

# Multiple Level Switch LS-800E (1-7 switch points)

Max. contact loads of the reed switch: SPST 100 VA; 3.0 A; 250 VAC (NC/NO).  
SPDT 20 VA; 0.5 A; 250 VAC (Change-over contact).

The data NC/NO are defined for: an empty tank / rising level.

## Specifications

<b>Materials</b>			
<b>Stem</b>	Brass	Stainless Steel	
<b>Mounting elements</b>	Brass	Stainless Steel	
<b>Flange</b>		Stainless Steel only	
<b>Float</b>	Buna N	Stainless Steel	PTFE
<b>Operating pressure</b>	10 bar	30 bar	3 bar
<b>Float temperature</b>	-40°C to +80°C Water -40°C...+110°C Oil	-40°C to +150°C	-40°C to +150°C
<b>Min. specific gravity of the liquid</b>	0.58 g/cm <sup>3</sup>	0.80 g/cm <sup>3</sup>	0.71 g/cm <sup>3</sup>
<b>Depth of immersion at a density of 1</b>	~20mm	~30mm	~34mm
<b>Protection rating</b>	IP65 (IP64 for Potted Cable/Leads)		

## Mounting Direction

Tank top : O      Bottom : U

## Mounting Types

(Material: Stainless Steel or brass)

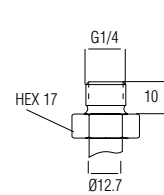
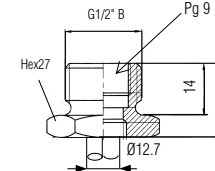
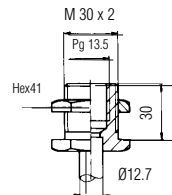
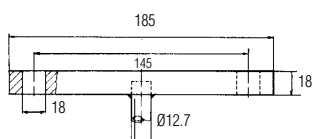
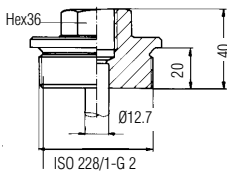
**TM/TC** = Tank screw DIN 910

**BCC** = Flange DN65-PN 16

**AM/AC** = Bulkhead fitting

**EM/EC** = Put in plug G1/2

**DM/DC** = Put in plug G1/4



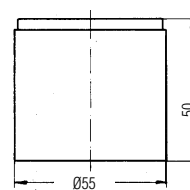
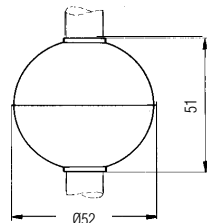
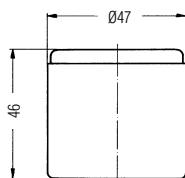
Available with Potted Cable/Leads Option only

## Floats

**N** = Buna N

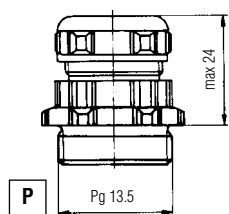
**C** = Stainless Steel

**T** = PTFE

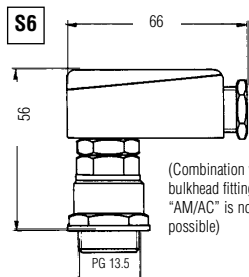


## Electrical Connections

**Pg 13.5 Cable and gland**  
Cable standard length appr. 1m;  
Temperature: -20 ... +80°C

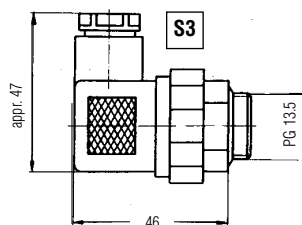


**Plug connector acc. DIN43651\***  
6 poles + earth  
Temperature: -20...+90°C  
max switch points: Group 1 : 5,  
Group 2 : 3, Group 3 : 2, Group 4 : 2



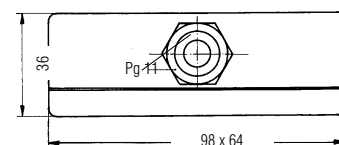
(Combination with bulkhead fitting "AM/AC" is not possible)

**Plug connector acc. DIN43650\***  
3 poles + earth  
Temperature: -20 ... +90°C  
max switch points: Group 1 : 2,  
Group 2 : 1

