

# ***RF Level Switches and Controls***



## ***Guaranteed Performance and Reliability***

RF level switches deliver peak performance at low cost. They are available in four models, providing a range of capabilities and cost-effectiveness for virtually any application. RF level switches offer single or dual switch points on a single probe and are commonly used for interface and wastewater applications. All Magtech RF level switches are backed by an Application Performance Guarantee and fully warranted.

## **FEATURES**

- Ignores significant product build-up
- Solid state, no moving parts
- Simple installation and calibration
- Modular electronics easily replaced
- Probe length easily field modified
- Explosion proof housing standard
- Rugged construction handles the toughest products
  - **LIQUIDS:** wastewater, oils, acids, slurries, fuels, caustics
  - **INTERFACES:** oil/water, foam/liquid
  - **DRYS/SOLIDS:** fly ash, cement, plastics, flour, powders, sand, grains, carbon black, wood chips

## LS 6000 Level Switch

### Low Cost, High Performance

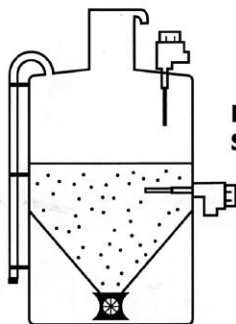
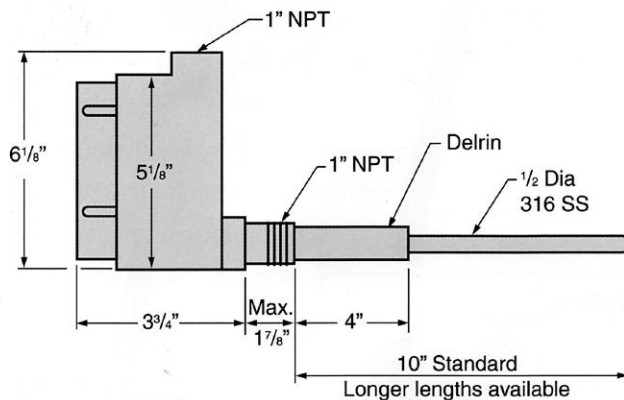
The LS 6000 level switch is an excellent general purpose level control. This unit can sense all liquids and difficult-to-measure dry materials.

The LS 6000 employs a radio frequency (RF) balanced impedance bridge to sense the presence or absence of product. This technique provides the ability to ignore significant product buildup on the probe and stability over wide temperature swings, thus eliminating the need for seasonal recalibration.

All electronics are housed in an explosion-proof enclosure and all necessary calibration adjustments and indicators are on-board, so all that is needed to calibrate the LS 6000 is a small screwdriver.

The probe is very rugged and made of 1/2-inch diameter 316 stainless steel. If a probe is too long, it may simply be shortened with a saw. To lengthen a probe, simply weld-on additional rods. Probes of all lengths are available from the factory.

- Senses liquid and dry materials
- Ignores significant product build-up
- On-board fuse protection
- Simple calibration
- Failsafe electronics
- 5 AMP, DPDT relay output



**DRY BULK SOLIDS DETECTION**

## LS 7000 Level Switch

### Most Versatile Level Switch Available

The LS 7000 level switch has all of the features and reliability of the LS 6000, plus features that make it the most versatile level control on the market.

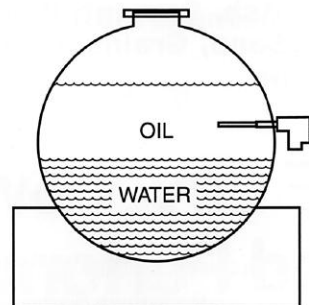
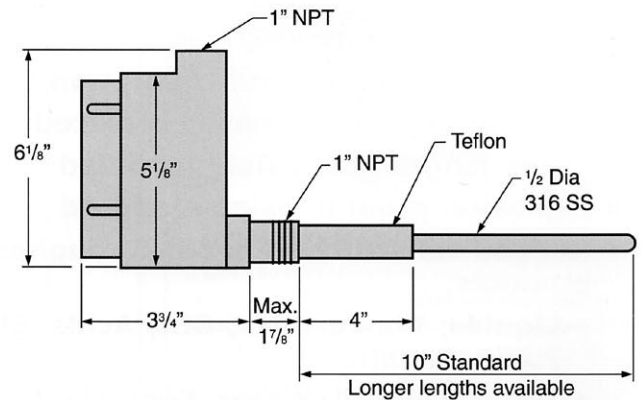
Every standard unit has an on-board fuse and surge suppressor to protect the electronics from improper supply voltages.

