D-S-2-P3-?
Material Type	SS304/316	SS304/316
Float Material	PU	PU
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	4" 150 # ANSI Flange	4" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 35 mm	∅ 35 mm
Specific Gravity	0.8	0.8
Design Pressure	2 kg/cm ²	2 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

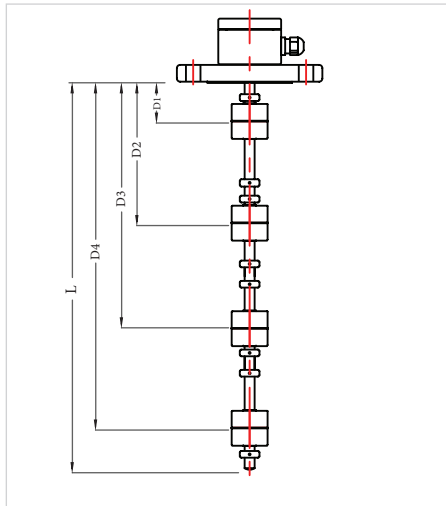
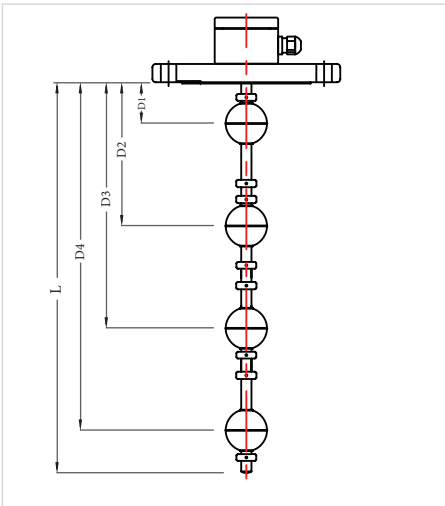
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min



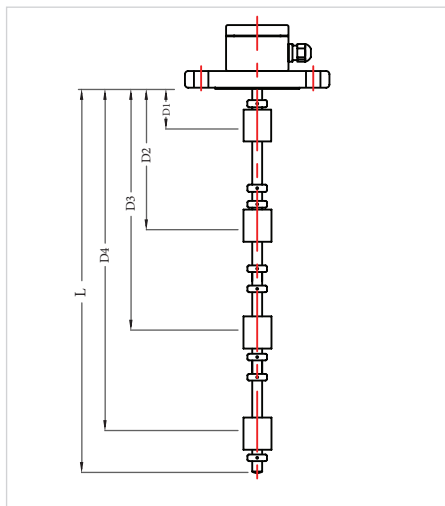
Type	VFS F-S-2-S4-?	VFS F-S-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Cast Aluminium Junction Box	Cast Aluminium Junction Box
Process Connection	4" 150 # ANSI Flange	4" 150 # ANSI Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 40 mm
Specific Gravity	0.65	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Four	Four

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min



Type	VFS F-S-2-P3-?
Material Type	SS304
Float Material	PU
Terminal Type	Cast Aluminium Junction Box
Process Connection	4" 150 # ANSI Flange
Guide Stem	∅ 12.7mm
Probe Length	Up to 3000 mm *
Float	∅ 35 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Ingress protection Class	IP 65
Mounting Position	Vertical
Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Four

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min



Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-G-2-S4-?

SS304/316
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2" BS10 Table E Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

VFS D-G-2-S4-?

SS304/316
 SS 316
 Weather Proof IP 65 /Cast Al
 2" BS10 Table E Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

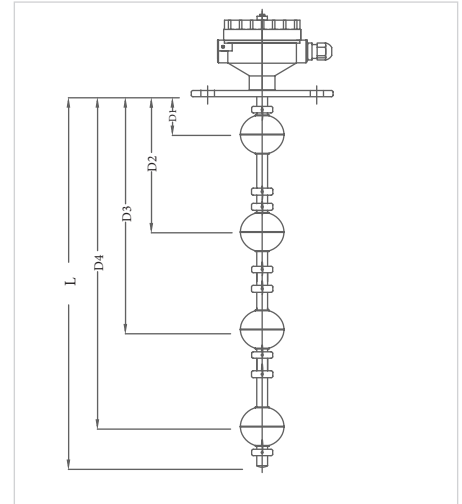
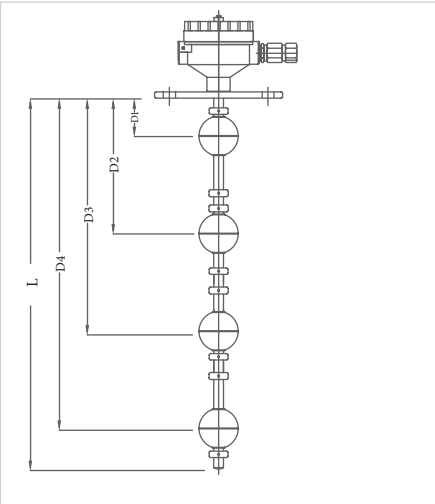
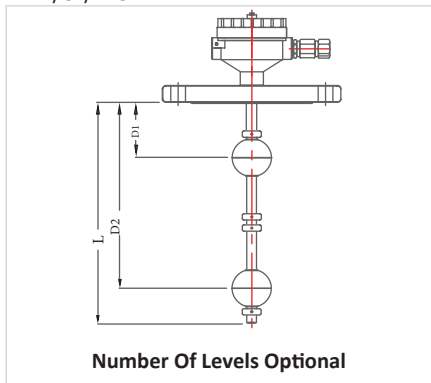
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance = 75mm min

Approval certification

ATEX/CE/ABS

**Type**

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-F-2-S4-?

SS304/316
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2 1/2" BS10 Table E Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

VFS D-F-2-S4-?

SS304/316
 SS 316
 Weather Proof IP 65 /Cast Al
 2 1/2" BS10 Table E Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

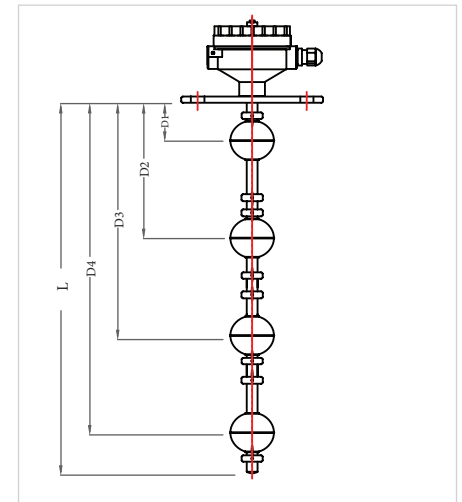
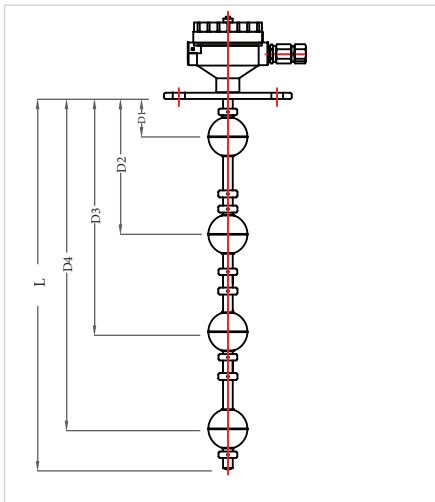
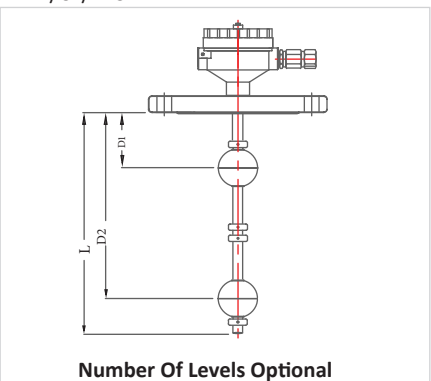
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance = 75mm min

Approval certification

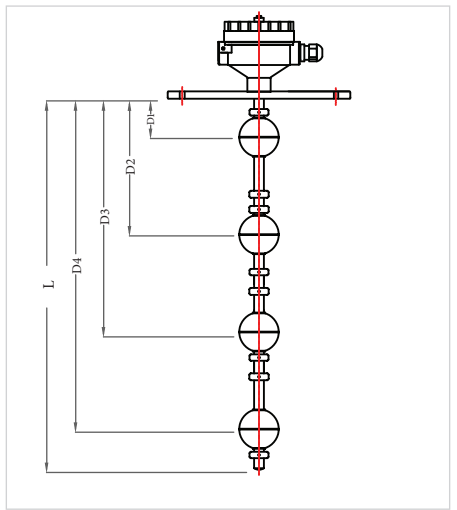
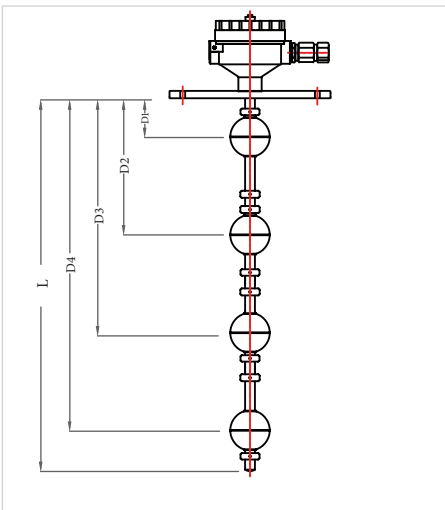
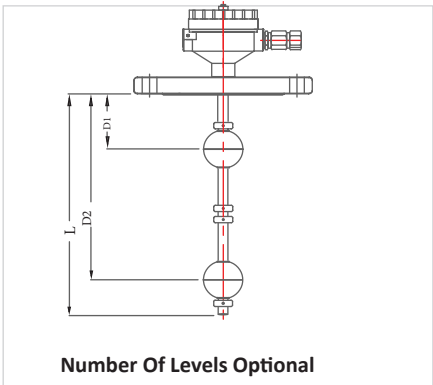
ATEX/CE/ABS



Type	VFS E-I-2-S4-?	VFS D-I-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	3" BS10 Table E Flange	3" BS10 Table E Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

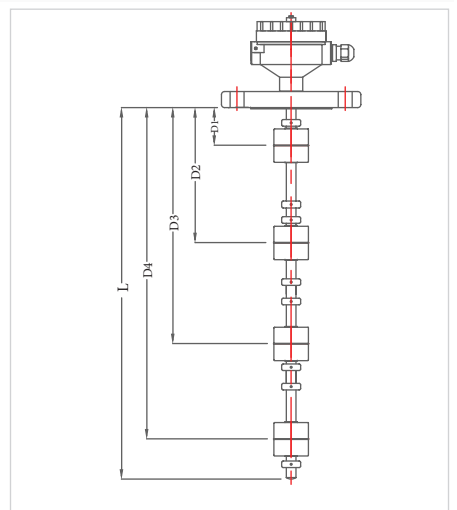
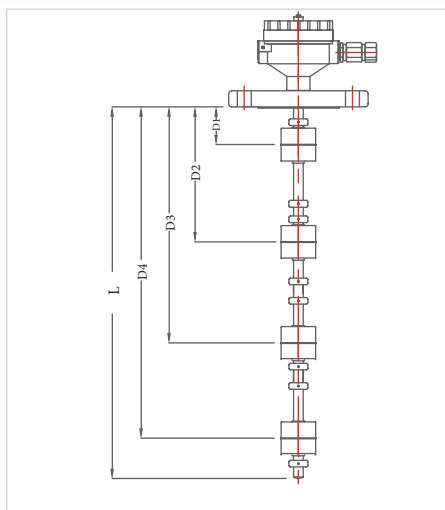
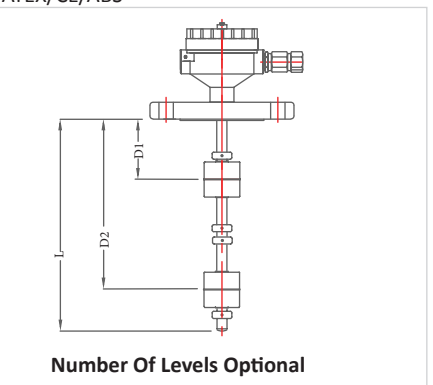
Minimum Measures
D1 ≥ 50mm
Between Contact Distance = 75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-G-2-S3-?	VFS D-G-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	2" BS10 Table E Flange	2" BS10 Table E Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

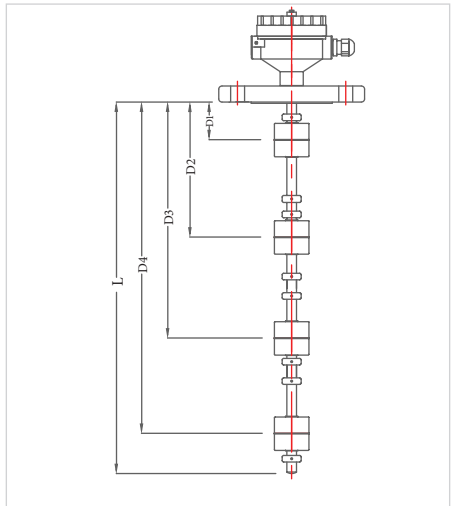
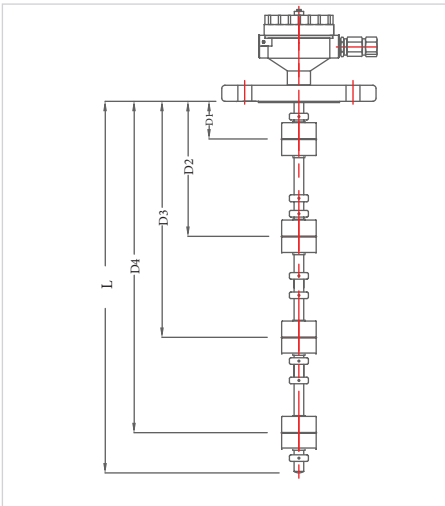
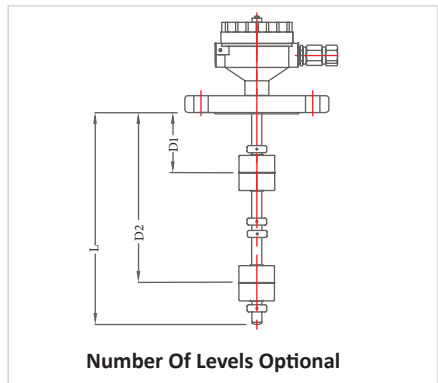
Minimum Measures
D1 ≥ 50mm
Between Contact Distance = 75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-F-2-S3-?	VFS D-F-2-S3-?
Material Type	304/316	304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC / Ex- Proof	Weather Proof IP 65 /Cast Al
Process Connection	2 ½" BS10 Table E Flange	2 ½" BS10 Table E Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS

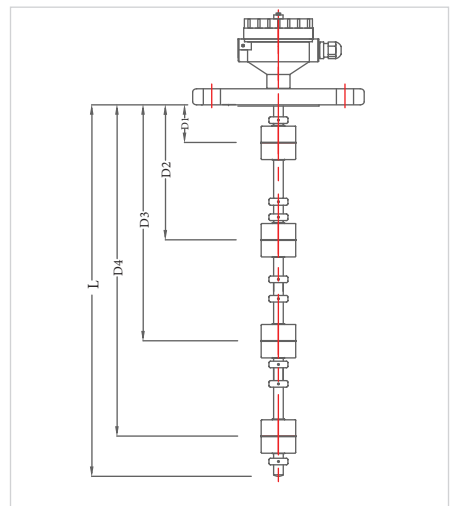
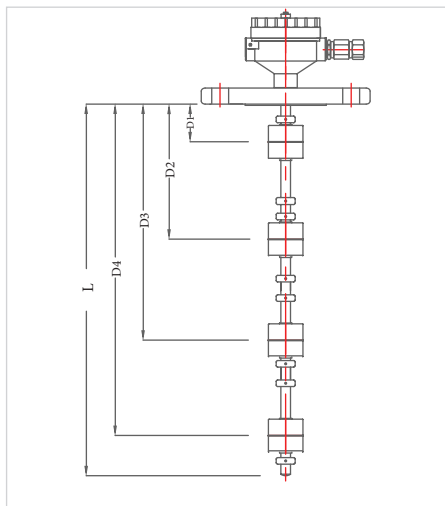
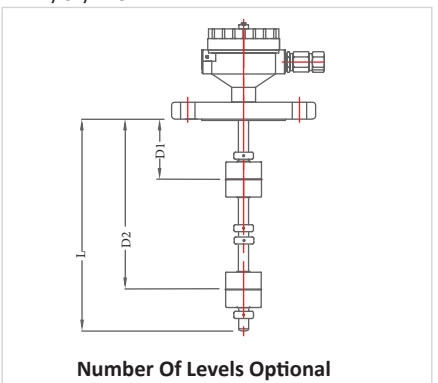


Type	VFS E-I-2-S3-?	VFS D-I-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC / Ex- Proof	Weather Proof IP 65 /Cast Al
Process Connection	3" BS10 Table E Flange	3" BS10 Table E Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

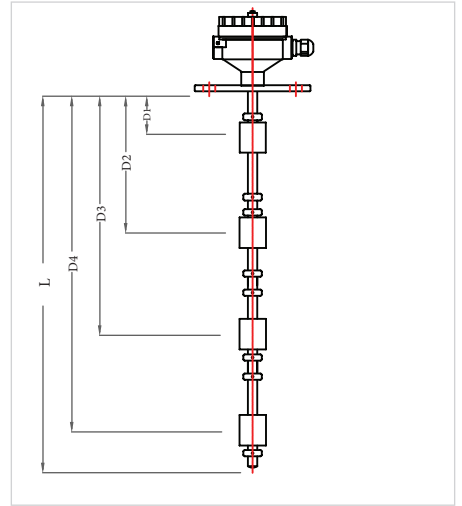
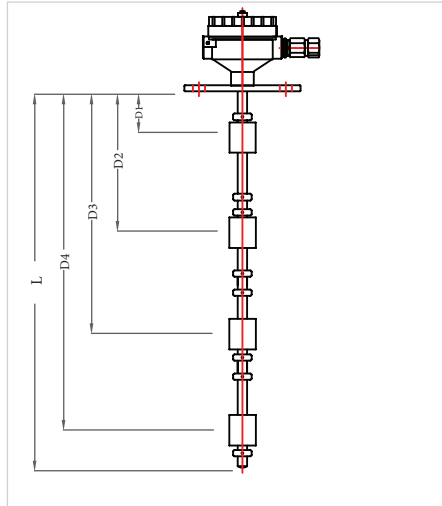
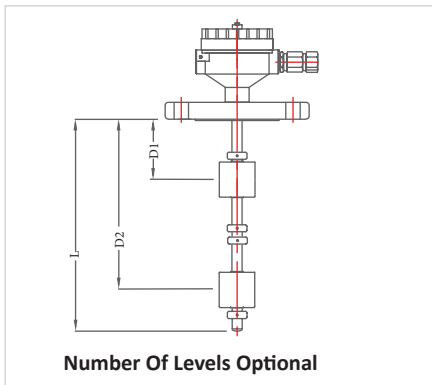
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

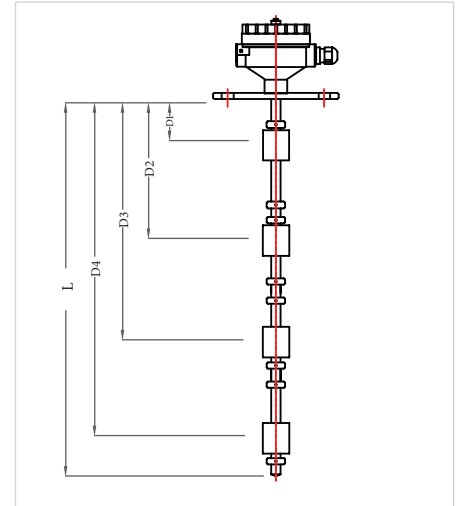
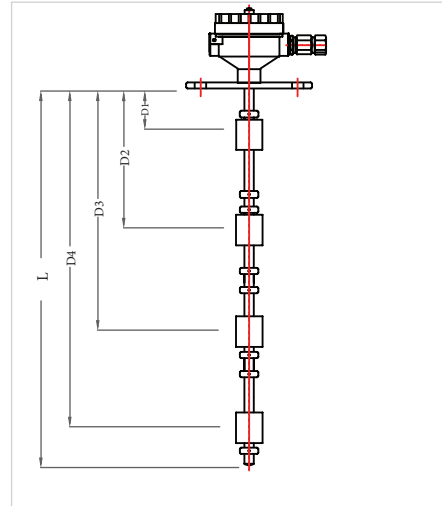
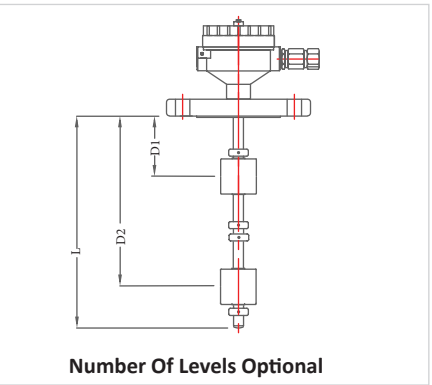
Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-G-2-P3-?	VFS D-G-2-P3-?
Material Type	SS304	SS304
Float Material	PU	PU
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC / Ex-	Weather Proof IP 65 /Cast Al
Process Connection	2" BS10 Table E Flange	2" BS10 Table E Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 35 mm	∅ 35 mm
Specific Gravity	0.8	0.8
Design Pressure	2 kg/cm ²	2 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three
Minimum Measures		
D1 ≥ 50mm		
Between Contact Distance =75mm min		



Type	VFS E-F-2-P3-?	VFS D-F-2-P3-?
Material Type	SS304	SS304
Float Material	PU	PU
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	2 1/2" BS10 Table E Flange	2 1/2" BS10 Table E Flange
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 35 mm	∅ 35 mm
Specific Gravity	0.8	0.8
Design Pressure	2 kg/cm ²	2 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three
Minimum Measures		
D1 ≥ 50mm		
Between Contact Distance =75mm min		



Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-I-2-P3-?

SS304
 PU
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 3" BS10 Table E Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 2 kg/cm²
 Up to 60°C
 IP 65
 Vertical

VFS D-I-2-P3-?

SS304
 PU
 Weather Proof IP 65 /Cast Al
 3" BS10 Table E Flange
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 2 kg/cm²
 Up to 60°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

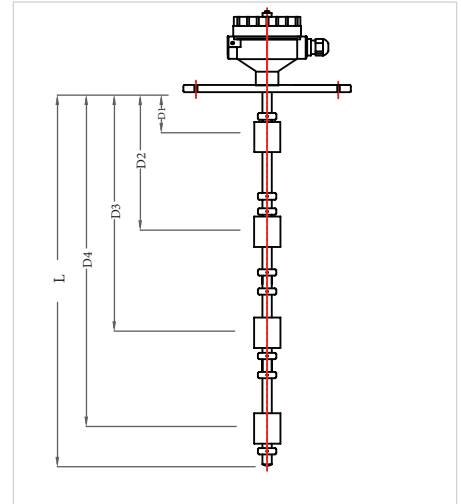
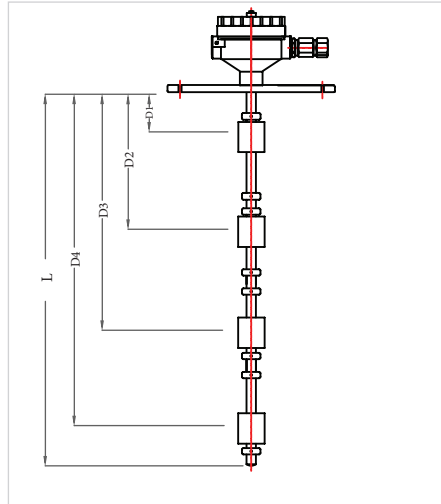
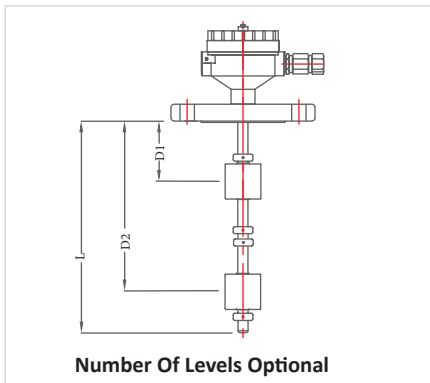
Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance = 75mm min

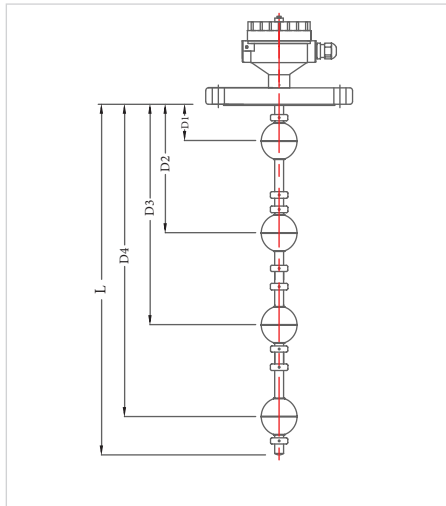
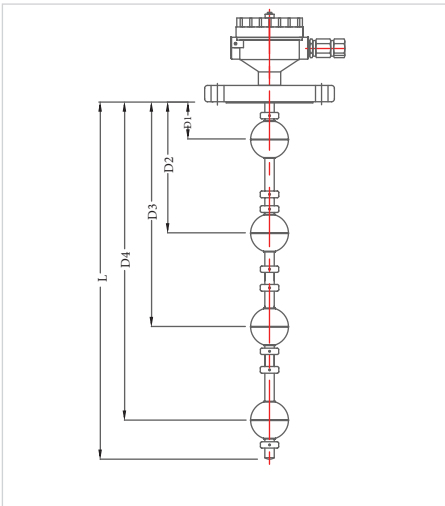
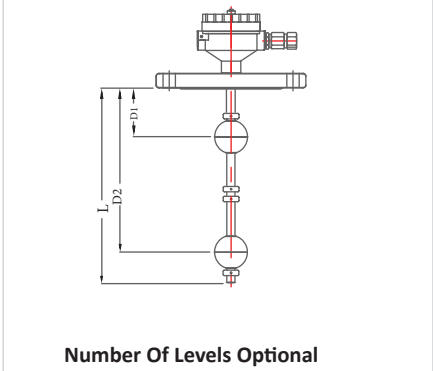


Type	VFS E-S-2-S4-?	VFS D-S-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 50 PN 40	DN 50 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Function	Electrical Specification Options Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

Function	OR Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification
ATEX/CE/ABS



