

# Multiple Level Switch LS-400E (1-4 switch points)

MULTI POINT

Max. contact loads of the reed switch:  
SPST 50 VA; 0.5 A; 250 Vac (NC/NO).  
SPDT 10VA; 0.3 A; 100 Vdc  
(Higher voltage on request).  
The data NC/NO are defined for an empty tank.

## Specifications

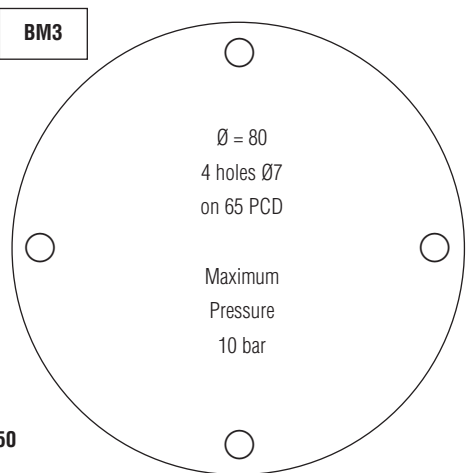
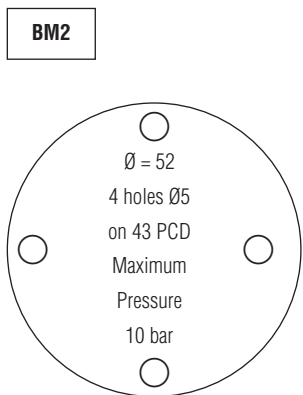
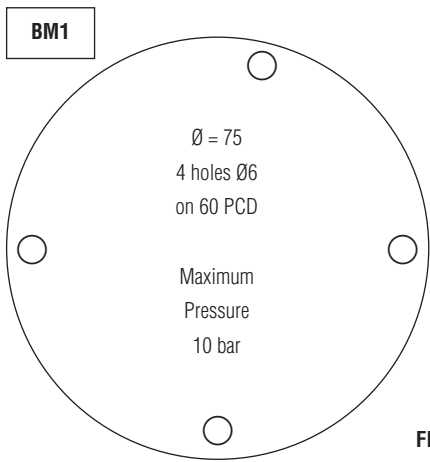
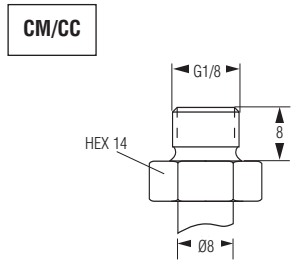
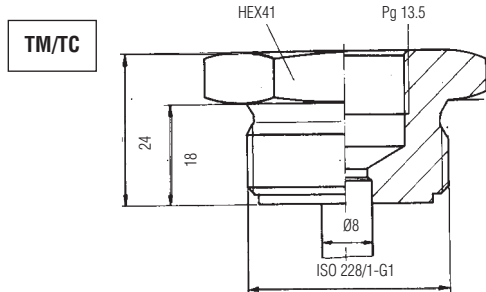
Materials		
Stem	Brass	Stainless Steel
Mounting type	Brass	Stainless Steel
Float	Buna N	Stainless Steel
Operating pressure	10 bar	20 bar
Float temperature*	-20°C ... +80°C Water -20°C ... +110°C Oil	-20°C ... +150°C
Min. specific gravity of the liquid	0.46g/cm <sup>3</sup>	0.85g/cm <sup>3</sup>
Depth of immersion at a density of 1	~9mm	~21mm
Protection rating	IP65 (IP64 for Potted Cable/Leads)	

Atex certified p/no.s available upon request

## Mounting Direction

Tank top : 0	Bottom : U
--------------	------------

## Mounting Type



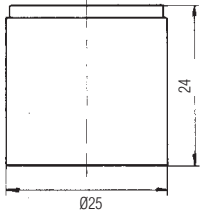
**Flanges are only available with DIN 43650 Connector or Potted Cable/Leads.**

Flange thickness = 5mm  
Standard flanges shown  
Other flanges available for OEM applications.

