

The **DLS** Switches are mounted on a side of vessels, even if very narrow. The liquid level is checked by a float integral with a small and very flexible tube; within this tube there is a rod fixed on only an end : the lift coming from float causes a bending on the outer tube and consequently a side thrust on the inner rod, that makes the output device trip (*trip on rise*); then, when the level comes down again and exceeds the preset point, the float makes the output device come back to the initial point (*reset on fall*); between the set and the reset points there is always a small gap, named *differential*, of about 5-10mm. The trip happens when level reaches about the median line of the float. The inverse function is available too : *Trip on fall* and *Reset on rise*. The output can be electric or pneumatic, is snap action and is placed in the housing.

A so small differential can be obtained thanks to the combination between volume and weight of float, and length of the arm supporting the float; for this reason many types of float are available, different both in materials and in volumes, in stainless steel AISI 316 or in Plexiglas (polymethacrylat), in polyethylene, etc; everything depends on the kind of liquids, on their temperature, pressure, corrosiveness and specific gravity.

Since it is frankly impossible to list all the existing solutions for every applications, *Domizi Snc* reserve to propose the properest solution only after having known the actual operating conditions of the Level Switch. Outer finish : Switches in carbon steel have the standard painting so realized : first coat in epoxy resin, and outer coat in **green** polyurethane resin; suitable for corrosive marine environments and tropical climates. Switches in stainless steel are polished and left bare.

The Level Switches meet the ATEX standard (page 37).

APPLICATIONS. Level control on vessels containing various types of industrial liquids, in off-shore and in-shore oil plants. The Switch can operate with liquids having pressures up to 500 Bar, temp. up to 120°C and specific gravity from 500kg/m³ up.

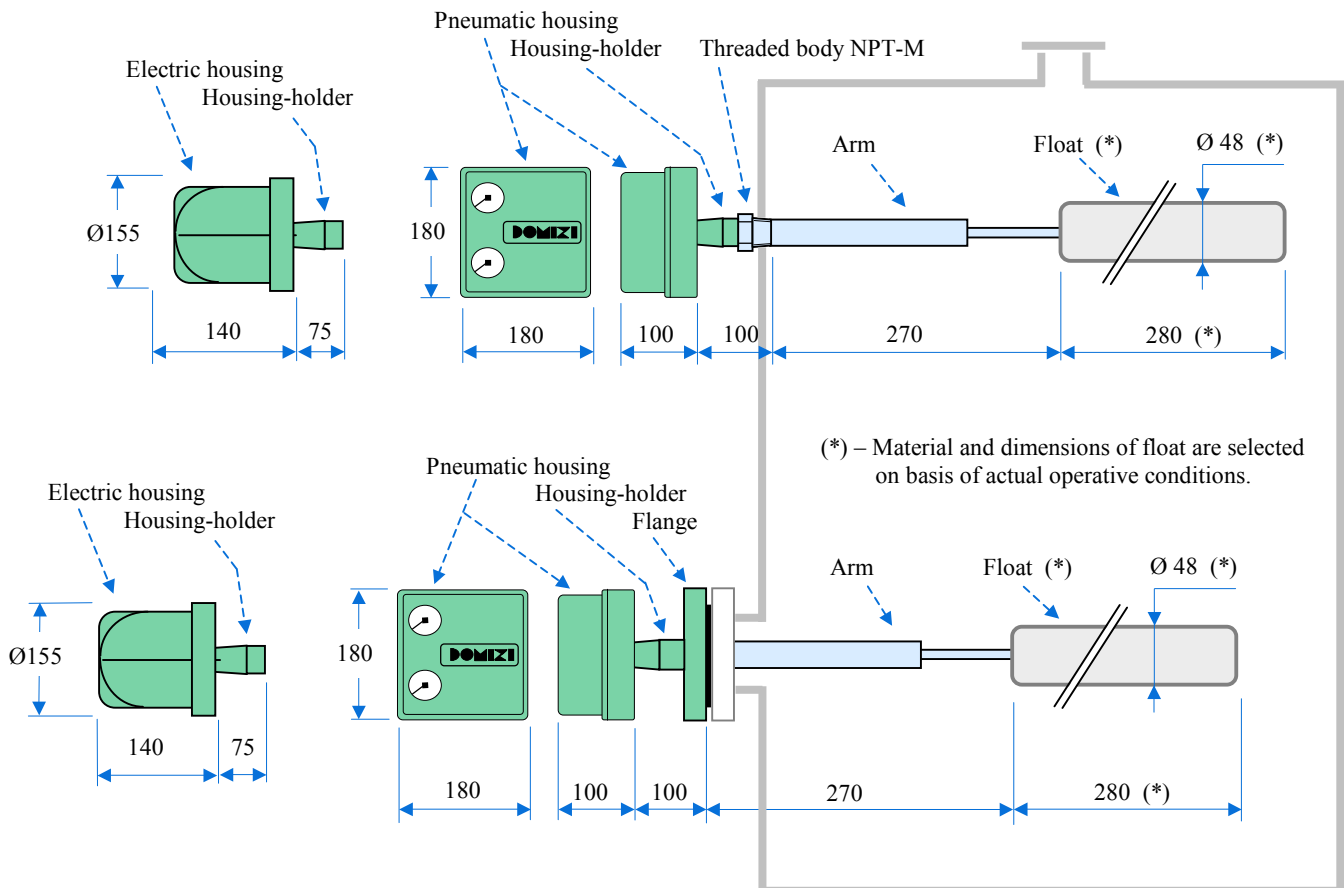
Connection to vessel. By threaded body NPT-M, or by flange ANSI 150÷2500 psi.

