

# Multi Level Switch

## UNS-1000 Series

### Features

- ▶ Fully customizable
- ▶ Up to 5 independent switch points
- ▶ Reversible switch logic
- ▶ Suitable for high viscosity liquids
- ▶ Optional integral temperature switch
- ▶ Hermetically sealed reed switches

### Applications

- ▶ Sump tanks
- ▶ Hydraulic power units
- ▶ Storage tanks
- ▶ Solvent recovery systems
- ▶ Lube oil console systems
- ▶ Marine applications



### General Specifications\*

<b>Max. Operating Pressure:</b>	220 psig (15 bar), NBR (BUNA), and SS float
<b>Minimum Specific Gravity:</b>	NBR (BUNA) - .57 g/cm <sup>3</sup> SS - .71 g/cm <sup>3</sup>
<b>Mounting Position:</b>	Vertical, ±30°, through top or bottom
<b>Protection Class:</b>	IP65 for ST-, KL- and PG-design IP67, IP68 on request IP54 for K-design

\* See Product Configurator for additional options.

### Max. Switchpoints

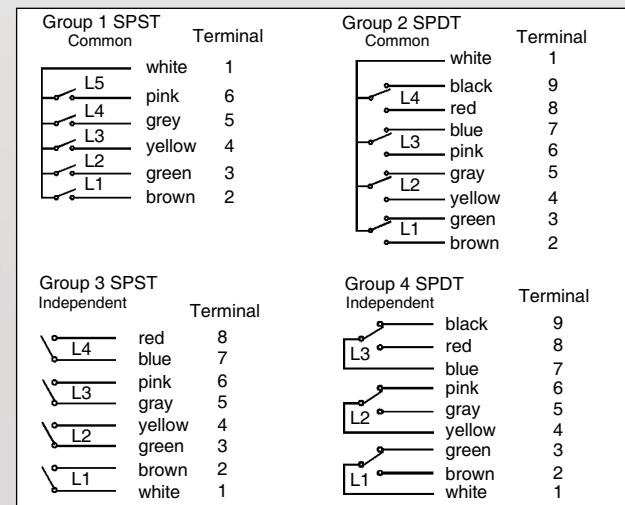
	KL6C AL Terminal Box	KL12C AL Terminal Box	ST1 DIN Connector	ST2 DIN Connector	PG Cable gland
Connect Group 1	5	5	2	5	3
Connect Group 2	2	4	1	2	1
Connect Group 3	3	4	1	3	2
Connect Group 4	2	3	1	2	1

### Combinations

Material	Mounting	Electrical Connection	Float
Stainless Steel (VA)	T1 NPT FLA3	DIN Connector (ST1 & ST2) Terminal box (KL6C or KL12C) Cable gland (PG) PVC Cable (K)	316 Stainless Steel (VA27)
	1/8 NPT 1/2 NPT	Cable gland (PG) PVC Cable (K)	
Brass (MS)	T1 NPT	DIN Connector (ST1 & ST2) Terminal box (KL6C or KL12C) Cable gland (PG) PVC Cable (K)	NBR BUNA-N (BN25)
	1/8 NPT 1/2 NPT	Cable gland (PG) PVC Cable (K)	

<b>Operating Temperature:</b>	+14 °F to +221 °F (-10 °C to +105 °C), PVC-cable
<b>Special Design Options: (On Request)</b>	DR - Damping tube HT - High temperature silicone-cable -40 °F to +302 °F (-40 °C to +150 °C) U - Mounting location through bottom PT100 - Pt100-element VV - Vertical adjustment Exi - ATEX approval EEx ia
<b>Contact Mode:</b>	NO or NC are defined on the basis of an empty tank and for installation through the top.
<b>Weight:</b>	Dependent on length and design

