

LSG SERIES



LSG is a float level switch designed for liquid level control in marine and industrial fields.

Typical applications are high and overflowing protection, water presence detection, high and low alarm level of liquids with or without foam.

Inside the float is placed a toroidal magnet which drives, without contact, a switch located inside the guide pipe; instrument have to be supplied with a constant voltage of 24Vdc (for example by means of VALCOM[®] TSU400 barrier) in order to provide two constant current output values related to alarm thresholds (On=6mA / Off=14mA). Switch replacement can be done without dismantling instrument from the process and doesn't need any recalibration. LSG can be used also in ON/OFF mode (simple connection).

APPLICATION FIELDS

Detection of water presence and level in overflow pipes. Simple system for high and low level detection in all tanks, wells, etc. Systems in accordance to IMO and Coast Guard for high & overflow alarms on tankers and chemical tankers.

Simple apparatus suitable for use in classified hazardous areas (Ex) according to EN 60079-11:2012 standard.



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TECHNICAL FEATURES

Electrical parameters

Supply:	Stabilized (only for current output mode)
Output signal:	Simple connection: ON / OFF Current output: 6mA (ON) - 14mA (OFF) @24 Vdc (*)
Current consumption:	Simple connection: ≤0.5A Current output: On: 6mA / Off: 14mA @24 Vdc
Rated power:	Simple connection: <10 W Current output: On: 0.144 W / Off: 0.588 W
Repeatability:	<1cm
Insulation:	>1GOhm @ 500Vac supply
Working Pressure:	Standard: 10 bar Maximum: 25 bar (**)
Manual test:	Use a lever for each float (option)

Notes

(*) Switching treshold is setted at 9mA.

(**) Depending on types of used float values

ENVIRONMENTAL FEATURES

Environmental Conditions

Ambient temperature: -35 ÷ +85° C

Process temperature: -20 ÷ +85° C (standard)
-40 ÷ 130° C (Glass reed relay, option)

Storage temperature: -35 ÷ +85° C

Ingress protection degree: IP67

Relative Humidity: < 98% RH not condensing

APPROVALS

Type approvals

Directive 2014/34/EU (ATEX)	LSG product shall be considered to be “simple apparatus” and adapt to be used in hazardous areas.
Directive 2014/30/EU (EMC)	Adequate level of electromagnetic compatibility
Marine type approval	In compliance with applicable requirements of RINA type approval system

ELECTRICAL WIRING

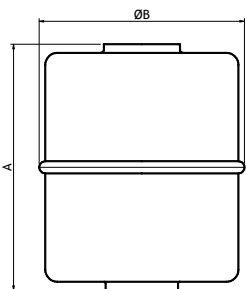
Transmitter hasn't polarity restriction.

	<p>Single float terminal board</p>
	<p>Double float terminal board</p>

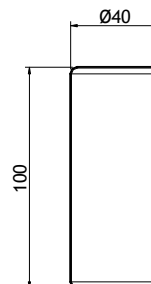
HOUSING MATERIAL AND TYPE

<ul style="list-style-type: none"> • Code A08 - AISI 316 • Material: AISI 316 \ AISI 316 (Ø 55) • Zone: II 1GD • Protection Degree: IP67

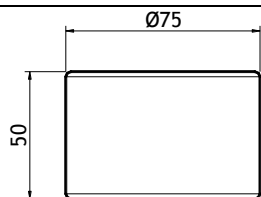
FLOATS



- Code **G1** A= 36 B=Ø 30
- Density **0.67 Kg/dm³**
- Code **G2** A= 51 B=Ø 44,4
- Density **0.5 Kg/dm³**
- Code **G3** A= 62.5 B= Ø 55
- Density **0.5 Kg/dm³**
- Material **AISI 316**



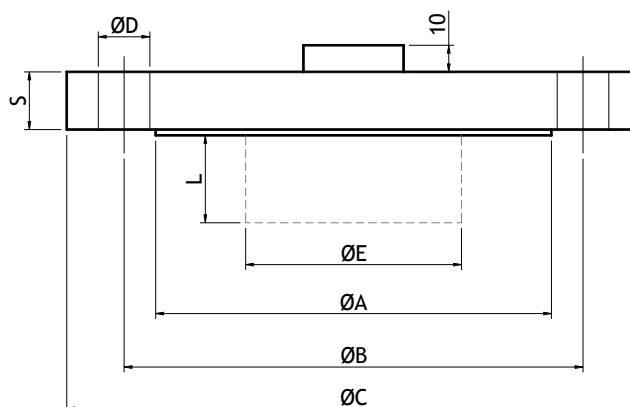
- Code **G7**
- Material **SPANSIL**
- Density **0.35 Kg/dm³**



