



point level detection – liquids



TLS Series

Cable Suspended Float Level Sensors

- One float gives a latched signal between two different levels
- Differential and switch level points are easily field adjustable
- Unique tumbling action eliminates chatter
- Mercury free design

The TLS-8 and TLS-6 cable suspended float switches are designed to provide the control signals for a differential pump control system. These top mounting switches are suitable for use in a wide variety of open

tanks. The control differential in the TLS-8 is adjustable from 12 to 157 in. (300 to 4000 mm) while the TLS-6 has an adjustable span of 8 to 39 in. (200 to 1000 mm).

■ Chemical Resistance

The ABS covered float and PVC jacketed cable are compatible with a wide range of liquids. However, there are some liquids that are not compatible with these materials.

ABS can be quickly damaged by the following liquids:

Aromatics (benzene, toluene, xylene) cause the float to

dissolve. Esters and ketones cause the float to swell.

PVC cable can be used with the following cautions:

Oils, especially vegetable oils and fats, tend to absorb the plasticizer of the PVC jacketed cable which causes it to stiffen.

■ Specifications

Switch Action

TLS-6A: Empty

TLS-6B: Fill

TLS-8A: Empty

TLS-8B: Fill

Material

Cable: PVC

Float: ABS Resin

Rope: PE

Weight: Painted cast iron (optional corrosive resistant PE paint)

Rating: IP68

Output Contact Rating: SPST, 50 VA, 0.5 A max., 300 VAC max. (resistive)

Minimum SG

TLS-6: 0.7

TLS-8: 0.9

Control Range

TLS-6: 8 to 39 in. (200 to 1000 mm)

TLS-8: 12 to 157 in. (300 to 4000 mm)

Operating Temperature: 14 to 122°F

(-10 to 50°C); Optional (-10 to 70°C) with T high temperature option

Maximum Pressure: 29 psi (2 bar)

Float Dimensions:

TLS-6: 2.8 dia. x 4.2 in. (70 x 107 mm)

TLS-8: 3.3 dia. x 6.5 in. (83 x 165 mm)

Cable Size:

TLS-6: Ø6.5 mm, 2 x 0.5 mm²

TLS-8: Ø8.1 mm, 2 x 0.75 mm²

Cable Length: 19.7 ft. (6 m) std.;

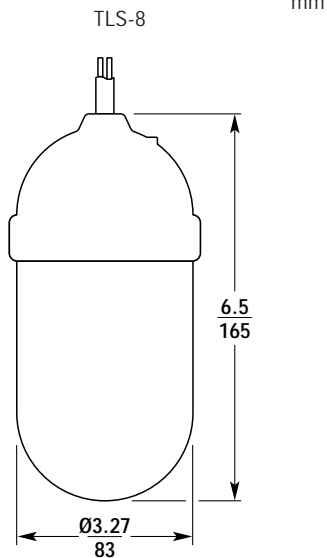
65.6 ft. (20 m) max

TLS Series – Cable Suspended Float Level Sensors

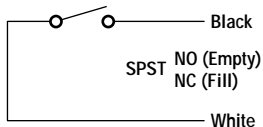
■ Applications

The TLS series cable suspended float switches can be installed in areas as small as a 55 gallon drum. The ABS covered float and the PVC jacketed cable make them ideal for most pump control applications.

■ Dimensions



■ Wiring



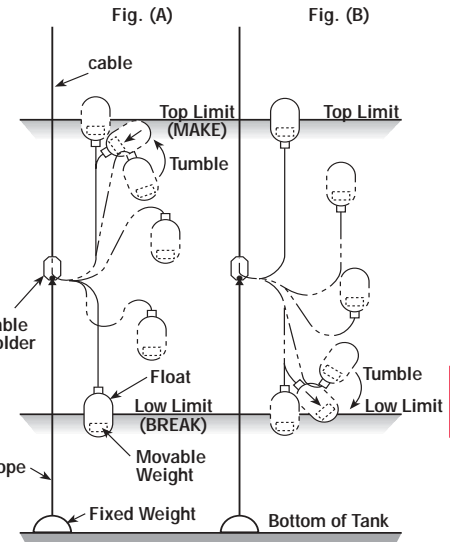
■ Operational Description

The TLS cable suspended float contains a hermetically sealed reed switch, a permanent magnet and a movable weight.

As the liquid level rises and falls, the movable, magnetized weight slides up and down inside the float and acts upon an encapsulated reed switch. The float tumbles at its upper and lower limits. In this way the reed switch changes state at the upper limit and remains in this state until the lower limit is reached and it changes state again. Models are available for either empty or fill operations.

■ Intrinsic Safety

Any of the STI float switch level controls may be used with STI Intrinsic Safety Barriers (IS) to meet hazardous location requirements for level control device. For more information see



point level detection – liquids

www.automationsensors.com/7150. For hazardous location requirements see the website at www.automationsensors.com/0825.

■ Ordering Information

Float Size	6	2.8 x 4.2 in. (70 x 107 mm)
	8	3.3 x 6.5 in. (83 x 165 mm)
Operation	A	For empty control
	B	For fill control
Option	(null)	No option
	K	High operating temperature
	Q	Anticorrosive treatment (epoxy)
Cable Length	(null)	20 ft. (6 m) cable standard
	L	m (max. length to 20 m)
Multiple Configuration	66	2.8 in. x 4.2 in. (70 x 107 mm)
	88	3.3 in. x 6.5 in. (83 x 165 mm)
Specify Number of Floats	1-6	Number of floats



For the Latest Information

Try Our Fax Back System at 1/916/431-6544

On the Internet: www.stiautomationproducts.com E-mail: sales@stiautomationproducts.com