Multi Level Switch

UNS-1000 Series

Formerly Series BLS 700

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*

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

* See Product Configurator for additional options.

Operating Temperature:	+14 °F to +221 °F (-10 °C to +105 °C), PVC-cable
Special Design Options: (On Request)	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
Contact Mode:	NO or NC are defined on the basis of an empty tank and for installation through the top.
Weight:	Dependent on length and design

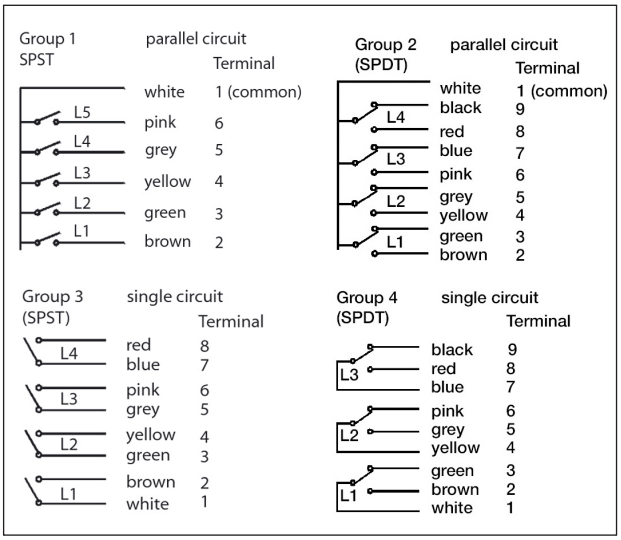
Max. Switchpoints

	KL6 / KL6C / ST2 / KXP	KL12 / KL12C	PG / K / C	KX4 / KX8 / M12x1	ST1
Connect Group 1	5	5	3	3	2
Connect Group 2	2	4	1	1	1
Connect Group 3	3	4	2	2	1
Connect Group 4	2	3	1	1	1
HT (High Temperature) Option Only	KL6 / KL6C / ST2 / KXP	KL12 / KL12C	PG / K / C	KX4 / KX8 / M12x1	ST1
Connect Group 1	3	3	3	3	2
Connect Group 2	1	1	1	1	1
Connect Group 3	3	2	2	2	1
Connect Group 4	1	1	1	1	1

Combinations

Material	Mounting	Electrical Connection	Float
Stainless Steel (VA)	T1 NPT T2 NPT FLA3	DIN Connector (ST1 or ST2) Terminal box (KL6C or KL12C) Cable gland (PG) PVC Cable (K)	316 Stainless Steel (VA27)
	1/8 NPT	Cable gland (PG)	
	1/2 NPT	PVC Cable (K Cable gland (PG)	
Brass (MS)	T1 NPT T2 NPT	DIN Connector (ST1 or ST2) Terminal box (KL6C or KL12C) Cable gland (PG) PVC Cable (K)	NBR BUNA-N (BN25)
	1/8 NPT	Cable gland (PG)	
	1/2 NPT	PVC Cable (K) Cable gland (PG)	