Housing. In aluminium casting, in electric or pneumatic version.

- With 1 microswitch SPDT : page 25. Size : Ø155×200mm, flame-proof EEx dc IIC T6; with 1 hole for electric connection : ¼" NPT-F (or ½" NPT-F).
- With 1 pneumatic valve On/Off/Vent : page 25. Size 180×180×100mm, water-proof; with 2 manometers Ø40mm; with 3 holes for pneumatic connection : ¼" NPT-F for inlet, outlet and vent air tube.

Housing-holder. In carbon steel, in stainless steel AISI 304 or AISI 316. Height : ~75mm (in any case, even in the version with fins for high temperatures, +181/+300°C, or without fins for low temperatures, -21/-60°C).

Upon request, special versions can be produced too.



CONNECTION to vessel of DLS :

- F** ••• Flange ANSI, face RF
- J** ••• " " RJ (Ring Joint)
- V** ••• Body, male threaded NPT-M
- 15** • Rating ANSI 150 psi
- 30** • " " 300
- 60** • " " 600
- M5** • " " 1500
- D5** • " " 2500
- E** Diameter Ø 2"
- G** " Ø 3"

Flanges are available in UNI/DIN too : page 33.
Upon request, body can be in Hastelloy, Teflon, PVC, etc.

Upon request, special versions can be produced too.

CONNECTION and HOUSING-HOLDER in :

- AC** Carbon steel (1)
- A4** Stainless steel AISI 304
- A6** " " AISI 316

HOUSING (pag. 34-35) :

Electric or pneumatic output :

- M** •• 1 Microswitch SPDT, dust-proof 10A-125/250Vac (UL 200°C), silver contact (1) (2)
- E** •• " " " " 4A res-2A ind-28Vdc, sealed in inert gas (3)
- N** •• " " " " 1A-125Vac (UL 200°C), gold contact (4)
- PA** • 1 Pneumatic valve ON-OFF : opens air when level rises, with 2 manometers (1)
- PC** • " " " " closes " " " with 2 manometers

Hole for electric connection :

- A** • Threaded 1/2" NPT-F for cable-gland (not supplied)
- B** • " 3/4" NPT-F " " (not supplied) (1)

Housing-holder :

- S** For standard temperatures, -20/+180°C
- H** For high temperatures, +181/+300°C, with fins
- L** For low temperatures, -21/-60°C, without fins

- 3 ways : On/Off/Vent
- Usage pressures : 1÷3 bar / 15÷45psi
- PA↔PC : Manual MDLS

DLS - [] - [] - [] Short description

In addition to the above Short description, *Domizi Snc* need also the following information, absolutely necessary.

