

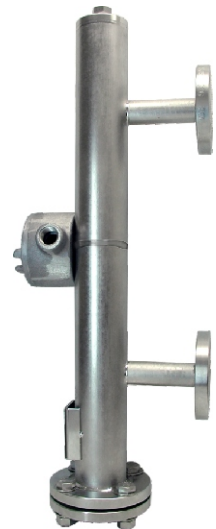


Magnetic Level Switch

SERIES: BLS903

- TEMPERATURE UP TO 450°C/840°F
- PRESSURE UP TO 3600 PSI (250 BAR)
- OPEN OR CLOSED TANK APPLICATIONS
- REPLACES FLOAT ACTUATED TYPE LEVEL SWITCHES
- WATERPROOF, INTRINSICALLY SAFE OR EXPLOSION PROOF
- FOR LIQUIDS WITH SPECIFIC GRAVITY OF HIGHER THAN 0.38

Applications:
 Boilers
 Propane Tanks
 Alkylation Units
 Chemical Storage
 Feed Water Tanks
 Petrochemical Tanks



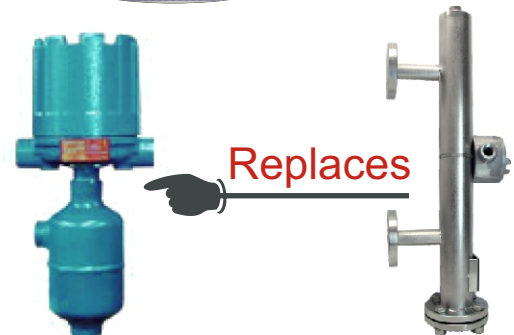
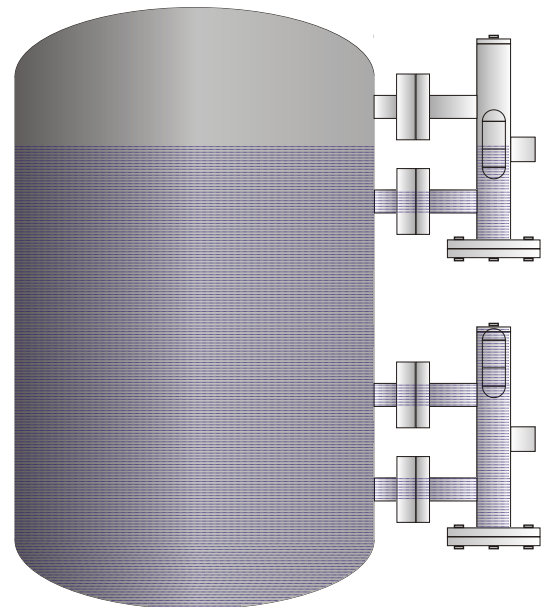
INTRODUCTION

The BLS903 Magnetic Level Switch is to trigger at a certain liquid level in boilers, storage tanks, etc. Due to the materials and technology used in the construction of these non-contact magnetic level switches, these instruments are very precise and reliable both at low and high pressures and temperatures.

The BLS903 level switches use the principle of magnetic coupling to provide level monitoring without direct contact between the switch and the fluid in the system. The float inside the hermetically sealed tube moves with the changing liquid level, and as it travels, the switches which are magnetically coupled to the float will be actuated.

Reed switches or electrical snap (magnetic pendulum switch) are mounted at a certain place on the exterior of the column to be activated at high/low levels. The number of switches is only limited by the length of the column and the switches can be mounted on either side of the column.

These level switches are suitable for applications in chemical and petrochemical industries, sewage water processing, power generation and boilers and the system is more reliable and easier to install and maintain than conventional level switches. Replacing the existing external cage liquid level switches with magnetic level switches would result in improved safety, reduced maintenance, and lower long-term operating cost. Mounting the level switches is an easy task.