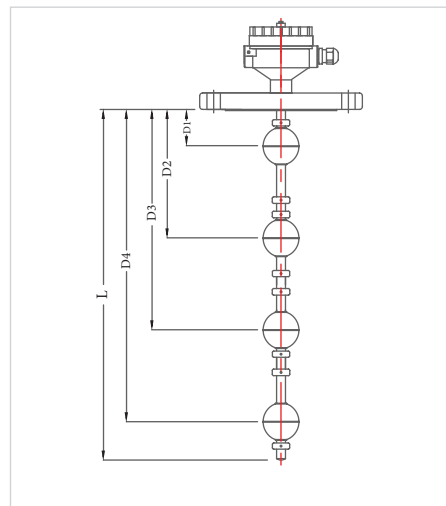
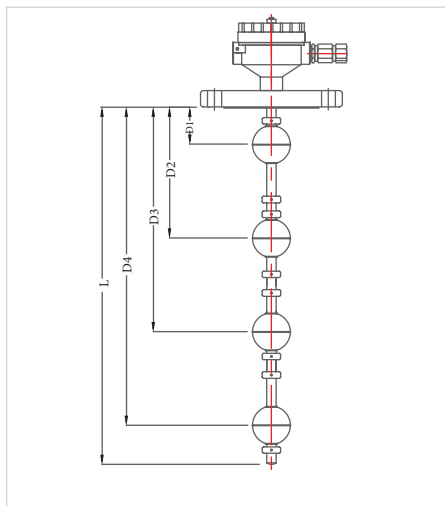
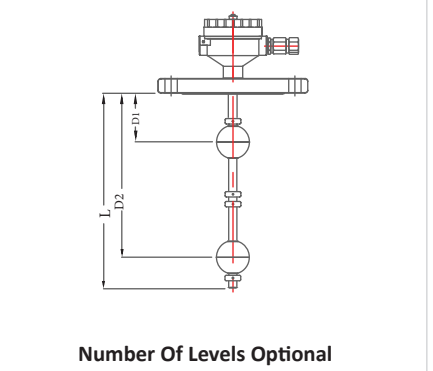
Type	VFS E-S-2-S4-?	VFS D-S-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 65 PN 40	DN 65 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

Function	Electrical Specification Options Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

Function	OR Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification
ATEX/CE/ABS



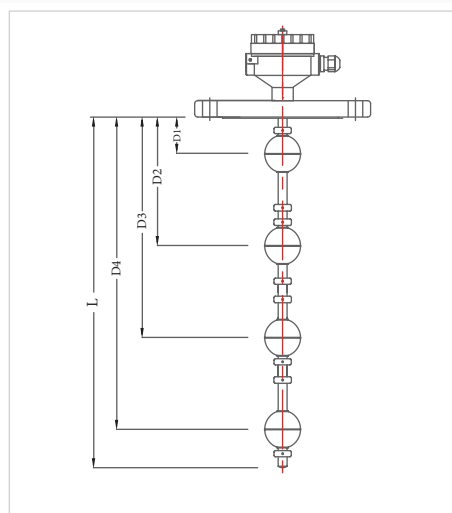
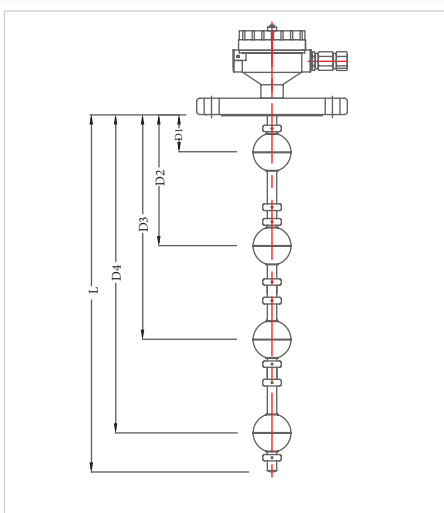
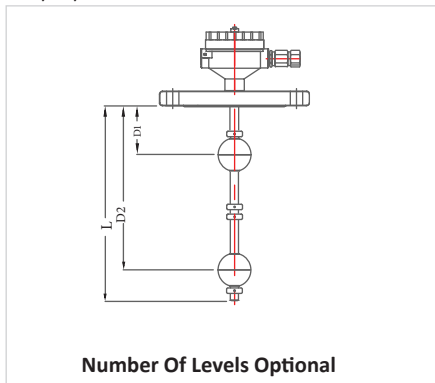
* For Extended Probe Length, Consult Factory

Type	VFS E-S-2-S4-?	VFS D-S-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 80 PN 40	DN 80 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification
ATEX/CE/ABS

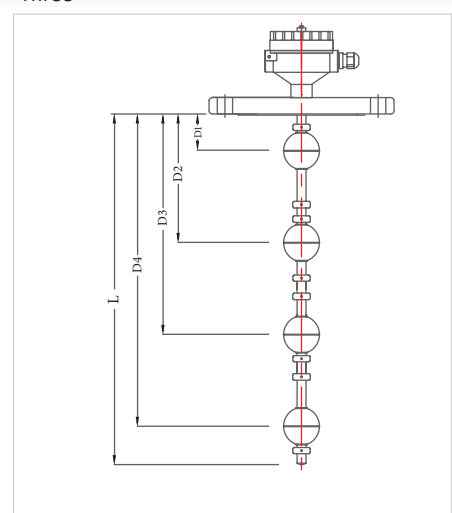
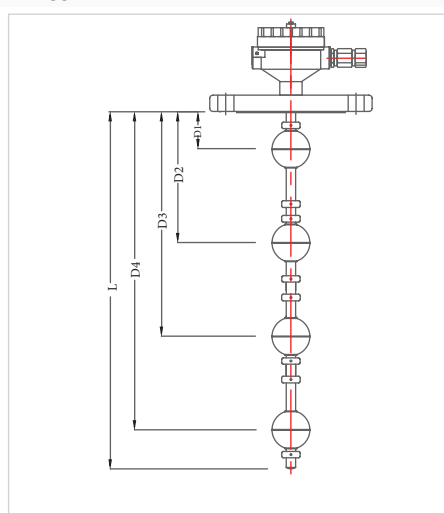
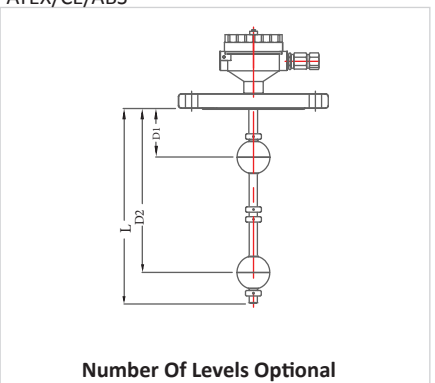


Type	VFS E-S-2-S4-?	VFS D-S-2-S4-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 100 PN 40	DN 100 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

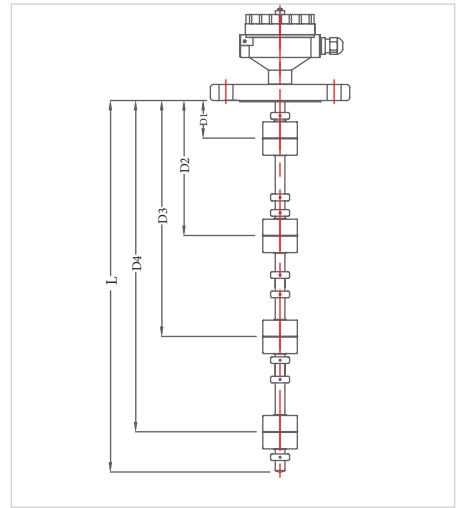
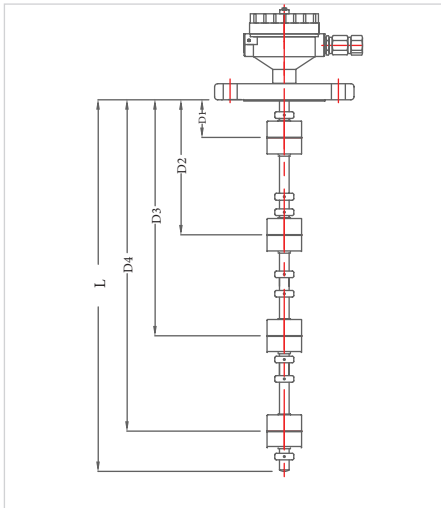
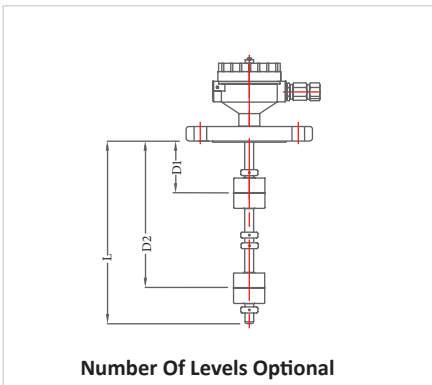
Approval certification
ATEX/CE/ABS



Type	VFS E-S-2-S3-?	VFS D-S-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 50 PN 40	DN 50 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

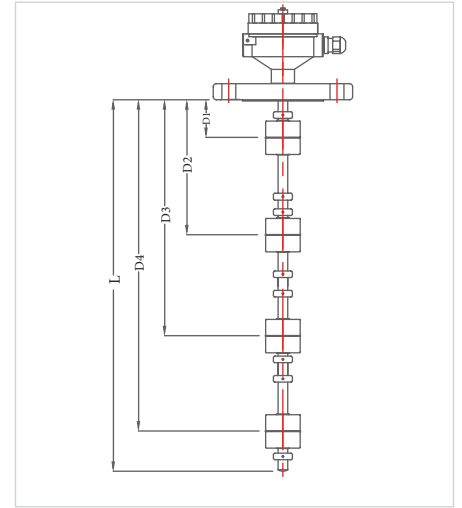
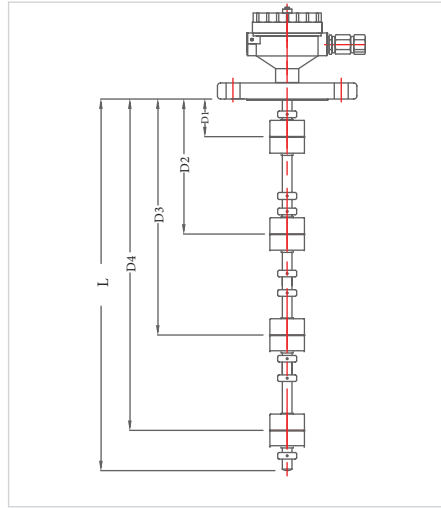
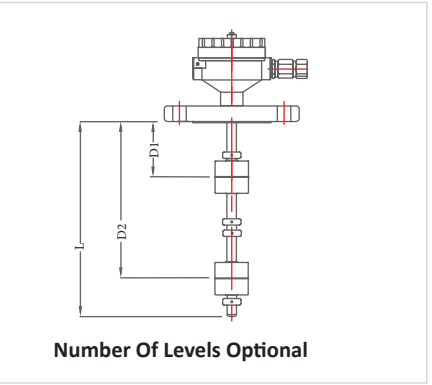
Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS



Type	VFS E-S-2-S3-?	VFS D-S-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 65 PN 40	DN 65 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D ≥ 50mm
Between Contact Distance =75mm min
Approval certification
ATEX/CE/ABS

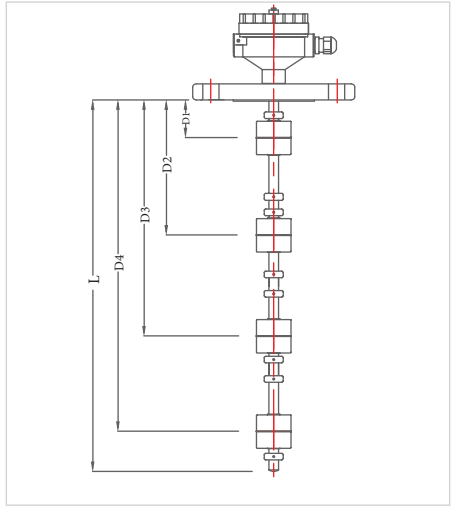
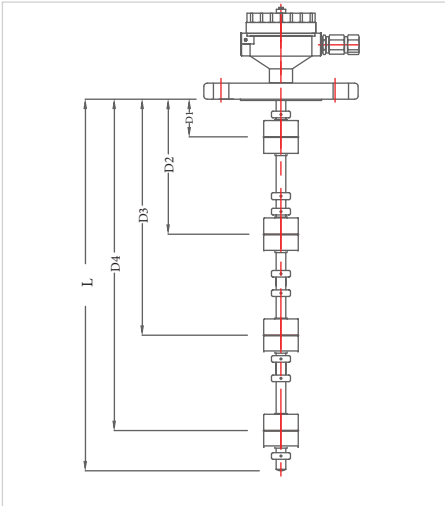
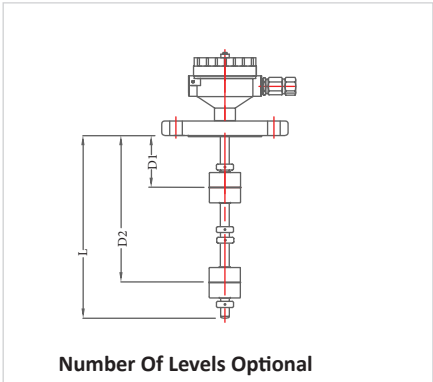


Type	VFS E-S-2-S3-?	VFS D-S-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 80 PN 40	DN 80 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification
ATEX/CE/ABS

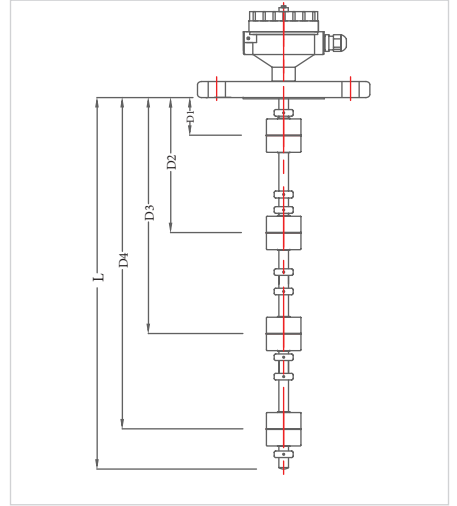
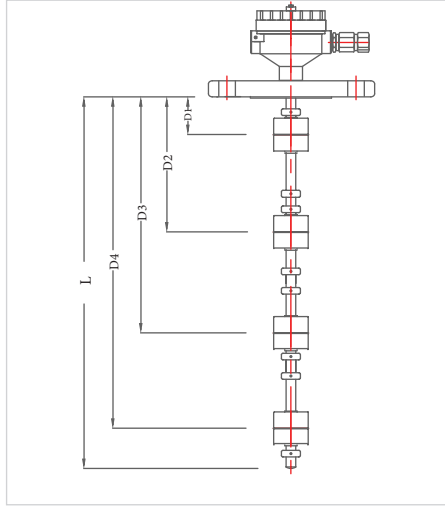
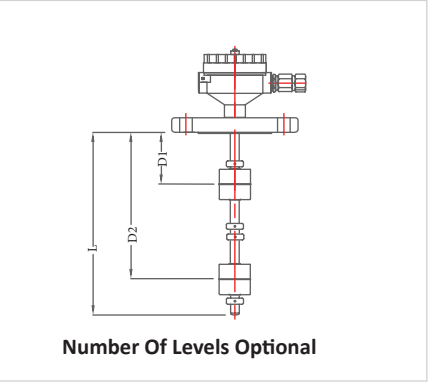


Type	VFS E-S-2-S3-?	VFS D-S-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Weather Proof IP 65 /Cast Al
Process Connection	DN 100 PN 40	DN 100 PN 40
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

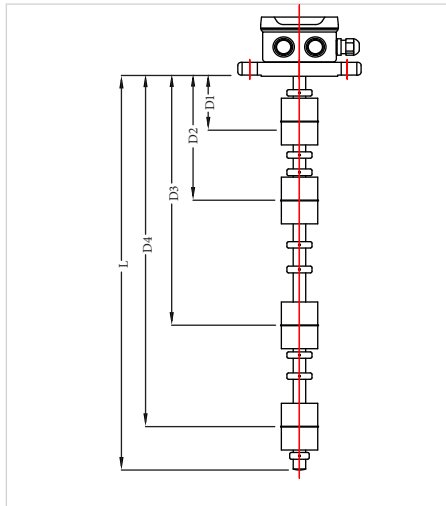
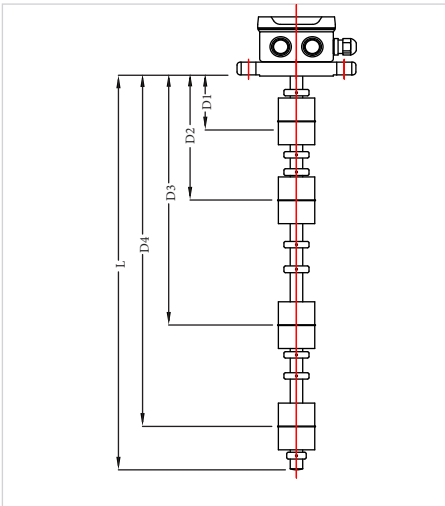
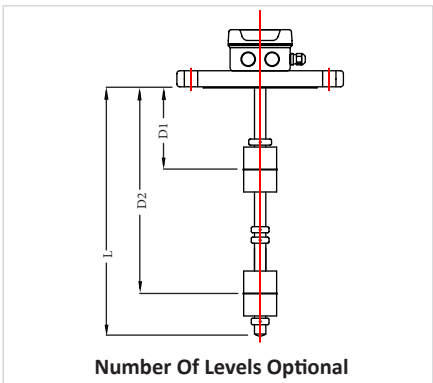
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Type	VFS G-D-3-P5-?	VFS G-E-3-P5-?
Material Type	PP / PVDF	PP / PVDF
Float Material	PP	PP
Terminal Type	Polycarbonate Enclosure	Polycarbonate Enclosure
Process Connection	2" 150# ANSI Flange	2 1/2" 150# ANSI Flange
Guide Stem	∅ 16 mm	∅ 16 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Design Pressure	2 kg/cm ²	2 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Mounting Position	Vertical	Vertical
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Three	Three

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

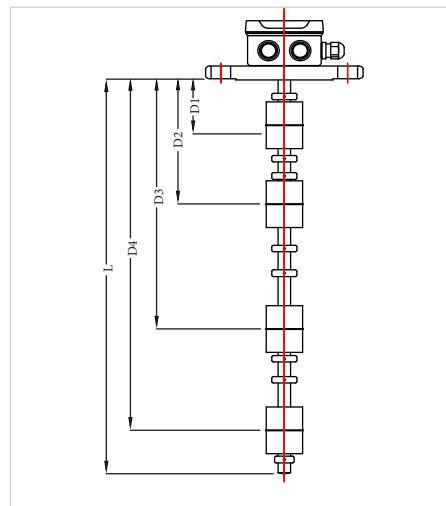
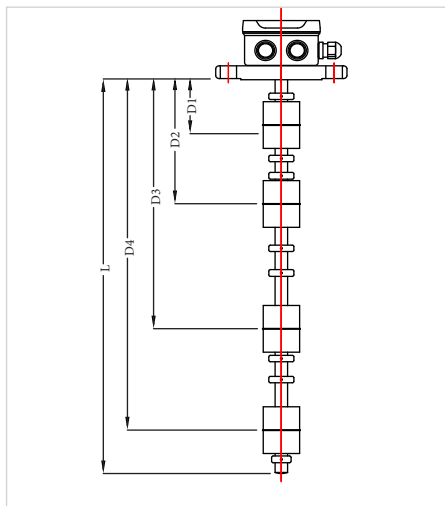


Type	VFS G-J-3-P5-?	VFS G-S-3-P5-?
Material Type	PP / PVDF	PP / PVDF
Float Material	PP	PP
Terminal Type	Polycarbonate Enclosure	Polycarbonate Enclosure
Process Connection	3" 150# ANSI Flange	4" 150# ANSI Flange
Guide Stem	∅ 16 mm	∅ 16 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Design Pressure	2 kg/cm ²	2 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Mounting Position	Vertical	Vertical

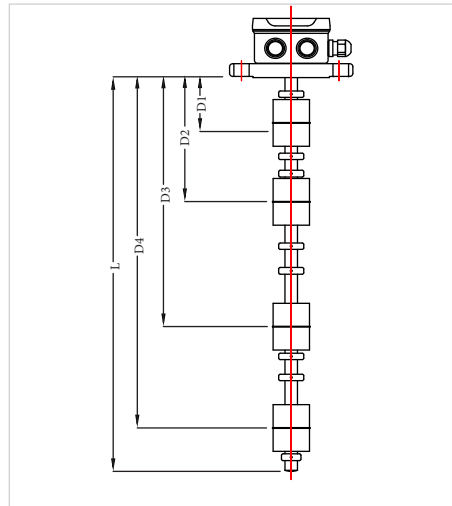
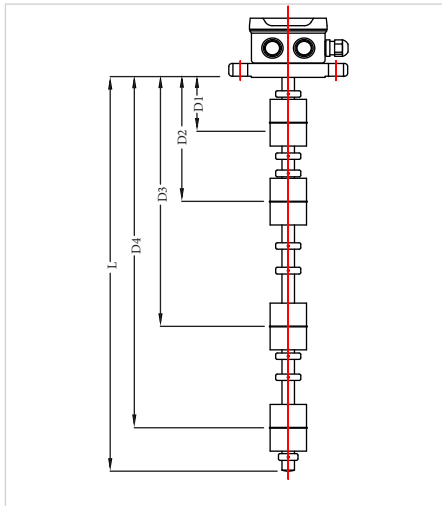
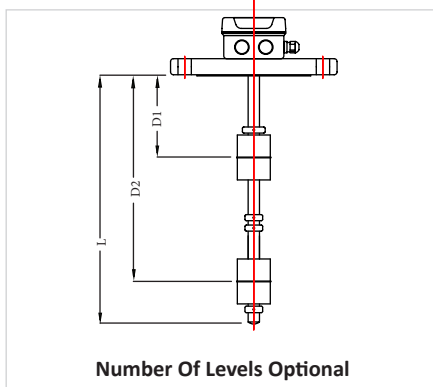
	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Three	Three

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two

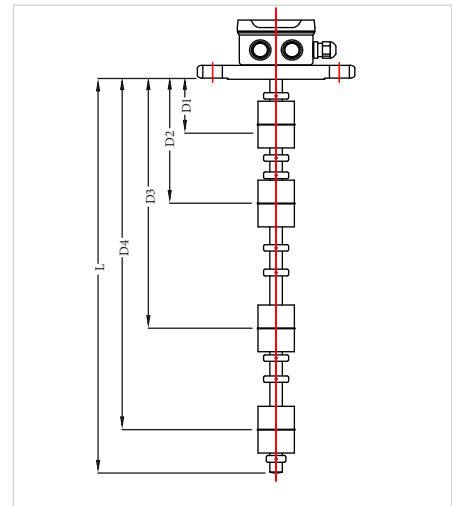
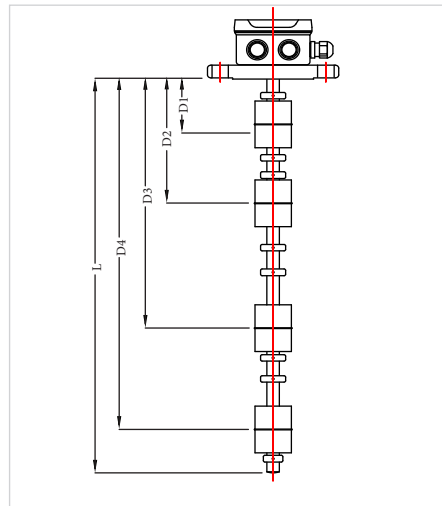
Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min



Type	VFS G-D-3-P6-?	VFS G-E-3-P6-?
Material Type	PP / PVDF	PP / PVDF
Float Material	PVDF	PVDF
Terminal Type	Polycarbonate Enclosure	Polycarbonate Enclosure
Process Connection	2" 150# ANSI Flange	2 1/2" 150# ANSI Flange
Guide Stem	∅ 16 mm	∅ 16 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 50 mm	∅ 50 mm
Specific Gravity	0.8	0.8
Design Pressure	5 kg/cm ²	5 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Three	Three
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two
Minimum Measures		
D1 ≥ 50mm		
Between Contact Distance =75mm min		



Type	VFS G-J-3-P6-?	VFS G-E-3-P6-?
Material Type	PP / PVDF	PP / PVDF
Float Material	PVDF	PVDF
Terminal Type	Polycarbonate Enclosure	Polycarbonate Enclosure
Process Connection	3" 150# ANSI Flange	4" 150# ANSI Flange
Guide Stem	∅ 16 mm	∅ 16 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 50 mm	∅ 50 mm
Specific Gravity	0.8	0.8
Design Pressure	5 kg/cm ²	5 kg/cm ²
Design Temperature	Up to 60°C	Up to 60°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Three	Three
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two
Minimum Measures		
D1 ≥ 50mm		
Between Contact Distance =75mm min		



Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-3-2-S4-?

304/316/316L
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2" BSP Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

VFS E-10-2-S4-?

304/316/316L
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2½" BSP Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Function
 Switching Capacity
 Maximum Number of Contacts

Electrical Specification Options

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

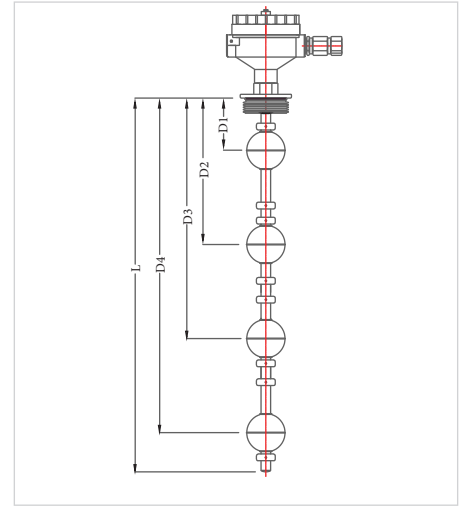
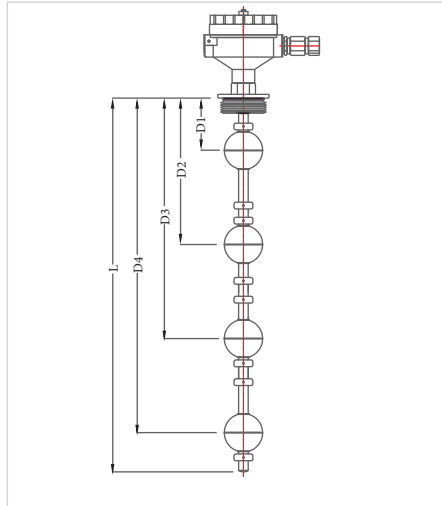
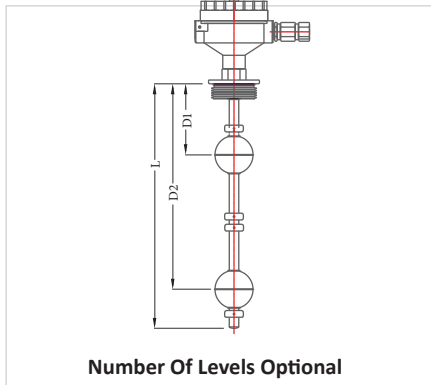
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 ≥ 50mm
 Between Contact Distance =75mm min

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**Type**

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-10-2-S4-?

