

The **DLF** Switches are mounted on line with pipes to vessels. Connections can be made by sleeves (threaded or socket welding) or by flanges.

In these types the liquid level is checked by a float integral with a swinging rod placed within the cylindrical body. When level rises higher than the preset point, the float makes the output device trip (*trip on rise*); when level comes down again and exceeds the preset point, the float makes the output device come back to the initial position (*reset on fall*); between the set and reset points there is always a small gap, named *differential*, of  $30 \pm 10\text{mm}$ .

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.

**The Switches meet the PED and the ATEX standards** (page 37).

**APPLICATIONS.** Thanks to this way of operating, these Switches can be used in vessels containing industrial liquids with specific gravity from  $500\text{kg/m}^3$  up and high pressures, all conditions usual in thermoelectric central stations, nuclear, chemical, petrochemical plants.

**Body.**

Materials : Carb.steel ASTM A106B, stainless AISI 304, AISI 316  
Size :  $\text{Ø}_{\text{outer}} 4''$  (114,3mm), in thickness as per ASME standards.

Rating : ANSI 150÷600 psi.

For further safety and production simplicity, float, rod and other inner parts are all made in AISI 316 stainless steel.

**Connection to vessel** (page 32-33).

- Sleeves, threaded or socket welding.
- Flanges as per ANSI 150÷600psi.
- Flange as per UNI/DIN standards.

Materials : Carb. steel ASTM A106B, stainless AISI 304 or 316.

**Housing** (page 34-35).

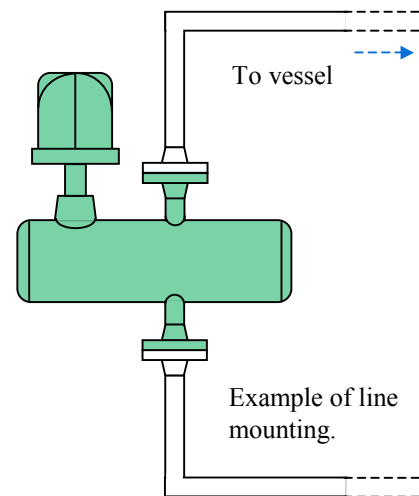
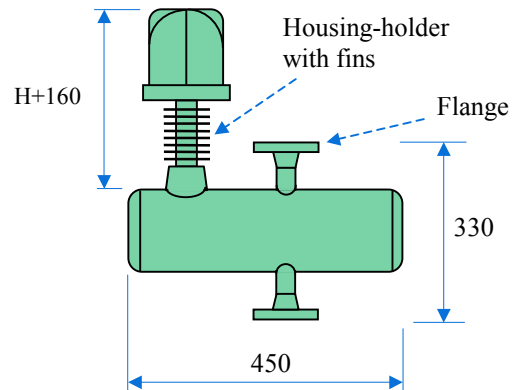
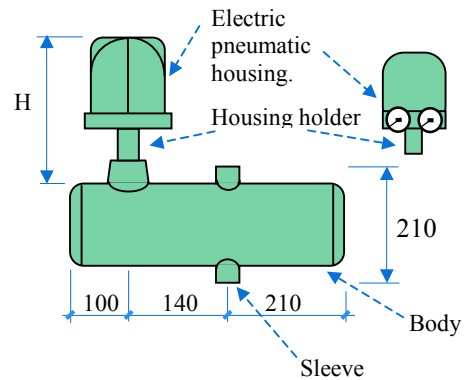
Aluminium casting, electric or pneumatic version :

- With 1 or 2 micros SPDT with simultaneous action;  
size :  $\text{Ø}155 \times 200\text{mm}$ , flame-proof EEx dc IIC T6;  
1 hole for electric connection :  $\frac{3}{4}''$  NPT-F (or  $\frac{1}{2}''$  NPT-F);
- 1 pneumatic valve On/Off/Vent;  $\text{Ø}125 \times 180\text{mm}$ , water-proof;  
3 holes for air connection  $\frac{1}{4}''$  NPT-F : inlet, outlet and vent.

