

Датчики уровня CS5603/CS5613

Технические характеристики

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Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



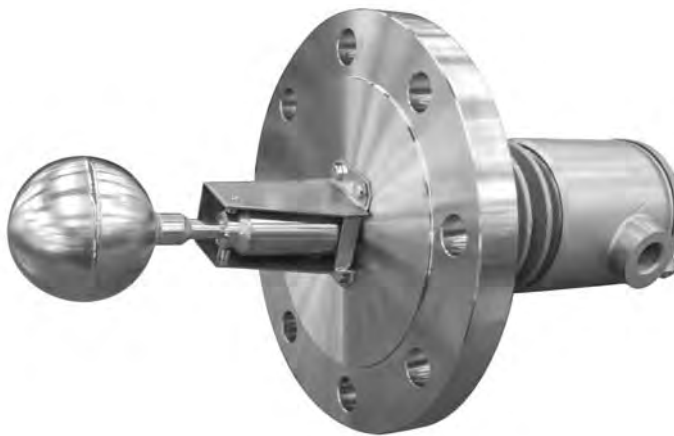
Solutions

Technical Information

CS5603/CS5613

Float Level Switch

High temperature and High pressure



Application

Float Level Switch CS5603/CS5613 is a float type compact level switch with explosion-proof feature. It is made of steel and is compatible with almost all types of liquids. Float Level Switch CS5603/CS5613 is especially suited for use with high temperature (max. 350°C), high pressure (max.. 4.9MPa) and permits liquid level control in simple procedures.

Features and benefit

- Simple function
- Extremely compact design
- Safety operation
- Reliable mechanical contact
- Easy mounting
- High corrosion resistance (stainless steel)
- Automatic pump and valve control with Nivotester"FTW325"

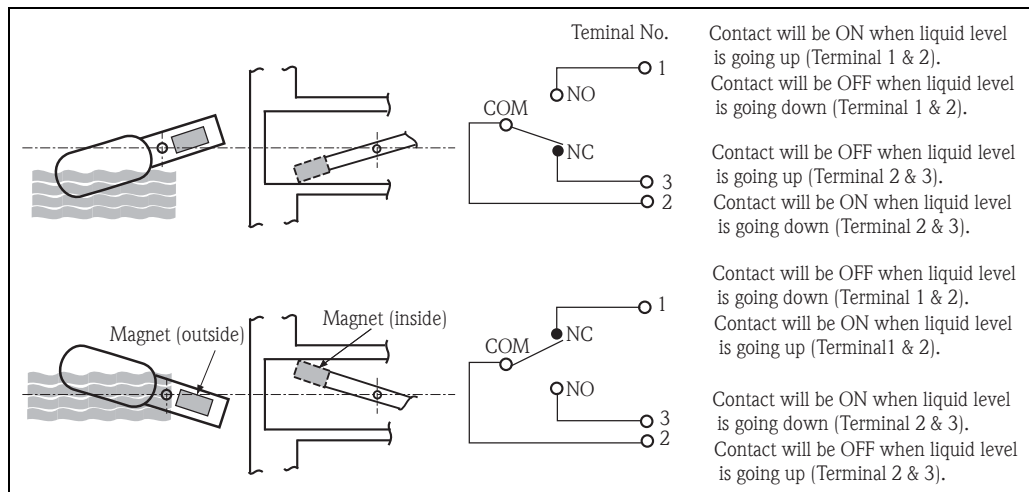
Contents

Function and system design	3	Dimensions	6
Operating principle	3	CS5603	6
Application	3	Installation	7
For alarming	3	Flange connection type installation	7
For controlling pump and valve	4	External camber type installation CS5613	7
Standard specification	5	Certification and approvals	8
Ambient temperature	5	Ex approval	8
Measured liquid temperature	5	Protection class	8
Float shape	5	Order Information	9
Measured liquid specific gravity	5	CS5603	9
Level Accuracy (50 mm displacer)	5	CS5613	10
Process Connection	5	Documentation	11
Material	5	Technical Information	11
Contact capacity	5	Operating Instructions	11
Contact configuration	5		
Cable entry	5		
Weight	5		
Paint colour	5		

Function and system design

Operating principle

Liquid level variation in a tank is detected with a float. Microswitch is activated with repulsive force produced between magnets attached to the float and the magnets arranged inside the housing. Operating signals are emitted as contact ON/OFF signals. Wiring is completed as shown the terminal No. 1 to 3 in the diagrams below. External output wiring is made so that it forms NO or NC circuit depending on utilization mode of the signals.

