

**KOBOLD Model NDT  
Static Pressure Level Switch  
User Instructions**



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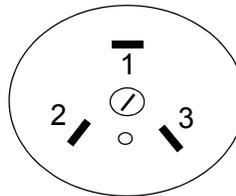
**[www.koboldusa.com](http://www.koboldusa.com)**

**Description**

The KOBOLD model NDT level switch uses the static pressure principle to monitor the level in open or vented tanks. The unit operates as follows:

1. The rising liquid level will provide a confined air volume in a user supplied pipe when the liquid reaches the bottom edge of the pipe.
2. As the liquid level continues to rise, the air trapped inside the pipe is compressed.
3. The switching will occur when the air inside the pipe is compressed to a pressure of 4 inches of water column.
4. The result is a level switch whose switchpoint is fixed at 4 inches above the bottom edge of the user supplied pipe. This allows the user to set his switchpoint by simply attaching the appropriate length pipe to the NDT level switch.

**Electrical Connections**



- 1 = Common
- 2 = Normally Closed
- 3 = Normally Open

**Technical Specifications**

**Wetted Parts**

Exposed to Liquid:  
Exposed to air pocket:

User supplied pipe  
NBR, Polyamide

**Housing:**

Polyamide

**Media:**

Any free flowing liquid

**Fittings:**

NDT-2020  
NDT-2080

1/2" BSP  
1-1/4" Hose fitting  
(accommodates 1" SCH 40 or SCH 80)  
4" above the end of user supplied pipe

**Switchpoint:**

**Switch Error:**

±10%

**Temperature Range:**

15 to 185°F

**Electrical Characteristics:**

Switch Type:  
Maximum Rating:

SPDT  
250 VAC, 8 Amp resistive, 1.5 Amp  
inductive

Protection:

NEMA 4

### **Precautions**

The following precautions must be adhered to at all times when using the model NDT flow switch:

- Inspect the instrument for damage upon arrival. Cracked, fractured or otherwise damaged instruments must not be put into use since the device is weakened to an unknown extent. If necessary, contact KOBOLD Instruments, Inc. for further guidance on making claims for damaged instruments.
- UNDER NO CIRCUMSTANCES must the maximum tolerances of temperature, pressure or electrical loading be exceeded.
- Double check all electrical connections prior to placing the unit into service. Mis-wired electrical connections can cause immediate and permanent damage to the instrument.

### **Installation Instructions**

1. The model NDT level switch must be mounted above the top of the tank to ensure that the fluid inside the tank will not contact the switch internals. If the fluid is permitted to flood the switch internals, the setpoint may be permanently altered or the switch may otherwise be damaged.
2. The pipe which is to be connected to the switch must be cut such that it extends into the tank 4 inches farther than the desired setpoint. For example, if the desired switchpoint is 12 inches below the top of the tank, the pipe should be cut such that it extends 16 inches into the tank.
3. If the unit with a threaded pipe connection is being used, a thread sealant such as PTFE tape should be applied to the threads to ensure an air-tight fit.
4. After all electrical connections are made, ensure that both the housing lid and the cable gland are tightly secured. This will ensure the watertight integrity of the unit.
5. Both the level switch and the pipe must be rigidly supported to prevent damage to the pipe fitting and subsequent switch malfunction.

### **Maintenance**

Since the NDT level switch is designed to function without contacting the media, virtually no maintenance is required. It is recommended that an occasional inspection of the electrical connections is made to ensure that all connections are tight, and that no corrosion exists. Additionally, if the process media tends to coat tanks and piping, it is recommended that the pressure pipe be removed and cleaned on a periodic basis.

### **Questions**

Call one of our friendly engineers at 800-998-1020.