Fluid : upper : Specific gravity of fluid : upper : kg/m³
 " lower : " " " " lower : kg/m³
 Temperature : Minimum °C Operating °C Maximum °C
 Pressure : Minimum bar (*) Operating bar (*) Maximum bar (*)
 Instrument function : Other :

(*) Simplify : 15bar ~ 15atm ~ 15kg/cm² ~ 15KPa ~ 1,5Mpa

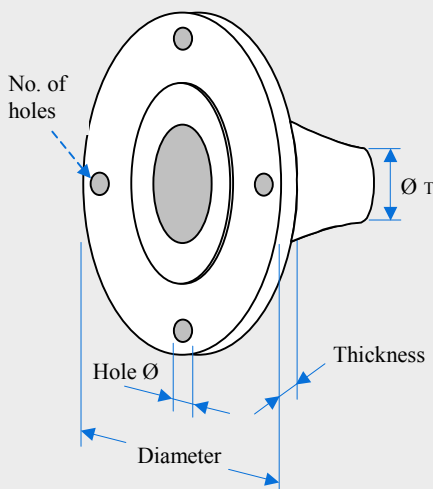
(1) - It is the standard option.

(2) - Dust-prrof phenolic case, silver contact, also 5A resistive - 250Vac, temperatures of -55/+125°C. Applications : ved. pag. 35

(3) - Hermetically sealed metallic case with inert gas, silver alloy contact, also 4A res-115V-60Hz, temperatures of -65/+125°C. Applications : as per page 35.

(4) - Dust-proof phenolic case, gold contact for very low electric loads (ex. insulating barriers with few mA and V), temp. -55/+125°C. Appl. : as per page 35.

Connections flanges ANSI B16.5 : some informative dimensions



		Diameter	Thickness	No.	Hole Ø	Ø T
Ø 1"	ANSI 150 =	108mm	14,3mm	4	15,9mm	33,4mm
	ANSI 300 =	124	17,5	4	19	"
	ANSI 600 =	124	24	4	19	"
	ANSI 1500 =	149	35	4	25,4	"
	ANSI 2500 =	159	41,3	4	25,4	"
Ø 1½"	ANSI 150 =	127 mm	17,5mm	4	15,9mm	48,3mm
	ANSI 300 =	156	20,6	4	22,2	"
	ANSI 600 =	156	28,6	4	22,2	"
	ANSI 1500 =	178	38,1	4	28,6	"
	ANSI 2500 =	203	50,8	4	31,7	"
Ø 2"	ANSI 150 =	152 mm	19mm	4	19mm	60,4mm
	ANSI 300 =	165	22,2	8	19	"
	ANSI 600 =	165	31,8	8	19	"
	ANSI 1500 =	216	44,5	8	25,4	"
	ANSI 2500 =	235	57,2	8	28,6	"
Ø 3"	ANSI 150 =	191mm	24mm	4	19mm	88,9mm
	ANSI 300 =	210	28,6	8	22,2	"
	ANSI 600 =	210	38,1	8	22,2	"
	ANSI 1500 =	267	54	8	31,7	"
	ANSI 2500 =	305	73,1	8	34,9	"
Ø 4"	ANSI 150 =	229mm	24mm	8	19mm	114,3mm
	ANSI 300 =	254	31,7	8	22,2	"
	ANSI 600 =	273	44,5	8	25,4	"
	ANSI 1500 =	311	60,4	8	34,9	"
	ANSI 2500 =	356	82,6	8	41,3	"