

Direct Insert Float Operated

General Instruments Consortium offers Side Mounted Level Switches for single level set point. This is trouble free, consistent and inexpensive solution to control Level in the tanks / vessels.

GIC offers two types of Direct Mounted Level Switches:

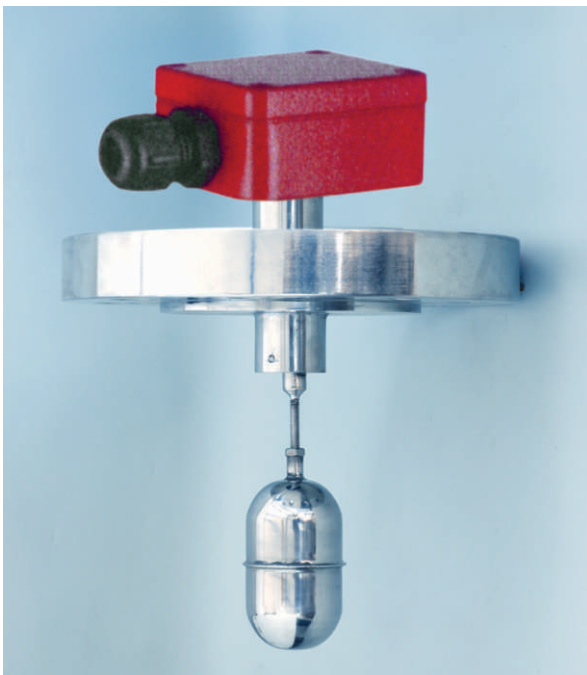
- Series SMLS/1000
- Series TMLS/1000

Side Mounted Direct Insert Type

(Series SMLS/1000)

This is direct mounted type level switch. This type uses counterbalance principle. It consists of Float, Float Stem with counterbalance weight and switch mechanism with magnet attracter. To ensure the safety and reliability GIC offers heavy wall floats.

In this type of Level Switch Float held in horizontal position and moves upwards and downwards with rising and falling level in the tank / vessel. This movement results in a rotary motion of the attracter causes actuation of microswitch. To improve reliability it employs dual opposed magnet design which provides snap action. This type of level switch is mounted directly on the tank / vessel having horizontal nozzle as shown in figure. The tank / vessel connection must be located at the elevation where set level is to occur.



