

The DL Switches are mounted on a side of vessel by means of a flange. In these switches the level is checked by a float integral with a swinging rod : 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 gap, named *differential*; it is $50 \pm 10\text{mm}$ in the standard case, but can be also much higher in the case of special versions. 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 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 500kg/m^3 up.

Body.

Materials : Carbon steel ASTM A106B, stainless AISI 304, AISI 316.
 Size : $\text{Ø}_{\text{outer}} 3''$ (89mm), in various thickness as per ASME standards.
 Rating : ANSI 150÷1500 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).

- Flanges as per ANSI standards : 150÷1500 psi.
- Flanges as per UNI/DIN standards.

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

Housing (page 34-35).

Aluminium casting, electric or pneumatic version :

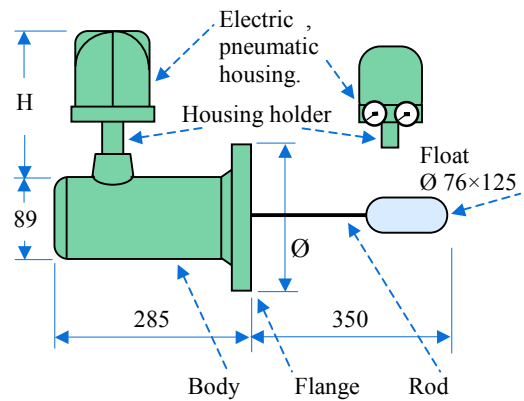
- 1 or 2 micros SPDT with simultaneous action;
 size : $\text{Ø}155 \times 200\text{mm}$, flame-proof EEx dc IIC T6;
 1 hole for electric connection : $\frac{3}{4}''$ NPT-F (or $\frac{1}{2}''$ NPT-F);
- 1 pneumatic valve On/Off/Vent; $\text{Ø}125 \times 180\text{mm}$, water-proof;
 3 holes for air connection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

Differential. $50 \pm 10\text{mm}$ in the standard case, but can be much higher in the case of special versions prepared upon request.

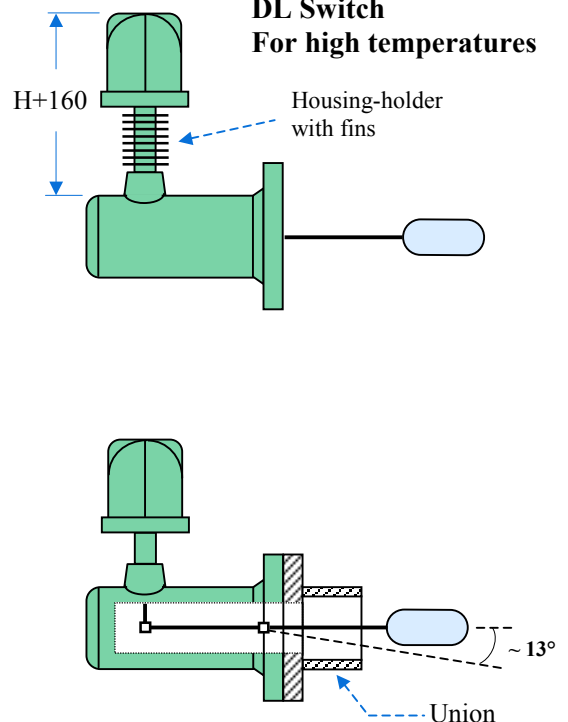
Rod. The rod jutting out into vessel is normally supplied with total length (Rod+Float) of 350mm from the flange, as per the side sketch. Other lengths can be produced upon request.

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 (page 34).

DL Switch



DL Switch For high temperatures



NOTE
 Union should have a proper size, so that Rod + Float can freely swing within a 13° angle as minimum.

Height H :	
Electric housing	= 245mm
Pneumatic housing	= 210mm
Flange diameter :	
$\text{Ø } 3''$	ANSI 150 = 191 mm
	ANSI 300 = 210 mm
	ANSI 600 = 210 mm
$\text{Ø } 4''$	ANSI 150 = 229 mm
	ANSI 300 = 254 mm
	ANSI 600 = 273 mm

In the case of turbulent liquids, would you please contact us.
 Upon request, special versions can be produced too.

CONNECTION to vessel of DL :

By means of:

- F** Flange ANSI, face RF
- J** " " " " RJ (Ring Joint)

Rating :

- 15** ANSI 150 psi
- 30** ANSI 300
- 60** ANSI 600
- M5** ANSI 1500

Flange diameter :

- G** 3" ⁽¹⁾
- H** 4"

BODY and CONNECTION in :

- AC** Carbon steel ⁽¹⁾
- 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 (page 34-35) :

Electric or pneumatic output :

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

DL -

--	--	--	--

 -

--	--

 -

--	--	--	--

 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⁾ – 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.