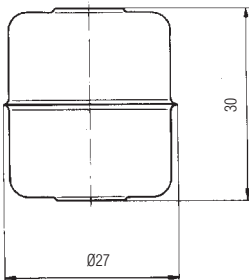


LEVEL SWITCHES

**Floats**



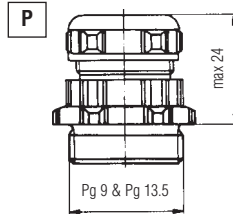
**N** = Buna N



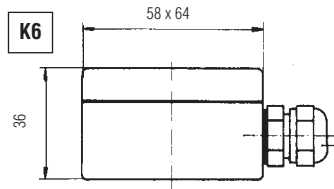
**C** = Stainless Steel

**Electrical Connection**

**Pg 13.5 Cable gland**  
Cable (PVC=0.34mm<sup>2</sup> or 0.25mm<sup>2</sup>)  
standard length appr. 1m;  
Temperature: -20 ... +80°C



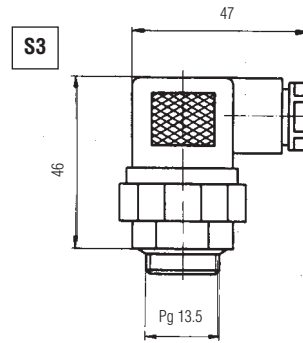
**Terminal box 6-poles**  
Temperature: -20 ... +150°C



**Plug connector acc. DIN 43650**

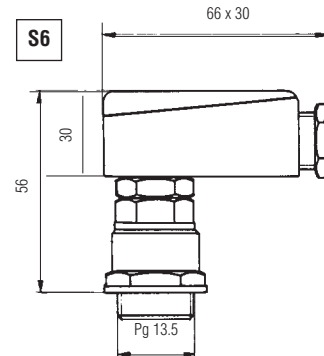
3 poles + earth  
Temperature: -20 ... +90°C

(Note: One float for two levels can be used only when low level is N.C. dry and high level is N.O. Dry.



**Plug connector acc. DIN 43651**

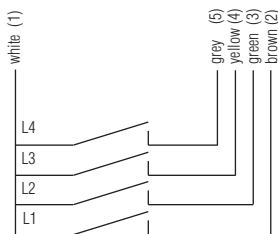
6 poles + earth  
Temperature: -20 ... +90°C  
Group 1 : 5, Group 2 : 3, Group 3 : 2,  
Group 4 : 2



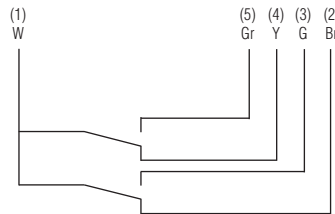
**Switching Groups**

(Pin correlation of the plug connectors)

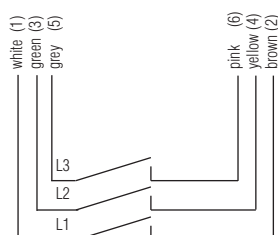
**Group 1**



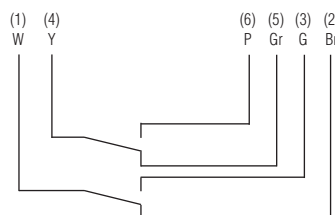
**Group 3**



**Group 2**



**Group 4**



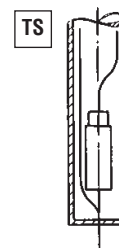
**Temperature Switch**

For large or OEM applications the LS-400E may be fitted with a temperature switch.

It is installed at the lower end of the stem and reduces the number of switch points by one.

Maximum Rating 2A, 120Vac, 2A, 24Vdc.

For full specification contact your sales office.



# LS-400E Multiple Level Switch check list

**MULTI POINT**

**LEVEL SWITCHES**

(Please copy and use as order form)

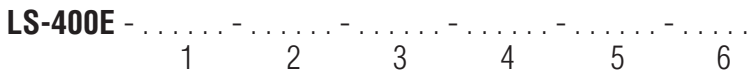
Customer: \_\_\_\_\_

Order no.: \_\_\_\_\_ Quantity: \_\_\_\_\_

**Application specific data:**

(Please complete fully and accurately)

1. Medium \_\_\_\_\_
2. Pressure (bar): Min \_\_\_\_\_ Max \_\_\_\_\_
3. Temperature (°C): Min \_\_\_\_\_ Max \_\_\_\_\_
4. Specific gravity (g/cm3): \_\_\_\_\_ Min \_\_\_\_\_ Max \_\_\_\_\_
5. Viscosity (SSU): \_\_\_\_\_
6. Tank: Material \_\_\_\_\_ Depth \_\_\_\_\_
7. Connection periphery (eg relay, PLC,.....): \_\_\_\_\_