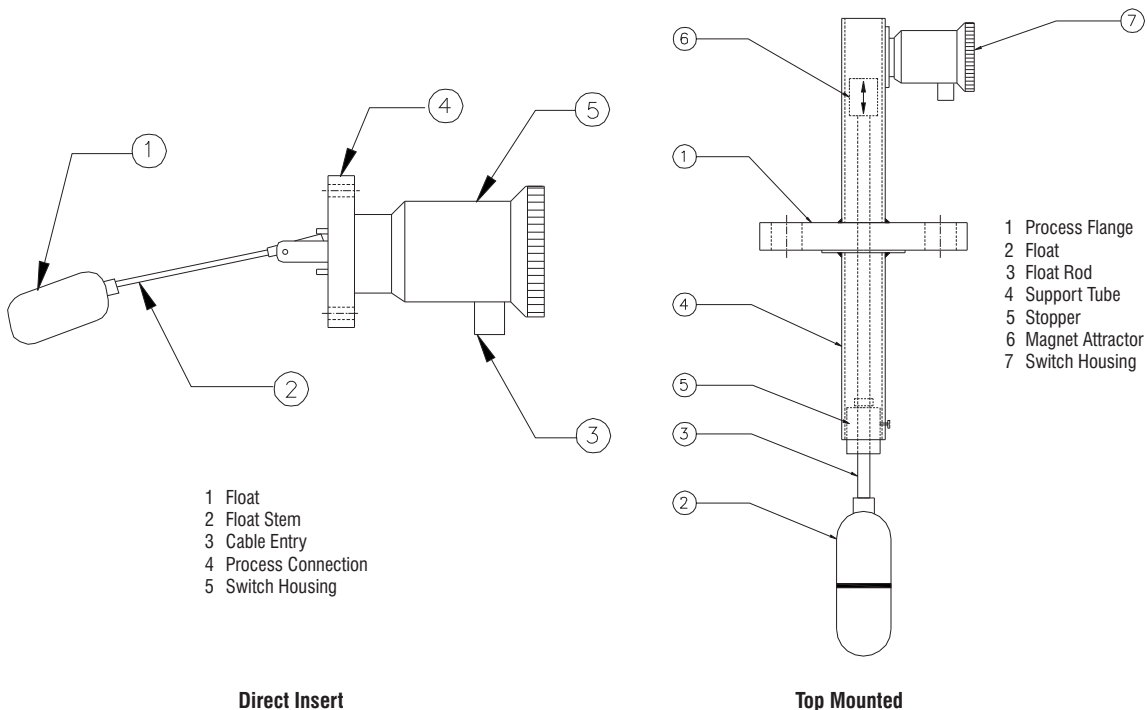
Top Mounted Direct Insert Type

(Series TMLS/1000)

This is direct mounted type level switch. This provides contact changeover at a selected elevation level in the tank / vessel. Switch is mounted on top of the tank / vessel and coupled with float assembly rides on the liquid surface with rising and falling of level. The magnet attracter is connected on the isolating tube as shown in figure. As the level rises stem head of float assembly reaches upto attracter causes actuation of microswitch. To improve reliability the stem guide is located just above the float. This type of level switch is used for lengths upto 2000 mm.

Specifications

Type	: Direct Insert Type
Mounting Orientation	: Side Mounted / Top Mounted
Float MOC	: SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel 600, Hastelloy C, others on request
Float Stem MOC	: SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel 600, Hastelloy C, others on request
Flange MOC	: SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel 600, Hastelloy C, others on request
Switch Type	: Snap Acting 1 SPDT / 2 SPDT Microswitch, 5A, 230 VAC
Switch Housing	: <ul style="list-style-type: none"> • Die Cast Aluminium Weatherproof to IP – 65 • Die Cast Aluminium Explosion proof suitable for Group IIA, IIB • Die Cast Aluminium Explosion proof suitable for Group IIC
Electrical Connection	: 3/4" ET(F)
Length below flange	: Upto 2000 mm (applicable for Top Mounted)
Process Connection	: Flanged in various sizes
Minimum Specific Gravity	: 0.8, others on request
Maximum Pressure	: Up to 20 Kg/cm ² at ambient temperature, others on request
Maximum Temperature	: Upto 150°C, others on request



Ordering Information

SMLS/1000-50F150-S4-1S-W5-Z



Series	
SMLS/1000	Side Mounted
TMLS/1000	Top Mounted

Process Connection				
Code	Size	Code	Code	Rating
50	2"	F	150	150#RF
65	2½"			
80	3"		300	300#RF
100	4"			

MOC of Float Assembly	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
M	Monel
T	Titanium
I	Inconel 600
H	Hastelloy C

Enclosure	
W5	Die Cast Aluminium Weatherproof to IP – 65
EA	Die Cast Aluminium Explosion proof suitable for Group IIA, IIB
EC	Die Cast Aluminium Explosion proof suitable for Group IIC

MicroSwitch	
1S	1 SPDT
2S	2 SPDT

External Cage Chamber

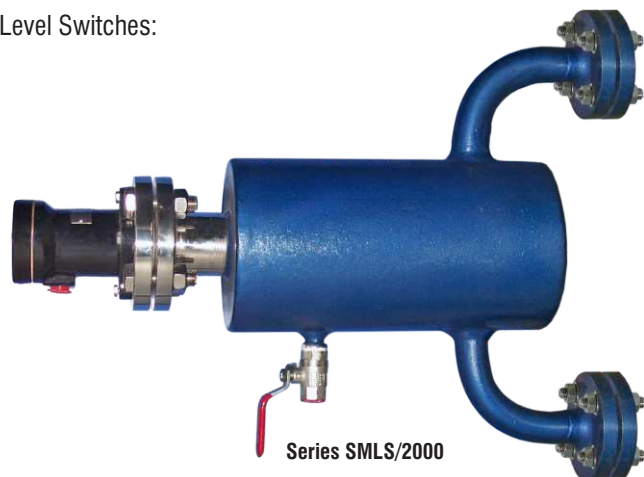
General Instruments Consortium offers External Cage Type Level Switches for single level set point. This is trouble free, consistent and inexpensive solution to control Level in the tanks / vessels.