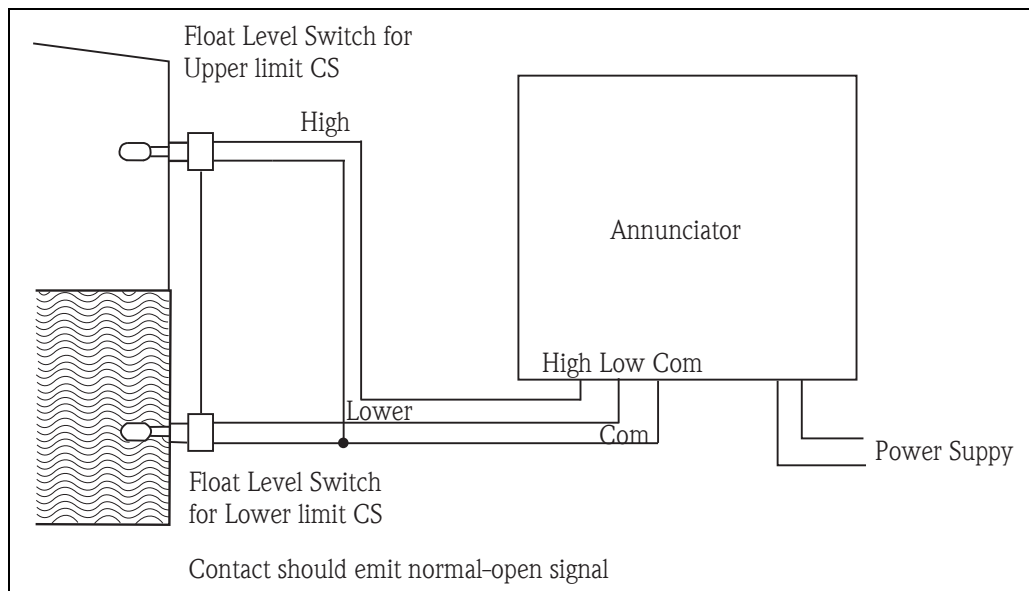


Application

- The best suited for high temperature and high pressure tank
- Wetted parts is high corrosion resistance (stainless steel)
- Reliable magnet repulsion performance
- Available Flame proof type