SS304/316
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 3" BSP Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 52 mm
 0.65
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Function
 Switching Capacity
 Maximum Number of Contacts

Electrical Specification Options

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

Function
 Switching Capacity
 Maximum Number of Contacts

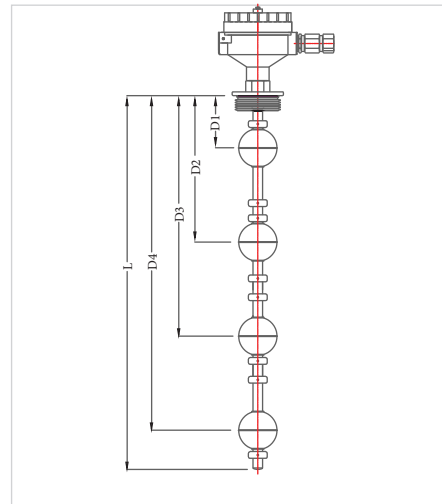
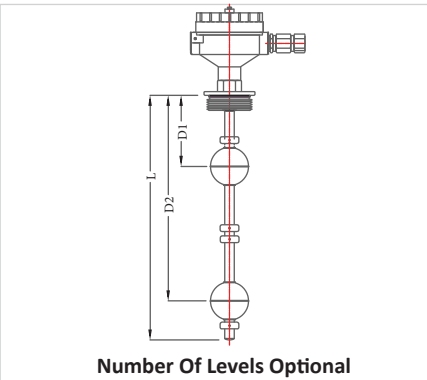
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 ≥ 50mm
 Between Contact Distance =75mm min

Approval certification

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Type	VFS E-3-2-S3-?	VFS E-10-2-S3-?
Material Type	SS304/316	SS304/316
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Ex. Proof, IP 65 Gr. IIA, IIB, IIC
Process Connection	2" BSP Adaptor	2½" BSP Adaptor
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 41 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

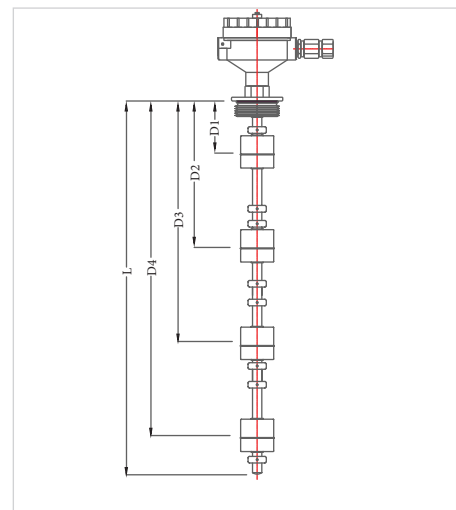
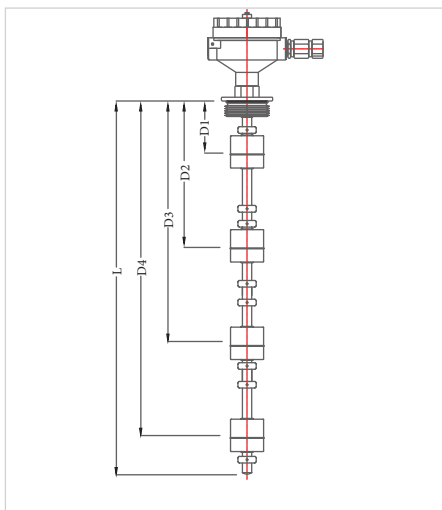
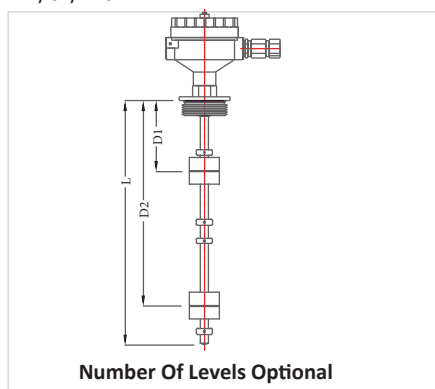
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures

D1 ≥ 50mm
Between Contact Distance =75mm min

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Type	VFS E-10-2-S3-?
Material Type	SS304/316
Float Material	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC
Process Connection	3" BSP Adaptor
Guide Stem	∅ 12.7 mm
Probe Length	Up to 3000 mm *
Float	∅ 41 mm
Specific Gravity	0.8
Design Pressure	20 kg/cm ²
Design Temperature	Up to 150°C
Ingress protection Class	IP 65
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four

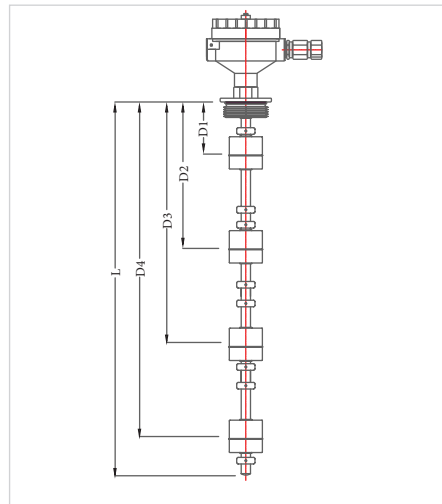
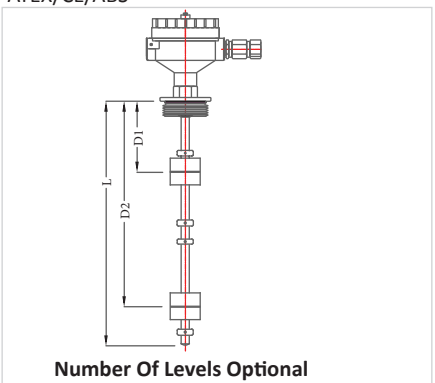
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three

Minimum Measures

D1 ≥ 50mm
Between Contact Distance =75mm min

Approval certification

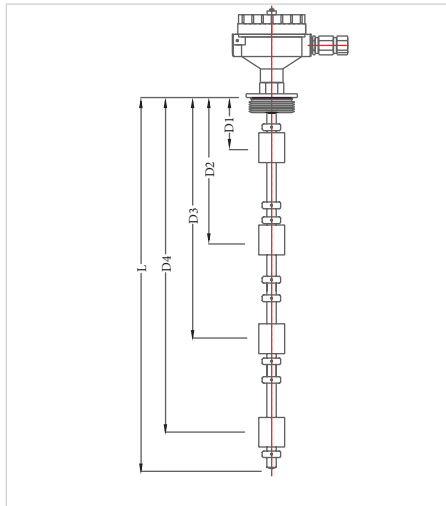
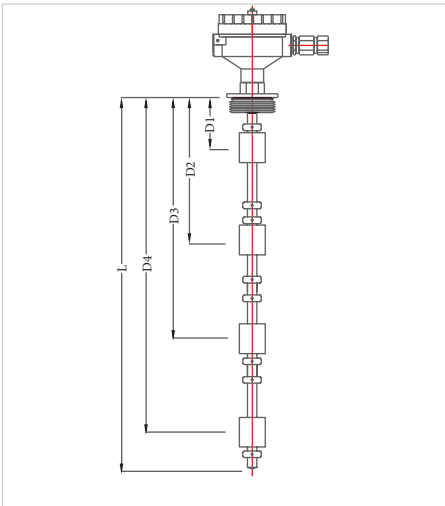
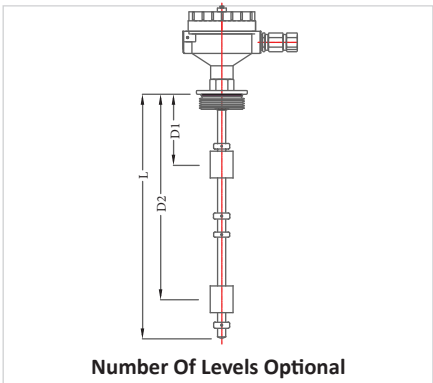
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Type	VFS E-3-2-P3-?	VFS E-10-2-P3-?
Material Type	SS304	SS304
Float Material	PU	PU
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Ex. Proof, IP 65 Gr. IIA, IIB, IIC
Process Connection	2" BSP Adaptor	2½" BSP Adaptor
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 35 mm	∅ 35 mm
Specific Gravity	0.8	0.8
Design Pressure	Atmospheric	Atmospheric
Design Temperature	Up to 60°C	Up to 60°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

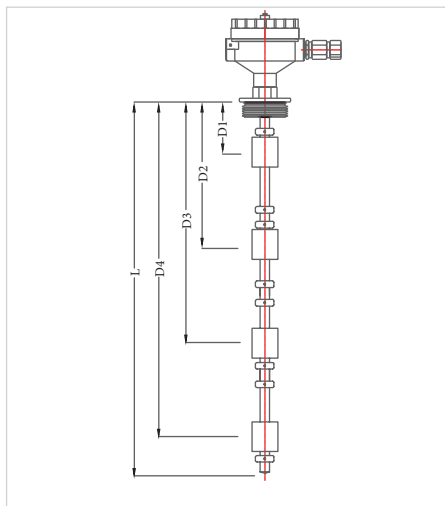
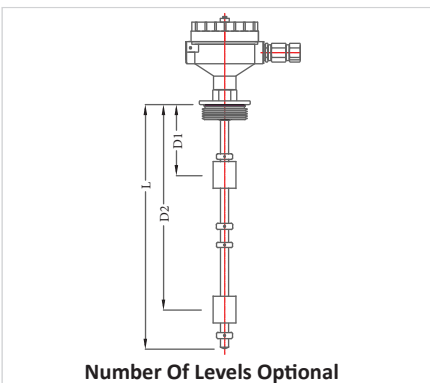


Type	VFS E-10-2-P3-?
Material Type	SS304
Float Material	PU
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC
Process Connection	3" BSP Adaptor
Guide Stem	∅ 12.7 mm
Probe Length	Up to 3000 mm *
Float	∅ 35 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Ingress protection Class	IP 65
Mounting Position	Vertical

Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four

OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min



* For Extended Probe Length, Consult Factory

Type	VFS E-4-2-S4-?	VFS E-10-2-S4-?
Material Type	SS304/316/316L	SS304/316/316L
Float Material	SS 316	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC	Ex. Proof, IP 65 Gr. IIA, IIB, IIC
Process Connection	2" NPT Adaptor	2½" NPT Adaptor
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.65	0.65
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four

OR

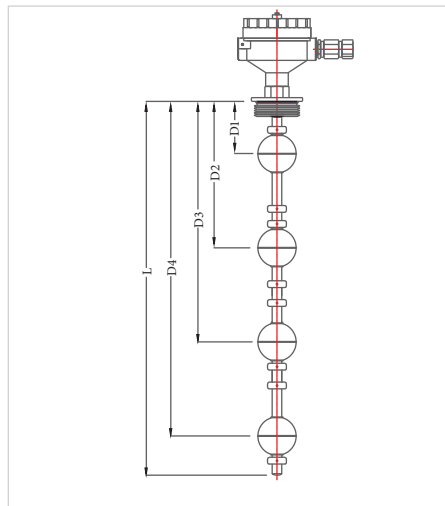
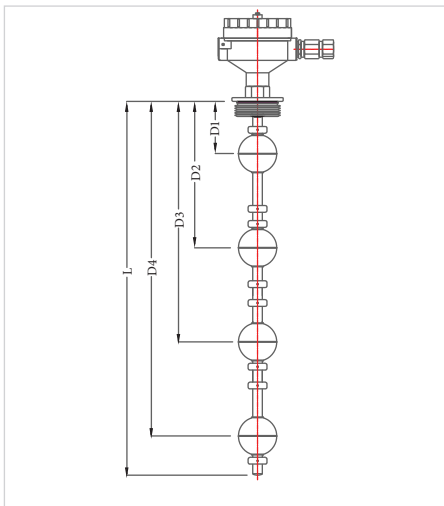
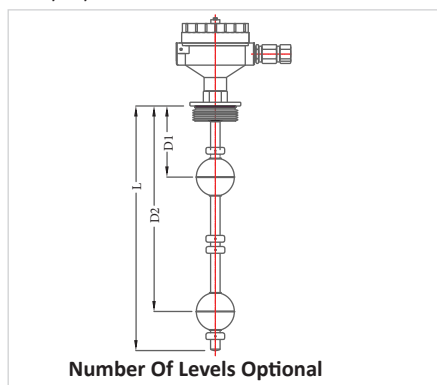
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three	Three

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

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Type	VFS E-10-2-S4-?
Material Type	SS304/316/316L
Float Material	SS 316
Terminal Type	Ex. Proof, IP 65 Gr. IIA, IIB, IIC
Process Connection	3" NPT Adaptor
Guide Stem	∅ 12.7 mm
Probe Length	Up to 3000 mm *
Float	∅ 52 mm
Specific Gravity	0.65
Design Pressure	20 kg/cm ²
Design Temperature	Up to 150°C
Ingress protection Class	IP 65
Mounting Position	Vertical
Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four

OR

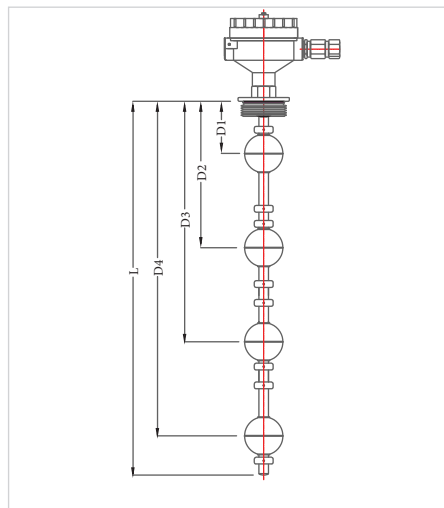
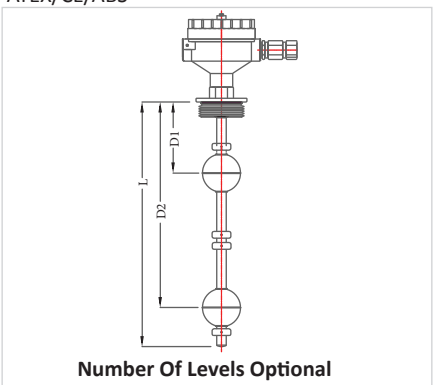
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Three

Minimum Measures

D1 ≥ 50mm
Between Contact Distance = 75mm min

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Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-4-2-S3-?

SS304/316/316L
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2" NPT Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41 mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

VFS E-10-2-S3-?

SS304/316/316L
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2 1/2" NPT Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41 mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

Function
 Switching Capacity
 Four

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

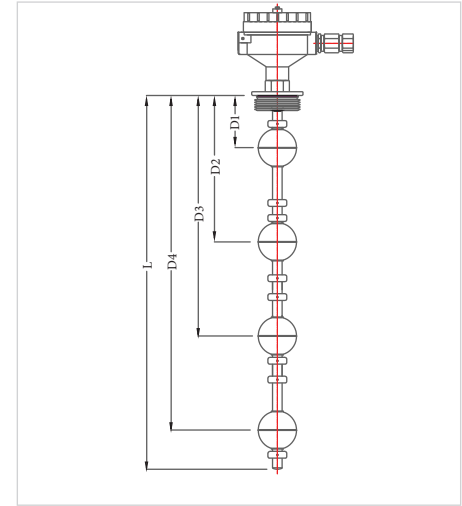
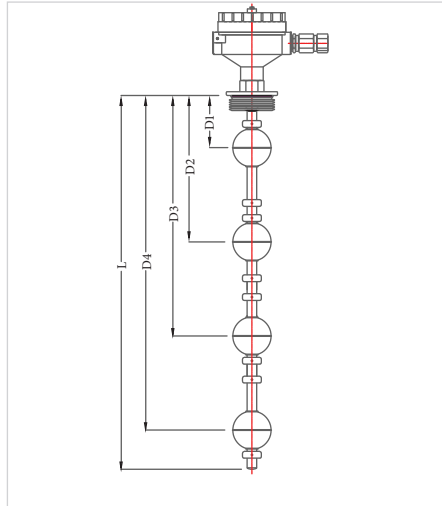
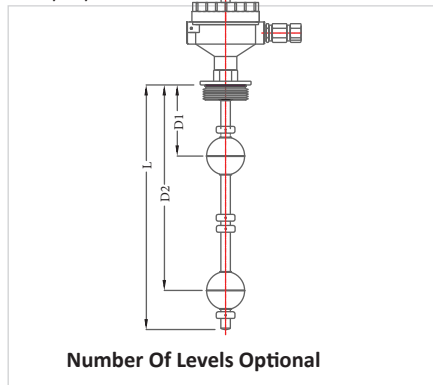
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Four

Approval certification

ATEX/CE/ABS

**Type**

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-10-2-S3-?

SS304/316/316L
 SS 316
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 3" NPT Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 41 mm
 0.8
 20 kg/cm²
 Up to 150°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

Function
 Switching Capacity
 Maximum Number of Contacts

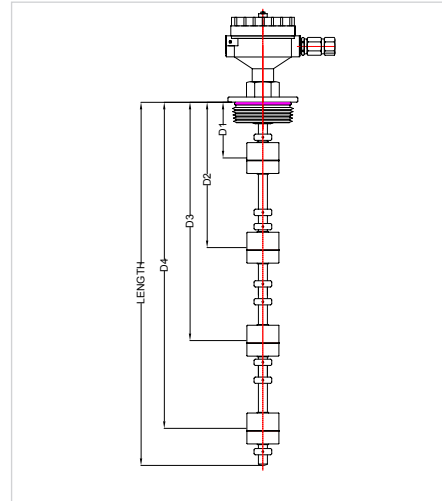
Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance = 75mm min

Approval certification

ATEX/CE/ABS



Type

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-4-2-P3-?

SS304
 PU
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2" NPT Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 Atmospheric
 Up to 60°C
 IP 65
 Vertical

VFS E-10-2-P3-?

SS304
 PU
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 2 1/2" NPT Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 Atmospheric
 Up to 60°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

OR

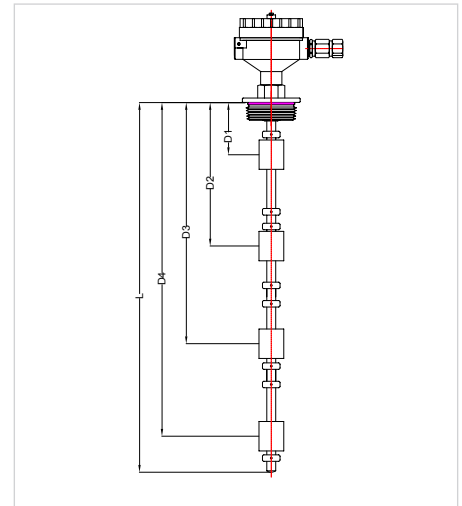
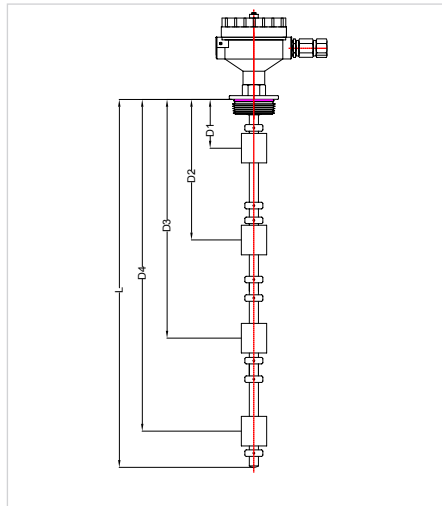
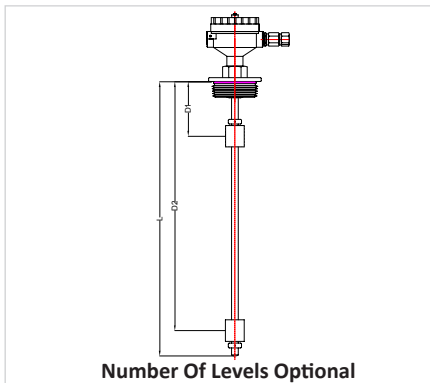
Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance =75mm min

**Type**

Material Type
 Float Material
 Terminal Type
 Process Connection
 Guide Stem
 Probe Length
 Float
 Specific Gravity
 Design Pressure
 Design Temperature
 Ingress protection Class
 Mounting Position

VFS E-10-2-P3-?

SS304
 PU
 Ex. Proof, IP 65 Gr. IIA, IIB, IIC
 3" NPT Adaptor
 \varnothing 12.7 mm
 Up to 3000 mm *
 \varnothing 35 mm
 0.8
 Atmospheric
 Up to 60°C
 IP 65
 Vertical

Electrical Specification Options

Function
 Switching Capacity
 Maximum Number of Contacts

Normally Open - Close
 300 VDC/240 V AC/3A/100VA
 Four

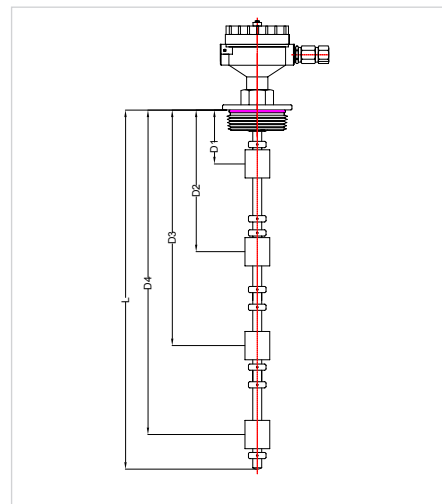
OR

Function
 Switching Capacity
 Maximum Number of Contacts

Change Over Switch (1NO + 1NC)
 500 VDC/250 V AC/1.5A/50VA
 Three

Minimum Measures

D1 \geq 50mm
 Between Contact Distance =75mm min

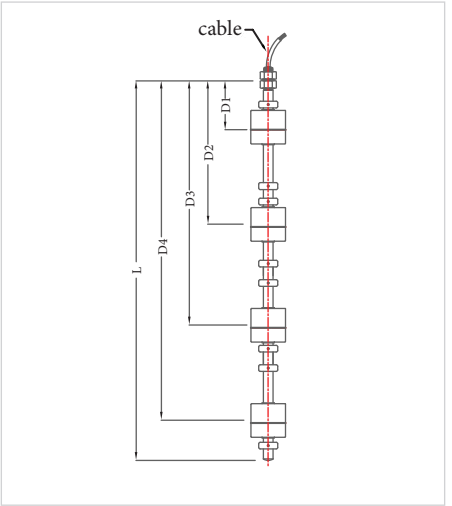
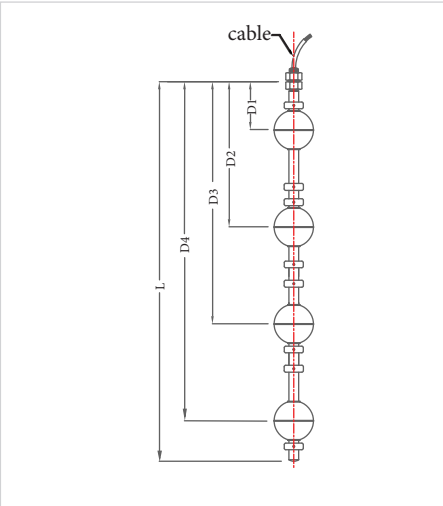
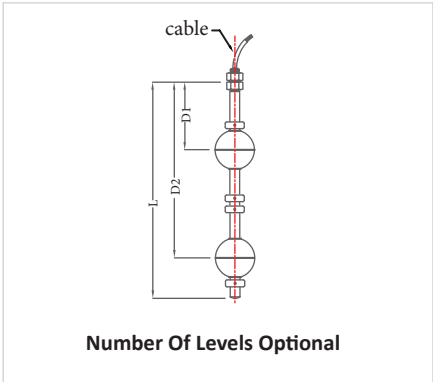


Type	VFS H-0-2-S4-?	VFS H-0-2-S3-?
Material Type	SS304/316/316L	SS304/316/316L
Float Material	SS 316	SS 316
Terminal Type	Cable	Cable
Process Connection	¼" Thread	¼" Thread
Guide Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 41 mm
Specific Gravity	0.8	0.8
Design Pressure	20 kg/cm ²	20 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical

	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Three	Three

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two

Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min

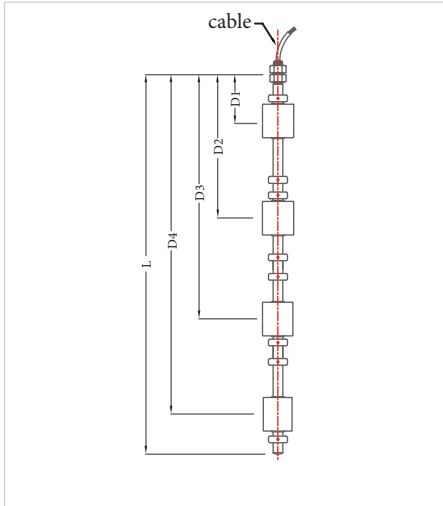


Type	VFS H-0-2-P3-?
Material Type	SS304
Float Material	PU
Terminal Type	Cable
Process Connection	¼" Thread
Guide Stem	∅ 12.7 mm
Probe Length	Up to 3000 mm *
Float	∅ 35 mm
Specific Gravity	0.8
Design Pressure Atmospheric	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical

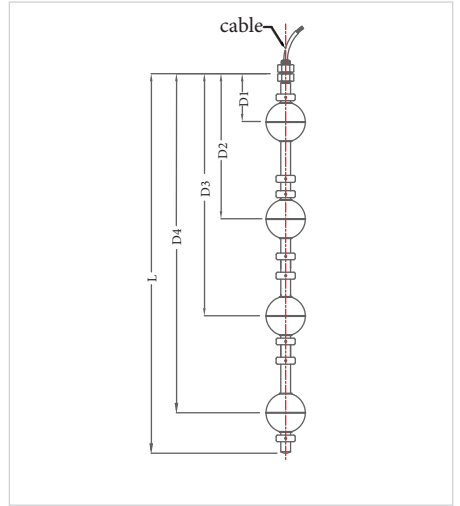
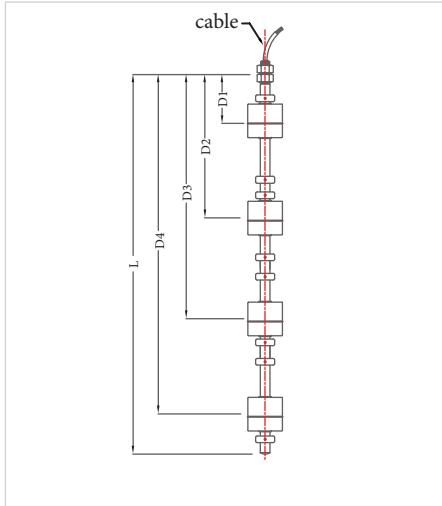
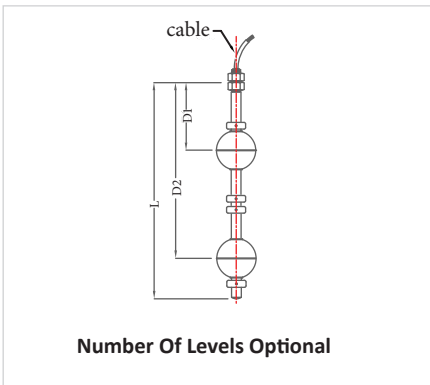
	Electrical Specification Options	
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Three	Three

	OR	
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two

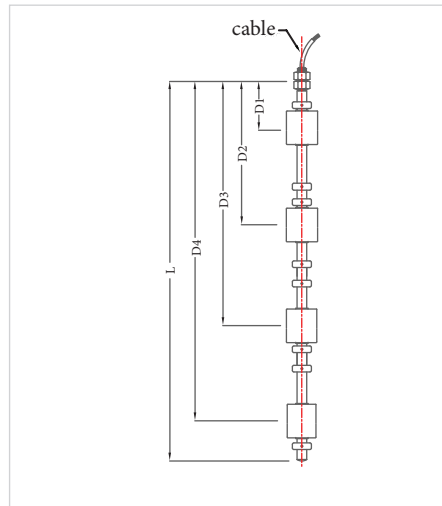
Minimum Measures
D1 ≥ 50mm
Between Contact Distance =75mm min



Type	VFS H-10-1-S1-?	VFS H-10-1-S2-?
Material Type	SS304/316/316L	SS304/316/316L
Float Material	SS 316	SS 316
Terminal Type	Cable	Cable
Process Connection	M8 Thread	M8 Thread
Guide Stem	∅ 8 mm	∅ 8 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 28 mm	∅ 30 mm
Specific Gravity	0.8	0.8
Design Pressure	8 kg/cm ²	8 kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Mounting Position	Vertical	Vertical
Electrical Specification Options		
Function	Normally Open - Close	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four	Four
OR		
Function	Change Over Switch (1NO + 1NC)	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two	Two
Minimum Measures		
D1 ≥ 50mm		
Between Contact Distance =75mm min		