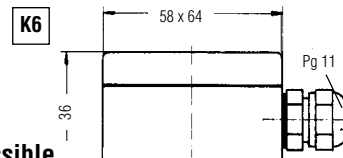


**Terminal box 12 poles\***  
Temperature: -20 ... +150°C

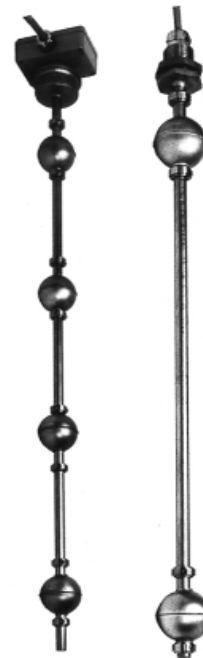
**K12**



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



\* Combination with put in plug "EM/EC" is not possible



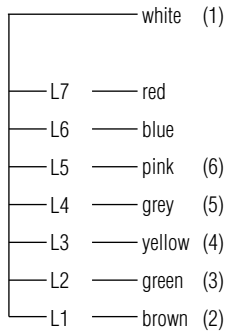
**MULTI POINT**

**LEVEL SWITCHES**

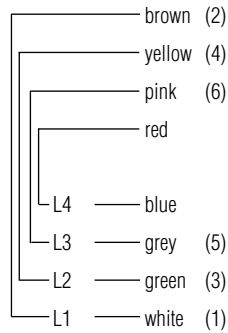
[www.gems-sensors.co.uk](http://www.gems-sensors.co.uk)

**Switching Groups**

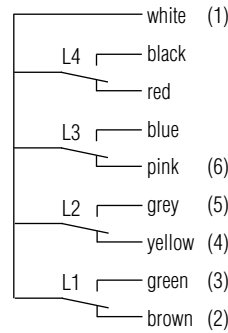
(Pin correlation of the plug connectors)



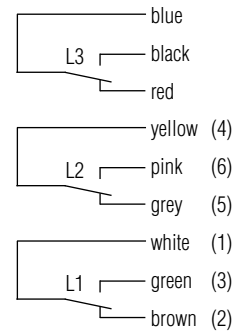
Group 1, max. 7 switch points, NC/NO



Group 2, max. 4 switch points, NC/NO



Group 3, max. 4 switch points (SPDT)



Group 4, max. 3 switch points (SPDT)

**Options**

**Vertical adjustment**

Vertical adjustment is only available with tank screw (T). It allows the stem to be adjusted vertically, limited only by the distance from the top stop ring to the electrical connector less the thickness of the mounting.

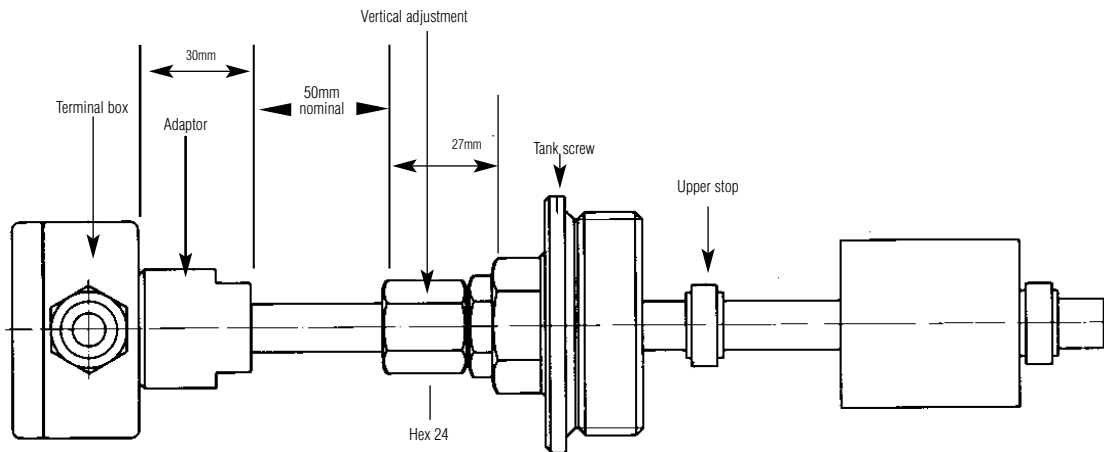
(Combination with bulkhead fitting "AM/AC" is not possible)

**Vertical adjustment**

**VVM** = Brass

**VVC** = Stainless Steel

max. pressure: 10 bar



**Slosh shield**

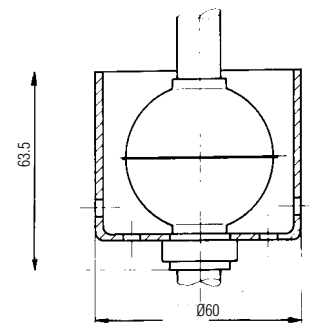
Each switch point can be equipped with a slosh shield, made from Stainless Steel, to avoid unintentional repetitive opening and closing of the switch due to turbulence or ripple.