- |                                  |   |                          |             |
|----------------------------------|---|--------------------------|-------------|
| <b>1. Mounting direction:</b>    | Through tank top                        | <input type="checkbox"/> | <b>O</b>    |
|                                  | Through tank bottom                     | <input type="checkbox"/> | <b>U</b>    |
| <b>2. Mounting Type</b>          | Brass                                   | <input type="checkbox"/> | <b>TM</b>   |
| <b>Tank screw:</b>               | Stainless Steel                         | <input type="checkbox"/> | <b>TC</b>   |
| <b>Flange ø75:</b>               | Brass                                   | <input type="checkbox"/> | <b>BM1*</b> |
| <b>ø52:</b>                      | Brass                                   | <input type="checkbox"/> | <b>BM2*</b> |
| <b>ø80:</b>                      | Brass                                   | <input type="checkbox"/> | <b>BM3*</b> |
| <b>Put in Plug G1/8:</b>         | Brass                                   | <input type="checkbox"/> | <b>CM</b>   |
|                                  | Stainless Steel                         | <input type="checkbox"/> | <b>CC</b>   |
| <b>No Mounting</b>               | Brass Stem                              | <input type="checkbox"/> | <b>OM</b>   |
|                                  | Stainless Steel                         | <input type="checkbox"/> | <b>OC</b>   |
| <b>3. Floats:</b>                | Buna N                                  | <input type="checkbox"/> | <b>N</b>    |
|                                  | Stainless Steel                         | <input type="checkbox"/> | <b>C</b>    |
| <b>4. Electrical connection:</b> | Plug connector DIN 43650                | <input type="checkbox"/> | <b>S3</b>   |
|                                  | max. switch points Group 1=2, Group 2=1 |                          |             |
|                                  | Plug connector DIN 43651                | <input type="checkbox"/> | <b>S6*</b>  |
|                                  | Cable and gland                         | <input type="checkbox"/> | <b>P*</b>   |
|                                  | Potted Cable                            | <input type="checkbox"/> | <b>VC</b>   |
|                                  | Potted Leads                            | <input type="checkbox"/> | <b>VL</b>   |
|                                  | Terminal box 6-poles                    | <input type="checkbox"/> | <b>K6*</b>  |
| <b>5. Switching group:</b>       | Group 1                                 | <input type="checkbox"/> | <b>1</b>    |
|                                  | Group 2                                 | <input type="checkbox"/> | <b>2</b>    |
|                                  | Group 3 (10VA, 0.3A, 100Vdc)            | <input type="checkbox"/> | <b>3</b>    |
|                                  | Group 4 (10VA, 0.3A, 100Vdc)            | <input type="checkbox"/> | <b>4</b>    |
| <b>6. Options:</b>               | Bent Stem                               | <input type="checkbox"/> | <b>BS</b>   |
|                                  | Temperature Switch                      | <input type="checkbox"/> | <b>TS</b>   |

\*S6, P, K6 not available with flange options BM1, 2 and 3

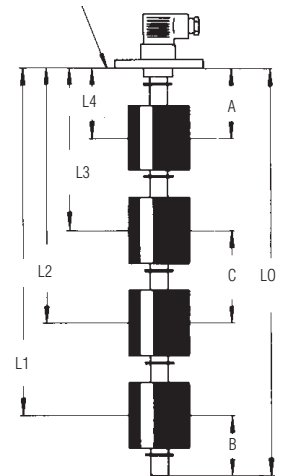
Please specify each non listed part:.....  
 .....  
 .....  
 .....

**Dimensions**

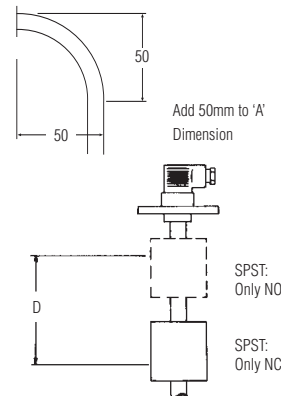
- L<sub>0</sub>** = 800mm max.
  - A** = min. from reference edge to highest switch point.
  - B** = min. from stem end to lowest switch point.
  - C** = min. between two switch points
  - D** = min. dual action
- (Note: one float or two levels can be used only when low level is NC, dry & high is NO dry)

Float	Buna	Stainless Steel
<b>A</b>	38mm	46mm
<b>B</b>	23mm	35mm
<b>C</b>	44mm	60mm
<b>D</b>	3mm	3mm

Reference edge (Sealing Face)



**Bent Stem Option**



**Level dimensions (Tolerances ± 3mm) related to the mid of float.**

Distance level	NO	NC	SPDT
L1 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L2 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L3 =	<input type="checkbox"/>	<input type="checkbox"/>	
L4 =	<input type="checkbox"/>	<input type="checkbox"/>	
L0 =	±2mm max. 800 mm		