Type	VFS H-10-1-P2-?
Material Type	SS304
Float Material	PU
Terminal Type	Cable
Process Connection	M8 Thread
Guide Stem	∅ 8 mm
Probe Length	Up to 3000 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	Atmospheric
Design Temperature	Up to 60°C
Mounting Position	Vertical
Electrical Specification Options	
Function	Normally Open - Close
Switching Capacity	300 VDC/240 V AC/3A/100VA
Maximum Number of Contacts	Four
OR	
Function	Change Over Switch (1NO + 1NC)
Switching Capacity	500 VDC/250 V AC/1.5A/50VA
Maximum Number of Contacts	Two
Minimum Measures	
D1 ≥ 50mm	
Between Contact Distance =75mm min	



VERTICAL FLOAT LEVEL SWITCH INSTALLED IN A CHAMBER

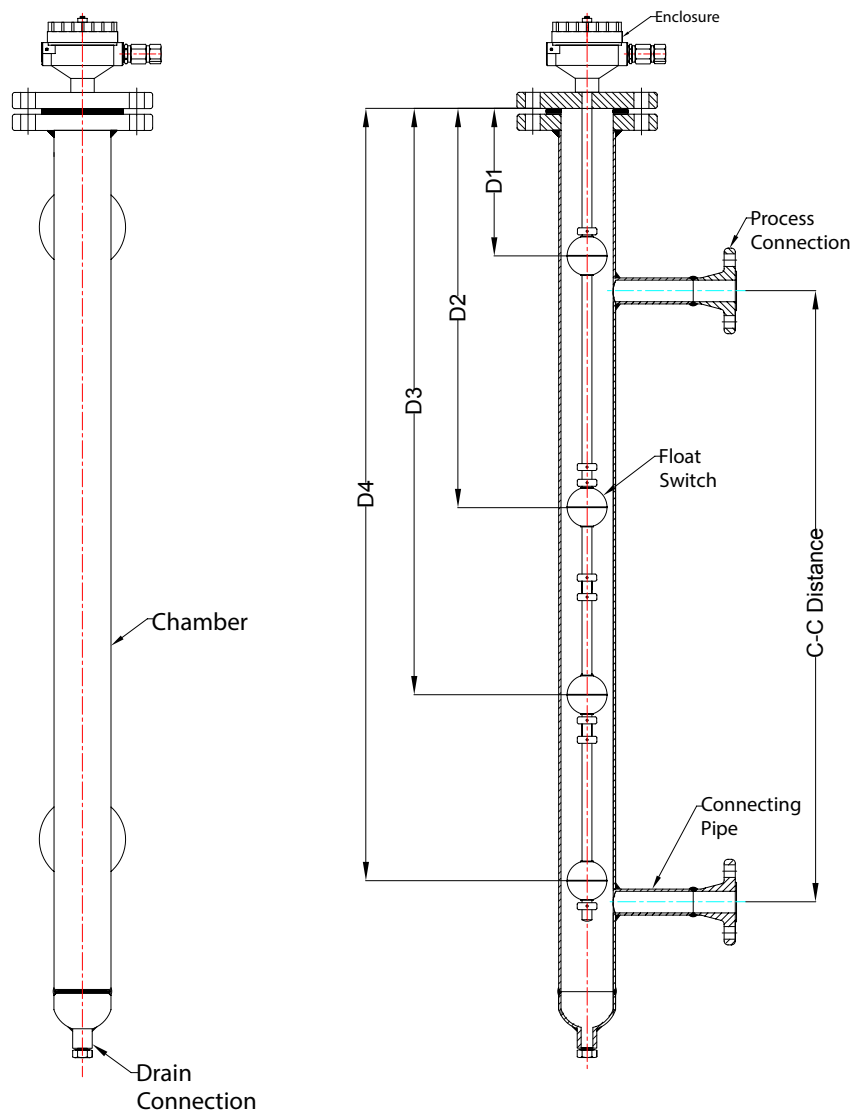
Wherever it is not possible or desirable to install Vertical Float switches directly onto the vessel, switches can be installed in an External Chamber. This arrangement gives smooth level control irrespective of turbulence in the process vessel and prevents accidental damages to the switch during shutdown or maintenance of the vessel. Chambers are used in applications which require isolations of process, High Pressure / High Temperature applications, Corrosive applications, Onshore / Offshore installations.

Main function of these chambers are :

1. Level Measurement
2. Interface Measurement / Control.

FEATURES :

- Available for Low Pressure and High Pressure applications.
- Wide range of material of construction to suit different environmental conditions.
- Wide range of end connection types / sizes to choose from.
- A variety of chamber mounting arrangements provided to suit existing nozzles.



* For ordering Information of **External Chamber** refer **External Chamber Catalog**.

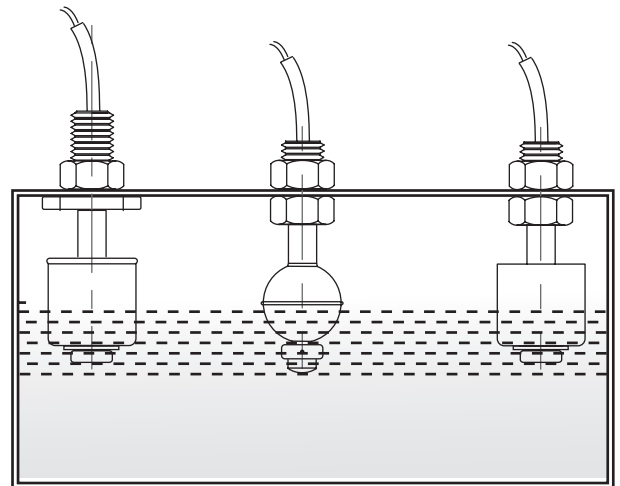
3. MINI VERTICAL MOUNTING MAGNETIC FLOAT SWITCHES - MVFS

MVFS are installed vertically and can be side mounted through an elbow. They provide actuation at high, low or intermediate liquid levels. The switch actions can be reversed from N/O to N/C & vice versa by simply changing the float direction.

3.1 APPLICATIONS :

Hot Water / Coffee Servers, Vending Machines, Ice Makers, Humidifiers, Food Industry, Air Conditioning & Refrigeration, Analysers, Engines, Agricultural Machines, Hydraulic, Lubricating & Oil Filtration Equipment's, Industrial Working Machines, Spark Erosion Machines & SPMs.

TYPICAL INSTALLATION INSIDE TANKS / LIQUID CONTAINERS



M-SS



**M-SS
(BRASS VERSION)**



**M-SS
(WITH CONNECTOR CABLE)**



M-PU

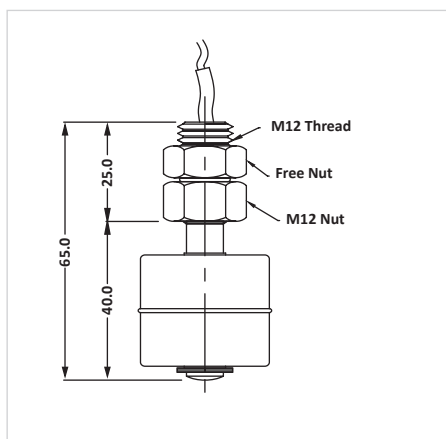


M-PP

ORDERING INFORMATION :

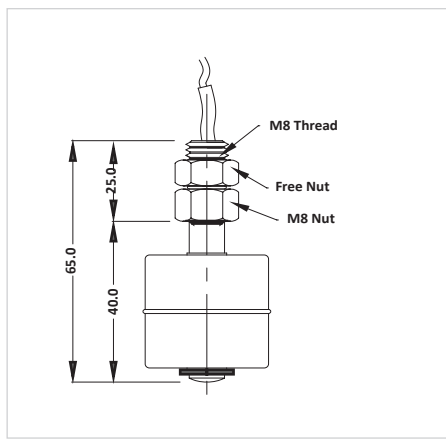
Specify model no., Operating temperature, Operating pressure, Process connection

Type	M-SS
Stem Material	304/316/316L .
Float Material	SS 316
Process Connection	M12 Thread With Lock Nut
Guide Stem	∅ 8 mm
Guide Stem Length	40 mm *
Float	∅ 28 mm
Specific Gravity	0.7
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 70°C
Mounting Position	Vertical



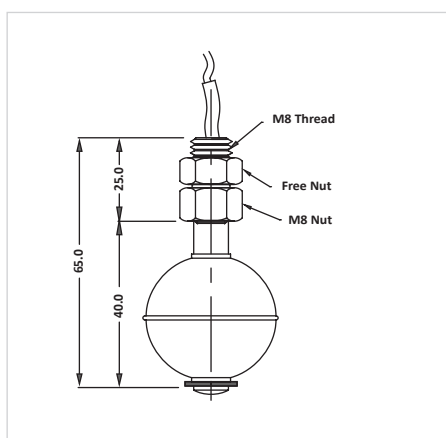
Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extrn. Leadwires

Type	M-SS
Stem Material	304/316/316L .
Float Material	SS 316
Process Connection	M8 Thread With Lock Nut
Guide Stem	∅ 8 mm
Guide Stem Length	40 mm *
Float	∅ 28 mm
Specific Gravity	0.7
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 70°C
Mounting Position	Vertical



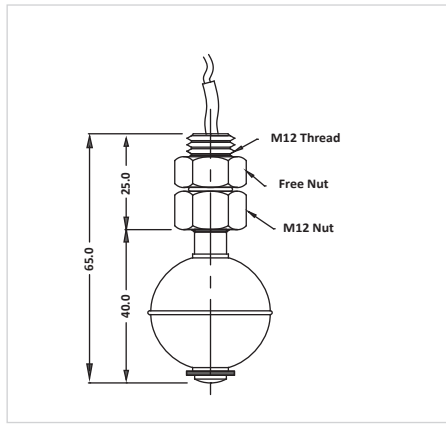
Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extrn. Leadwires

Type	M-SS
Stem Material	304/316/316L .
Float Material	SS 316
Process Connection	M8 Thread With Lock Nut
Guide Stem	∅ 8 mm
Guide Stem Length	40 mm *
Float	∅ 30 mm
Specific Gravity	0.7
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 70°C
Mounting Position	Vertical



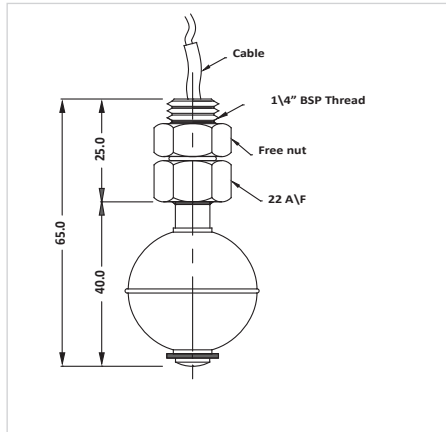
Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extrn. Leadwires

Type	M-SS (Brass Version)
Stem Material	Brass
Float Material	SS 316
Process Connection	M12 Thread
Guide Stem	∅ 8 mm
Guide Stem Length	40 mm *
Float	∅ 30 mm
Specific Gravity	0.7
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 70°C
Mounting Position	Vertical



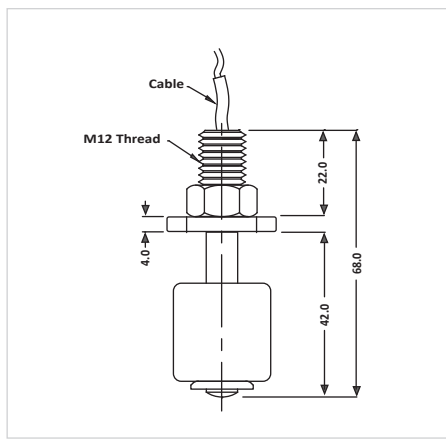
Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extrn. Leadwires

Type	M-SS (Brass Version)
Stem Material	Brass
Float Material	SS 316
Process Connection	1\4" BSP(M) Thread With Lock Nut
Guide Stem	∅ 8 mm
Guide Stem Length	40 mm *
Float	∅ 28 mm
Specific Gravity	0.7
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 70°C
Mounting Position	Vertical



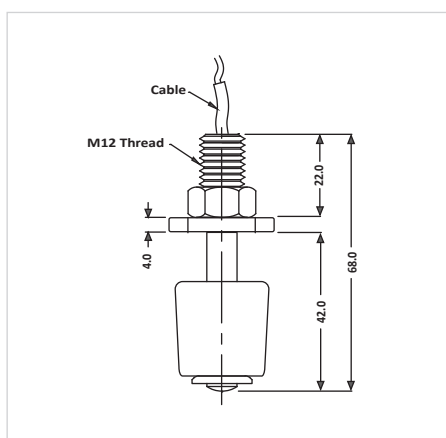
Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires

Type	M-PU
Stem Material	PP
Float Material	PU
Process Connection	M12 Thread With Lock Nut
Guide Stem	∅ 8 mm
Guide Stem Length	42 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	1 Kg/cm ²
Design Temperature	Up to 40°C
Mounting Position	Vertical



Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires

Type	M-PP
Stem Material	PP
Float Material	PP
Process Connection	M12 Thread With Lock Nut
Guide Stem	∅ 8 mm
Guide Stem Length	42 mm *
Float	∅ 25 mm
Specific Gravity	0.8
Design Pressure	1 Kg/cm ²
Design Temperature	Up to 40°C
Mounting Position	Vertical



Electrical Specifications	
Switch Capacity	15 VA (NO)
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires

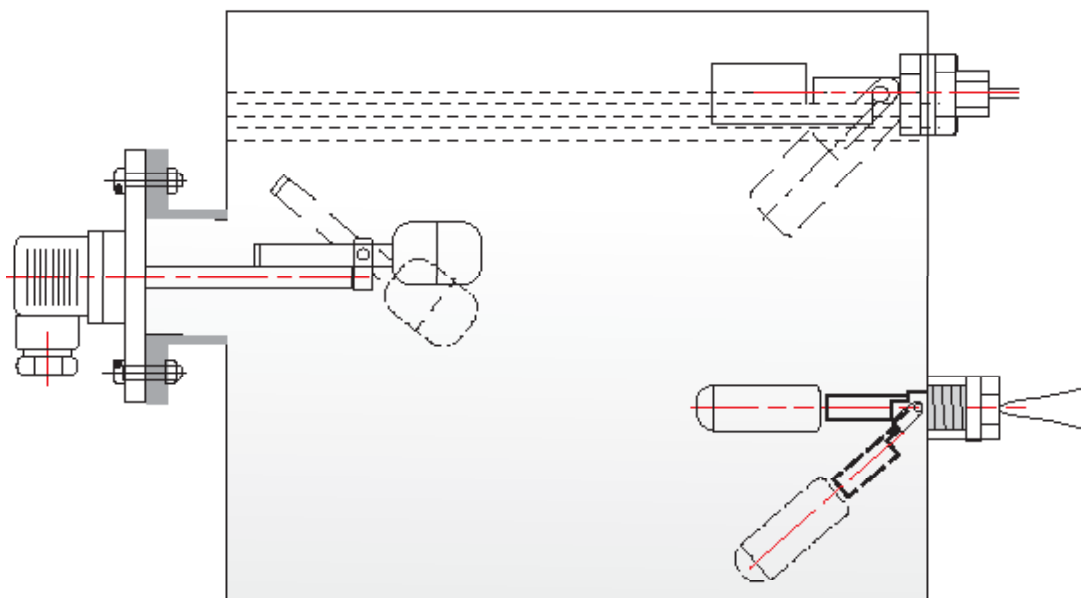
4. MINI HORIZONTAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES - MHFS

'MHFS' Are installed horizontally, and can be mounted vertically for some application like flow detection. They provide actuations at high, low or intermediate liquid levels and the switch action can be reversed by re-orientation of mounting.

4.1 APPLICATIONS :

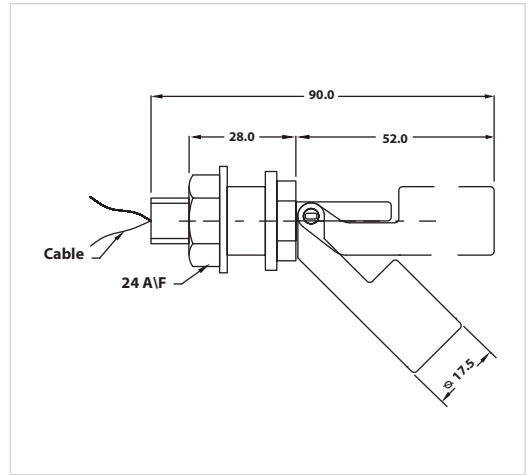
Hot Water / Coffee Servers, Vending Machines, Ice Makers, Humidifiers, Food Industry, Air Conditioning & Refrigeration, Analysers, Engines, Agricultural Machines, Hydraulic, Lubricating & Oil Filtration Equipment's, Special Purpose Machines.

4.2 INSTALLATION OPTIONS



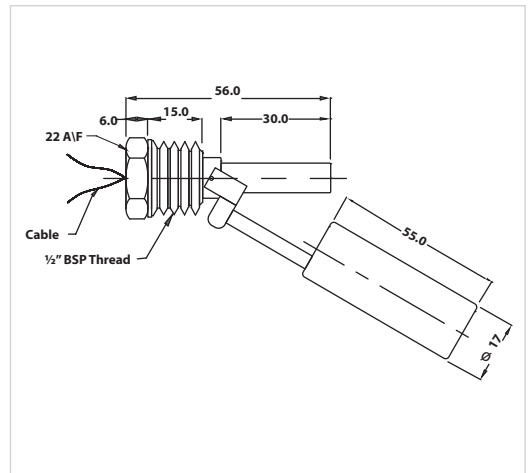
Type	M-SPP
Stem Material	PP
Float Material	PP
Process Connection	M16 Thread With Lock Nut
Guide Stem	∅ 8 mm
Probe Length	90 mm *
Float	∅17.5 X 52 mm
Specific Gravity	0.8
Design Pressure	1 Kg/cm ²
Design Temperature	Up to 60°C
Mounting Position	Horizontal

Electrical Specifications	
Switch Capacity	15 VA
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires
Contacts	SPST



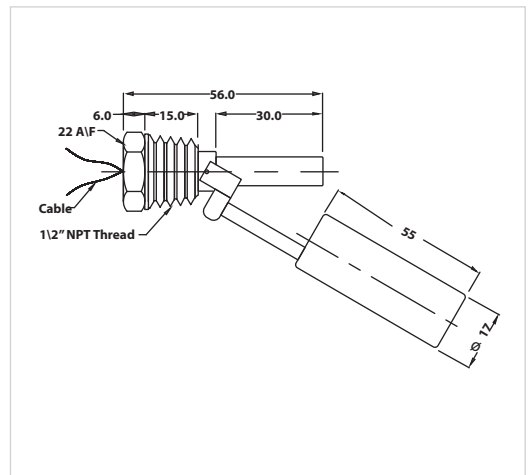
Type	M-SSS
Material Type	304/316/316L
Float Material	SS 304
Process Connection	½" BSP Thread
Probe Length	Up to 100 mm *
Float	∅ 17 X 55 mm
Specific Gravity	0.8
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 80°C
Mounting Position	Horizontal

Electrical Specifications	
Switch Capacity	15 VA
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires
Contacts	SPST



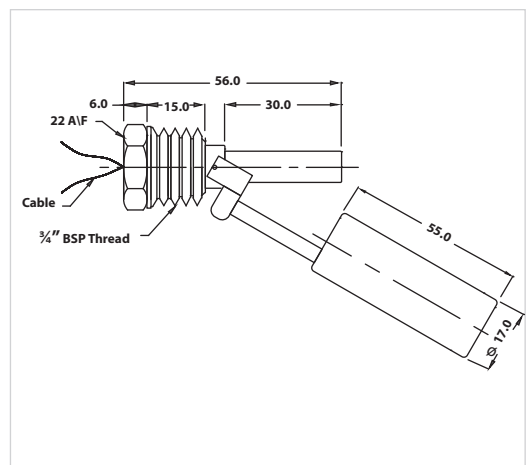
Type	M-SSS
Material Type	304/316/316L
Float Material	SS 304
Process Connection	½" NPT Thread
Probe Length	110 mm *
Float	∅ 17 X 55 mm
Specific Gravity	0.8
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 80°C
Mounting Position	Horizontal

Electrical Specifications	
Switch Capacity	15 VA
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires
Contacts	SPST



Type	M-SSS
Material Type	304/316/316L
Float Material	SS 304
Process Connection	¾" BSP Thread
Probe Length	110 mm *
Float	∅ 17 X 55 mm
Specific Gravity	0.8
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 80°C
Mounting Position	Horizontal

Electrical Specifications	
Switch Capacity	15 VA
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leadwires
Contacts	SPST

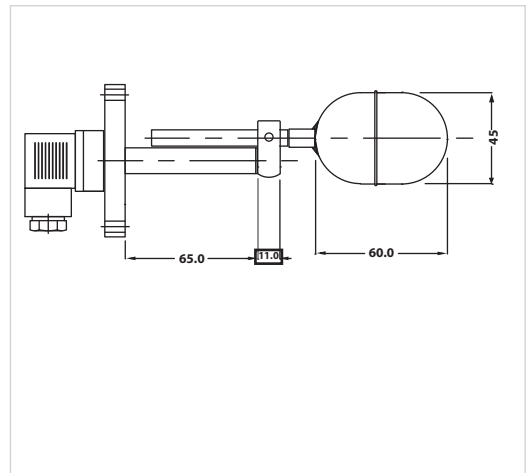
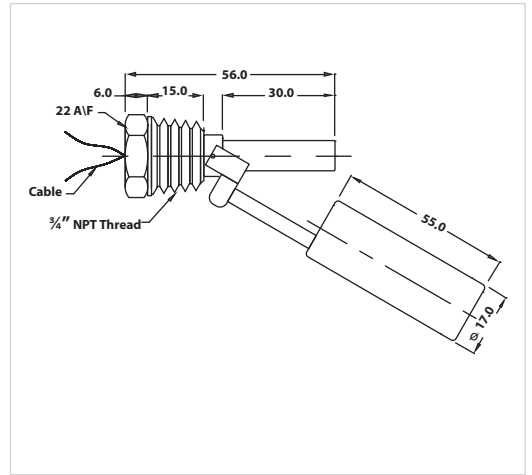


Type	M-SSS
Material Type	304/316/316L
Float Material	SS 304
Process Connection	¾" NPT Thread
Probe Length	110 mm *
Float	∅ 17 X 55 mm
Specific Gravity	0.8
Design Pressure	2 Kg/cm ²
Design Temperature	Up to 80°C
Mounting Position	Horizontal
Contacts	SPST

Electrical Specifications	
Switch Capacity	15 VA
Switching Voltage	125V AC / 200 V DC
Switching Current	0.25A
Switch Action	Reversible
Carry Current	0.5A
Termination	PVC X 1000mm extn. Leads

Type	M-SSS With Flange
Termination	DIN Polyamide
Material Type	304/316/316L
Float Material	SS 304
Process Connection	75x65 PCD Flange
Probe Length	150 mm *
Float	∅45 X 60mm
Specific Gravity	0.8
Design Pressure	5 Kg/cm ²
Design Temperature	Up to 110°C
Mounting Position	Horizontal

Electrical Specifications	
Switch Capacity	100 VA
Switching Voltage	240V AC / 300 V DC
Switch Action	2A
Carry Current	3A
Termination	DIN Connector
Contacts	SPST

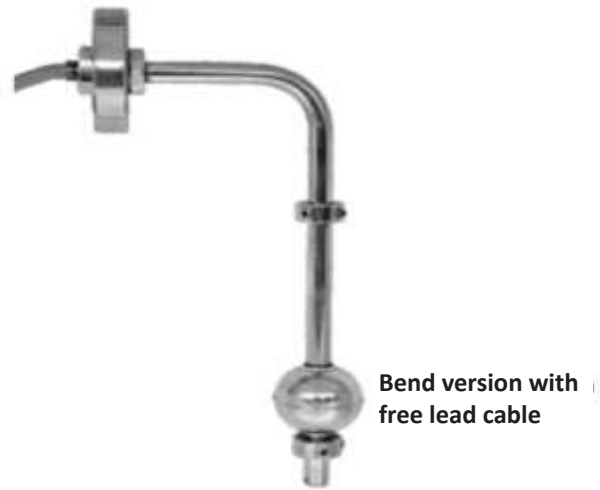


5. BEND VERSION MAGNETIC FLOAT LEVEL SWITCHES- BVFS

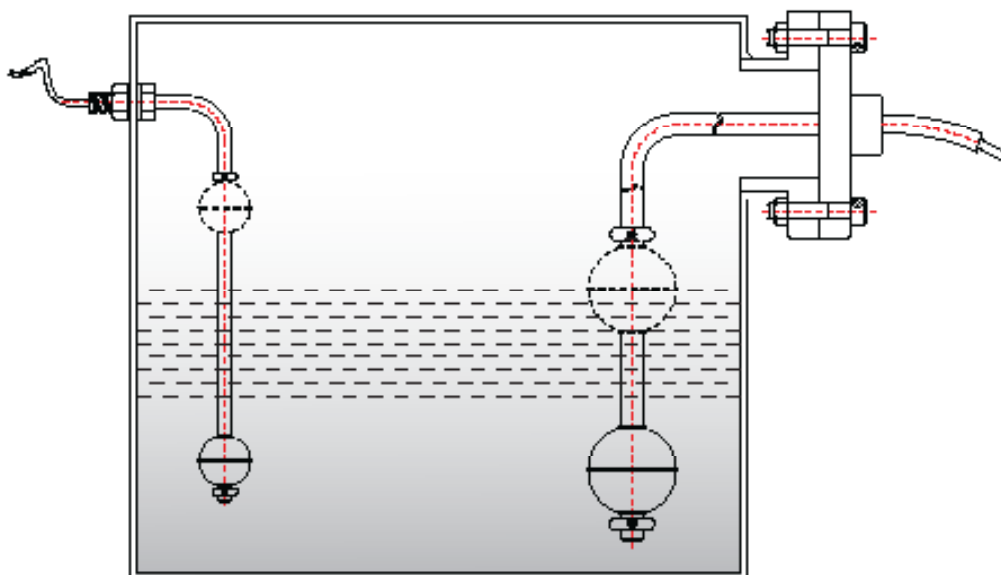
Bend version float switches are used for applications where there is a mounting constraint from the top. These bend version level switches have rugged construction and can be used for both indoor & outdoor applications.

5.1 CONSTRUCTION AND OPERATION:

Magnetic Reed switch being the sensing element, the float switch operates on a simple principle. A float encircling a fixed stationary stem, is equipped with powerful permanent magnet. As the float rises or falls with liquid level, the magnetic field generated by the magnet that is present within the float actuates a hermetically sealed Reed switch mounted inside the stem at a preset level. This inturn makes or breaks the contact of the Reed switch.



