

# Thread Treatment

## Sealing

When threading metal threads into a metal coupling, pipe sealant or Teflon® tape is recommended. Due to potential compatibility problems, when sealing plastic threaded units, a compatible pipe sealant such as **No More Leaks™** from Permatex® is recommended.

## Tightening

When threading a plastic level switch into a metal coupling, the installer should use a suitable wrench and tighten the threads 1 to 1-1/2 additional turns past hand tight. Over torquing of the threads will result in damage to the plastic mounting plug.

## The Effect of Thread Engagement on Actuation Points

The length of mounting threads engaged at installation is important in calculating switch actuation points and the actual length of stem extending into the tank. Use the chart below to find the thread engagement length (T) for a given NPT size. Factor the T dimension into any calculation of switch actuation levels (L) and overall length (L<sub>0</sub>).

	NPT							
	1/8"	1/4"	1/2"	3/4"	1"	1-1/4"	2"	3"
T Dim.	.27"	.39"	.53"	.55"	.68"	.71"	.76"	1.20"

**Examples:** To solve for "L" use the formulas shown in the examples below. To calculate the Actual Tank Intrusion, substitute the L<sub>0</sub> value in place of L<sub>1</sub> in any of the formulas.

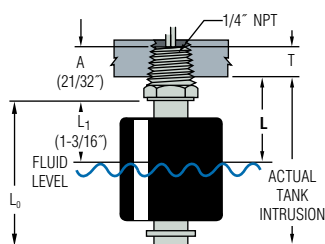
### Internally Mounted – Standard Length

LS-1900 Series internally mounted through a 1/4" NPT hole.  
To calculate L dimension:

$$L = L_1 + (A - T)$$

$$L = 1-3/16" + (21/32" - .39")$$

$$L = 1.46"$$



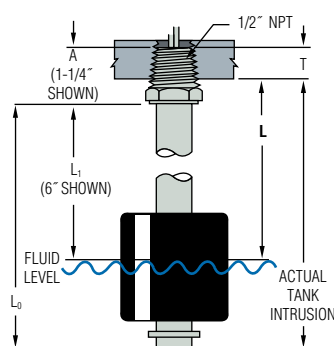
### Internally Mounted – Configurable Length

LS-800 Series (Type 1) internally mounted through a 1/2" NPT hole.  
To calculate L dimension:

$$L = L_1 + (A - T)$$

$$L = 6" + (1-1/4" - .53")$$

$$L = 6.72"$$



Definition of Variables Used in Examples Below

A = Mounting length.

T = Thread engagement.

P = Distance from coupling (bung) top to inside surface of tank or bracket.

L = Switch actuation level as measured from inside surface of tank or bracket to fluid surface.

L<sub>1</sub> = Switch actuation level, nominal, as measured from bottom of mounting (based on a liquid specific gravity of 1.0).

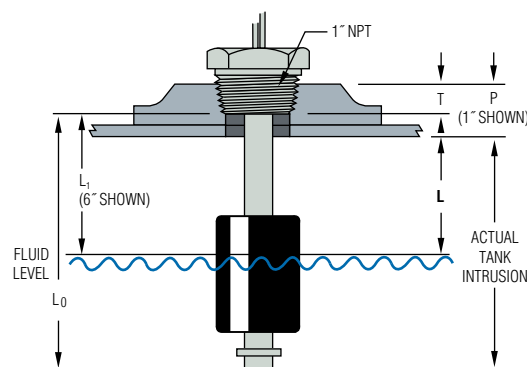
### Externally Mounted – Configurable Length

LS-700 Series (Type 3) externally mounted through a 1" NPT hole. To calculate L dimension:

$$L = L_1 - (P - T)$$

$$L = 6" - (1" - .68")$$

$$L = 5.68"$$



No More Leaks is a trademark of Permatex® Industrial Corp., a subsidiary of Loctite Corp.  
Teflon is a registered trademark of DuPont Corp.