GIC offers following Series of External Cage Chamber Type Level Switches:

- Series SMLS/2000
- Series TMLS/2000

Series SMLS/2000

This type of level switch consists of fabricated external cage with inlet-outlet process connections having fixed distance. The switch assembly is mounted horizontally on the external cage as shown in figure. The external cage type level switch is mounted outside the tank / vessel which significantly reduce effect of turbulence. It also provides ease of online maintenance without impeding the process conditions.



Series TMLS/2000

This type of level switch assembly is mounted vertically on the external cage as shown in figure. The external cage type level switch is mounted outside the tank / vessel which significantly reduces effect of turbulence.



Specifications

Type	: External Cage Chamber
Series	: SMLS/2000, TMLS/2000
Float MOC	: SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel 600, Hastelloy C, others on request
Float Stem MOC	: SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel 600, Hastelloy C, others on request
Flange MOC	: SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel 600, Hastelloy C, others on request
Switch Type	: Snap Acting 1 SPDT / 2 SPDT Microswitch, 5A, 230 VAC
Switch Housing	: <ul style="list-style-type: none"> ● Die Cast Aluminium Weatherproof to IP – 65 ● Die Cast Aluminium Explosion proof suitable for Group IIA, IIB ● Die Cast Aluminium Explosion proof suitable for Group IIC
Electrical Connection	: 3/4" ET (F)
External Cage Chamber	: CS, SS 304, SS 304L, SS 316, SS 316L, Monel, Titanium, Inconel, Hastelloy C etc.
Centre to Centre Distance	: 250 mm (Standard)
Process Connection	: Flanged in various sizes
Minimum Specific Gravity	: 0.8, others on request
Maximum Pressure	: Up to 20 Kg/cm ² at ambient temperature, others on request
Maximum Temperature	: Upto 150°C, others on request

Ordering Information

TMLS/2000-50F150-S4S4-PP-1S-W5-Z



Series	
SMLS/2000	Side Mounted
TMLS/2000	Top Mounted

Process Connection				
Code	Size	Code	Code	Rating
15	1/2"	F	150	150#RF
20	3/4"			
25	1"			
40	1 1/2"	300	300#RF	
50	2"			

MOC of Float Assembly	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
M	Monel
T	Titanium
I	Inconel 600
H	Hastelloy C

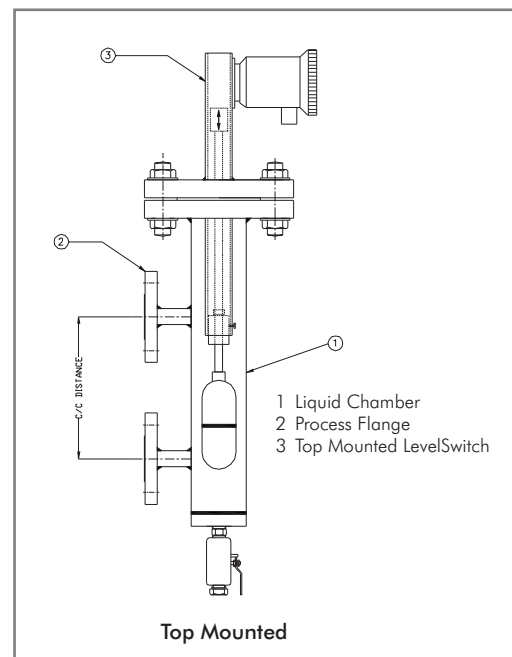
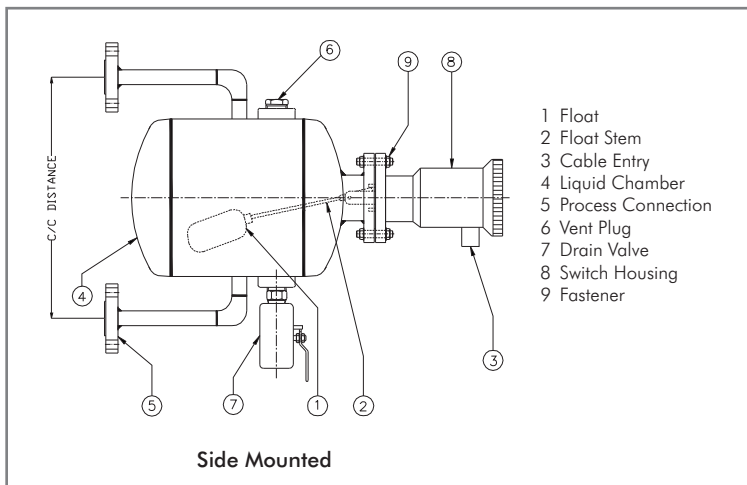
MOC of External Chamber	
C	CS
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
M	Monel
T	Titanium
I	Inconel 600
H	Hastelloy C