TYPICAL INSTALLATION INSIDE THE TANKS



5.2 GENERAL SPECIFICATIONS:

Enclosure	: Cast Al, Weather-proof to IP65 Ex-proof to Gr. IIA & IIB DIN Polyamide connector.
Conduit Connection	: Brass, ¾" ET/ ½" NPT
Guided Stem MOC	: SS316 SS304
Float MOC x Size	: SS316 x Ø22, Ø28, Ø30, Ø40, Ø52, Ø89, PU Foam X Ø22, Ø25, Ø35
Stem OD	: Ø8, Ø12.7 in SS316/SS304
Operating Temperature	: SS316-Ø52, Ø40 up to 150°, Ø22, Ø28, Ø30 upto 100°C. PU Foam- Ø22, Ø25, Ø35 up to 60°C.
Operating pressure max.	: SS316-Ø52, Ø40 up to 20 Kg/cm ² , Ø22, Ø28, Ø30 upto 8Kg/cm ² . PU Foam- Ø22, Ø25, Ø35 –Atmospheric
Min. specific gravity	: 0.7
No. of Floats	: Single/ Multiple (Max. 4) (More available on request)
Process Connections	: Flanged / Triclover Flange
Preset Levels	: 1 to 4 (Factory Set) (More available on request)
Switch type	: Glass encapsulated hermetically sealed Reed contacts.
Switching capacity	: 15VA (NO) / 100VA (NO) or 3VA (1C/O) / 50VA (1C/O)
Differential	: FIXED (10± 2 mm)
Accuracy / Repeatability	: ± 2mm / ± 1mm
Load	: Resistive / Inductive
Insulation	: 100 Mega-Ohms at 500V DC
Special features	: Intrinsically safe to EX ib Gr IIA-IIB

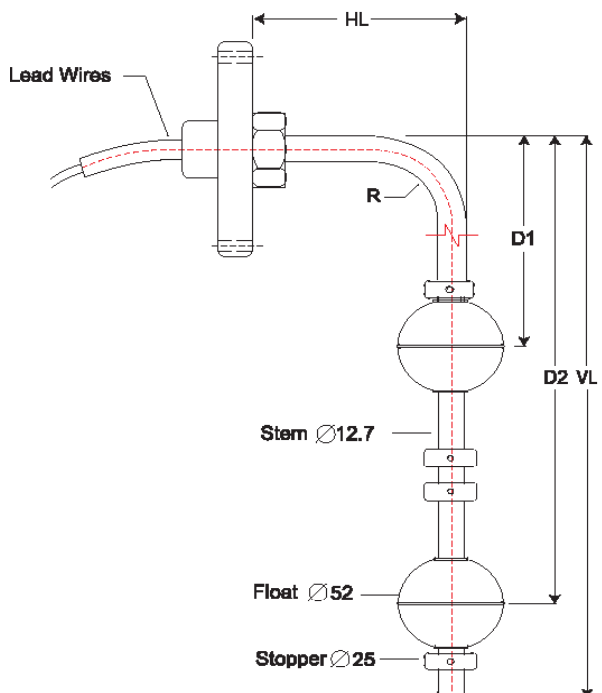
5.3 ORDERING INFORMATION:

Specify part no., as given in the catalog for vertical mounting magnetic float level switches, guide stem length, preset levels D1, D2, D3 etc., Specific gravity, operating temperature & pressure.

Note :-

- 1 : Maximum Number of Contacts : Four
- 2 : Change Over Contacts option also available

CONSTRUCTION DETAILS FOR BEND VERSION FLOAT SWITCHES

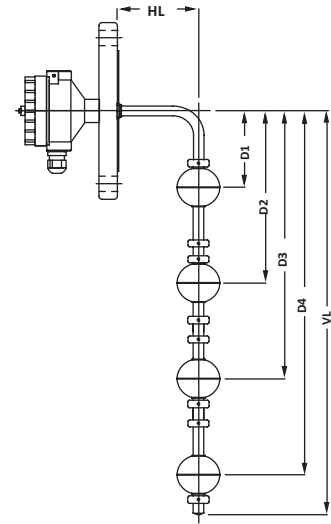
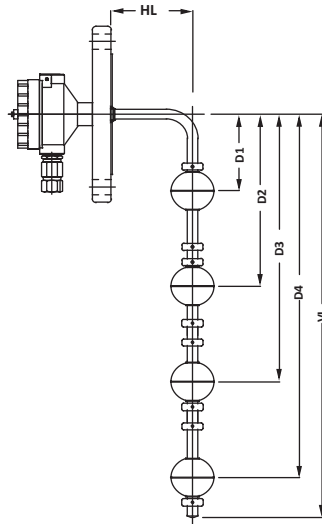


Type	BVFS E-D-2-S4-2	BVFS D-D-2-S4-2
Material Type (Wetted Parts)	304/316/316L	304/316/316L
Float Material	SS 316	SS 316
Terminal Type	Explosion Proof Gr. IIA, IIB, IIC	Weather Proof /Cast Al.
Process Connection	2" 150 # ANSI Flange	2" 150 # ANSI Flange.
Guided Stem	∅ 12.7 mm	∅ 12.7 mm
Probe Length	Up to 3000 mm *	Up to 3000 mm *
Float	∅ 52 mm	∅ 52 mm
Specific Gravity	0.8	0.8
Design Pressure	20 Kg/cm ²	20 Kg/cm ²
Design Temperature	Up to 150°C	Up to 150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Normally Open	Normally Open
Switching Capacity	300 VDC/240 V AC/3A/100VA	300 VDC/240 V AC/3A/100VA
Number of Contacts	4 contacts	4 contacts

Minimum Measures

D1 = ≥ 50mm

Between Contact Distance =75mm min



6. HFS SERIES- HORIZONTAL MOUNTING MAGNETIC FLOAT LEVEL SWITCHES

HFS is a economical, maintenance free and reliable device used for high, low or intermediate point level switching. It is ideal for tanks with inaccessible tops or bottoms and where insertion depths of top mounted models are exceeded.

6.1 CONSTRUCTION & OPERATION :

The Horizontal mounting float switches uses Magnets and works on the principle of magnetic repulsion.

HFS consists of a free moving pivoted float assembly and a switch enclosure in non - magnetic material to achieve undisturbed magnetic flux. It employs dual magnets, one in the float arm and other in the contact carriers housed in the switch enclosure. A change in liquid level brings the like poles of dual magnets opposite to each other and the resulting repulsion force ensures a changeover of contacts with snap action. The magnetic transmission is glandless, leaving no scope for leakages from vessel into switch housing. These switches are manufactured in various materials, enclosures & special features to suit broad range of media / applications. They are designed to provide high repeatability and to minimize effects of shock, vibration & Pressure.



Flame Proof - SS Enclosure



Weather Proof - Cast Aluminium Enclosure



Complete PP Construction

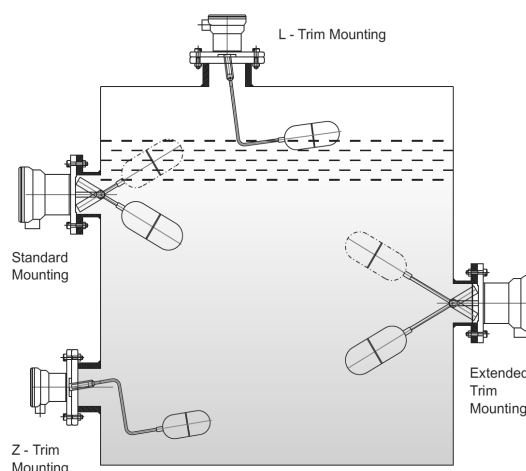
6.2 INSTALLATION OPTIONS :

HFS can be mounted both internally & externally through a chamber if installation is required outside the main vessel. External mounting is resorted to, where space is a limiting factor or mechanical devices like stirrers operate within the tank. Besides, in applications like boilers, reaction kettles with external mounting, isolation is possible for regular servicing. The switch is normally side-mounted, however for applications like slurry, top installation is preferred. The switch can be wired directly "to make or break electrical circuits", of burners, heaters, motor pumps, alarms and other such electrically operated devices.

FEATURES:

1. Approved by CMRI for Gr. I, IIA, IIB applications
2. Level switch also available in complete SS316 MOC
3. Customization on request
4. External chamber option available

TYPICAL INSTALLATION IN A TANK



6.3 ORDERING INFORMATION FOR HORIZONTAL MOUNTING MAGNETIC FLOAT SWITCHES

SPECIFY PART NO. → HFS **1** **2** **3** **4** **5** **6**
 HFS
 Example: HFS W 2 1 1 2 F3

1 ENCLOSURE:

- W : Weatherproof IP 65/ Aluminium
- F : Flame Proof / SS304 for Gr. IIA, IIB
- G : Flame Proof / SS304 for Gr. IIC
- P : Poly Propylene
- O : Others

2 WETTED PARTS:

- 1. SS304
- 2. SS316
- 3. SS316L
- 4. Poly Propylene
- 5. Others

3 FLANGE SIZE

- 1. Sq. 92 x 92 PCD, Casted Flange
- 2. Sq 92X92 PCD, machined flange
- 3. Ø 120mm x 92 PCD
- 4. Ø 127mm x 98 PCD (1½" 150# ANSI)
- 5. Ø 152mm x 121 PCD (2" 150# ANSI)
- 6. Ø 152mm x 114 PCD (2" BS 10 - E)
- 7. Ø 190mm x 152.4 PCD (3" #150 ANSI)
- 8. Ø 165mm x 127 PCD (2½" BS 10 - E)
- 9. Ø 178mm x 140 PCD (2½" #150 ANSI)
- 10. Ø 230mm x 190 PCD (4" #150 ANSI)
- 0. Others

4 SWITCH TYPE

- 1. 250V AC / 5A 1SPDT (Micro Switch)
- 2. 250V AC / 5A 2SPDT (Micro Switch)

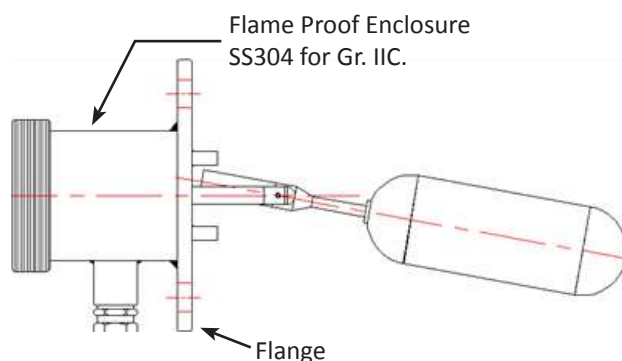
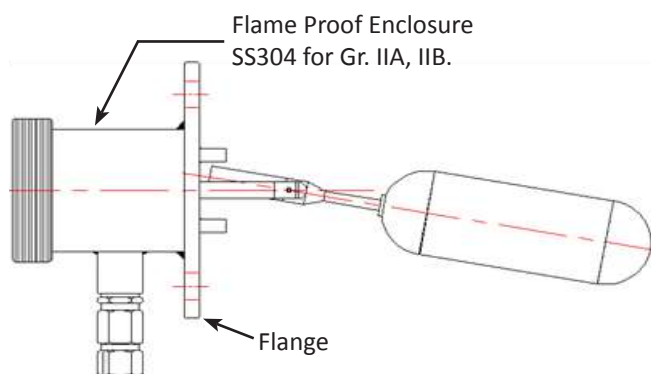
5 PRESSURE & TEMPERATURE RATING

- 1. Ambient pressure & temperature
- 2. 10 kg/cm², 150°C
- 3. 10 kg/cm², 180°C
- 4. 20 kg/cm², 180°C
- 5. 40 kg/cm², 200°C
- 6. 100 kg/cm², 150°C
- 7. Others

6 FLOAT MOC x SIZE

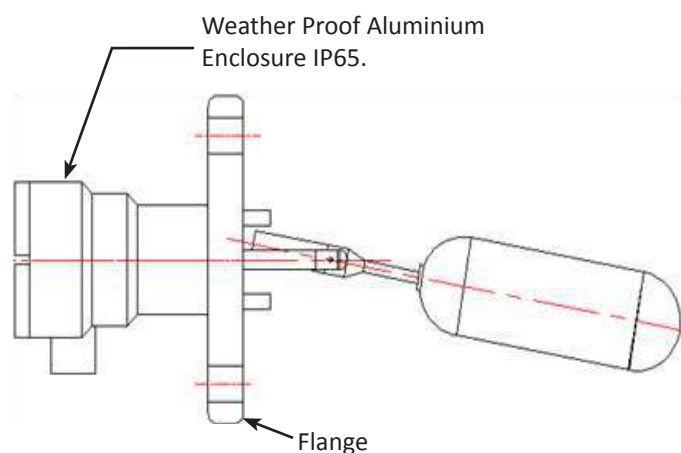
Type	Material	Float Dia
F1	SS304	46mm
F2	SS304	60mm
F3	SS316	60mm
F4	PP	60mm
F5	PP	53mm
F6	SS316L	46mm
F7	SS304	45mm
F0	Others	Others

6.4 TERMINAL WITH PROCESS CONNECTION :



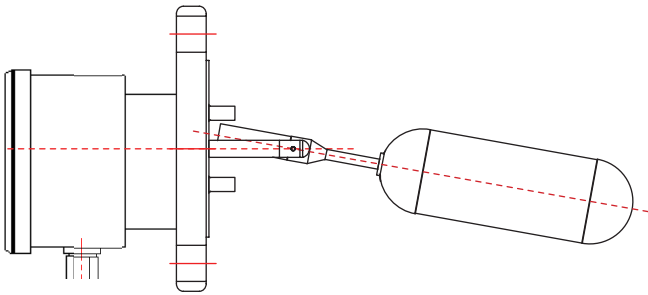
HFS CODE	Flange Size mm	Flange Rating
F - * - 1	Sq. 92 X 92 PCD	-
F - * - 2	Ø120 X 92 PCD	-
F - * - 3	Ø127 X 98 PCD	1 ½" 150# ANSI
F - * - 4	Ø152 X 121 PCD	2" 150# ANSI
F - * - 5	Ø152 X 114 PCD	2" BS 10 - E
F - * - 6	Ø190 X 152.4 PCD	3" 150# ANSI
F - * - 7	Ø165 X 127 PCD	2 ½" BS 10 - E
F - * - 8	Ø178 X 140 PCD	2 ½" 150# ANSI
F - * - 9	Ø230 X 190 PCD	4" 150# ANSI
F - * - O	Others	

HFS CODE	Flange Size mm	Flange Rating
G - * - 1	Sq. 92 X 92 PCD	-
G - * - 2	Ø120 X 92 PCD	-
G - * - 3	Ø127 X 98 PCD	1 ½" 150# ANSI
G - * - 4	Ø152 X 121 PCD	2" 150# ANSI
G - * - 5	Ø152 X 114 PCD	2" BS 10 - E
G - * - 6	Ø190 X 152.4 PCD	3" 150# ANSI
G - * - 7	Ø165 X 127 PCD	2 ½" BS 10 - E
G - * - 8	Ø178 X 140 PCD	2 ½" 150# ANSI
G - * - 9	Ø230 X 190 PCD	4" 150# ANSI
G - * - O	Others	



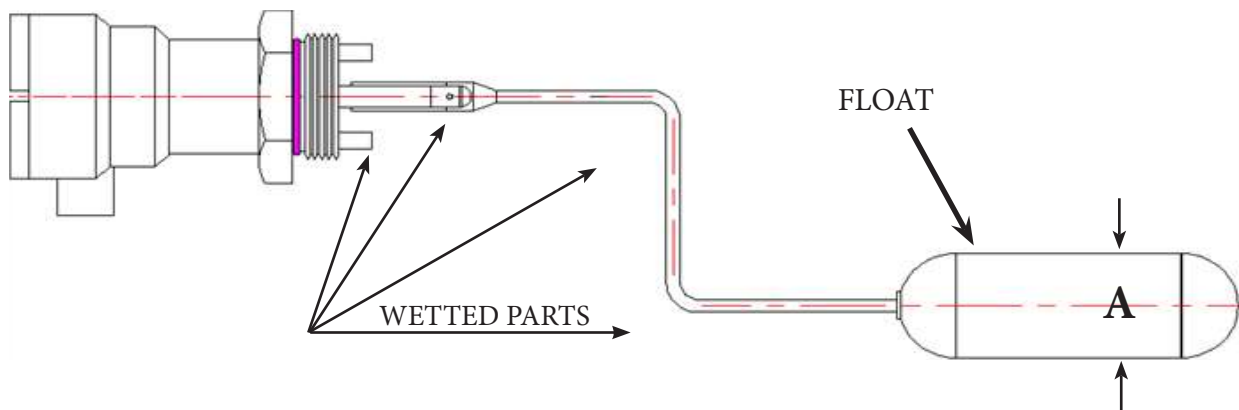
HFS CODE	Flange Size mm	Flange Rating
W - * - 1	Sq. 92 X 92 PCD	-
W - * - 2	Ø120 X 92 PCD	-
W - * - 3	Ø127 X 98 PCD	1 ½" 150# ANSI
W - * - 4	Ø152 X 121 PCD	2" 150# ANSI
W - * - 5	Ø152 X 114 PCD	2" BS 10 - E
W - * - 6	Ø190 X 152.4 PCD	3" 150# ANSI
W - * - 7	Ø165 X 127 PCD	2 ½" BS 10 - E
W - * - 8	Ø178 X 140 PCD	2 ½" 150# ANSI
W - * - 9	Ø230 X 190 PCD	4" 150# ANSI
W - * - O	Others	

PP TERMINAL WITH PROCESS CONNECTION :



HFS CODE	Flange Size mm	Flange Rating
P - * - 1	Sq. 92 X 92 PCD	-
P - * - 2	Ø120 X 92 PCD	-
P - * - 3	Ø127 X 98 PCD	1 ½" 150# ANSI
P - * - 4	Ø152 X 121 PCD	2" 150# ANSI
P - * - 5	Ø152 X 114 PCD	2" BS 10 - E
P - * - 6	Ø190 X 152.4 PCD	3" 150# ANSI
P - * - 7	Ø165 X 127 PCD	2 ½" BS 10 - E
P - * - 8	Ø178 X 140 PCD	2 ½" 150# ANSI
P - * - 9	Ø230 X 190 PCD	4" 150# ANSI
P - * - O	Others	

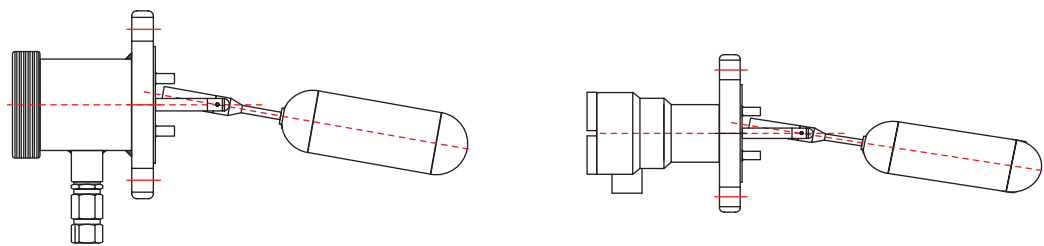
6.5 FLOAT WITH WETTED PARTS :



HFS CODE	WETTED PARTS		FLOAT	
	Material	Material	Dia A (mm)	
-1--*-F1	SS304	SS304	46mmx118mm	
-1--*-F2	SS304	SS304	60mmx142mm	
-2--*-F3	SS316	SS316	60mmx142mm	
-3--*-F6	SS316L	SS316L	46mmx118mm	
-4--*-F4	POLY PROPYLENE	POLY PROPYLENE	60mm	
-4--*-F5	POLY PROPYLENE	POLY PROPYLENE	53mm	
-1--*-F6	SS316L	SS316L	46mmx118mm	
-1--*-F7	SS304	SS304	45mmx80mm	

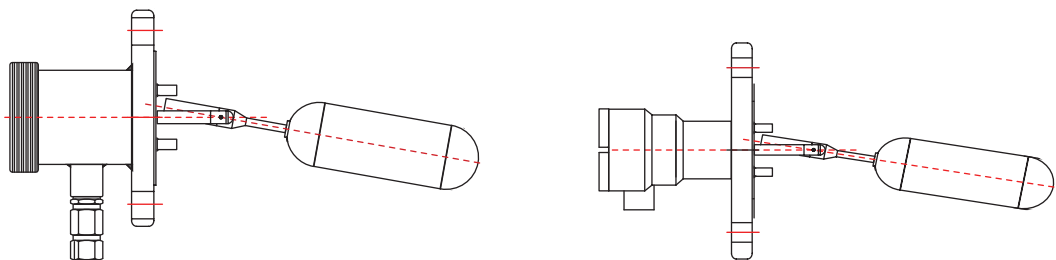
Type	HFS-F-1-4-1-1-F1	HFS-W-1-4-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" 150 # ANSI Flange	2" 150 # ANSI Flange
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress Protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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Type	HFS-F-1-8-2-1-F1	HFS-W-1-8-2-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2½" 150 # ANSI Flange	2½" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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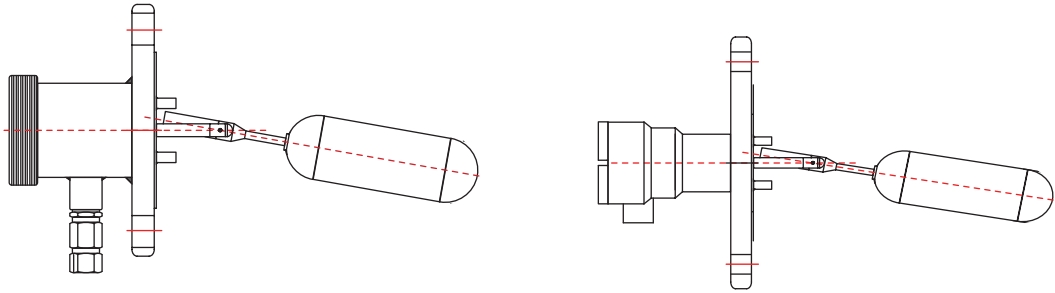


* For Extended Probe Length, Contact Factory

Type	HFS-F-1-6-1-2-F1	HFS-W-1-6-1-2-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	3" 150 # ANSI Flange	3" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10Kg/cm ²	10Kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

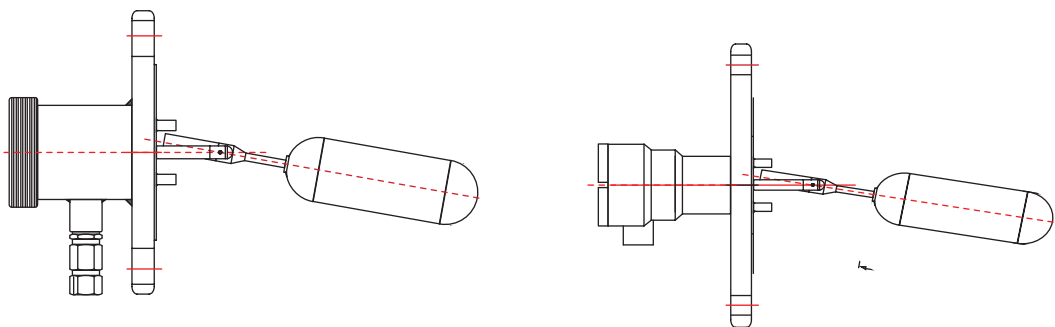
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Type	HFS-F-1-9-2-3-F1	HFS-W-1-9-2-3-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	4" 150 # ANSI Flange	4" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10 kg/cm ²	10 kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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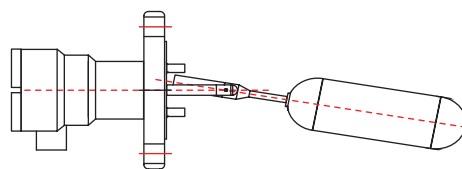
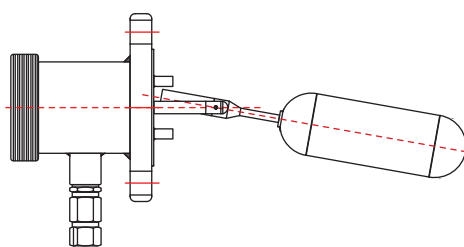
Type	HFS-F-1-4-1-1-F6	HFS-W-1-4-1-1-F6
Material Type	304/316	304/316
Float Material	SS316	SS316
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" 150 # ANSI Flange	2" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	2Kg/Cm ²	2Kg/Cm ²
Operating Temperature	100°C	100°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications

Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

Approval Certification

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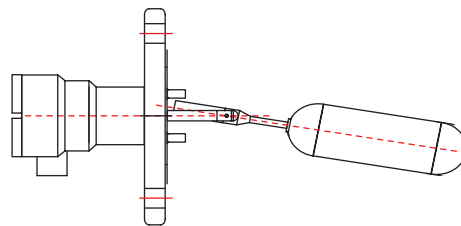
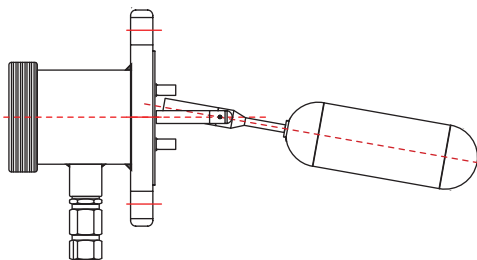
Type	HFS-F-1-8-2-3-F6	HFS-W-1-8-2-3-F6
Material Type	304/316	304/316
Float Material	SS316	SS316
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2½" 150 # ANSI Flange	2½" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10 kg/cm ²	10 kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications

Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

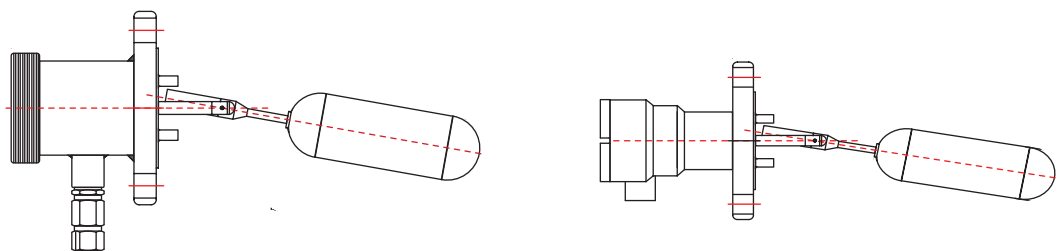
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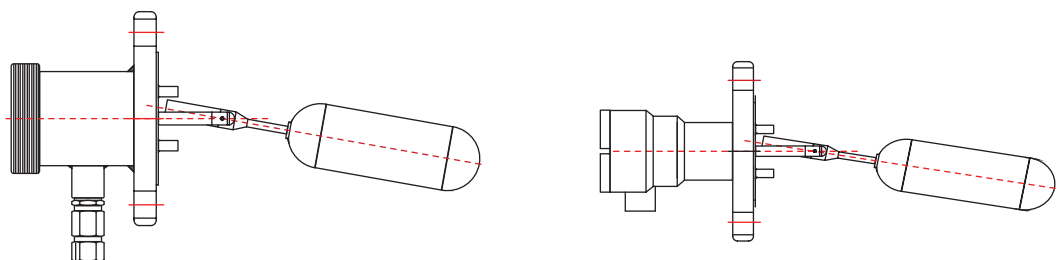
Type	HFS-F-1-4-1-1-F2	HFS-W-1-4-1-1-F2
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" 150 # ANSI Flange	2" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 60 mm	∅ 60 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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Type	HFS-F-1-8-2-2-F2	HFS-W-1-8-2-2-F2
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2 1/2" 150 # ANSI Flange	2 1/2" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 60 mm	∅ 60 mm
Specific Gravity	0.8	0.8
Operating Pressure	10 kg/cm ²	10 kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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* For Extended Probe Length, Contact Factory