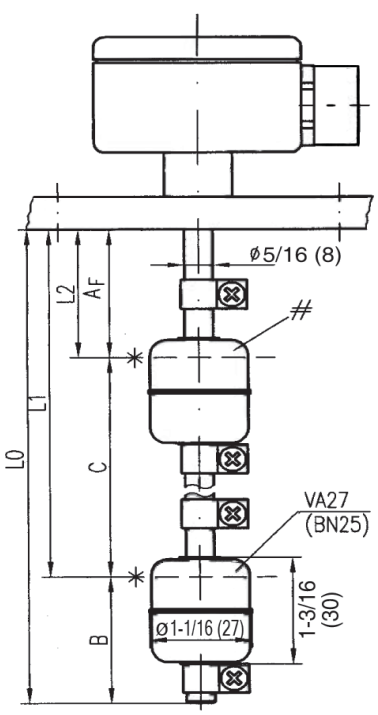
Wiring Color / Code



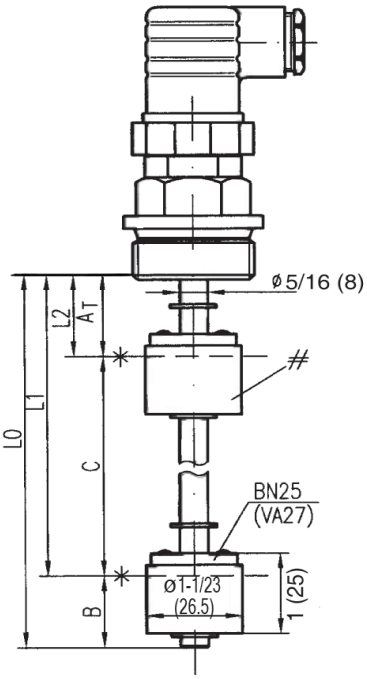
Technical Drawing

Formerly Series BLS 700

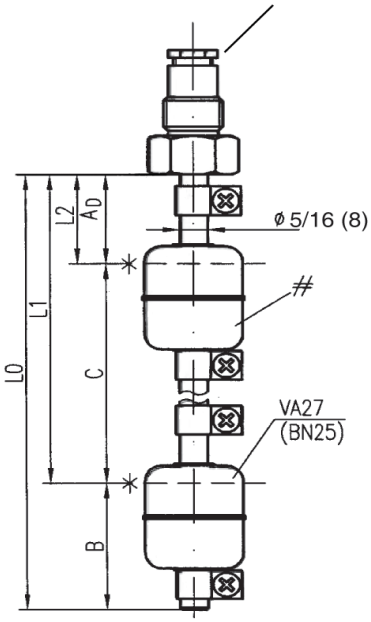
Dimensions in inch (mm)



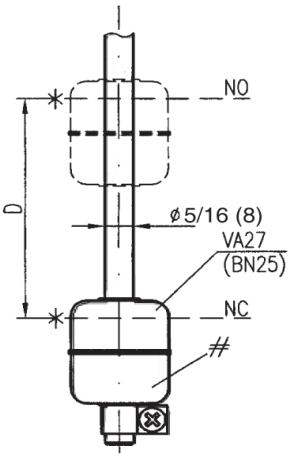
With Aluminum
Junction Box
and 1/2" NPT Female Conduit
(KL6C or KL12C)



With DIN
Connector
(ST1)



With Cable
gland
(PG)



Dual switching
(1 float for 2
switchpoints)

1. Length tolerance ±1/8" (±3 mm)
2. L0 = max. 40 in. (1000 mm)

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

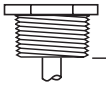
# Float position:
VA27 = NO/NC ⇒ see float marking
SPDT ⇒ NO-function
BN25 = NO ⇒ compound points at bottom
NC ⇒ compound points at top
SPDT ⇒ compound points at bottom

Dimensions / Float type	Min. distances in inch/mm					
	A_F	A_T	A_D	B	C	D
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

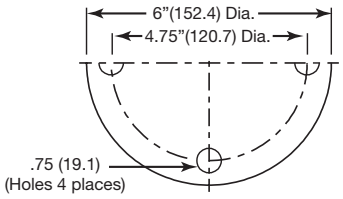
(When using -DR: Dimension B + 3/4" (20 mm)!) on request

Mounting Types:

1/8" or 1/2"
NPT Male



T1" NPT
T2" NPT



FLA3
2" 150# Flange
Flange DJN2527
DN50/PN16

Product Configurator

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

Basic Configuration

UNS-1000 Series	Multi Level switch type

Material of Stem

VA	316 SS
MS	Brass

Mounting Element

1/8NPT	1/8" NPT, mounting thread (inside tap)
1/4NPT	1/4" NPT, mounting thread (inside tap)
1/2NPT	1/2" NPT, mounting thread (inside tap)
T1NPT	1" NPT tank screw
T2NPT	2" NPT tank screw
FLA3	Blind flange, 2" 150 lbs RF (ANSI) (VA only)

Electrical Connection[1]

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

[1] See "Combinations" section on page 1 for mounting and electrical connection options.

No. of Switchpoints***

L1	1 Switchpoint @ _____in / mm
L2	2 Switchpoints @ _____in / mm
L3	3 Switchpoints @ _____in / mm
L4	4 Switchpoints @ _____in / mm
L5	5 Switchpoints @ _____in / mm

Float Type

	Min. Density	Material	Form	Dia. (i)	Max. Temp.	Pressure (+20 °C)
BN25	0.57 g/cm³	BUNA NBR	Cylinder	1" 25 mm	212 °F (100 °C)	15 bar
VA27	0.71 g/cm³	Stainless steel, 316	Cylinder	1-1/16" 27 mm	302 °F (150 °C)	15 bar

Contact Type of Float(s)

Contact Mode	Contact Rating
1-SPST (NO)	230 V AC / DC, 2 A, 40 VA / W
2-SPST (NC)	230 V AC / DC, 2 A, 40 VA / W
3-SPDT	150 V AC / 100 V DC, 0.2 A, 3 VA / W

Options

Please specify when needed

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

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

Group 2

SPDT		Terminal
	white	1 (common)
L4	black	9
	red	8
L3	blue	7
	pink	6
L2	grey	5
	yellow	4
L1	green	3
	brown	2

Group 3

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

Group 4

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

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