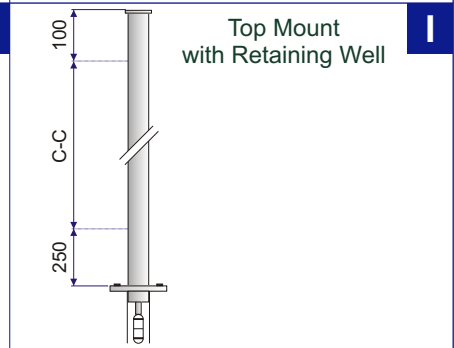
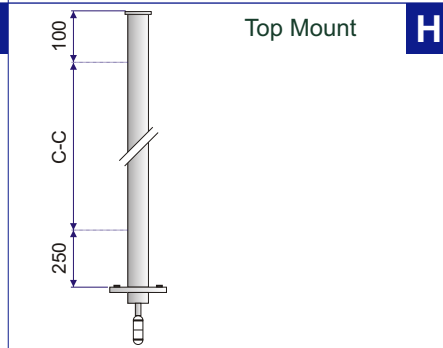
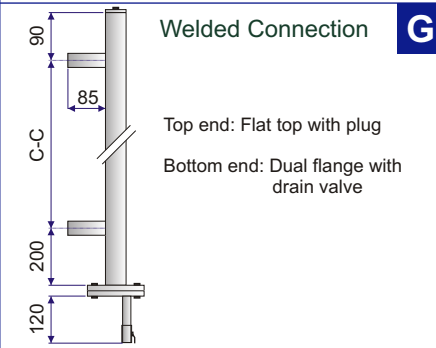
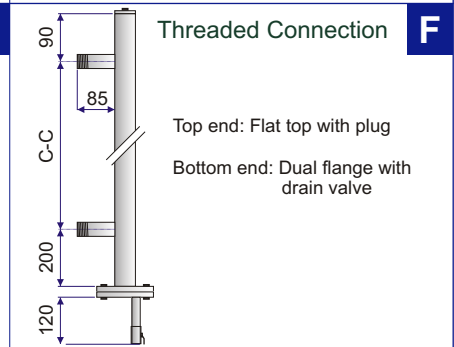
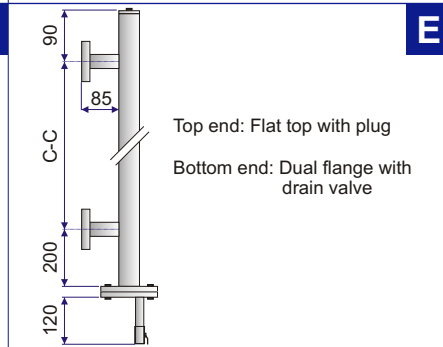
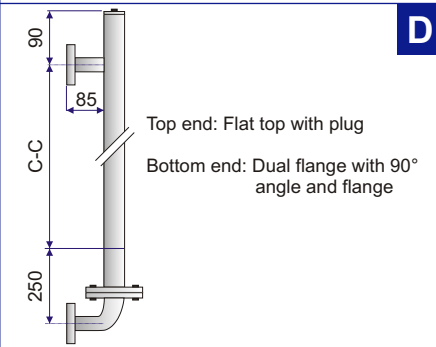
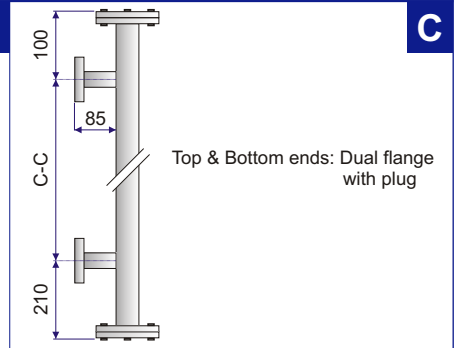
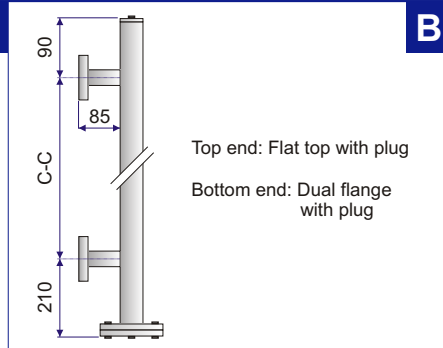
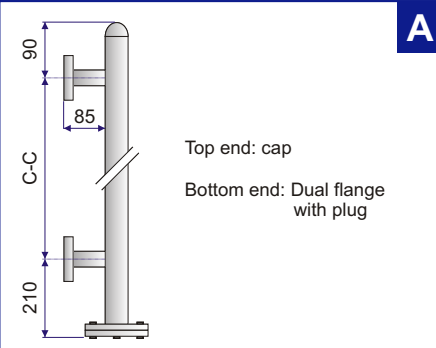