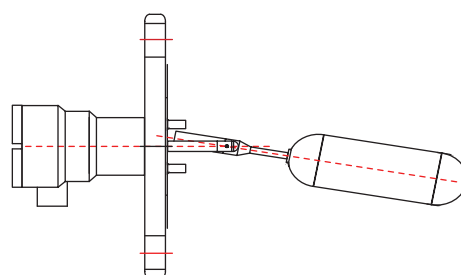
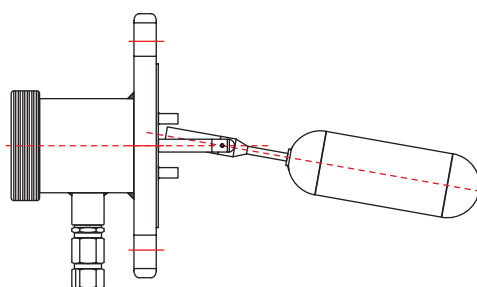
Type	HFS-F-1-6-1-4-F2	HFS-W-1-6-1-3-F2
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	3" 150 # ANSI Flange	3" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 60 mm	∅ 60 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications

Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

Approval Certification

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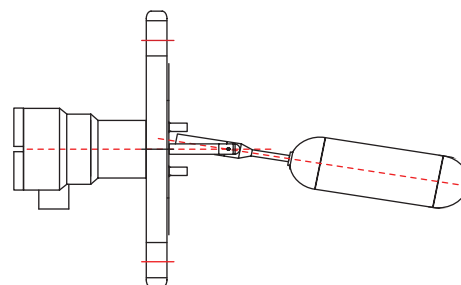
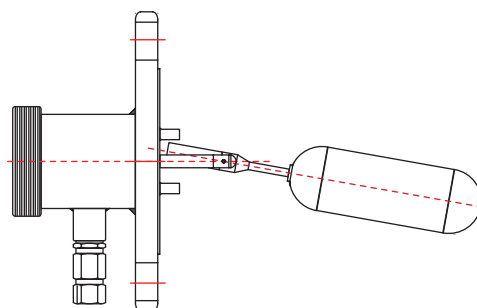
Type	HFS-F-1-9-2-4-F2	HFS-W-1-9-2-3-F2
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	4" 150 # ANSI Flange	4" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 60 mm	∅ 60 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications

Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

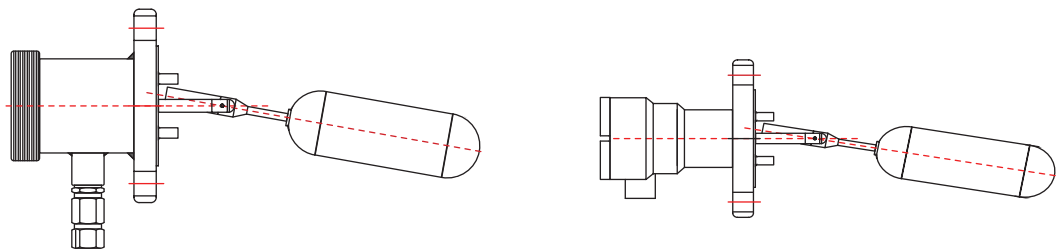
Approval Certification

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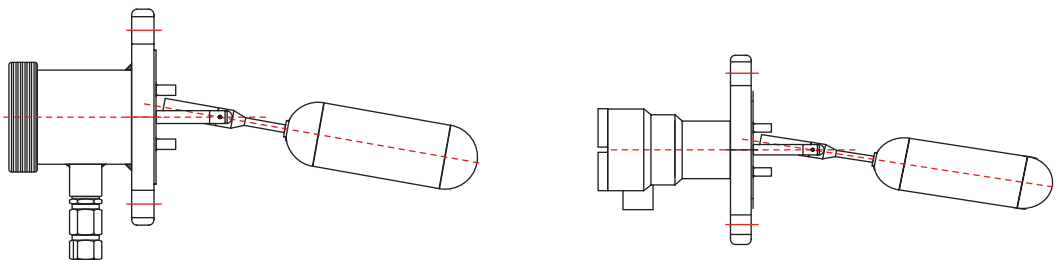
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Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" BS-10 Table E Flange	2" BS-10 Table E Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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Type	HFS-F-1-7-2-4-F1	HFS-W-1-7-2-3-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2 1/2" Table E Flange	2 1/2" Table E Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

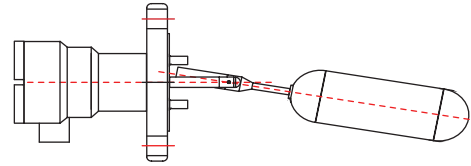
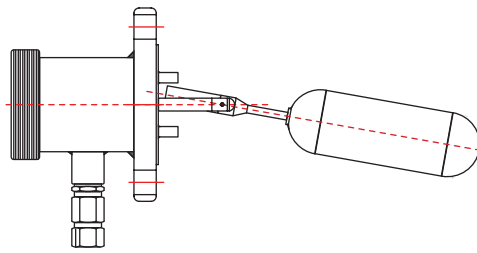
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Type	HFS-F-1-5-1-2-F6	HFS-W-1-5-1-2-F6
Material Type	304/316	304/316
Float Material	SS316 L	SS316 L
Enclosure	Flame Proof / SS304 for Gr. IIC	Weather Proof / Cast Aluminium
Process Connection	2" BS-10 Table E Flange	2" BS-10 Table E Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10kg/cm ²	10kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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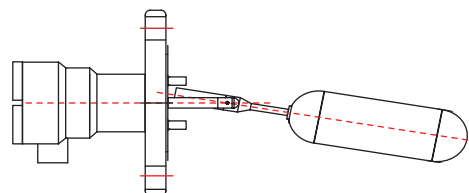
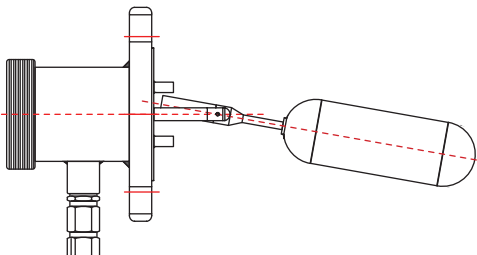
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Type	HFS-F-1-8-2-4-F6	HFS-W-1-8-2-1-F6
Material Type	304/316	304/316
Float Material	SS316	SS316
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2½" Table E Flange	2½" Table E Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	Ambient Pressure
Operating Temperature	180°C	Ambient Temperature
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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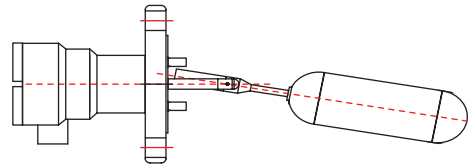
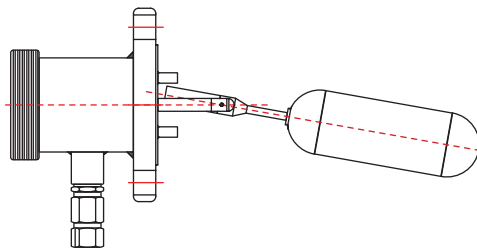
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Type	HFS-G-1-5-1-1-F2	HFS-W-1-5-1-1-F2
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIC	Weather Proof / Cast Aluminium
Process Connection	2" BS-10 Table E Flange	2" BS-10 Table E Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 60 mm	∅ 60mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

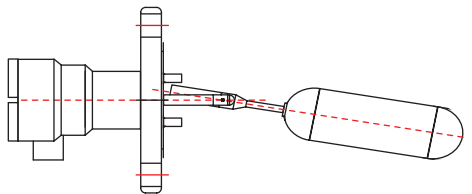
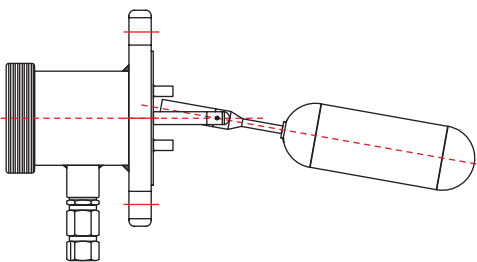
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Type	HFS-F-1-7-2-4-F2	HFS-W-1-7-2-3-F2
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2½" Table E Flange	2½" Table E Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 60 mm	∅ 60 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

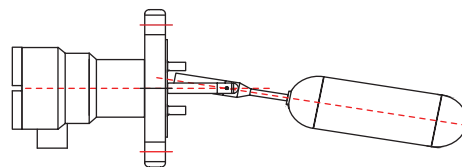
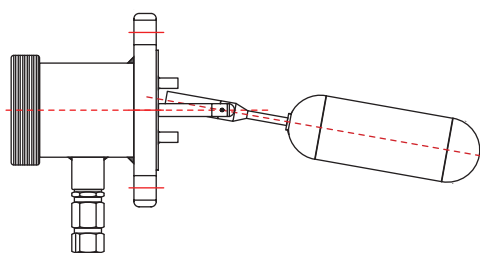
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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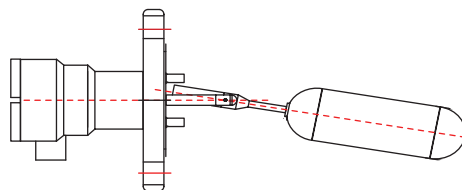
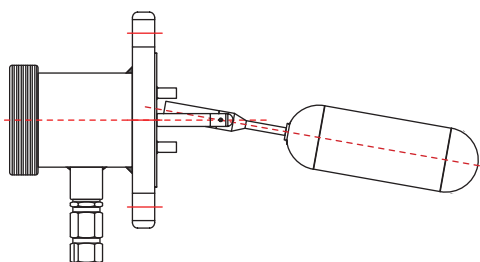
Type	HFS-F-1-O-1-1-F1	HFS-W-1-O-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	DN 50 PN 40 Flange	DN 50 PN 40 Flange
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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Type	HFS-F-1-O-2-2-F1	HFS-W-1-O-2-2-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	DN 65 PN 40 Flange	DN 65 PN 40 Flange
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10kg/cm ²	10kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

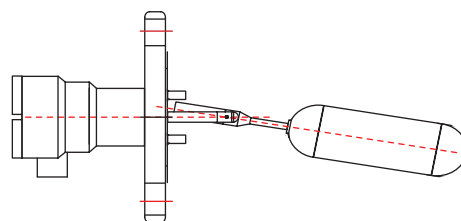
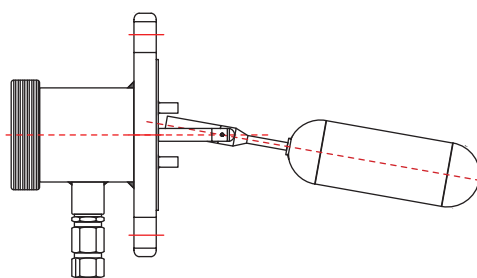
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Type	HFS-F-1-O-3-1-F1	HFS-W-1-O-2-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	DN 80 PN 40 Flange	DN 80 PN 40 Flange
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10kg/cm ²	10kg/cm ²
Operating Temperature	180°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

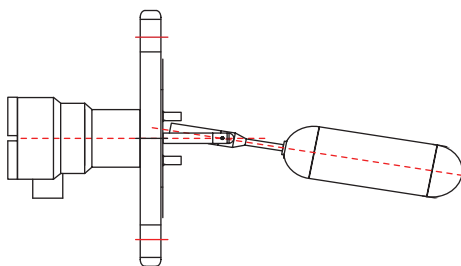
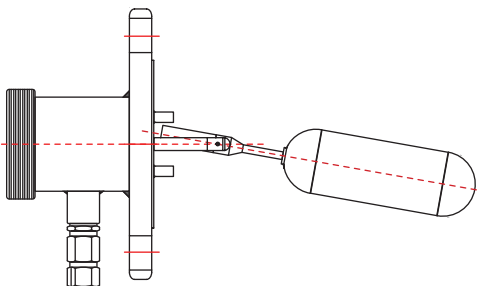
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Type	HFS-F-1-O-4-2-F1	HFS-W-1-O-3-2-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	DN 100 PN 40 Flange	DN 100 PN 40 Flange
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

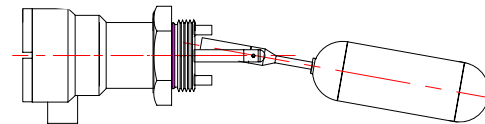
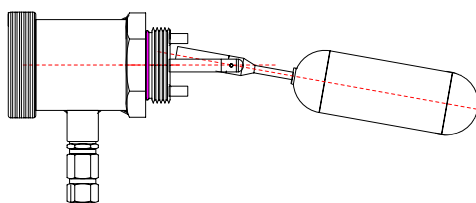
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Type	HFS-F-1-O-1-1-F1	HFS-W-1-O-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" BSP Adaptor	2" BSP Adaptor
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

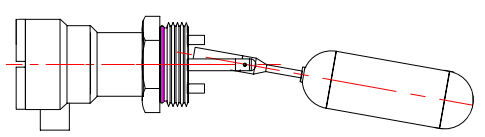
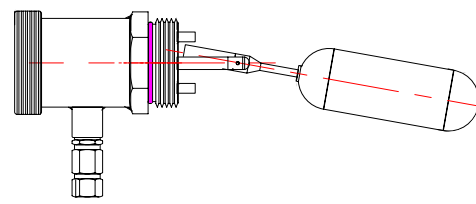
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Type	HFS-F-3-O-2-2-F1	HFS-W-3-O-2-2-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2½" BSP Adaptor	2½" BSP Adaptor
Probe Length	≤ 500 mm*	≤ 500 mm*
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10kg/cm ²	10kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

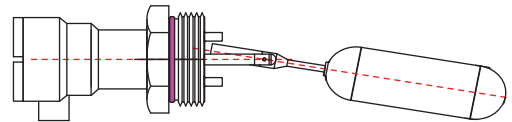
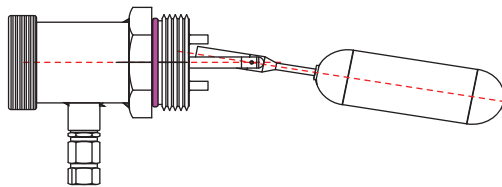
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* For Extended Probe Length, Contact Factory

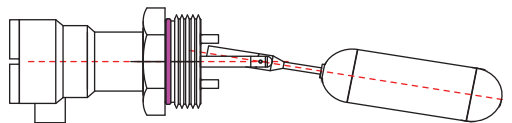
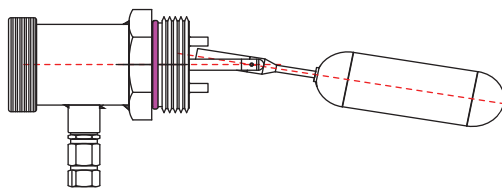
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Material Type	304	304
Float Material	SS304	SS 304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	3" BSP Adaptor	3" BSP Adaptor
Probe Length	≤ 500 mm*	≤ 500 mm*
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10kg/cm ²	10kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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Type	HFS-F-1-O-2-4-F1	HFS-W-1-O-2-3-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	3 1/2" BSP Adaptor	3 1/2" BSP Adaptor
Probe Length	Up to 500 mm*	Up to 500 mm*
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal
Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

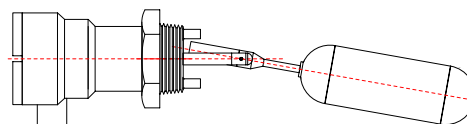
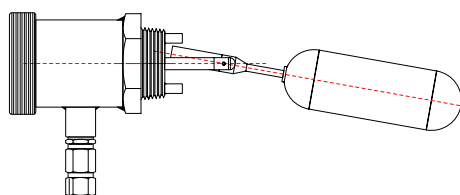
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Type	HFS-F-3-O-1-1-F1	HFS-W-1-O-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" NPT Adaptor	2" NPT Adaptor
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

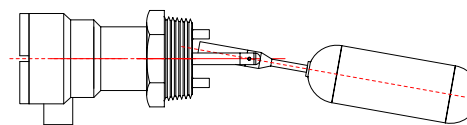
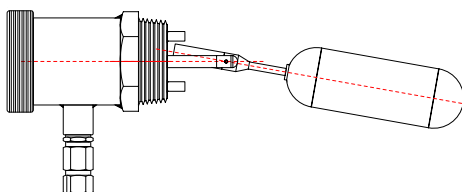
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Type	HFS-F-1-O-2-2-F1	HFS-W-1-O-2-2-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2 1/2" NPT Adaptor	2 1/2" NPT Adaptor
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	10kg/cm ²	10kg/cm ²
Operating Temperature	150°C	150°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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* For Extended Probe Length, Contact Factory

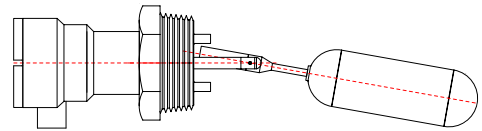
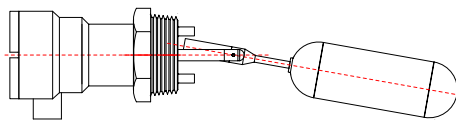
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Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	3"NPT Adaptor	3"NPT Adaptor
Probe Length	up to 500 mm *	up to 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	20kg/cm ²	10kg/cm ²
Operating Temperature	180°C	180°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications

Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

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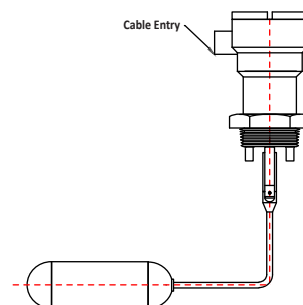
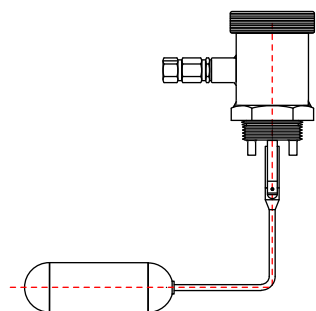
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Type	HFS-F-1-O-1-1-F1	HFS-W-1-O-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2" NPT Adaptor	2" NPT Adaptor
Probe Length	Upto 500 mm *	Upto 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

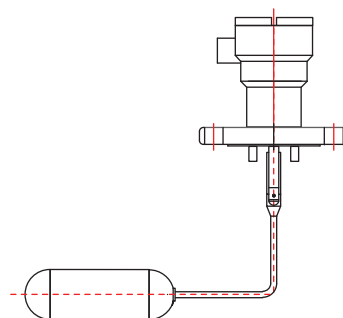
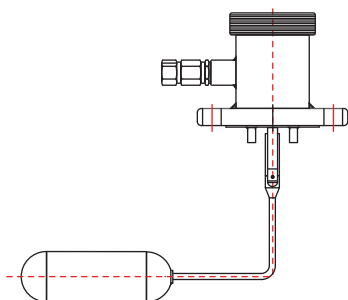
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Type	HFS-F-1-4-1-1-F1	HFS-W-1-4-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Cast Aluminium Terminal Box
Process Connection	2" 150 # ANSI Flange	2" 150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

Approval Certification
ATEX/CE/ABS

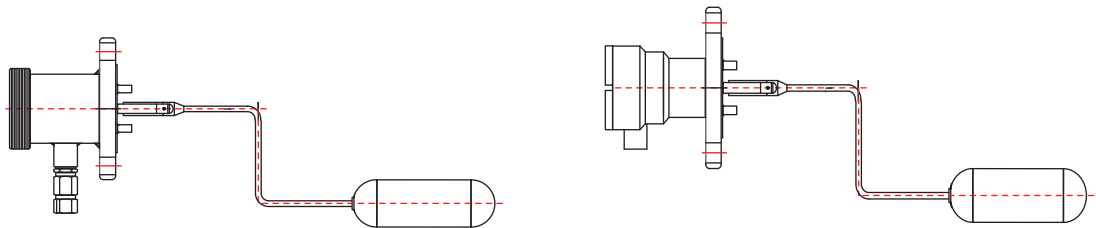


Type	HFS-F-1-4-1-1-F1	HFS-W-1-4-1-1-F1
Material Type	304	304
Float Material	SS304	SS304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB	Weather Proof / Cast Aluminium
Process Connection	2"150 # ANSI Flange	2"150 # ANSI Flange
Probe Length	≤ 500 mm *	≤ 500 mm *
Float	∅ 46 mm	∅ 46 mm
Specific Gravity	0.8	0.8
Operating Pressure	Ambient	Ambient
Operating Temperature	Ambient	Ambient
Ingress protection Class	IP 65	IP 65
Mounting Position	Horizontal	Horizontal

Electrical Specifications		
Function	Change Over Contacts (1 NO + 1 NC)	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 1SPDT	250VA / 5A 1SPDT
Maximum Number of Contacts	2 Change Over Contacts	2 Change Over Contacts

Approval Certification

ATEX/CE/ABS

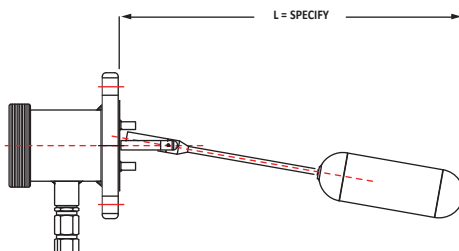


Type	HFS-F-1-4-1-2-F1
Material Type	304
Float Material	SS 304
Enclosure	Flame Proof / SS304 for Gr. IIA, IIB
Process Connection	2"150 # ANSI Flange
Probe Length	≤ 500 mm *
Float	∅ 46 mm
Specific Gravity	0.8
Operating Pressure	10Kg/Cm ²
Operating Temperature	100°C
Ingress protection Class	IP 65
Mounting Position	Horizontal

Electrical Specifications	
Function	Change Over Contacts (1 NO + 1 NC)
Switching Capacity	250VA / 5A 2SPDT
Maximum Number of Contacts	2 Change Over Contacts

Approval Certification

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HORIZONTAL FLOAT LEVEL SWITCH INSTALLED IN A CHAMBER

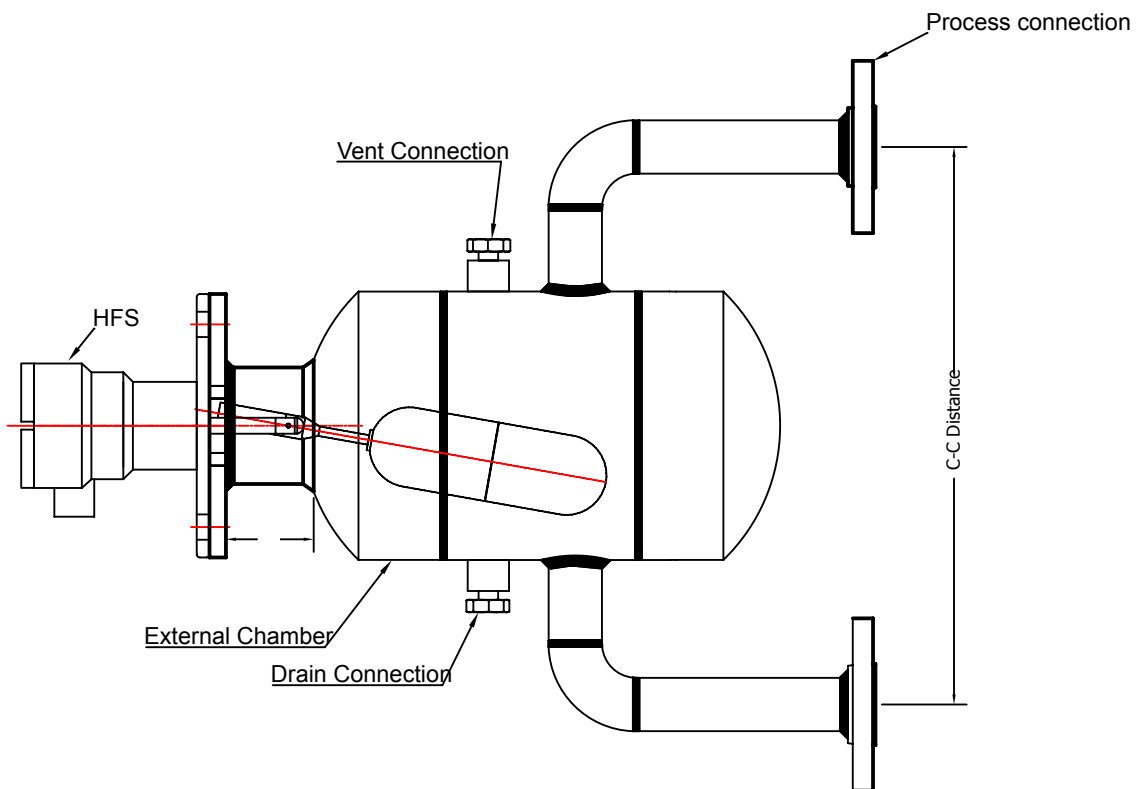
Wherever it is not possible or desirable to install Horizontal Float switches directly onto the vessel, switches can be installed in an External Chamber. This arrangement gives smooth level control irrespective of turbulence in the process vessel and prevents accidental damages to the switch during shutdown or maintenance of the vessel. Chambers are used in applications which require isolations of process, High Pressure / High Temperature applications, Corrosive applications, Onshore / Offshore installations.

Main function of these chambers are :

1. Level Measurement
2. Interface Measurement between two liquids.

FEATURES :

- Available for Low Pressure and High Pressure applications.
- Wide range of material of construction to suit different environmental conditions.
- Wide range of end connection types / sizes to choose from.
- A variety of chamber mounting arrangements provided to suit existing nozzles.



* For ordering Information of **External Chamber** refer **External Chamber Catalog**.

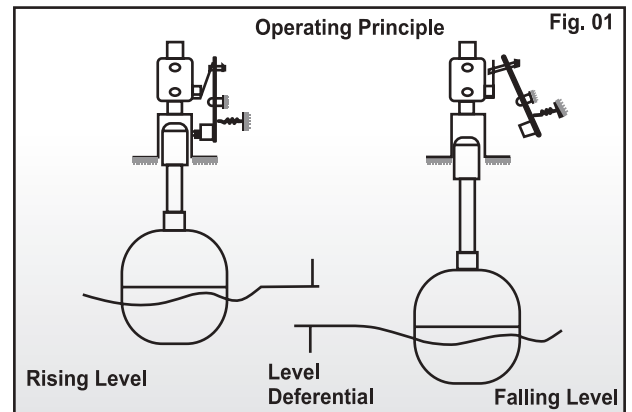
7. EXTERNAL CHAMBER LEVEL SWITCHES- MLS

It is a switch for critical area applications or just general purpose control, A choice of carbon steel chambers is available, or for more vigorous applications we supply a series of 316 stainless steel chambers. A variety of tank and process connections is available to make installation simple and economical.