- Code **G5**
- Material **NEOPRENE**
- Density **0.3 Kg/dm³**

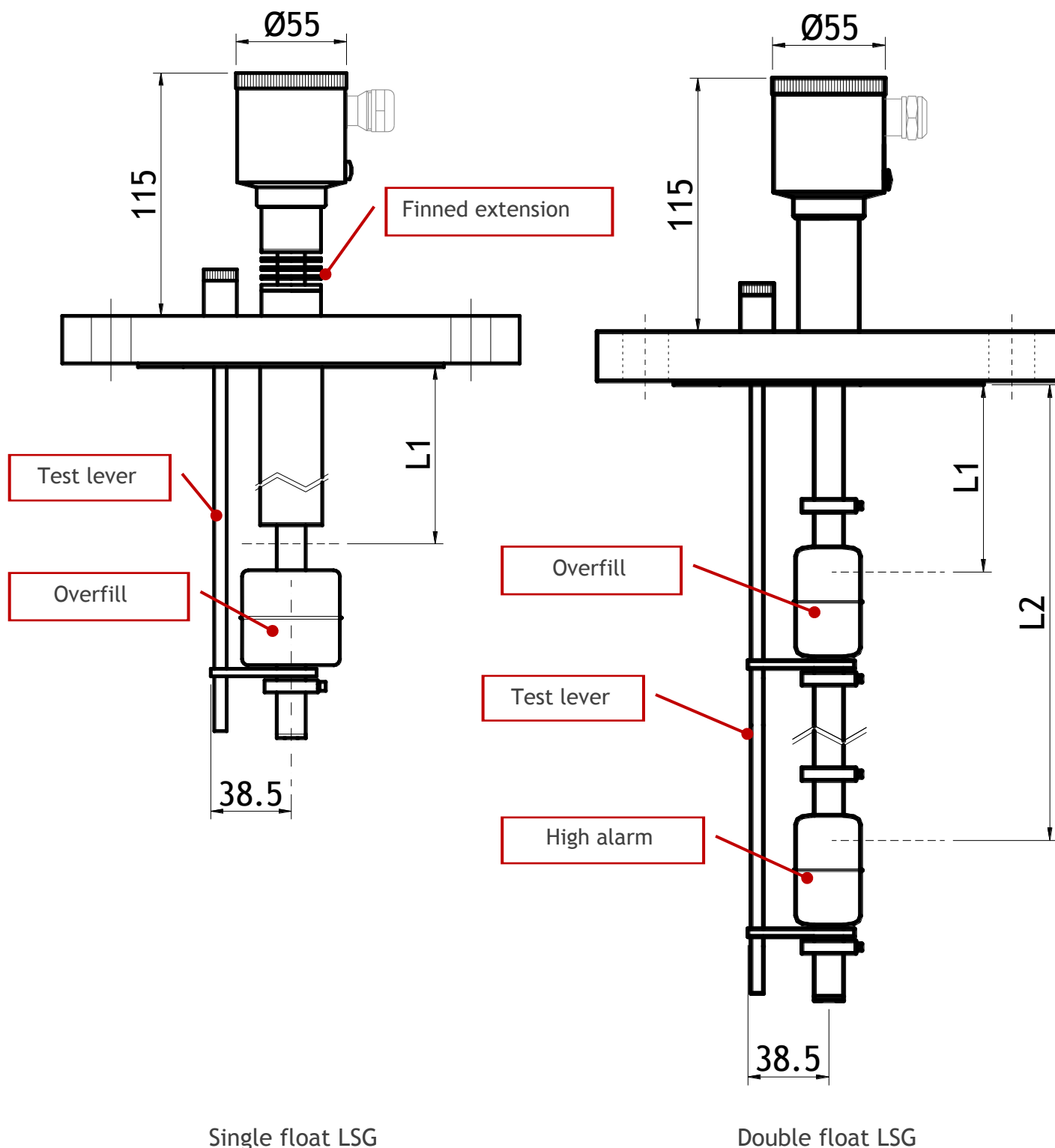
PROCESS CONNECTIONS

Standard flanges



Code	DN	PN	ØA [mm]	ØB [mm]	ØC [mm]	ØD [mm]	S [mm]
F05	50	10/16	102	125	165	18	18
F08	65	10/16	122	145	185	18	22
F09	80	6	128	150	190	18	16
F10	80	10/16	138	160	200	18	20
F25	1"	ANSI 150	51	79.5	108	16	14.5
F20	1" 1/2	ANSI 150	73	98.5	127	16	17.5
F29	2"	ANSI 150	92	120.5	152	19	19
F34	3"	ANSI 150	127	152.5	191	19	24
F35	3"	ANSI 300	127	168.3	210	22	28.6
F38	4"	ANSI 150	157.2	190.5	228.6	19	23.8