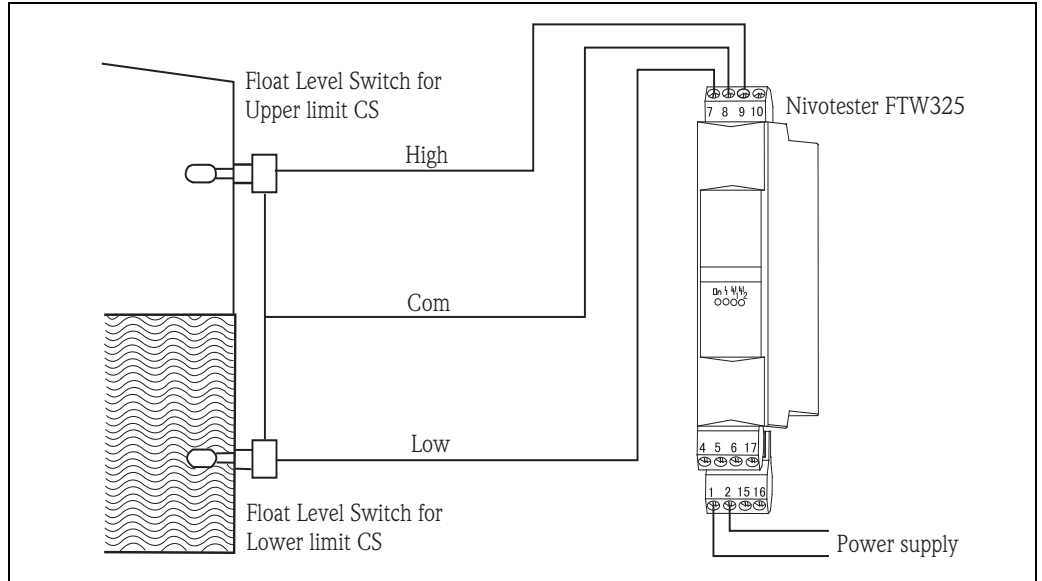
For alarming

When the float level switch is combined with annunciator, It is possible that a lamp comes on and sounds for alarming.



For controlling pump and valve

When the level float switch is combined with Nivotester FTW325, no control circuit is required. It is available that you only connect the contact output from Nivotester to pump and valve.
(See Nivotester FTW325 Operating Instruction)



Standard specification

Ambient temperature -10...+60°C (in case of liquid freezing, it is unmeasurable)

Measured liquid temperature -20...+350°C (in case of liquid freezing, it is unmeasurable)

Float shape Specifications depending on type of float.

	Spherical	Cylindrical
Level Accuracy (50 mm displacer)	±5mm ($\rho = 1\text{g/cm}^3$)	±8mm ($\rho = 0.8\text{g/cm}^3$)
Hysteresis	10mm ($\rho = 1\text{g/cm}^3$)	±16mm ($\rho = 0.8\text{g/cm}^3$)
Measured liquid specific density	$\geq 0.65\text{g/cm}^3$	$\geq 0.45\text{g/cm}^3$
Maximum allowable working pressure	4.9MPa (at 200°C max.)	2.35MPa (at 100°C max.)
Containment temperature	-20...350°C (at 4.41MPa max.)	-20...350°C (at 1.96MPa max.)

Measured liquid specific density 0.45... 2.0g/cm³

Process Connection
 10K 80A RF, flange JIS B2220
 10K 100A RF, flange JIS B2220
 20K 80A RF, flange JIS B2220
 20K 100A RF, flange JIS B2220
 3" 150lbs RF, flange ANSI B16.5
 4" 150lbs RF, flange ANSI B16.5
 3" 300lbs RF, flange ANSI B16.5
 4" 300lbs RF, flange ANSI B16.5

Material
 Float (cylindrical, spherical) : SUS316
 Flange : SUS304, SUS316
 Body : SCS13, AC4CT6
 Cover : AC4A

Contact capacity
 AC250V 5A (resistance load)
 DC125V 0.3A (resistance load)

Contact configuration SPDT(microswitch)