(Combination with tank screw "TM/TC" is not possible)

**Slosh shield**

Material: Stainless Steel

**DH**



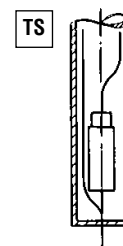
**Temperature Switch**

For Large or OEM applications the LS-800 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, 120 Vac or 2A, 24 Vdc

For full specification contact your sales office.



# LS-800E Multiple Level Switch check list

(Please copy and use as order form)

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

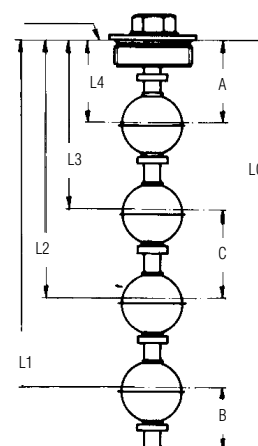
**Application specific data:** (Please complete fully and accurately)

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,.....): \_\_\_\_\_

**Dimensions**

- L<sub>0</sub>** = 3000mm max.
- A** = 60mm min. distance to highest switch point.
- B** = 50mm min. distance between stem and lowest switch point.
- C** = 75mm min. between two switch points
- D** = 7mm min. dual action (One float actuates two switch points).

Reference edge (Sealing Face)



**LS-800E - . . . . . 1. . . . . 2. . . . . 3. . . . . 4. . . . . 5. . . . . 6.**

**1. Mounting direction:** Through tank top  **O**  
 Through tank bottom  **U**

**2. Mounting:**

**Tank screw G2"** Brass  **TM**  
 Stainless Steel  **TC**

**Bulkhead fitting** Brass  **AM**  
 Stainless Steel  **AC**

**Put in plug G1/2"** Brass  **EM**  
 Stainless Steel  **EC**

**Flange DN 65/PN16** Stainless Steel  **BCC**

**Put in plug G1/4"** Brass  **DM**  
 Stainless Steel  **DC**

**No Mounting:** Brass  **OM**  
 Stainless Steel  **OC**

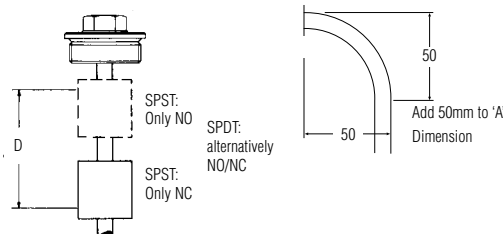
**3. Floats:** Buna N  **N**  
 Teflon  **T**  
 Stainless Steel  **C**

**4. Electrical connection:** Plug connector DIN 43650  **S3**  
 Plug connector DIN 43651 (Not with AM/AC)  **S6\***  
 Cable gland  **P**  
 Potted Cable  **VC**  
 Potted Leads  **VL**  
 Terminal box 6-poles  **K6**  
 Terminal box 12-poles  **K12**

**5. Switching group:** Group 1  **1**  
 Group 2  **2**  
 Group 3  **3**  
 Group 4  **4**

**6. Options:** Vertical adjustment Brass  **VVM**  
 Vertical adjustment Stainless Steel  **VVC**  
 Slosh Shield  **DH**  
 Temperature Switch  **TS**  
 Bent Stem  **BS**

**Bent Stem Option**



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

Distance level	NO group 1	NC group 1	NO group 2	NC group 2	SPDT group 3	SPDT group 4
L1 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L2 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L3 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L4 =	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L5 =	<input type="checkbox"/>	<input type="checkbox"/>				
L6 =	<input type="checkbox"/>	<input type="checkbox"/>				
L7 =	<input type="checkbox"/>	<input type="checkbox"/>				
L0 =	±2mm max 3000 mm					

**Please specify each non listed part:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\*S6 not available with AM/AC