### Wiring Color / Code



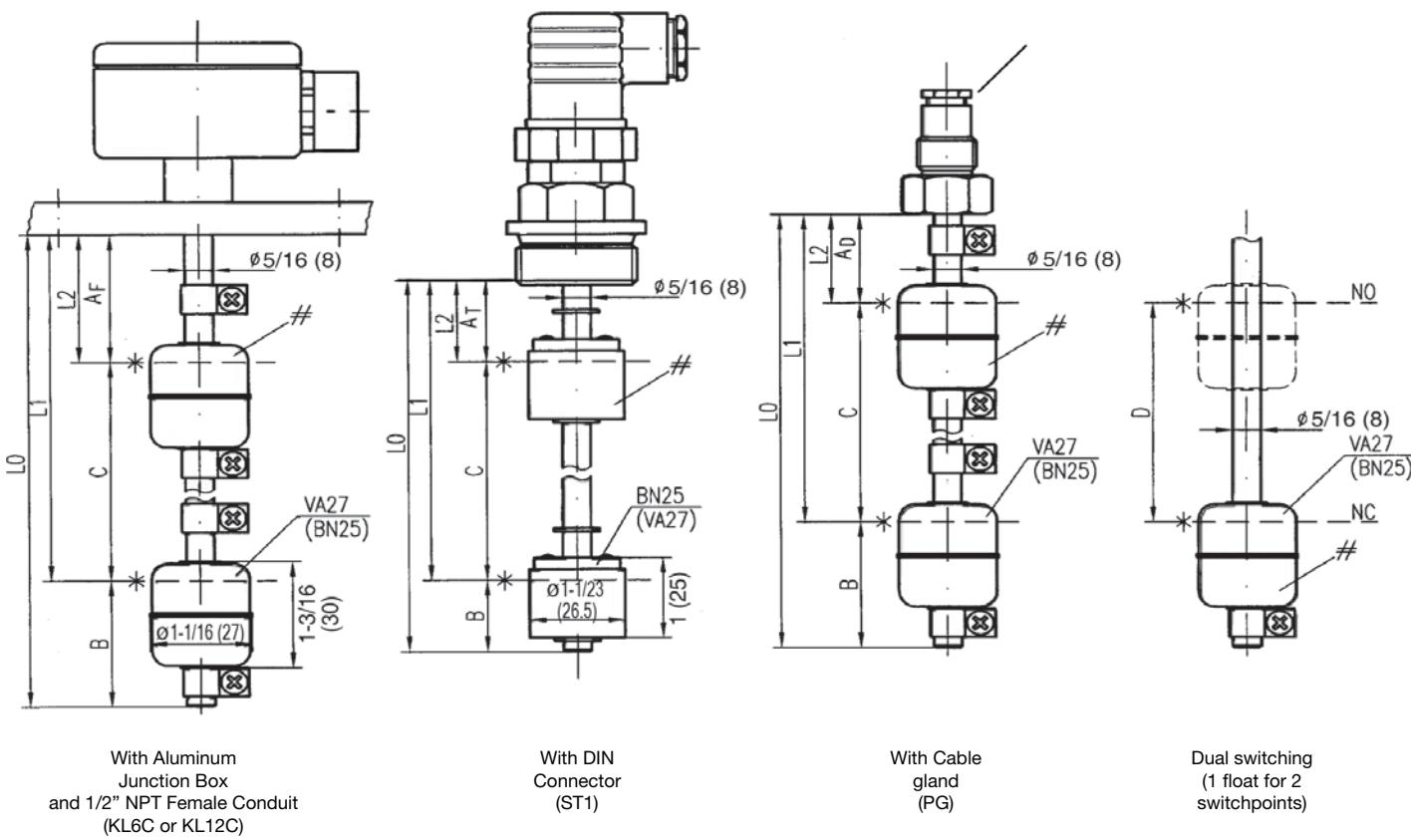
# Multi Level Switch

**UNS-1000 Series**

## Technical Drawing

Formerly Series BLS 700

Dimensions in inch (mm)



With Aluminum  
Junction Box  
and 1/2" NPT Female Conduit  
(KL6C or KL12C)

With DIN  
Connector  
(ST1)

With Cable  
gland  
(PG)

Dual switching  
(1 float for 2  
switchpoints)

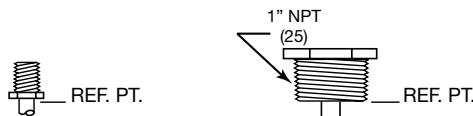
- Length tolerance  $\pm 1/8"$  ( $\pm 3$  mm)
- L<sub>0</sub> = max. 40 in. (1000 mm)

\* Immersion depth at density 1:  
 VA27 = 13/16 in  $\pm 0.1$  in (21  $\pm 2$  mm)  
 BN25 = 1/2 in  $\pm 0.1$  in (13  $\pm 2$  mm)  
 Temperature sensor PT100=dimension B+10mm

# Float position:

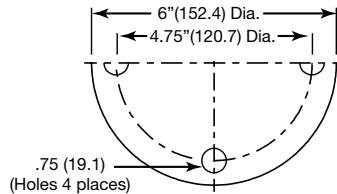
VA27 = NO/NC	$\Rightarrow$ see float marking
SPDT	$\Rightarrow$ NO-function
BN25 = NO	$\Rightarrow$ compound points at bottom
NC	$\Rightarrow$ compound points at top
SPDT	$\Rightarrow$ compound points at bottom

### Mounting Types:



**1/8" or 1/2"  
NPT Male**

**T1" NPT**



**FLA3**  
2" 150# Flange  
Flange DJN2527  
DN50/PN16

Dimensions	Min. distances in inch/mm					
	A <sub>F</sub>	A <sub>T</sub>	A <sub>D</sub>	B	C	D
Float type						
VA27	1/26	1/26	1/26	1.6/40	2.56/65	1.25/32
BN25	.86/22	.86/22	.86/22	1/25	1.78/45	1.25/32

(When using -DR: Dimension B + 3/4" (20 mm)!) on request

## Multi Level Switch

Formerly Series BLS 700

## UNS-1000 Series Order Form

Check Boxes to Select Specification Requirements

**Description:**

UNS 1000 - \_\_\_\_\_ / \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ / \_\_\_\_\_ - \_\_\_\_\_