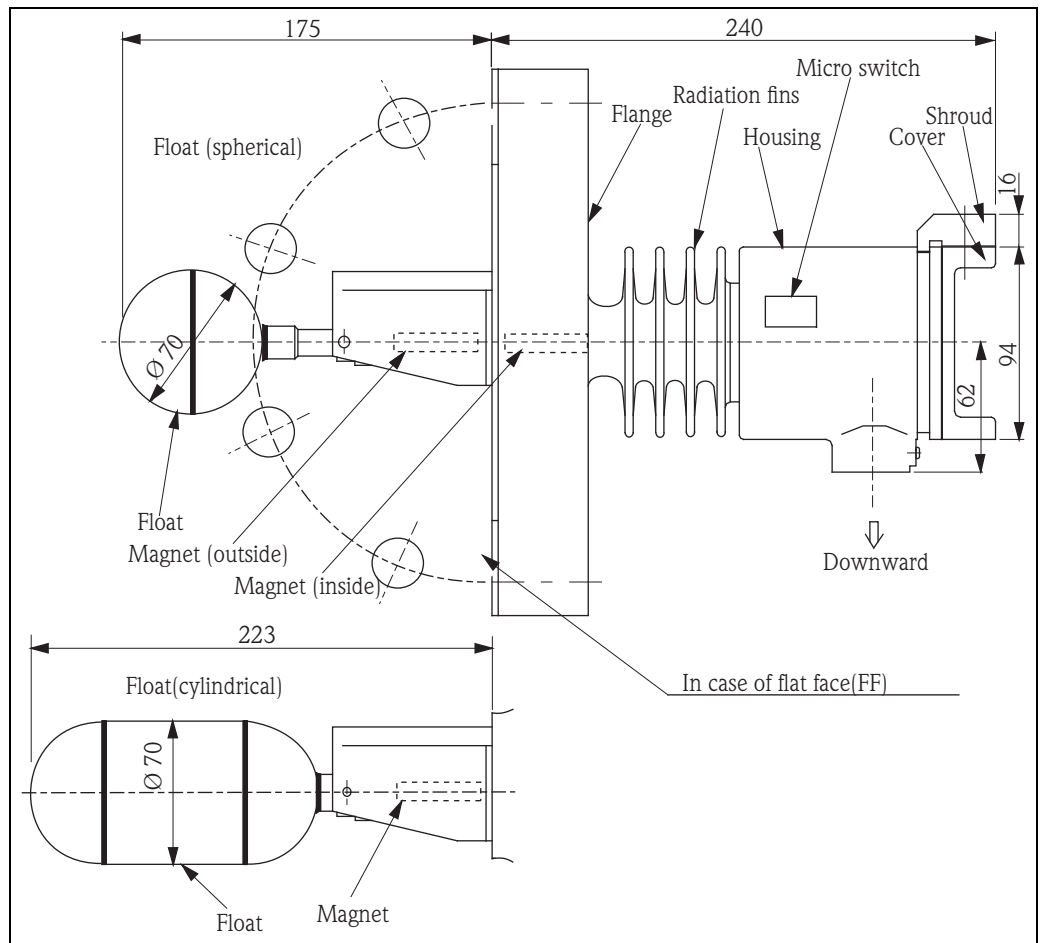
Cable entry PF(G)1/2

Weight Approx. 7.5kg (CS5603, 10K 80A RF, flange JIS B2220)