Enclosure	
W5	Die Cast Aluminium Weatherproof to IP – 65
EA	Die Cast Aluminium Explosion proof suitable for Group IIA, IIB
EC	Die Cast Aluminium Explosion proof suitable for Group IIC

MicroSwitch	
1S	1 SPDT
2S	2 SPDT

Drain	
P	1/2" Plugged
N	1/2" Needle Valve
B	1/2" Ball Valve

Vent	
P	1/2" Plugged
N	1/2" Needle Valve
B	1/2" Ball Valve



Top Mounted Float Operated

General Instruments Consortium offers Top Mounted Float Operated Level Switches for single and multiple level set points.

- **Series TMLS/4000**

Top Mounted Float Operated Level Switch (Series TMLS/4000)

This is top mounted type level switch provided single or multiple set points. It uses float that glides on the surface of liquids. This level switch consists of Terminal Enclosure, Float Stem with Reed Switches and Float with magnets assembled inside. This type of level switch can be used for single or multiple level controls. When level rises float travels with the liquid on the float stem and when it comes in contact with the reed switches located at a predetermined length of the stem, due to magnetic force reed switch changes its contact. This type of level switch is used for lengths upto 3000 mm. It is recommended to use perforated stillwell for lengths more than 1500 mm.



Specifications

Type	: Top Mounted Float Operated Level Switch
Mounting Orientation	: Top
Float	: SS 304, SS 304L, SS 316, SS 316L, PP, others on request
Flange MOC	: CS, SS 304, SS 304L, SS 316, SS 316L, PP, others on request
Float Stem	: SS 304, SS 304L, SS 316, SS 316L
Switch Type	: Reed Switch, 0.5A, 230 VAC
Switch Housing	: <ul style="list-style-type: none">● Die Cast Aluminium Weatherproof to IP – 65● Die Cast Aluminium Explosion proof suitable for Group IIA, IIB● Die Cast Aluminium Explosion proof suitable for Group IIC
Electrical Connection	: $\frac{3}{4}$ "ET(F)
Length below flange	: Upto 3000 mm
Process Connection	: Flanged in various sizes
Minimum Specific Gravity	: 0.8, others on request
Maximum Pressure	: Up to 10 Kg/cm ² at ambient temperature, others on request
Maximum Temperature	: Upto 150°C, others on request

Ordering Information

TMLS/4000-50F150-S4S4S4-W5-Z



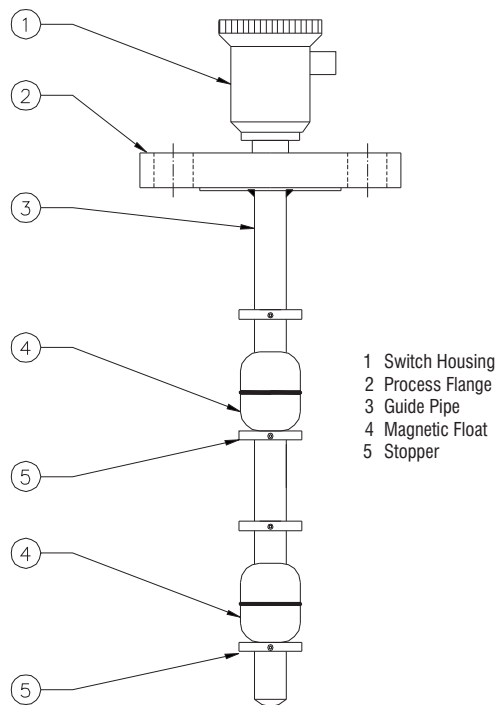
Process Connection				
Code	Size	Code	Code	Rating
50	2"	F	150	150#RF
65	2½"			
80	3"			
100	4"		300	300#RF

MOC of Flange	
C	CS
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
PP	PP

Enclosure	
W5	Die Cast Aluminium Weatherproof to IP – 65
EA	Die Cast Aluminium Explosion proof suitable for Group IIA, IIB
EC	Die Cast Aluminium Explosion proof suitable for Group IIC