SPECIFICATIONS

Chamber & Float Material	316L stainless steel (std.); Options: 304L stainless steel, titanium, Monel, PVC, Hastelloy C, polypropylene, Teflon and rubber-lined stainless steel
Process Connection	Flange ANSI/DIN, threaded or butt-weld
Switch Housing	ABS (std.), Aluminum (Explosion-proof)
Measuring Length	200 mm up to 6 meters; Multi-section for higher lengths
Operating Pressure	Vacuum up to 3600 psi (250 bar)
Operating Temperature	-200...450°C
Environmental Protection	IP67 for the transmitter head
Min. Specific Gravity	0.38
Maximum Viscosity	500 cst

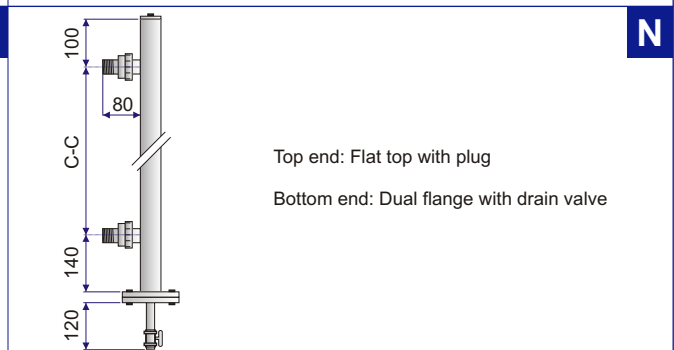
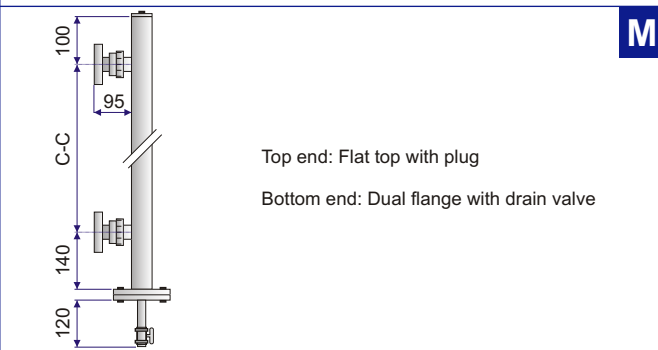
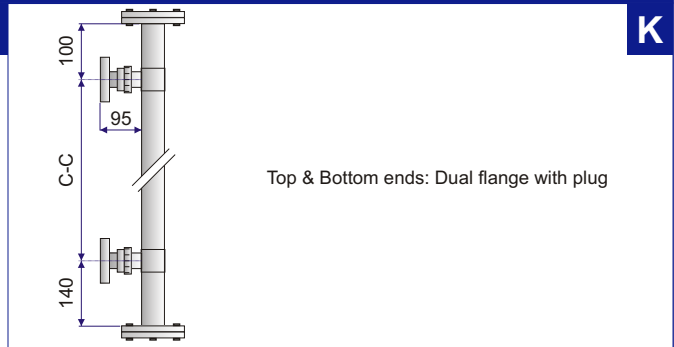
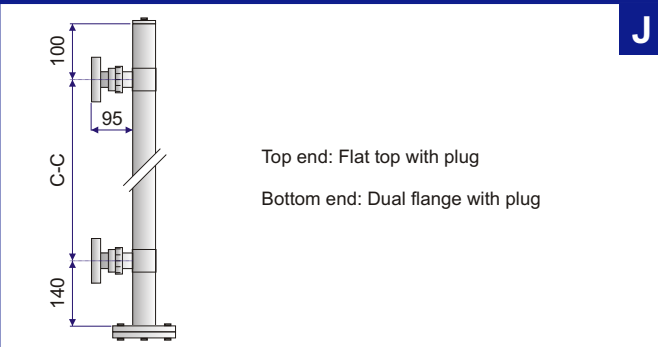
METAL TYPE