Paint colour Silver

Dimensions

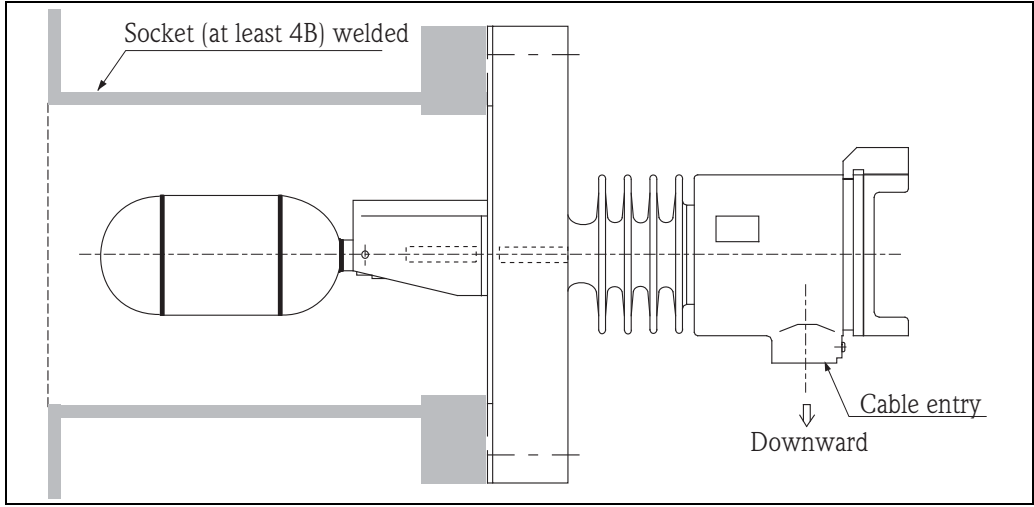
CS5603



Installation

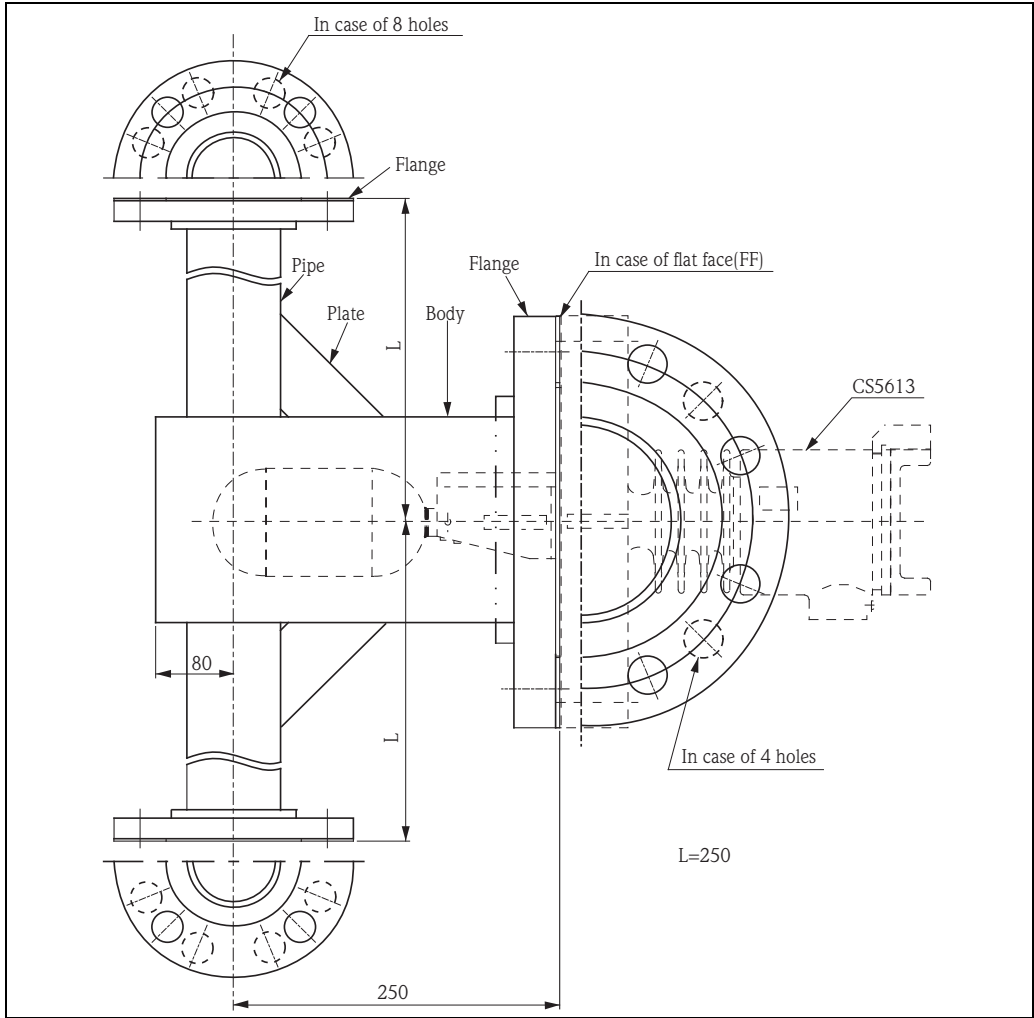
Flange connection type installation

The level float switch of flange connection must prepare a nozzle of at least 4B.



External chamber type installation CS5613

The pipe connection for the level float switch of external chamber type is flange connection.



Note!
The conduit connection must always be set downside.

Certification and approvals

Ex approval	TIIS TIIS d2G4
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Protection class	IP65
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Order Information