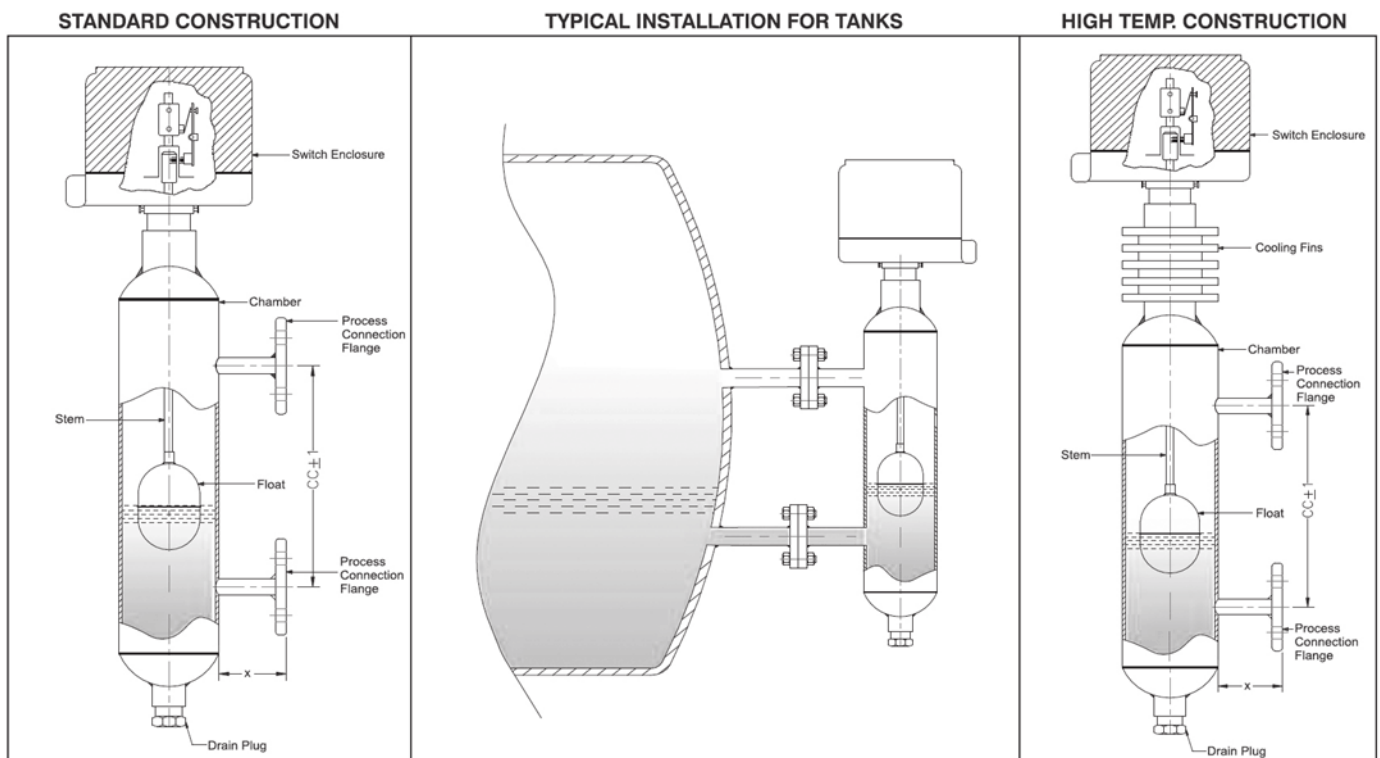
7.1 CONSTRUCTION AND OPERATION :

The basic operating includes a magnetic switch action resulting from a change in liquid level, which moves a magnetic attraction sleeve into the field of an externally located magnet. This Principle eliminates problems associated with flexing diaphragm seals. Bellow seals, as well as "fouling" problems encountered by probe type devices.

The illustrations below (refer fig.01) demonstrates the operating principle using a float to provide the operating motion. A falling liquid level causes a downward movement of a magnetic attraction sleeve moving it below the magnetic field generated by the externally mounted magnet. The bias spring causes the magnet to pull away from the sealing tube in turn actuating the switch. The reverse action takes place on rising level, with the attraction sleeve being moved into the magnetic field causing the magnet to pull in towards the sealing tube in turn actuating the switch.



7.2 INSTALLATION OPTIONS :



7.3 GENERAL SPECIFICATIONS:

Enclosure	: Cast Al, Weather Proof IP 65
Connection	: Brass ¾" ET or ½"NPT
Switch mechanism	: Adjustable, Micro switch 5A, 230VAC (SPDT)
Switch action	: Bistable
No. of switch mechanisms	: Max. three (adjustable)
Control range	: 150 mm (Approx)
Operating Differential	: 25±5mm
Float & Stem	: SS304 or SS316
Float size	: Ø50x150mm
Chamber MOC (IBR)	: CS (IBR grade)
Chamber MOC (Non-IBR)	: CS / SS304 / SS316
Process connection (IBR)	: Flanged
Size	: 25NB, BS 10 - E or ANSI std.
Process connection (Non-IBR)	: Flanged
MOC	: CS, SS304, BS 10 - E
Size	: 25NB or ANSI std
C-C distance	: 200-500mm
Vent	: ½" Plug / Flanged
Max temperature	: 200°C (without cooling fins) Or 400°C (with cooling fins)
Test Pressure	: Up to 50 Kg/cm ²
Min. Liquid Specific Gravity	: 0.8

7.4 ORDERING INFORMATION :

SPECIFY PART NO. → MLS **1** **2** **3** **4** **5** **6** **7**

MLS

Example: MLS

1 APPROVAL:

- 1. None
- 2. IBR

2 PROCESS CONNECTION MOC :

- 1. 1" BS 10 - E
- 2. 1"NB ANSI 150 #
- O. Others

3 NO. OF SWITCHES:

- 1. One
- 2. Two
- 3. Three

4 CHAMBER :

- W: Without
- B: CS (IBR)
- M: CS (Non IBR)
- N: SS304 (Non IBR)
- S: SS316 (Non IBR)
- O: Others

5 FLOAT & STEM:

- 1: SS304
- 2: SS316
- O: Others

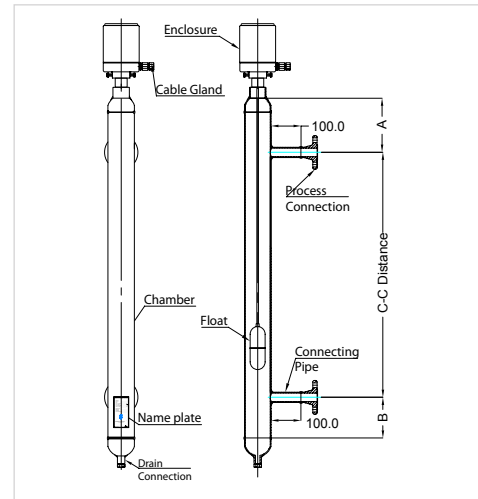
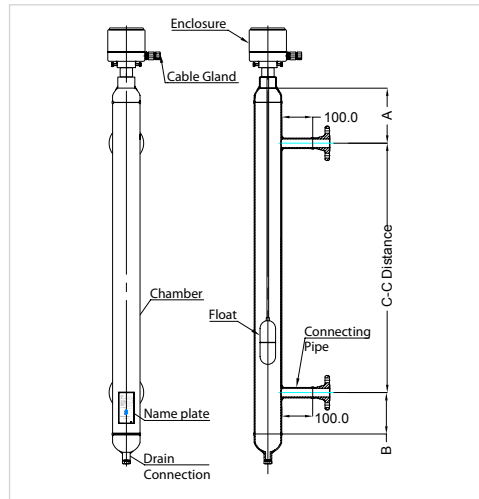
6 HIGH TEMP ARRANGEMENT:

- N: Not provided
- P: Provided

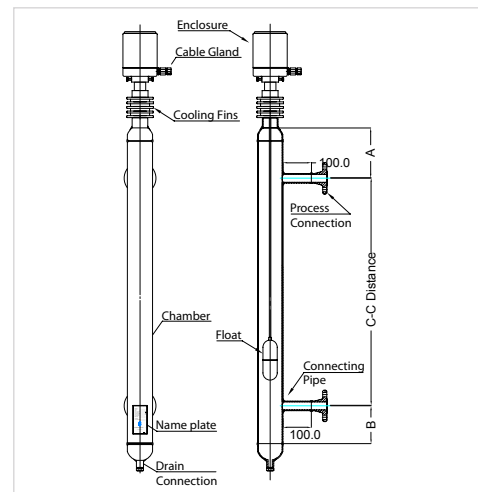
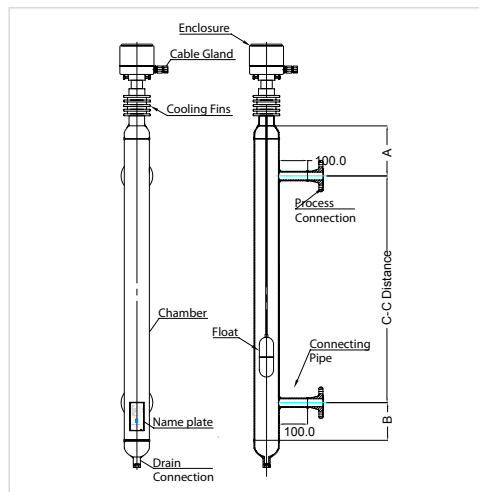
7 DRAIN:

- 1. ½" BSP Plug
- O. Others

Type	MLS-1-2-1-B-1-N-1	MLS-1-2-2-B-1-N-1
Enclosure	Cast Al, Weather Proof	Cast Al, Weather Proof
Process Connection	1" 150 # ANSI Flange	1" 150 # ANSI Flange
Chamber Size	3" NB sch 10	3" NB sch 10
Chamber & Process Connection Material	SS 304	SS 304
Float Size	∅50 X 150 mm	∅50 X 150 mm
Float Material	SS 304	SS 304
C-C Distance	500 mm to 3000mm	500 mm to 3000mm
Vent & Drain Connection	½" Plug / Flange	½" Plug / Flange
Max. Temperature	200°C (without cooling fins)	200°C (without cooling fins)
Test Pressure	50 kg/cm ²	50 kg/cm ²
Specific Gravity	0.8 Kg/cm ²	0.8 Kg/cm ²
Ingress protection Class	IP 65	IP 65
ELECTRICAL SPECIFICATION		
No. of switch mechanisms	Max. Three (Adjustable)	Max. Three (Adjustable)
Control Range	150 mm (approx)	150 mm (approx)
Operating Differential	25±5mm	25±5mm
Switch Mechanism	Adjustable	Adjustable
Switch action	Bistable	Bistable
Contact Type	Microswitch (SPDT)	Microswitch (SPDT)
Contact Rating	5A , 230 V AC (SPDT)	5A , 230 V AC (SPDT)



Type	MLS-1-2-1-B-1-P-1	MLS-1-2-2-B-1-P-1
Electrical Connection	Cast Aluminium terminal Box	Cast Aluminium terminal Box
Process Connection	1" NB 150 # ANSI Flange	1" NB 150 # ANSI Flange
Chamber Size	3" NB sch 10	3" NB sch 10
Chamber & Process Connection Material	SS 304	SS 304
Float Size	∅50 X 150 mm	∅50 X 150 mm
Float Material	SS 304	SS 304
C-C Distance	500 mm to 3000mm	500 mm to 3000mm
Vent & Drain Connection	½" Plug / Flange	½" Plug / Flange
Max. Temperature	400°C (with cooling fins)	400°C (with cooling fins)
Test Pressure	50 kg/cm ²	50 kg/cm ²
Specific Gravity	0.8 Kg/cm ²	0.8 Kg/cm ²
Ingress protection Class	IP 65	IP 65
ELECTRICAL SPECIFICATION		
No. of switch mechanisms	Max. Three (Adjustable)	Max. Three (Adjustable)
Control Range	150 mm (approx)	150 mm (approx)
Operating Differential	25±5mm	25±5mm
Switch Mechanism	Adjustable	Adjustable
Switch action	Bistable	Bistable
Contact Type	Microswitch (SPDT)	Microswitch (SPDT)
Contact Rating	5A , 230 V AC (SPDT)	5A , 230 V AC (SPDT)



8. CABLE SUSPENDED FLOAT OPERATED LEVEL SWITCH – CFS

Cable Suspended Float Operated Level Switch is a simple, user friendly and reliable switch for liquid level detection. The dual chambered float is made of injection moulded tough polypropylene that ensures good waterproof protection. The switching differential is adjustable by adjusting the position of the Adjustable stopper.

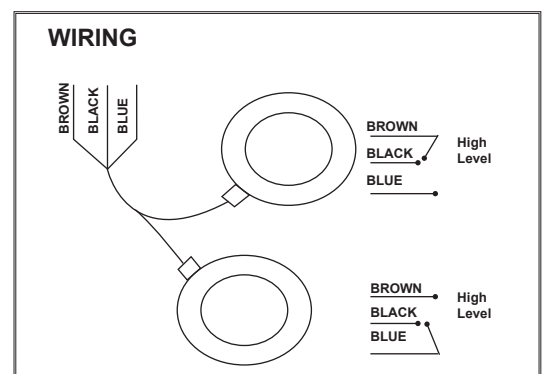
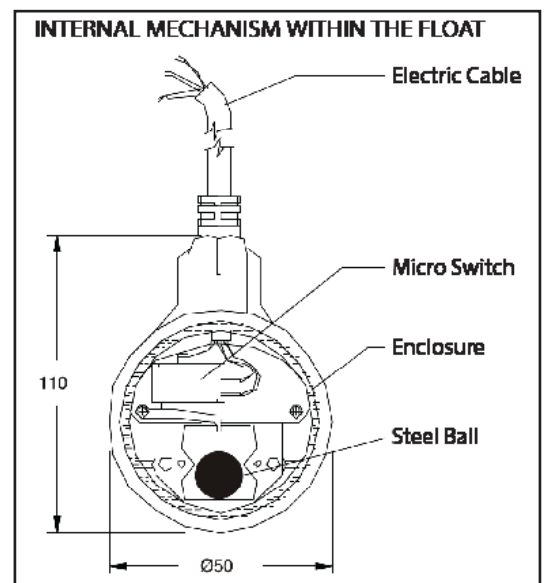
The cable of the level switch is a flexible insulated copper cable with a PVC/Neoprene outer insulation. This can be used in Liquid Level Monitoring, Pump control for Potable water, sewage applications.

8.1 CONSTRUCTION & OPERATION :

It consists of a float, integral with a 3 core electric cable. A fixed micro switch and a moving steel ball are enclosed within the float casting. A change in liquid level causes the float to tilt up or down around a pivot, provided in the form of an adjustable stopper or support pipe, at an angle and in the process, actuating a steel ball to move and operate a micro switch plunger to close or open an electrical circuit with potential free contacts, to operate auxiliary electrical devices like alarm, pump and solenoid valve.

8.2 GENERAL SPECIFICATIONS:

Float Protection	: Weather Proof IP - 68
Rating of Micro switch	: 10A, 250V AC
Switching Angle	: $\pm 45^\circ$
Max. Temperature	: 50°C
Max. Pressure	: 1 bar
Terminal Enclosure	: Cast Al, Weather Proof IP - 65
Cable gland	: Polyamide x PG 13.5
Process connection	: 2", 2 1/2", 3" & 4" ANSI or BS Standard Flange
Integral cable length	: 5 or 10 mtrs (Larger length on request)
Contact Type	: Micro switch (SPDT)
Float MOC	: PP
Cable	: Neoprene or PVC $\varnothing 9$ mm with 3 core 1mm ²
Min. Liquid Specific Gravity	: 0.8
Adjustable Stopper	: PP
Support Pipe	: SS304 / PP / PVC



Applications: Used in Sumps, Sewage, factory drainage, sludgy & soil water containing suspensions for automatic switching of pumps, submerged pumps, solenoid valves, alarms, etc.

8.3 INSTALLATION MODES:

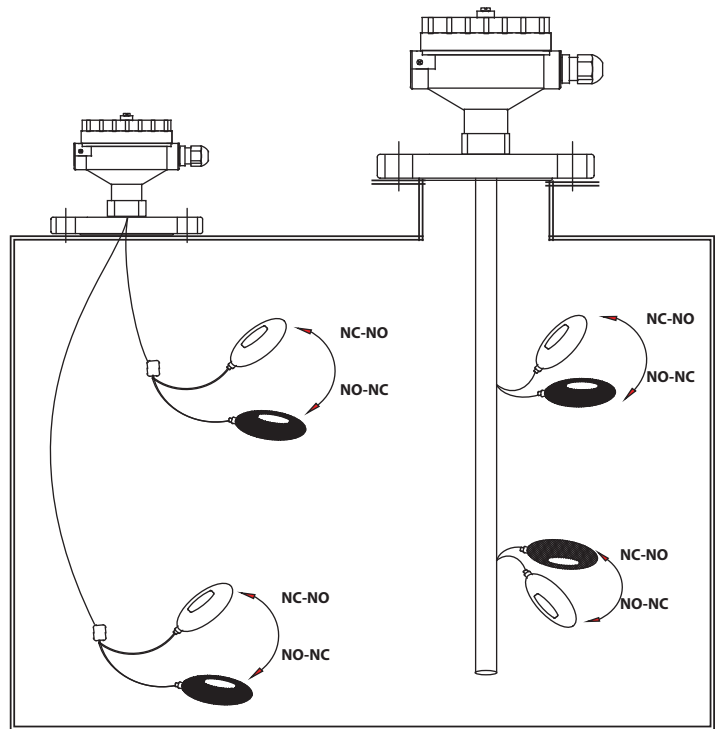
Provide a fixation point to the cable, to act as a pivot for the float to achieve switch actuation at preset level. The location of the fixation point depends on the preset level, float shape, weight and its differential angle.

FIGURE 1 - TOP MOUNTED WITH ADJUSTABLE STOPPER:

The cable is suspended through a top clamp and an adjustable stopper, which moves freely along its length. It is positioned at a fixed point through an internal o-ring to provide a fixation point.

FIGURE 2 - TOP MOUNTED WITH SUPPORT PIPE:

A support pipe along with required number of cable float switches is suspended from tank top through a flange. The open cable ends, terminate into an IP65 enclosure. The cables are tied / clamped to the support pipe at various points to provide number of fixation points.



8.4 ORDERING INFORMATION FOR CABLE SUSPENDED FLOAT OPERATED LEVEL SWITCH

SPECIFY PART NO. → CFS **1** **2** **3** **4**
 Example: CFS
 CFS

1 ENCLOSURE

- A. Not Provided
- B. Cast Al, Weather proof IP - 65
- O. Others

2 CONSTRUCTION

- 1. Adjustable stopper
- 2. Support Pipe x PVC / SS304 / SS316
- O. Others

3 PROCESS CONNECTION

- 1. Not Provided
- 2. 2"x MS BS 10 - E
- 3. 2 ½"x PP / 3"x SS304 BS 10 - E
- O. Others

4 NO. OF SUSPENDED FLOATS

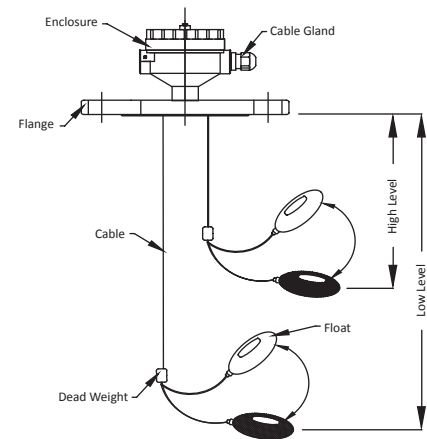
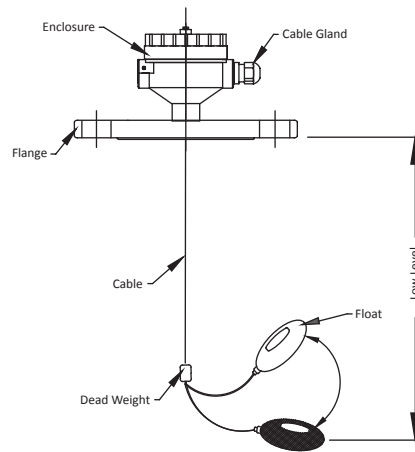
- 1. One
- 2. Two
- 3. Three
- 4. Four

Type

Float Material	PP
Float Ingress Protection	IP-68
Electrical Connection	Cast Al, Weather Proof
Process Connection	2" BS-10 Table E Flange
No. of Levels	One
Construction Type	Adjustable Stopper
Cable Type	Neoprene or PVC
Switching Angle	±45°
Contact Type	Micro switch (SPDT)
Contact Rating	10A, 250V AC
Integral Cable Length	Up to 10 meters *
Specific Gravity	0.8 min
Design Pressure	1 Kg/cm ²
Design Temperature	50°C
Ingress protection Class	IP 65
Mounting Position	Vertical

CFS-B-1-2-1**CFS-B-1-2-2**

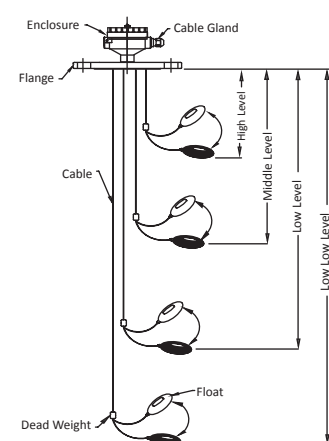
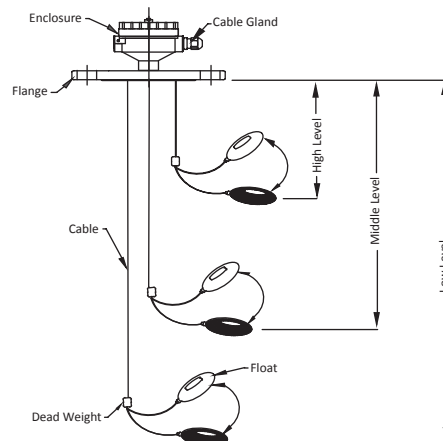
Float Material	PP
Float Ingress Protection	IP-68
Electrical Connection	Cast Al, Weather Proof
Process Connection	2" BS-10 Table E Flange
No. of Levels	Two
Construction Type	Adjustable Stopper
Cable Type	Neoprene or PVC
Switching Angle	±45°
Contact Type	Micro switch (SPDT)
Contact Rating	16A, 250V AC
Integral Cable Length	Up to 10 meters *
Specific Gravity	0.8 min
Design Pressure	1 Kg/cm ²
Design Temperature	50°C
Ingress protection Class	IP 65
Mounting Position	Vertical

**Type**

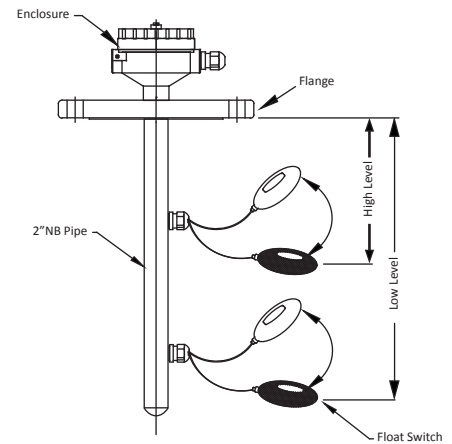
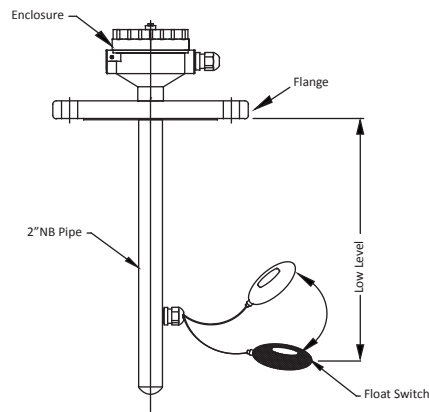
Float Material	PP
Float Ingress Protection	IP-68
Electrical Connection	Cast Al, Weather Proof
Process Connection	2" BS-10 Table E Flange
No. of Levels	Three
Construction Type	Adjustable Stopper
Cable Type	Neoprene or PVC
Switching Angle	±45°
Contact Type	Micro switch (SPDT)
Contact Rating	10A, 250V AC
Integral Cable Length	Up to 10 meters *
Specific Gravity	0.8 min
Design Pressure	1 Kg/cm ²
Design Temperature	50°C
Ingress protection Class	IP 65
Mounting Position	Vertical

CFS-B-1-2-3**CFS-B-1-2-4**

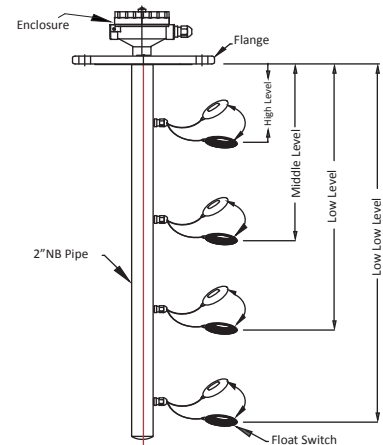
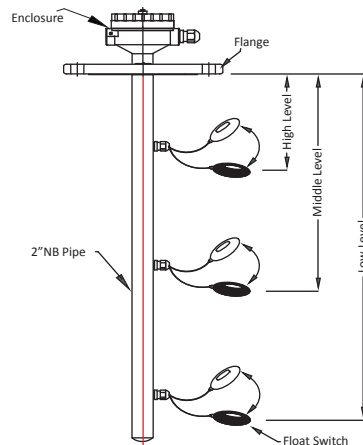
Float Material	PP
Float Ingress Protection	IP-68
Electrical Connection	Cast Al, Weather Proof
Process Connection	2" BS-10 Table E Flange
No. of Levels	Four
Construction Type	Adjustable Stopper
Cable Type	Neoprene or PVC
Switching Angle	±45°
Contact Type	Micro switch (SPDT)
Contact Rating	10A, 250V AC
Integral Cable Length	Up to 10 meters *
Specific Gravity	0.8 min
Design Pressure	1 Kg/cm ²
Design Temperature	50°C
Ingress protection Class	IP 65
Mounting Position	Vertical



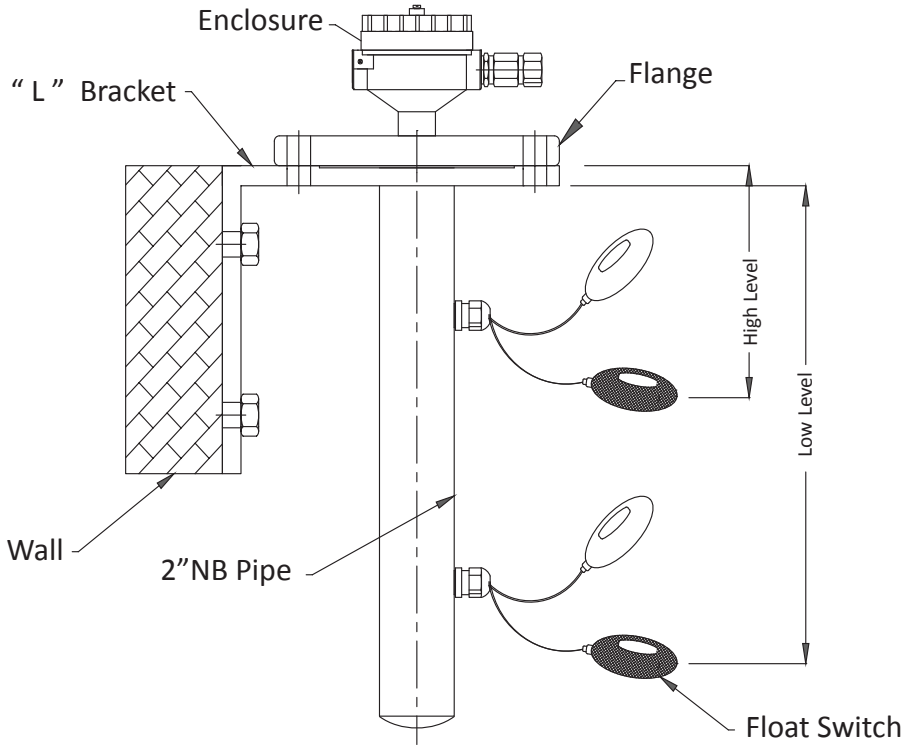
Type	CFS-B-2-2-1	CFS-B-2-2-2
Float Material	PP	PP
Float Ingress Protection	IP-68	IP-68
Electrical Connection	Cast Al, Weather Proof	Cast Al, Weather Proof
Process Connection	2" BS-10 Table E Flange	2" BS-10 Table E Flange
No. of Levels	One	Two
Construction Type	Supporting Pipe	Supporting Pipe
Supporting Pipe MOC	SS 304	SS 304
Cable Type	Neoprene or PVC	Neoprene or PVC
Switching Angle	±45°	±45°
Contact Type	Micro switch (SPDT)	Micro switch (SPDT)
Contact Rating	10A, 250V AC	10A, 250V AC
Integral Cable Length	Up to 10 meters *	Up to 10 meters *
Specific Gravity	0.8 min	0.8 min
Design Pressure	1 Kg/cm ²	1 Kg/cm ²
Design Temperature	50°C	50°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical



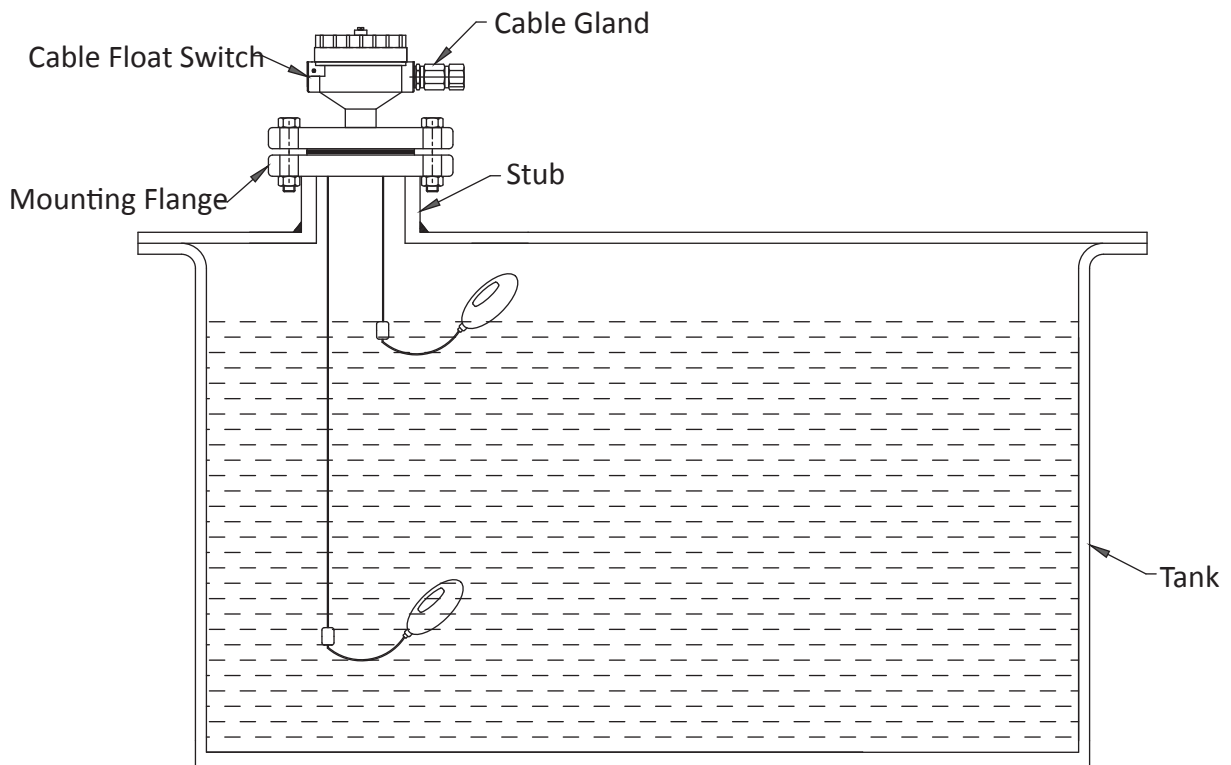
Type	CFS-B-2-2-3	CFS-B-2-2-4
Float Material	PP	PP
Float Ingress Protection	IP-68	IP-68
Electrical Connection	Cast Al, Weather Proof	Cast Al, Weather Proof
Process Connection	2" BS-10 Table E Flange	2" BS-10 Table E Flange
No. of Levels	Three	Four
Construction Type	Adjustable Stopper	Adjustable Stopper
Supporting Pipe MOC	SS 304	SS 304
Cable Type	Neoprene or PVC	Neoprene or PVC
Switching Angle	±45°	±45°
Contact Type	Micro switch (SPDT)	Micro switch (SPDT)
Contact Rating	10A, 250V AC	10A, 250V AC
Integral Cable Length	Up to 10 meters *	Up to 10 meters *
Specific Gravity	0.8 min	0.8 min
Design Pressure	1 Kg/cm ²	1 Kg/cm ²
Design Temperature	50°C	50°C
Ingress protection Class	IP 65	IP 65
Mounting Position	Vertical	Vertical



TWO LEVEL SWITCH WITH SUPPORTING PIPE & 'L' CLAMP FOR MOUNTING



TWO LEVEL SWITCH MOUNTED ON A TANK NOZZLE



9. DISPLACER TYPE LEVEL SWITCHES - DLS

Displacer type level switches offers the industrial user a wide choice of alarm and control configuration. DLS works on a simple buoyancy principle and is well suited for simple or complex applications, such as forming surging liquids or agitated fluids, and usually costs less than other types of level switches.

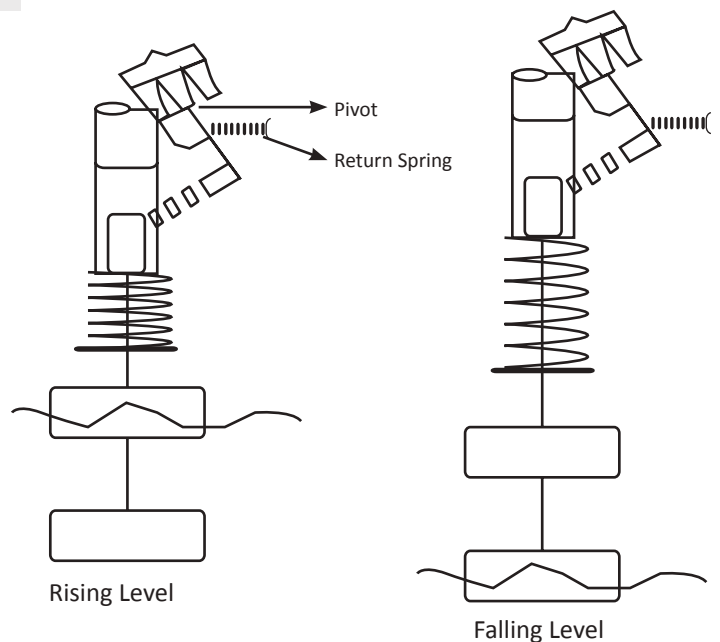
9.1 CONSTRUCTION & OPERATION:

Operation is based on simple buoyancy principle. As the liquid level rises and progressively immerses the displacer elements, the effective weight suspended on the spring reduces and the consequent length of the spring change is used to provide magnet movement and operate the switch. The spring movement causes the magnetic sleeve to attract a pivoted magnet actuating a switch mechanism located outside the barrier tube. Built-in limit stops, prevent over stroking under level surge conditions.

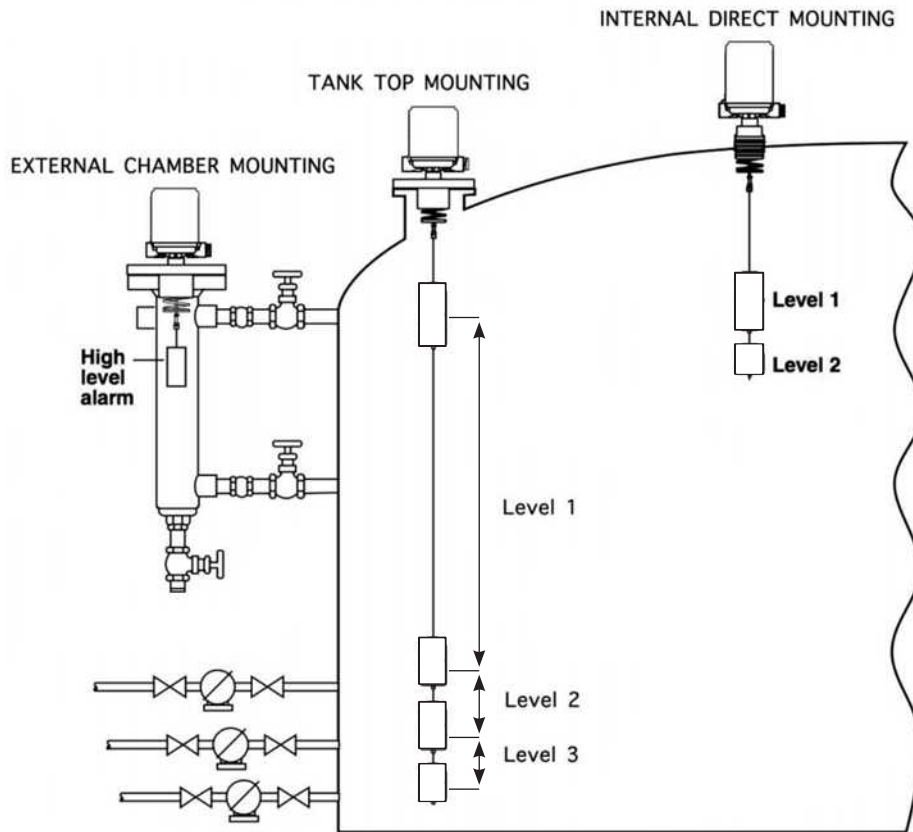


FEATURES:

- Wide choice of switching functions
- Suitable for large tanks up to 15 meters
- Site adjustable switch points
- Customized for high temp, high pressure & vacuum applications.
- Reliable performance in turbulent liquids even without still pipes.
- Easy transportation of longer length switches.
- Enclosure : Weather proof-IP-65
Ex-proof-Gr. IIA & IIB or IIC



9.2 INSTALLATION OPTIONS



9.3 GENERAL SPECIFICATIONS:

Enclosure	: Cast ALUMINIUM, Weather Proof-IP 65, Cast AL Ex-proof Gr. IIA & IIB or IIC
Conduit Connection	: Brass ¼ " ET or ½" NPT
Measuring Range	: 200 mm~15000 mm
Operating Differential	: 40±5 mm / Adjustable / 65 ±5 mm
Switch Type	: Micro switch
Switch Contacts	: 2 SPDT (2 NO + 2 NC) @ 5A, 230 VAC (Resistive)
Switch Action	: Bistable
Terminals	: To suit 1.5 mm ² conductor
Flexible Rope	: SS304, SS316, PP, PTFE
Displacer	: SS304, SS316, PP, PTFE
Spring Housing	: SS316, PP, PTFE
Spring Material	: SS316, SS316L
Process Connection Flanged	: MS, SS304, SS316, PP (SS clad), PTFE (SS clad)
Perforated still well	: MS, SS304, SS316, PP (65 NB)
External Cage	: MS, SS304, SS316, PP (80 NB)
Max. Temperature	: 0-200°C (without cooling fins) 0-300°C (with cooling fins) (Contact factory for temperature more than 300°C)
Max. Test Pressure	: Vacuum to 40 Kg/cm ² (Contact factory for pressure more than 40 Kg/cm ²)
Min. Sp. Gravity	: 0.7 (Contact factory for Sp. Gr. less than 0.7)

SINGLE SWITCH MODELS

These instruments are factory calibrated to operate over a narrow level differential band and are ideally suited for liquid level alarm applications, on either high or low level. The operating level is fully adjustable by simply repositioning the displacer along its suspension rope. The differential band is $\pm 51 \text{ mm}$ (2") in water and varies with liquid specific Gravity.



These wide differential units are factory calibrated to actuate as the liquid level reaches a given displacer and to remain actuated until the level reaches a second displacer. The minimum differential band is approximately 152 mm (6") in water and varies with liquid specific gravity. The maximum differential is determined by the length of the displacer suspension cable



DUAL SWITCH MODELS :

Narrow differential type instruments utilize two switches, each actuated at a different level and each calibrated with a narrow differential band.



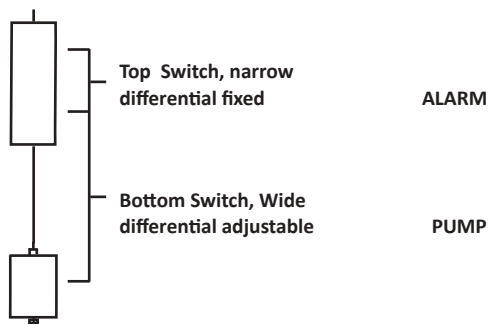
Wide differential type displacer level switches are factory calibrated with a choice of several operating sequences.



OPERATING SEQUENCE

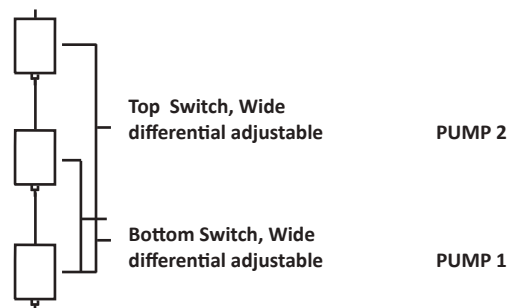
PUMP CONTROL PLUS ALARM

At the lowest level the pump starts. When the level rises to the middle displacer, the pump stops. If the level continues to rise, the upper displacer actuates the alarm switch which remains actuated until the level drops to the middle displacer.



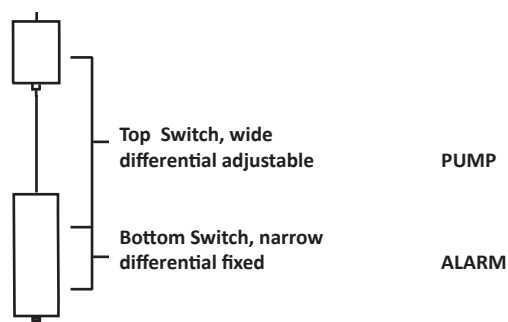
CONTROL OF 2 PUMPS

Pump starts as the level rises to the middle displacer. Should the level continue to rise to the upper displacer, No.2 pump is actuated. Both pumps operate until the level is dropped to the lower displacer.

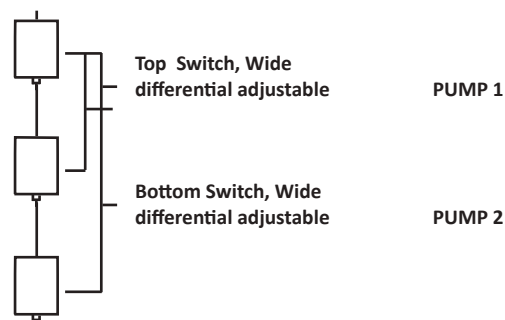


DIFFERENTIAL ADJUSTABLE

The sequence of arrangement can be reversed to provide pump start at high level and pump stop at low level followed by low level alarm operation



The pumping sequence of Arrangement above can be reversed



9.4 ORDERING INFORMATION FOR DISPLACER TYPE LEVEL SWITCHES

SPECIFY PART NO. → DLS **1** **2** **3** **4** **5** **6** **7**

Example DLS

DLS

1 SWITCH MECHANISMS / DISPLACERS

- A. One / One
- B. One / Two
- C. Two / Two
- D. Two / Three
- E. Three / Three

2 ENCLOSURE

- A: Cast Al, Weather proof x ¾" ET
- B: Cast Al, Ex-proof Gr. IIA & IIB x ½" NPT
- C: Cast Al, Ex-proof Gr. IIC x ½" NPT
- D: Others

3 DISPLACER MOC

- 1. SS304
- 2. SS316
- 3. PP
- 4. Teflon
- 5. Others

4 PROCESS CONNECTION MOC

- E. MS
- F. SS304
- G. SS316
- H. PP
- I. Teflon

5 PROCESS CONNECTION

- 1: 3" #150 ANSI Flange
- 2: 80 NB, BS 10-E Flange
- O: Others

6 INSTALLATION

- 1: Internal Direct
- 2: Perforated Still Well in MS
- 3: Perforated Still Well in SS304
- 4: Perforated Still Well in SS316
- 5: Perforated Still Well in PP
- 6: External Chamber with 1" NB Flange in MS
- 7: External Chamber with 1" NB Flange in SS304
- 8: External Chamber with 1" NB Flange in SS316
- 9: External Chamber with 1" NB Flange in PP
- O: Others

7 HIGH TEMP ARRANGEMENT

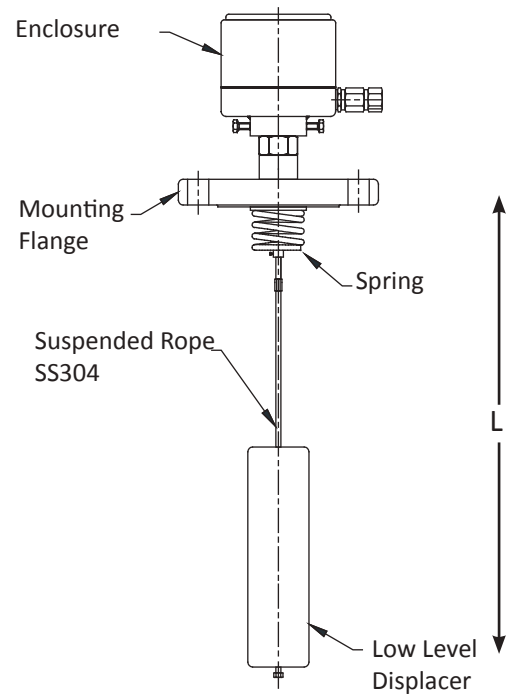
- N: Not provided
- P: Provided

APPLICATIONS

Foaming or Surging fluids, Agitated fluids. Sewage handling, Dirty liquids, Paints, Liquids with solids.

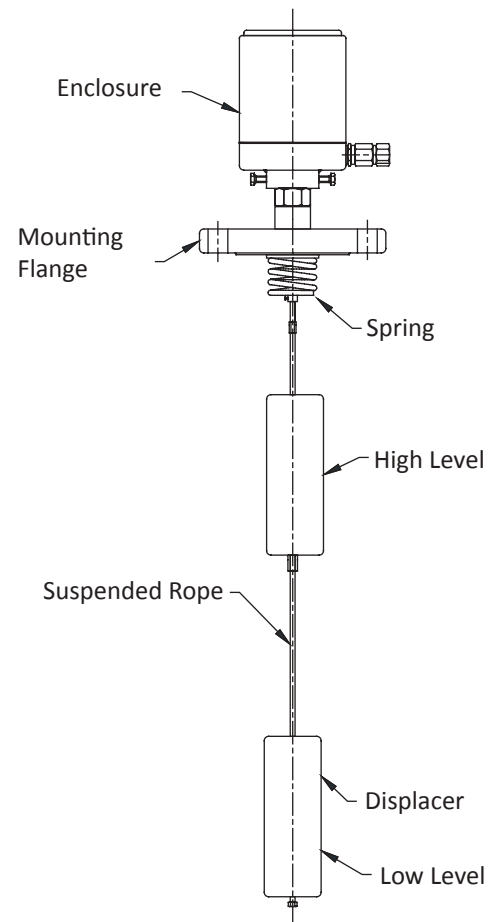
DLS WITH SINGLE LEVEL DISPLACER

Specifications	DLS-A-A-1-F-1-1-N
Enclosure	Cast Al, Weather proof x 3/4" ET
Displacer MOC	SS304
Process Connection MOC	SS304
Process Connection	ANSI 3" #150 Flange
Installation	Internal Direct
High Temp Arrangement	Not Provided
Suspended Rope MOC	SS304
Number of Levels	One



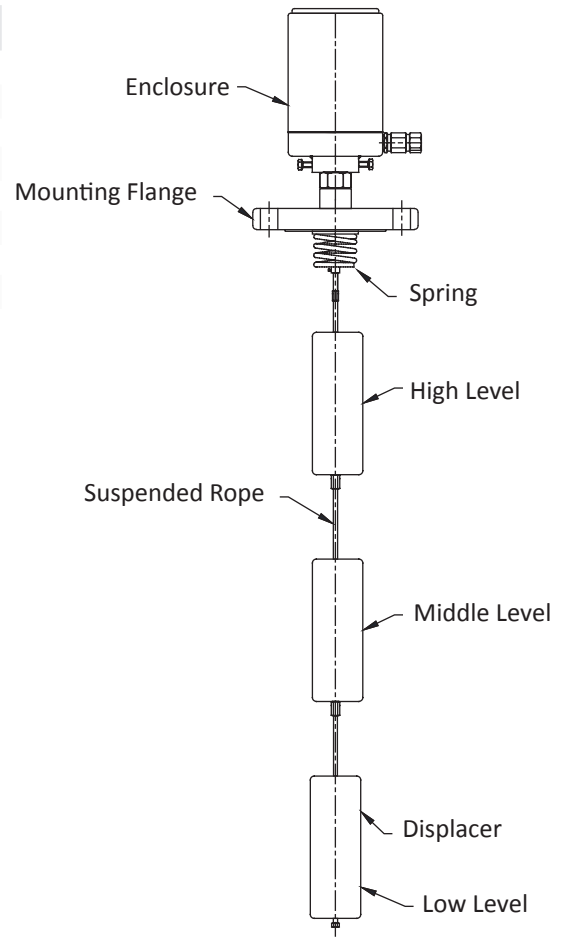
DLS WITH TWO LEVEL DISPLACERS

Specifications	DLS-C-B-1-F-1-1-N
Enclosure	Cast Al, Ex-proof Gr. IIA & IIB X 1/2" NPT
Displacer MOC	SS304
Process Connection MOC	SS304
Process Connection	ANSI 3" #150 Flange
Installation	Internal Direct
High Temp Arrangement	Not Provided
Suspended Rope MOC	SS304
Number of Levels	Two



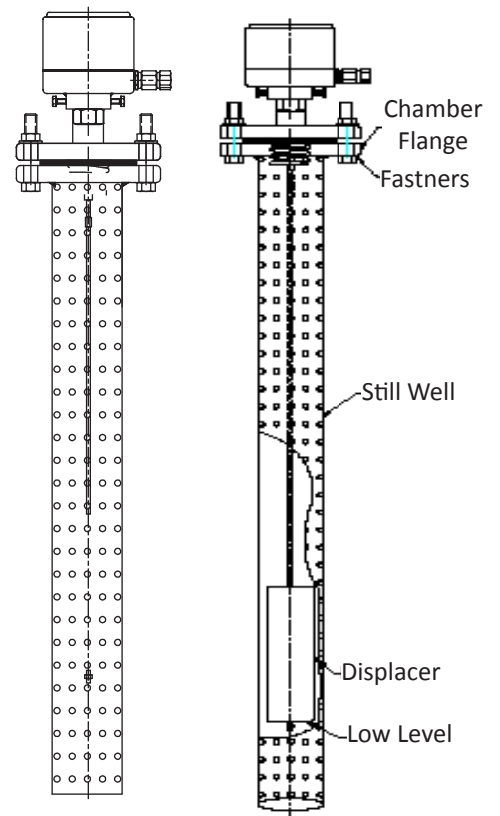
DLS WITH THREE LEVEL DISPLACERS

Specifications	DLS-E-B-2-G-1-1-N
Enclosure	Cast Al, Ex-proof Gr.IIA & IIB X ½" NPT
Displacer MOC	SS316
Process Connection MOC	SS316
Process Connection	ANSI 3" #150 flange
Installation	Internal Direct
High Temp Arrangement	Not Provided
Suspended Rope MOC	SS316
Number of Levels	Three



DLS WITH A SINGLE LEVEL DISPLACER IN A STILL WELL

Specifications	DLS-A-A-1-F-1-6-N + MS STILL WELL
Enclosure	Cast Al, Weather proof x ¾" ET
Displacer MOC	SS304
Process Connection MOC	SS304
Process Connection	ANSI 3" #150 Flange
Installation	MS Still well with 1" NB Flange in MS
High Temp Arrangement	Not Provided
Suspended Rope MOC	SS304
Number of Levels	One



DLS WITH A SINGLE LEVEL DISPLACER IN A CHAMBER

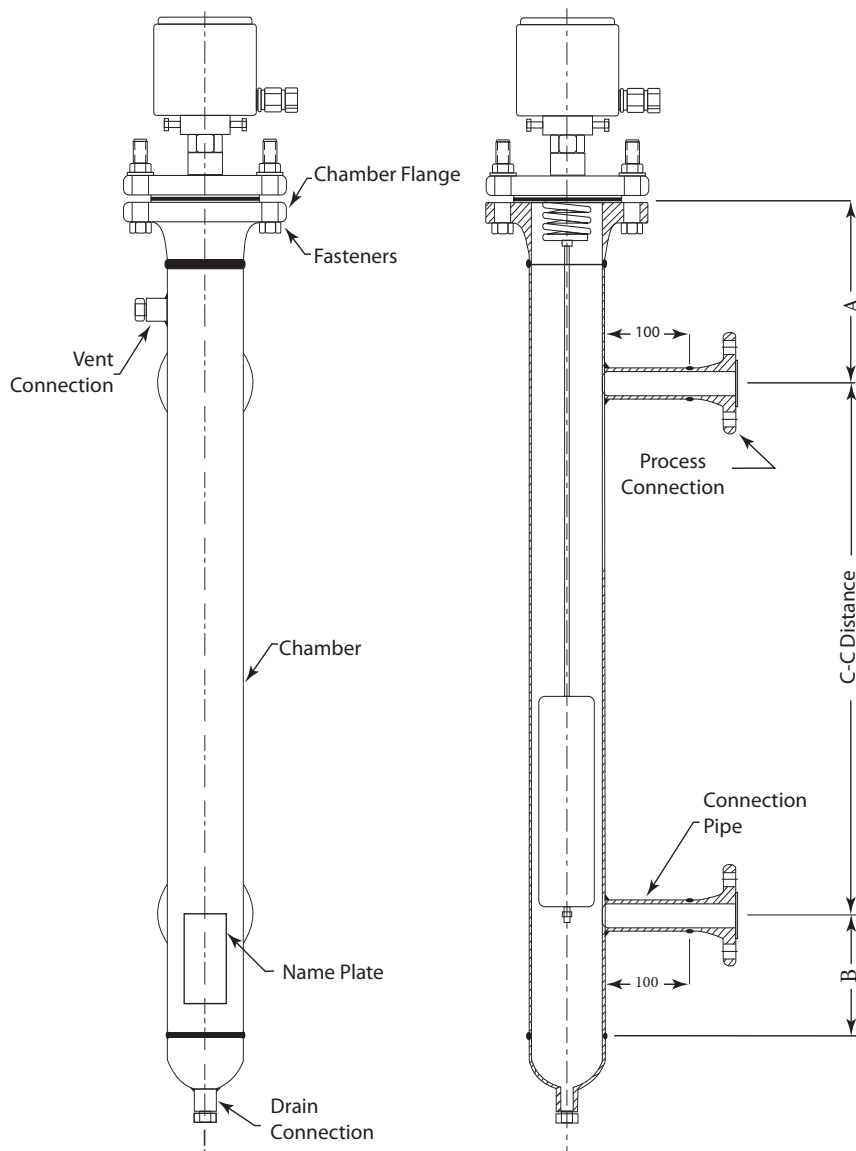
Wherever it is not possible or desirable to install Displacer Type Level Switch directly onto the vessel, switches can be installed in an External Chamber. This arrangement gives smooth level control irrespective of turbulence in the process vessel and prevents accidental damages to the switch during shutdown or maintenance of the vessel. Chambers are used in applications which require isolations of process, High Pressure / High Temperature applications, Corrosive applications, Onshore / Offshore installations.

Main function of these chambers are :

1. Level Measurement
2. Interface Measurement between two liquids.

FEATURES :

- Available for Low Pressure and High Pressure applications.
- Wide range of material of construction to suit different environmental conditions.
- Wide range of end connection types / sizes to choose from.
- A variety of chamber mounting arrangements provided to suit existing nozzles.




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