DIMENSIONAL DRAWINGS



ORDERING CODE

LSG Float Level Switch

01 Detection points

S Single
D Double

02 L1 alarm

XXX L1=XXX mm
Examples
048 L1=048 mm
500 L1=500 mm

03 L2 alarm

XXX L2=XXX mm
Examples
048 L2=048 mm
500 L2=500 mm
N00 L2 Not present

04 L3 alarm

XXX L3=XXX mm
Examples
048 L3=048 mm
500 L3=500 mm
N00 L3 Not present

05 Housing material and type

A01 AISI 316 Ø 55mm 1 screwed cover, side cable gland
A03 AISI 316 Ø 55mm 1 screwed cover, axial cable gland
B01 Hastelloy B Ø 55mm 1 screwed cover, side cable gland
B03 Hastelloy B Ø 55mm 1 screwed cover, axial cable gland
C01 Hastelloy C Ø 55mm 1 screwed cover, side cable gland
C03 Hastelloy C Ø 55mm 1 screwed cover, axial cable gland
T01 Titanio C Ø 55mm 1 screwed cover, side cable gland
T03 Titanium C Ø 55mm 1 screwed cover, axial cable gland

06 Process connection

... See table on page 4

7 Process gasket material

N None or All welded

8 Wetted parts material

A AISI 316
B AISI 316L
K Hastelloy C

9 Extension probe

T02 Pipe in AISI 316 Ø 9mm < 1 m
T07 Pipe in AISI 316 Ø 10mm < 1 m
T18 Pipe in AISI 316 Ø 12mm < 4 m
T33 Pipe in AISI 316 Ø 14mm < 4 m
T50 Pipe in AISI 316 Ø 16mm < 5 m
Z99 Special

10 Electrical connections

19 SS Gland PG9 IP67 for cable Ø 5÷7mm
20 SS Gland PG13 IP67 for cable Ø 8÷12mm
36 AISI 316 nipple 1/2" G-F
37 AISI 316 nipple 1/ 2" NPT-F
39 AISI 316 nipple M20x1.5-F
99 Special

ORDERING CODE

11 Float type	
<input type="checkbox"/>	G1 Float AISI 316 Ø 30 mm OVP 40
<input type="checkbox"/>	G2 Float AISI 316 Ø 44 mm OVP 16
<input type="checkbox"/>	G3 Float AISI 316 Ø 55 mm OVP 16
<input type="checkbox"/>	G5 Float Neoprene Ø 75 mm OVP 20
<input type="checkbox"/>	G7 Float Spansil Ø 40 mm OVP 20
<input type="checkbox"/>	ZZ Special
12 Electrical output	
<input type="checkbox"/>	L Simple contact
<input type="checkbox"/>	M Current output 2 wires on-off
13 Ex type approval	
<input type="checkbox"/>	DC Declaration of conformity Ex ia simple component
<input type="checkbox"/>	N0 No Ex certification
14 Marine type approval	
<input type="checkbox"/>	R RINA
<input type="checkbox"/>	N None
15 Options and accessories	
<input type="checkbox"/>	01 Test certificate according to EN 10204
<input type="checkbox"/>	02 TAG Transcription
<input type="checkbox"/>	04 Calibration Report
<input type="checkbox"/>	T1 T1 Finned extension type 1 (-60°C...÷150°C)
<input type="checkbox"/>	NN No options

OUR PRODUCTS



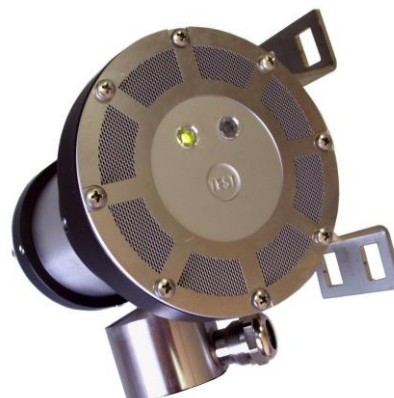
Submersible electronic level transmitters 271 series



Ultrasonic level switch



Float electronic level transmitters 27L series with digital output 4-20 mA



Oil mist detector



Pressure, level and vacuum series T72 transmitters.



Pressure, level and vacuum series 27A transmitters.