The following dimensions in mm are only samples to help visualizing the final product. Final dimensions of the level gauge depend on the float type, maximum pressure and temperature and the specific gravity of the fluid.



PLASTIC TYPE

The following dimensions in mm are only samples to help visualizing the final product. Final dimensions of the level gauge depend on the float type, maximum pressure and temperature and the specific gravity of the fluid.



Type: R1

Reed switch bi-stable

Function: N.O. or N.C.
Enclosure: IP 67
Voltage: 10-240 V
Maximum Rating: 0.5A / 20W / 30VA
Reproducibility: < 2 mm
Temperature Rating: -40...+105°C
Cable Length: 2 or 5 meter
Dimensions (mm): 36x26x13
Temperature (option): 140°C maximum



Type: R2 EEx i

Reed switch bi-stable

Function: N.O. or N.C.
Enclosure: IP 67
Voltage: 10-24 V
Max. Rating: 0.5A / 20W / 30VA
Reproducibility: < 2 mm
Temperature Rating: -40...+90°C
Cable Length: 5 or 10 meter
Dimensions (mm): 36x26x13
Temperature (option): 130°C maximum

Type: M1

Magnetic Pendulum System (hermetically sealed switch)

Function: SPDT
Enclosure: IP 65
Voltage: 10-240 V
Maximum Rating: 2A / 40W / 100VA
Reproducibility: < 2 mm
Temperature Rating: -50...+380°C
Cable Entry: Gland (opt M20)
Dimensions (mm): Heat shield 90x60x4



Type: M2 EEx i

Magnetic Pendulum System (hermetically sealed switch)

Function: SPDT
Enclosure: IP 65
Voltage: 10-24 V
Maximum Rating: 0.5A / 20W / 30VA
Reproducibility: < 2 mm
Temperature Rating: -50...+380°C
Dimensions (mm): Heat shield 90x60x4
Option: Gold plated

Type: R3 EEx m II T6; EEx ia II C T6

Reed switch bi-stable

Function: SPDT
Enclosure: IP 67
Voltage: 10-230 V
Maximum Rating: 0.6A / 45W / 45VA
Switching Differential: 9-15 mm
Reproducibility: < 4 mm
Temperature Rating: -25...+85°C
Cable length: 5 or 10 meter
Dimensions (mm): 98x25x19



Type: M3 EEx d IIC T6; EEx d I 150°C

Magnetic Pendulum System (hermetically sealed switch)