CS5603

010		Function:	
	0	Standard function	
	1	Non standard function	
020		Process Connection:	
	1	10K 80A RF, flange JIS B2220	
	2	20K 80A RF, flange JIS B2220	
	3	10K 100A RF, flange JIS B2220	
	4	20K 100A RF, flange JIS B2220	
	5	3" 150lbs RF, flange ANSI 16.5	
	6	3" 300lbs RF, flange ANSI 16.5	
	7	4" 150lbs RF, flange ANSI 16.5	
	8	4" 300lbs RF, flange ANSI 16.5	
	9	Special version, TSP-no. to be spec.	
030		Material Process Connection ; Float:	
	4	SUS304; SUS316,Spherical	
	5	SUS304; SUS316, Cylindrical	
	6	SUS316; SUS316, Spherical	
	7	SUS316; SUS316, cylindrical	
	9	Special version, TSP-no. to be spec.	
040		Approval:	
	2	Flame proof d2G4 E ¹ , IP65	
	3	Flame proof d2G4 EB ² , IP65	
	9	Special version, TSP-no. to be spec.	
050		External Chamber:	
	0	Not used	
	9	Special version, TSP-no. to be spec.	
060		Cable entry:	
	0	PF(G)1/2	
	1	PF (G)3/4 cable gland, TF16-11	
	2	PF (G)3/4 cable gland, TF16-12	
	3	PF (G)3/4 cable gland, TF16-9	
	4	NPT1/2	
	9	Special version, TSP-no. to be spec.	
070		Colour	
	0	Silver	
	9	Special version, TSP-no. to be spec.	
CS5603-		Order code	

¹ TIIS d2G4 (E)

² TIIS d2G4 + cable gland (EB)

Standard

Old	New
PT male thread	R
PT female thread	Rc
PS	Rp
PF	PF(G)

CS5613

010		Function:	
	0	Standard function	
	1	Non standard function	
020		Switch Head Connection	
	3	10K 100A RF, flange JIS B2220	
	4	20K 100A RF, flange JIS B2220	
	7	4" 150lbs RF, flange ANSI 16.5	
	8	4" 300lbs RF, flange ANSI 16.5	
	9	Special version, TSP-no.to be spec.	
030		Material Switch Head Connection ; Float:	
	4	SUS304; SUS316, Spherical	
	5	SUS304; SUS316, Cylindrical	
	6	SUS316; SUS316, Spherical	
	7	SUS316; SUS316, Cylindrical	
	9	Special version, TSP-no. to be spec.	
040		Approval:	
	2	Flame proof d2G4 E ¹ , IP65	
	3	Flame proof d2G4 EB ² , IP65	
	9	Special version, TSP-no. to be spec.	
050		External Chamber:	
	A	STPG370, 10K 25A RF, SS400, flangeJIS B2220	
	B	STPG370, 20K 25A RF, S25C, flangeJIS B2220	
	C	STPG370, 1" 150lbs RF, SS400, flangeANSI B 16.5	
	D	STPG370, 1" 300lbs RF, S25C, langedANSI B 16.5	
	E	SUS304, 10K 25A RF, SUS304, flange JIS B2220	
	F	SUS304, 20K 25A RF, SUS304, flange JIS B2220	
	G	SUS304, 1" 150lbs RF, SUS304, flangeANSI B 16.5	
	H	SUS304, 1" 300lbs RF, SUS304, flangeANSI B 16.5	
	J	SUS316, 10K 25A RF, SUS316, flangeJIS B2220	
	K	SUS316, 20K 25A RF, SUS316, flangeJIS B2220	
	L	SUS316, 1" 150lbs RF, SUS316, flangeANSI B 16.5	
	M	SUS316, 1" 300lbs RF, SUS316, flangeANSI B 16.5	
	9	Special version, TSP-no. to be spec.	
060		Cable entry:	
	0	PF(G)1/2	
	1	PF (G)3/4 cable gland, TF16-11	
	2	PF (G)3/4 cable gland, TF16-12	
	3	PF (G)3/4 cable gland, TF16-9	
	4	NPT1/2	
	9	Special version, TSP-no. to be spec.	
070		Colour:	
	0	Silver	
	9	Special version, TSP-no. to be spec.	
CS5613-		Order code	

¹ TIIS d2G4 (E)

² TIIS d2G4 + cable gland (EB)

Standard

Old	New
PT male thread	R
PT female thread	Rc
PS	Rp
PF	PF(G)

Documentation

Technical Information

TI 373F

Technical Information: Nivotester FTW325

Operating Instructions

BA 1015N

Operating Instructions: Float Level Switch CS5603/CS5613

KA199F

Compact Instructions: Nivotester FTW325

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