

Multi Level Switch

UNS-2000 Series

Formerly Series BLS 800

Features

- ▶ Fully customizable
- ▶ Up to 6 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:	580 PSI (40 bar), depends on mounting element and float	Operating Temperature:	+14 °F to +221 °F (-10 °C to +105 °C), PVC-cable
Minimum Specific Gravity:		Special Design Options: (On Request)	DR - Damping Tube HT - High Temperature Application - (-40 °C up to +150 °C) F- Silicone Cable U - Mounting location through bottom PT100 - PT100-Element TP - Temperature switch VV - Vertical Adjustment EXi - ATEX-approval EEx ia
NBR (BUNA):	0.6 g/cm ³	Contact Mode:	NO or NC are defined on the basis of an empty tank and for installation through the top
S.S.:	0.78 g/cm ³	Weight:	Depends on length and design
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.

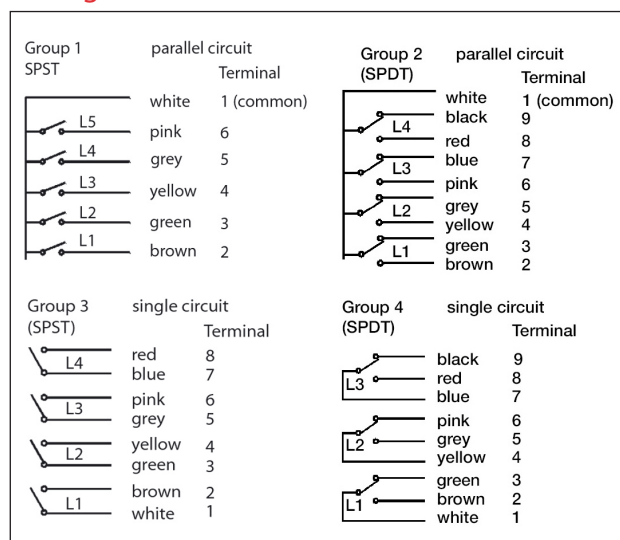
Max. Switchpoints

	KL6 / KL6C / ST2 / KXP / KX8	KL12 / KL12C	PG / K / C	KX4 / M12x1	ST1
Connect Group 1	5	6	6	3	2
Connect Group 2	2	4	4	1	1
Connect Group 3	3	4	4	2	1
Connect Group 4	2	3	3	1	1

Combinations

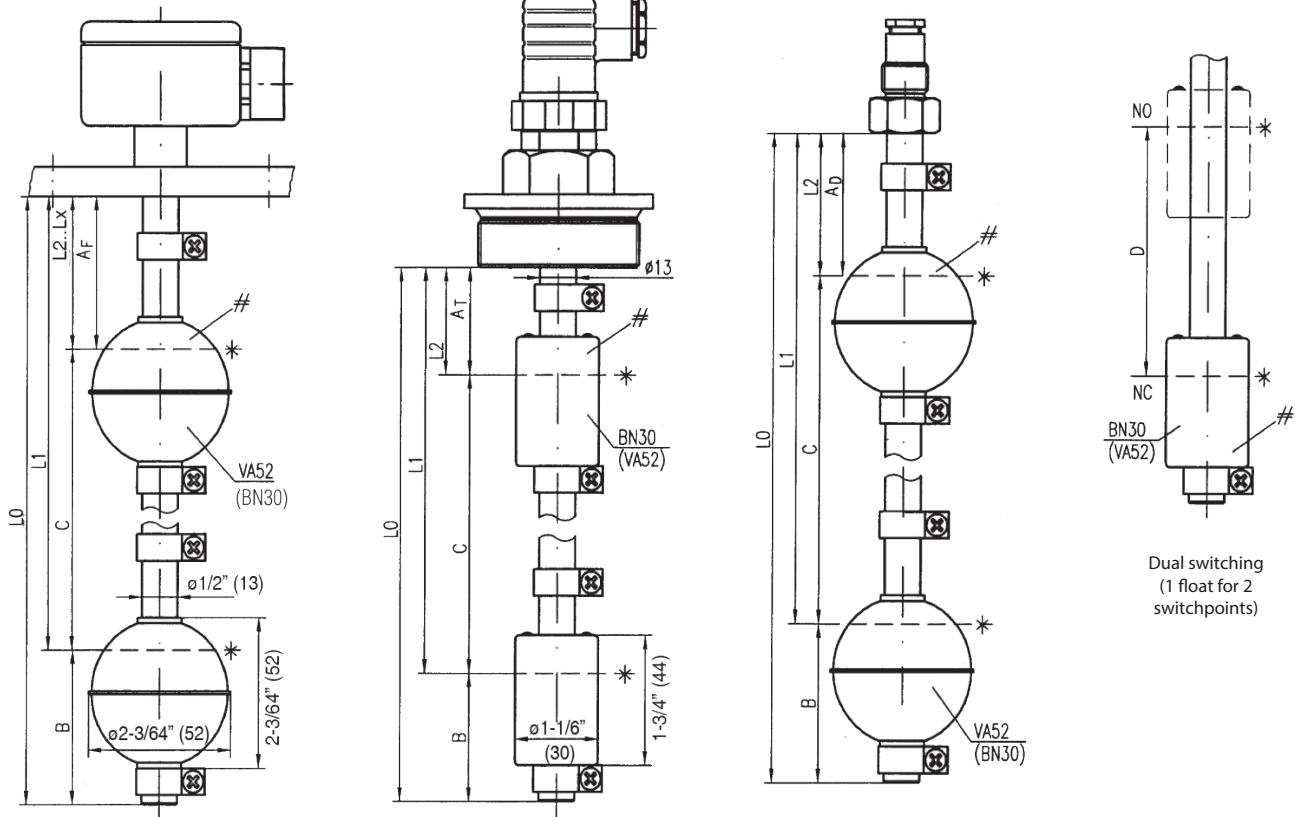
Material	Mounting	Electrical Connection	Float
Stainless Steel (VA)	T1-1/4 NPT T2 NPT FLAS	DIN Connector (ST1 & ST2) Terminal box (KL6C or KL12C) Cable gland (PG) PVC Cable (K)	Stainless Steel (VA52)
	1/2 NPT	Cable gland (PG) PVC Cable (K)	
Brass (MS)	T1-1/4 NPT T2 NPT	DIN Connector (ST1 & ST2) Terminal box (KL6C or KL12C) Cable gland (PG) PVC Cable (K)	NBR (Buna-N) (BN30)
	1/2 NPT	Cable gland (PG) PVC Cable (K)	

