



# ENAPART



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## 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\*

|                                  |   |
|----------------------------------|---|
| <b>Max. Operating Pressure:</b>  | 580 PSI (40 bar), depends on mounting element and float                       |
| <b>Minimum Specific Gravity:</b> |   |
| NBR (BUNA):                      | 0.6 g/cm <sup>3</sup>   |
| S.S:                             | 0.78 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<br>IP67, IP68 on request<br>IP54 for K-design |

\* See Product Configurator for additional options.

|   |   |
|---|---|
| <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<br>HT - High Temperature Application - (-40 °C up to +150 °C)<br>F- Silicone Cable<br>U - Mounting location through bottom<br>PT100 - PT100-Element<br>TP - Temperature switch<br>V V - Vertical Adjustment<br>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>                              | Depends on length and design  |

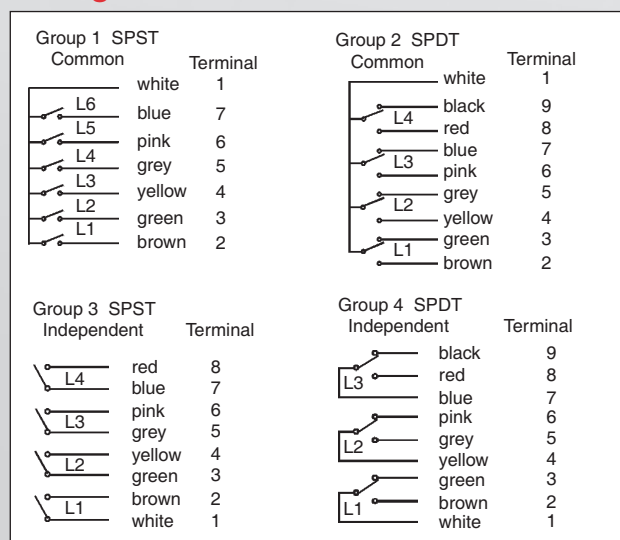
### Max. Switchpoints

|                        | KL6C<br>AL Terminal<br>Box | KL12C<br>AL Terminal<br>Box | ST1<br>DIN<br>Connector | ST2<br>DIN<br>Connector | PG<br>Cable<br>gland |
|------------------------|----------------------------|-----------------------------|-------------------------|-------------------------|----------------------|
| <b>Connect Group 1</b> | 5                          | 6                           | 2                       | 5                       | 6                    |
| <b>Connect Group 2</b> | 2                          | 4                           | 1                       | 2                       | 4                    |
| <b>Connect Group 3</b> | 3                          | 4                           | 1                       | 3                       | 4                    |
| <b>Connect Group 4</b> | 2                          | 3                           | 1                       | 2                       | 3                    |

### Combinations

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

### Wiring Color / Code



**Barksdale®**

CONTROL PRODUCTS

Barksdale, Inc./Barksdale GmbH  
A Subsidiary of Crane Co.