**Differential.**  $30 \pm 10\text{mm}$  in the standard case.

**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.

**DLF Switch**



<b>Height H :</b>	
Electric housing	= 245mm
Pneumatic housing	= 210mm

Upon request, special versions can be produced too.

**CONNECTIONS to vessel of DLF :**

By means of :

- F** Flange ANSI, face RF
- J** " " " RJ (Ring Joint)
- N** Sleeves, female threaded NPT-F
- P** " " male threaded NPT-M
- S** " " socket welding

Rating :

- 15** ANSI 150 psi
- 30** ANSI 300
- 60** ANSI 600

Diameter :

- Flanges or Sleeves :
- C** 1"
  - D** 1½"
  - E** 2"

**M□□□□** Center-to-center distance between connections (mm) : those in the sketch are standard.

**BODY and CONNECTIONS in :**

- AC** Carbon steel <sup>(1)</sup>
- A4** Stainless steel AISI 304
- A6** " " AISI 316

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

**HOUSING (pag.34) :**

**Electric or pneumatic output :**

- Number of electric outputs : 1 or 2 microswitches SPDT with simultaneous action
- A••** Microswitch, dust-proof 6A – 24Vdc, silver contact <sup>(1)</sup> <sup>(2)</sup>
- B••** " " " 6A res – 5A ind – 30Vdc, silver contact <sup>(3)</sup>
- Q••** " " " 1mA–5Vdc(min value), 1A–125Vac(max value), gold contact <sup>(4)</sup>
- R••** " " sealed in inert gas, 3A res–1,5A ind–30Vdc, silver contact <sup>(5)</sup>
- Z••** " " " 1mA–5Vdc(min), 0,5A–30Vdc(max), gold contact <sup>(6)</sup>
- 1PA•** 1 Pneumatic valve ON-OFF : opens air when level rises, with 2 manometers <sup>(1)</sup>
- 1PC•** " " " closes " " " with 2 manometers

**Hole for electric connection :**

- A•** Threaded ½" NPT-F for cable-gland (not supplied)
- B•** " ¾" NPT-F, " " (not supplied) <sup>(1)</sup>

**Housing-holder :**

- S** For standard temperatures, –20/+180°C
- H** For high temperatures, +181/+450°C, with fins
- L** For low temperatures, –21/–60°C, without fins

- 3 ways : On/Off/Vent
- Usage pressures :  
1÷5,5Bar / 15÷80psi
- PA↔PC : page 34.

Upon request, special versions can be produced too.

**DLF -**     **- M**     **-**     **-**     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/m <sup>3</sup>	
	lower :	.....		lower :	.....	kg/m <sup>3</sup>	
Temperature :	Minimum	..... °C	Operating	..... °C	Maximum	..... °C	
Pressure :	Minimum	..... bar (*)	Operating	..... bar (*)	Maximum	..... bar (*)	
Instrument function :	.....					Other :	.....

(\*) Simplify : 15bar ~ 15atm ~ 15kg/cm<sup>2</sup> ~ 15KPa ~ 1,5Mpa

(1) – It is the standard option.  
 (2) – Micro A : also 6A resistive – 250Vac; temperatures of : –25/+85°C.  
 (3) – Micro B : also 15A resistive – 3A inductive – 250Vac; temperatures of : –25/+80°C.  
 (4) – Micro Q : also 1A – 125Vac, but is recommended for very low electric loads (e.g. insulating barriers with few mA and V); temperatures of : –55/+85°C.  
 (5) – Micro R : also 1A resistive – 0,8A inductive – 220Vac; temperatures of : –55/+150°C.  
 (6) – Micro Z : recommended for very low electric loads (e.g. insulating barriers with few mA and V); temperatures of : –55/+150°C.