



Parto Sahand Ara

LBS

LEVEL BYPASS SWITCH

BYPASS LEVEL SWITCH MODEL: **DA**

BYPASS LEVEL SWITCH MODEL: **DB**





LEVEL BYPASS SWITCH MODEL: LBS

Applications

Alarm for Max and Min level, control of pumps on vessels including simple water or chemical corrosive or toxic liquids, under pressures and temperatures also very high or very low; for liquids with specific gravity from 500kg/m³ up.

Technical data

Body

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

Size : Øouter 4" (114,3mm), different thickness as per ASME standards.

Rating : ANSI 150, 300, 600, 1500, 2500 psi.

Bottom : The Side-Side Switches have drain hole ¾" NPT-F threaded (upon request, ½" NPT-F or 1" NPT-F), with or without accessories (plugs, valves, etc).

Inspection flanges : Øouter 3" in the ratings ANSI 150 to 600 psi (face RF) Øout.

2½" in the ratings ANSI 1500 to 2500 psi (face RJ).

Connections to vessel

Materials : Carbon steel ASTM A105N, stainless AISI 304, or AISI 316.

Flanges (ANSI) : 150 to 2500 psi, Ø 1 to 2"

Flanges (DIN) : PN 10 to 100, DN 25 to 100

Sleeves : Threaded or socked welding

Mounting : Side-Side or Side-Bottom.

C/C-distance M : As per table page 4, other distances on request

Housing

Aluminium cast, in electric or pneumatic version:

+ With 1 or 2 microswitches SPDT with simultaneous action

size : Ø155×200mm, flame-proof EEx dc IIC T6;

1 hole for electric connection : ¾" NPT-F threaded (or ½" NPT-F)

housing-holder height :- 80mm for temperatures of -20/+180°C

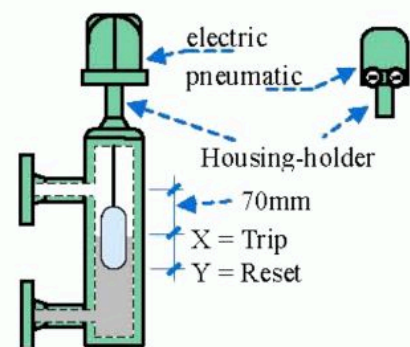
- 145mm for higher or lower temperatures.

+ With 1 pneumatic valve On/Off/Vent; Ø125×180mm, water-proof;

3 holes for air connection ¼" NPT-F : inlet, outlet and vent;

housing-holder height :- 70mm for temperatures of -20/+180°C

- 130mm for higher or lower temperatures.



Differential

The Switch trips when level reaches the X height and resets when comes back to Y height (or on the contrary), as per the side sketch. Usually the X point is fixed at 70mm below the top connection, and between X and Y there is a differential of about 30÷65mm (it changes on basis of the specific gravity of liquids); but, upon request, such heights and differentials can be made different too.

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.