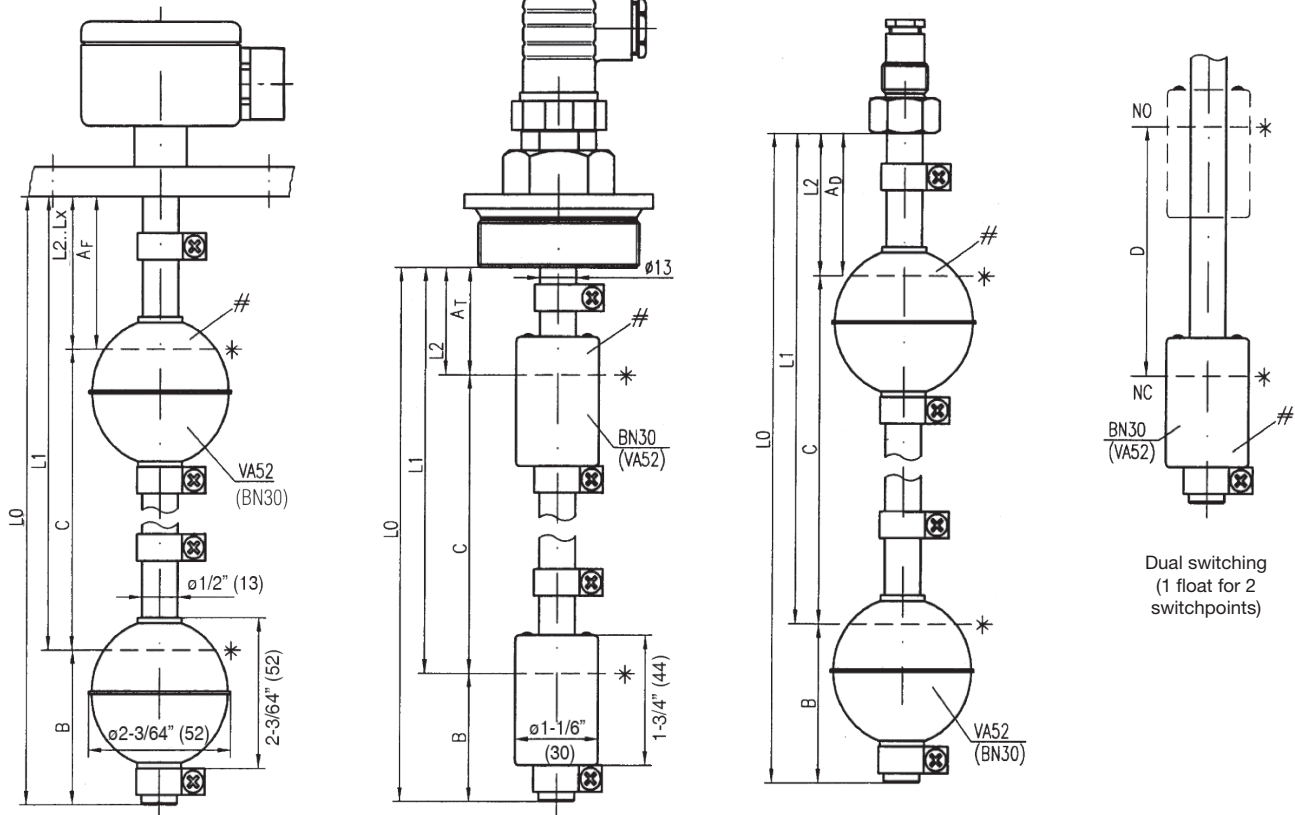
# Multi Level Switch

# UNS-2000 Series

## Technical Drawing

## Formerly Series BLS 800

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  $\pm 3$  mm
2. L0 = max. 3000 mm (118 inches)

- \* Immersion depth at density 1:  
 VA52 =  $36 \pm 2$  mm  
 BN30 =  $20 \pm 2$  mm

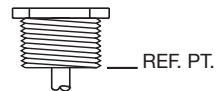
- # Float position:  
 VA52 = NO/NC  $\Rightarrow$  see float marking  
 SPDT  $\Rightarrow$  NO-function  
 BN30 = NO  $\Rightarrow$  compound points at bottom  
 NC  $\Rightarrow$  compound points at top  
 SPDT  $\Rightarrow$  compound points at bottom

| Dimensions | Min. distances in mm |                |                |    |    |    |
|------------|----------------------|----------------|----------------|----|----|----|
|            | A <sub>F</sub>       | A <sub>T</sub> | A <sub>D</sub> | B* | C  | D  |
| Float type |                      |                |                |    |    |    |
| VA52       | 32                   | 32             | 32             | 55 | 85 | 55 |
| BN30       | 40                   | 40             | 40             | 39 | 77 | 55 |

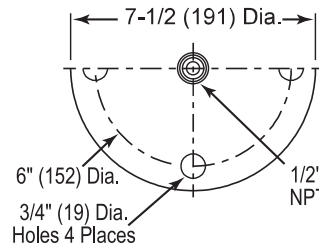
- \*When using -DR: Dimension B + 20 mm!  
 \*When using -PT100: Dimension is B + 10 mm  
 \*When using -TPxx/2: Dimension is B + 40 mm



1/2" NPT

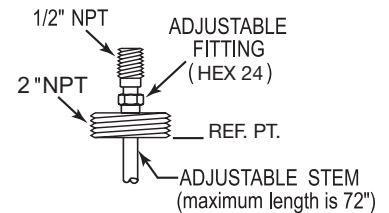


T1-1/4" or T2" NPT



### 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

## Multi Level Switch

**UNS-2000 Series**

Formerly Series BLS-800

### UNS-2000 Series Order Form

Check Boxes to Select Specification Requirements

Description:

UNS 2000 - \_\_\_\_\_ / \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ / \_\_\_\_\_ - \_\_\_\_\_

#### Product Configurator

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

#### 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 Connection<sup>1</sup>

- 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  
 C 1/2" NPT male conduit (VA only)

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

#### Float Type

|                               | Min. Density           | Material             | Form     | Ø               | Max. Temp.                                      | Max. Bar |
|-------------------------------|------------------------|----------------------|----------|-----------------|---|----------|
| <input type="checkbox"/> BN30 | 0.6 g/cm <sup>3</sup>  | NBR                  | Cylinder | 30 mm<br>1-3/16 | 212 °F (100 °C) - Oil<br>176 °F (80 °C) - Water | 15       |
| <input type="checkbox"/> VA52 | 0.78 g/cm <sup>3</sup> | Stainless steel, 316 | Ball     | 52 mm<br>2-1/16 | 302 °F (150 °C)                                 | 40       |

#### No. of Switchpoints<sup>2</sup>

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

See also Connection Groups in table "Max. Switchpoints"

#### Options, please specify when needed

- 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

#### Contact Type of Float

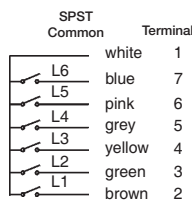
|                          | Contact Mode | Contact Rating                 |
|--------------------------|--------------|--------------------------------|
| <input type="checkbox"/> | 1-SPST (NO)  | 250 V AC / DC, 3 A, 100 VA / W |
| <input type="checkbox"/> | 2-SPST (NC)  | 250 V AC / DC, 3 A, 100 VA / W |
| <input type="checkbox"/> | 3-SPDT       | 140 V AC / DC 1 A, 60 VA / W   |

#### Must specify with your orders

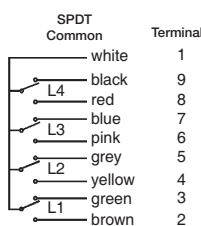
Check List:

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

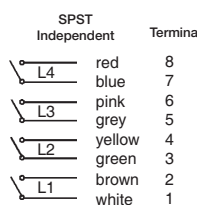
##### Group 1



##### Group 2



##### Group 3



##### Group 4