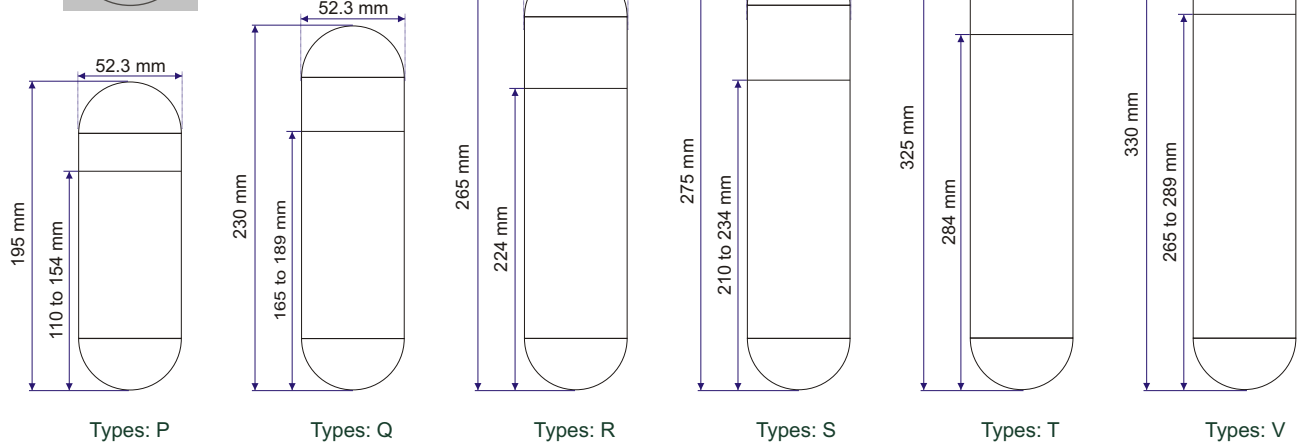
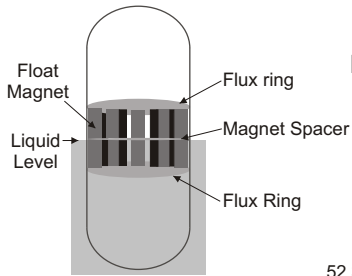
Function: SPDT
Enclosure: IP 65
Voltage: 10-240 V
Maximum Rating: 2A / 40W / 100VA
Temperature Rating: -50...+300°C
Cable Entry: 3/4" NPT max. 1.5 mm²
Dimensions (mm): Heat shield 195x130x4
Options: 2 x SPDT; M20x1.5



METAL FLOATS

Dimensions may change for special applications.

Based on the operating conditions, the appropriate float will be selected by Indumart.



Specifications may change without prior notice.

ORDER CODE

Model: BLS903 -

Mounting Configuration

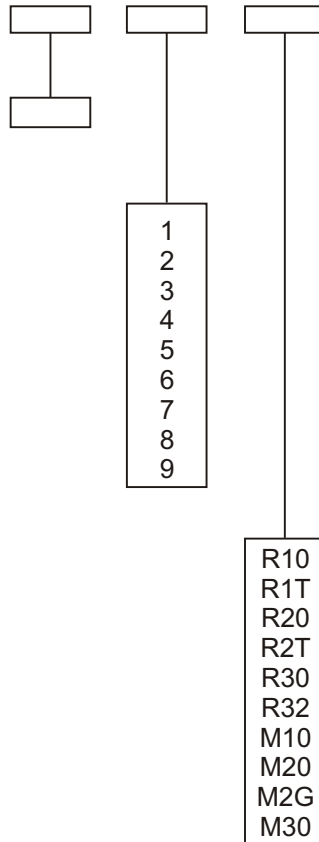
Select one of the A to M configurations. (Please consult factory for special design)

Chamber & float material

- 316L SS (std.)
- 304L SS
- Monel
- Titanium
- Hastelloy C
- PVDF
- PVC
- Polypropylene
- Rubber lined SS

Switch Class

- R1
- R1 - High Temperature
- R2
- R2 - High Temperature
- R3
- R3 - 2 x SPDT
- M1
- M2
- M2 - Gold-plated Contacts
- M3



Options: Insulation pad and blanket for high temperature, and electric heat tracing for cryogenic processes are available.

While ordering, the following parameters must be stated.

- Pressure range of the liquid
- Temperature of the liquid
- Specific gravity of the liquid
- Viscosity of the liquid
- Pressure class rating (ANSI/DIN)
- Process connection size
- C-C distance
- Cable length required (R Switches only)

Note: if more than one switch is required, please mention the code(s) for additional switch(es) at the end of the ordering code.

Example: BLS903-A1R30-R30-R30-R30
The above comes with 4 switches.



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