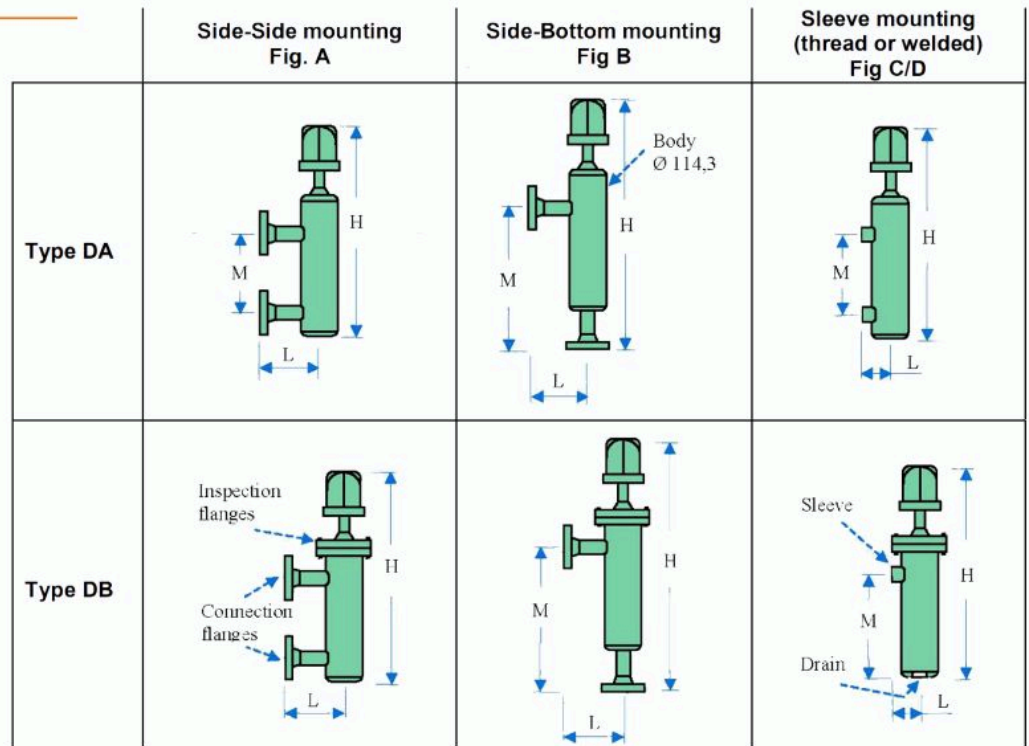


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Level Switches series DA, DB (Functional principle)

The level of liquid present in a vessel is checked by the float being inside the main body, the chamber, of the Level Switch. When level rises up to the preset height, the float makes the output device trip (trip on rise); when level comes down again and exceeds the preset height, the float makes the output device come back to the initial position (reset on fall); between the set and reset heights there is always a gap, named differential : see below. The inverse function is available too : Trip on fall and Reset on rise. The output device can be electric or pneumatic, is snap action and is placed in the housing. Differently from DA, the type DB is provided with inspection flanges, allowing to open the instrument and to clean it from possible residues of the liquid under control. The level switches meet the PED and ATEX standards.

Design



Dimensions:

	M (mm)		H (mm)			L (mm)	
	DA, DB	DA	DA	DB	DA	DA, DB	DA
ressure rating (ANSI)	150...600	1500...2500	150...600	150...600	1500...2500	150...600	1500...2500
Fig. A	178	178	660	710	750	195	220
Fig. B	350	400	730	780	800	195	220
Fig. C	178	178	660	710	660	90	115
Fig. D	250	300	630	680	680	90	115



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Order Code

LBS Configuration		
1	Type of level switch	
	DA	Level switch without inspection flanges
	DB	Level switch with inspection flanges
2	Mounting	
	SS	Side-Side
	SB	Side-Bottom
3	Mounting parts	
	1	Flanges DIN
	2	Flanges ANSI with RF-face
	3	Flanges ANSI with RJ (Ring Joint)-face
	4	Sleeves, female threaded, NPT-F
	5	Sleeves, male threaded, NPT-M
	6	Sleeves, socket welded
*	Other - please specify	
4	Pressure rating	
	C1	ANSI 150 lbs
	C2	ANSI 300 lbs
	C3	ANSI 600 lbs
	C4	ANSI 1500 lbs
	C5	ANSI 2500 lbs
	P1	PN10
	P2	PN16
	P3	PN25
	P4	PN40
	P5	PN64
	P6	PN100
*	Other - please specify	

5	Connection size	
	25	1" DN25
	40	1½" DN40
	50	2" DN50
6	Center to center distance	
	***	Please replace *** by the c to c distance in mm
7	Body and connection material	
	C	CS
	L	304SS
	S	316SS
	*	Other - please specify
8	Drain	
	1	Side-bottom ∩ no drain possible
	2	½"NPT-F
	3	¾"NPT-F
	4	1"NPT-F
	5	with drain, no accessory
	6	with drain, plugged (mat. as body)
	7	with drain, with valve
8	with drain, with valve and plug	

Additional order details _____

LBS -

1	2	3	4	5	6	7	8



Parto Sahand Ara

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