Special P/N to be assigned once order is received: L700XXX

## Product Configurator

Example UNS 1000 -VA / T1NPT -KL6C -VA27 -L2 / 2.1 -U-HT-(DR)(-VV)-PT100-Exi

## Basic Configuration

UNS-1000 Series Level switch type

Check Required Specs

Material of Stem

<input type="checkbox"/>	VA	316 SS
<input type="checkbox"/>	MS	Brass

## Mounting Element

<input type="checkbox"/>	1/8NPT	1/8" NPT, mounting thread (inside tap)
<input type="checkbox"/>	1/4NPT	1/4" NPT, mounting thread (inside tap)
<input type="checkbox"/>	1/2NPT	1/2" NPT, mounting thread (inside tap)
<input type="checkbox"/>	T1NPT	1" NPT tank screw
<input type="checkbox"/>	FLA3	Blind flange, 2" 150 lbs RF (ANSI) (VA only)

Electrical Connection<sup>1</sup>

<input type="checkbox"/>	ST1	Cube plug DIN 43650, 3-pin + earth
<input type="checkbox"/>	ST2	Angle plug DIN 43651, 6-pin + earth
<input type="checkbox"/>	KL6C	Aluminum terminal box, 6 terminals w/ 1/2" NPT conduit
<input type="checkbox"/>	KL12C	Aluminum terminal box, 9 terminals w/ 1/2" NPT conduit
<input type="checkbox"/>	PG	PG-cable gland with 1 m PVC-cable (22 AWG)
<input type="checkbox"/>	K	PVC-cable sealed std 1 meter (22 AWG)
<input type="checkbox"/>	KXP	Explosion proof junction box with 1/2" conduit female. (Only available with 1" NPT option)
<input type="checkbox"/>	C	1/2" NPT male conduit (VA only)

## No. of Switchpoints\*\*\*

<input type="checkbox"/>	L1
<input type="checkbox"/>	L2
<input type="checkbox"/>	L3
<input type="checkbox"/>	L4
<input type="checkbox"/>	L5

- 1 Switchpoint @ \_\_\_\_\_ in / mm  
 2 Switchpoints @ \_\_\_\_\_ in / mm  
 3 Switchpoints @ \_\_\_\_\_ in / mm  
 4 Switchpoints @ \_\_\_\_\_ in / mm  
 5 Switchpoints @ \_\_\_\_\_ in / mm

<sup>1</sup> See "Combinations" section on page 1 for mounting and electrical connection options.

## Float Type

	Min. Density	Material	Form	Dia. (Ø)	Max. Temp.	Pressure (+20 °C)	
<input type="checkbox"/>	BN25	0.57 g/cm <sup>3</sup>	BUNA NBR	Cylinder	1" 25 mm	212 °F (100 °C)	15 bar
<input type="checkbox"/>	VA27	0.71 g/cm <sup>3</sup>	Stainless steel, 316	Cylinder	1-1/16" 27 mm	302 °F (150 °C)	15 bar

## IMPORTANT

## Must specify with your orders

1 - Overall stem length: L0= \_\_\_\_\_ in/mm max. 40" (1000 mm)

2 - Dimensional position of float\*\*\*

3 - Pick wiring code:

 Group 1

SPST Common Terminal

L5	white	1
L4	pink	6
L3	grey	5
L2	yellow	4
L1	green	3
	brown	2

 Group 2

SPDT Common Terminal

L4	white	1
L4	black	9
L4	red	8
L3	blue	7
L3	pink	6
L2	yellow	5
L2	gray	4
L1	green	3
L1	brown	2
L1	green	3
L1	brown	2

 Group 3

SPST Independent Terminal

L4	red	8
L3	blue	7
L3	pink	6
L2	gray	5
L2	yellow	4
L1	green	3
L1	brown	2
L1	white	1

 Group 4

SPDT Independent Terminal

L3	black	9
L3	blue	8
L3	pink	7
L2	gray	6
L2	yellow	5
L2	green	4
L2	brown	3
L1	white	2
L1	brown	1

## Contact Type of Float(s)

Contact Mode	Contact Rating
<input type="checkbox"/> 1-SPST (NO)	230 V AC / DC, 2 A, 40 VA / W
<input type="checkbox"/> 2-SPST (NC)	230 V AC / DC, 2 A, 40 VA / W
<input type="checkbox"/> 3-SPDT	150 V AC / 100 V DC, 0.2 A, 3 VA / W

## Options

Please specify when needed

<input type="checkbox"/> DR	Damping tube
<input type="checkbox"/> HT	High temperature silicone-cable (-40 °F to +302 °F (-40 °C to +150 °C))
<input type="checkbox"/> U	Mounting through bottom
<input type="checkbox"/> PT100	Pt100-element
<input type="checkbox"/> VV	Vertical adjustment
<input type="checkbox"/> Exi	ATEX approval EEx ia (Enclosure)
<input type="checkbox"/> TS/xx/2	Temperature Sensor, xx = °C: +60 °C, +70 °C, +80 °C, +90 °C, /2=NC