Wiring Color / Code



Technical Drawing

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)

Mounting Types:

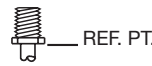
1. Length tolerance ± 3 mm
2. L0 = max. 3000 mm (118 inches)

* Immersion depth at density 1:
 VA52 = 36 ± 2 mm
 BN30 = 20 ± 2 mm

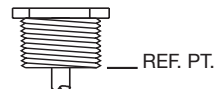
Float position:
 VA52 = NO/NC \Rightarrow see float marking
 SPDT \Rightarrow NO-function
 BN30 = NO \Rightarrow compound points at bottom
 NC \Rightarrow compound points at top
 SPDT \Rightarrow compound points at bottom

Dimensions	Min. distances in mm					
	AF	AT	AD	B*	C	D
Float type						
VA52	32	32	32	55	85	55
BN30	40	40	40	39	77	55

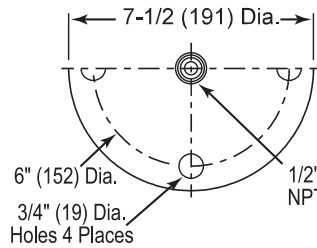
*When using -DR: Dimension B + 20 mm!
 *When using -PT100: Dimension is B + 10 mm
 *When using -TPxx/2: Dimension is B + 40 mm



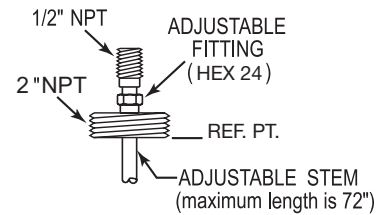
1/2" NPT



T1-1/4" or T2" NPT



FLA5
 3" 150# Flange with 1/2" NPT Male Fitting (per applicable ANSI specifications)
 Flange only available in stainless steel.



Adjustable Stem
 Only available with flange and 'T' type connections

Formerly Series BLS-800

Product Configurator

Example	UNS 2000	-VA	/ T2NPT	-KL6C	-VA52	L2	/ 2.1	-(DR)-(VV)-HT-U-PT100-TP/XX.X-Exi
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Basic Configuration

UNS 2000 Level switches type

Check Required Specs

Material of Stem

VA	SS316
MS	Brass

Mounting Element

1/2NPT	1/2" NPT mounting (inside tap)
T1-1/4NPT	1-1/4" NPT tank screw
T2NPT	2" NPT tank screw
FLA5	3" Blind flange (150#)

Electrical Connection¹

ST1	Cube plug DIN 43650, 3-pin + GND
ST2	Angle plug DIN 43651, 6-pin + GND
KL6C	Aluminum terminal box, 6 terminals with 1/2" NPT conduit
KL12C	Aluminum terminal box, 9 terminals with 1/2" NPT conduit
PG	PG-cable gland with 1 m PVC-cable
K	PVC-cable sealed, specify length at order
KXP	Explosion proof junction box with 1/2" conduit (T2NPT and FLA5 only) Not ATEX approved. For ATEX approval, select Exi option.
C	1/2" NPT male conduit (VA only)

No. of Switchpoints² L=Level, T=Temperature

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
L6	6 Switchpoints @ _____ in/mm

2. See also Connection Groups in table "Max. Switchpoints"
 L0 = 30000 mm (118 in) max
 L0 = L1 + B*
 B* = 1.54 in (39 mm) for BN30
 2.17 in (55 mm) for VA52

Options

DR	Damping tube
HT	High temperature silicone cable (max 6 wires), (up to +150 °C) 302°F
U	Mounting through bottom
PT100	PT100-element
VV	Vertical adjustment
Exi	ATEX approval EEx ia
TP	3A, 12 or 24V DC
X	Contact mode 2 (NC)
XX	Setpoint at rising in °C

Standard +122 °F / +158 °F / +194 °F (+50 °C / +70 °C / +90 °C)
Others on request

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

Float Type

	Min. Density	Material	Form	i	Max. Temp.	Max. Bar
BN30	0.6 g/cm3	NBR	Cylinder	30 mm 1-3/16	212 °F (100 °C) - Oil 176 °F (80 °C) - Water	15
VA52	0.78 g/cm3	Stainless steel, 316	Ball	52 mm 2-1/16	302 °F (150 °C)	40

Contact Type of Float³

	Contact Mode	Contact Rating
	1-SPST (NO)	250 V AC / DC, 3 A, 100 VA / W
	2-SPST (NC)	250 V AC / DC, 3 A, 100 VA / W
	3-SPDT	140 V AC / DC 1 A, 60 VA / W

³ Up to 6 contact types can be selected if 6 switchpoints are selected. Order type: L1, L2, L3, L4, L5 & L6.

Must specify with your orders

Check List:

- 1 - Overall stem length: L0= _____ (in/mm) (Upto 3000mm std.)
- 2 - Add dimensional position of float
- 3 - Pick wiring code:

q Group 1

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

q Group 2

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

q Group 3

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

q Group 4

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