MOC of Float Stem	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L

MOC of Float	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
PP	PP



- 1 Switch Housing
- 2 Process Flange
- 3 Guide Pipe
- 4 Magnetic Float
- 5 Stopper

Float Operated Level Switch

Top Mounted Displacer Operated

General Instruments Consortium offers Top Mounted Displacer Operated Level Switches for single and multiple level set points:

- Series TMLS/3000

This is top mounted type level switch provided single or multiple set points. It uses displacer that do not float on the surface of liquids. Working principle of the level switch is based on a buoyancy principle. This level switch consists of Switch Assembly, Wire Rope with Spring Assembly and Displacer suspended on spring. Displacer having more density than the process liquid is used. Spring selection is determined by the weight of the displacer. When level rises it displacer is submerged and amount of weight equal to the weight of process liquid is displaced. This displacement relieves spring tension causes the actuation of microswitch. This type of level switch is used for lengths upto 10000 mm.



Specifications

Type	: Top Mounted Displacer Operated Level Switch
Mounting Orientation	: Top
Displacer	: SS 304, SS 304L, SS 316, SS 316L, PP, Other on request
Flange MOC	: CS, SS 304, SS 304L, SS 316, SS 316L, PP, Other on request
Spring Assembly	: SS 304, SS 304L, SS 316, SS 316L
Wire Rope	: SS 304, SS 304L, SS 316, SS 316L
Switch Type	: Snap Acting 1 SPDT / 2SPDT Microswitch, 5A, 230 VAC
Switch Housing	: <ul style="list-style-type: none"> • Die Cast Aluminium Weatherproof to IP – 65 • Die Cast Aluminium Explosion proof suitable for Group IIA, IIB • Die Cast Aluminium Explosion proof suitable for Group IIC
Electrical Connection	: 3/4"ET(F)
Length below flange	: Upto 10000 mm
Process Connection	: Flanged in various sizes
Minimum Specific Gravity	: 0.8, other on request
Maximum Pressure	: Up to 40 Kg/cm ² at ambient temperature, other on request
Maximum Temperature	: Upto 150°C, other on request

Ordering Information

TMLS/3000-50F150-S4S4-S4S4-1S-W5-Z



Process Connection				
Flanged Connection				
Code	Size	Code	Code	Rating
50	2"	F	150	150#RF
65	2½"			
80	3"			
100	4"			
			300	300#RF

Enclosure	
W5	Die Cast Aluminium Weatherproof to IP – 65
EA	Die Cast Aluminium Explosion proof suitable for Group IIA, IIB
EC	Die Cast Aluminium Explosion proof suitable for Group IIC

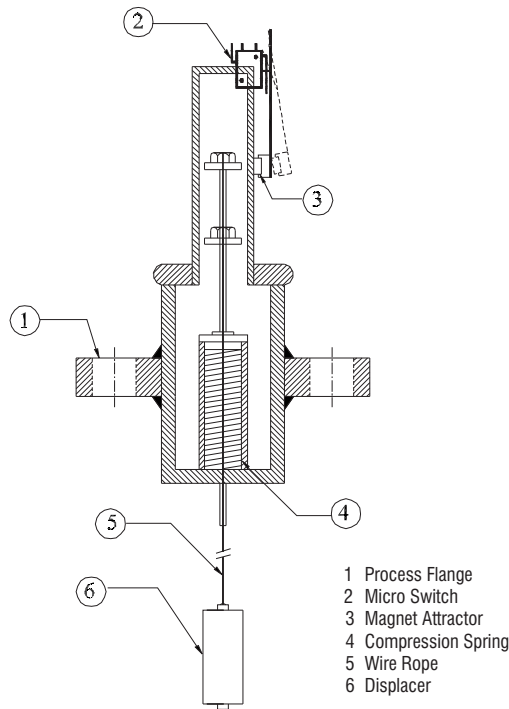
MOC of Flange	
C	CS
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
PP	PP

MicroSwitch	
1S	1 SPDT
2S	2 SPDT

MOC of Displacer	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L
PP	PP

MOC of Wire Rope	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L

MOC of Spring	
S4	SS 304
S4L	SS 304L
S6	SS 316
S6L	SS 316L



- 1 Process Flange
- 2 Micro Switch
- 3 Magnet Attractor
- 4 Compression Spring
- 5 Wire Rope
- 6 Displacer

Displacer Type Level Switch