A built-in static arrestor protects the circuitry from hostile bin environments created by static-prone materials such as plastic pellets.

An on-board test switch combined with modular electronics makes troubleshooting and repair simple. Every unit is backed by a two-year warranty.

A time delay allows the user to select ON DELAY or OFF DELAY operation. This timing range is adjustable from 1/8 second to 2 hours. The timer can be used to ignore wave action in a tank or used to pump down a sump with a single probe.

- User-programmable time delay
- On-board fuse and spike suppression
- Built-in static protection
- Failsafe high or low level
- On-board test switch



**INTERFACE DETECTION**

## LS 7000/2 Dual Point Level Switch

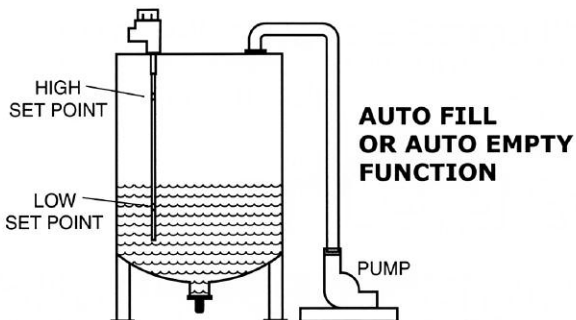
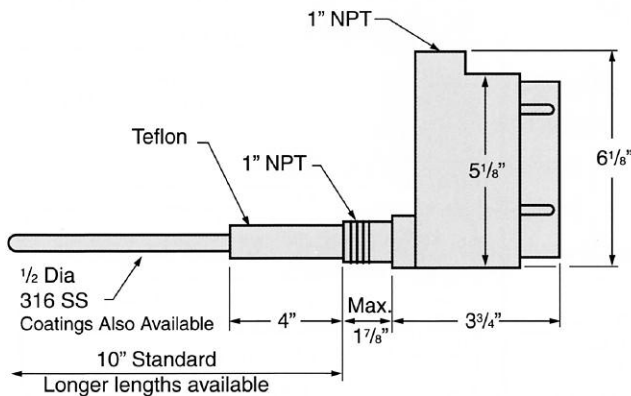
### Field Adjustable High and Low Setpoints on a Single Probe

The LS 7000/2 dual point level switch is specifically designed to automatically fill or empty a tank, hopper or sump. The high and low setpoints are adjustable over the entire length of the probe. All calibration adjustments and indicators are enclosed in an explosion-proof housing.

The dual-point level switch uses a single relay (DPDT 5 amp) and an on-board latching circuit for automatic operation. No external latching relays or holding contacts are required – simply wire the relay output in series with the pump. For example: to automatically fill a vessel, select "AUTO FILL" on the electronics, and the relay will energize when material is below the "low setpoint." The pump will turn on and continue to run until the level reaches the "high setpoint," then shut off. For "AUTO EMPTY," relay action is reversed.

For highly conductive materials, a Halar-coated probe is recommended.

- Field selectable "AUTO FILL" or "AUTO EMPTY"
- Internal latching circuitry
- Simple installation and calibration
- On-board fuse protection
- Modular electronics easily replaced



## LS 8000 Remote-Mounted Level Switch

### Remote-Mount Electronics up to One Mile from the Probe

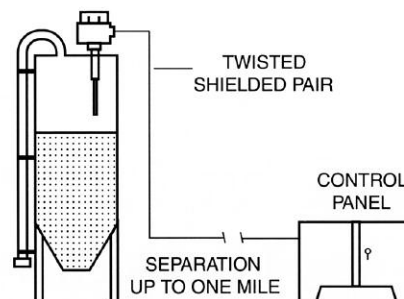
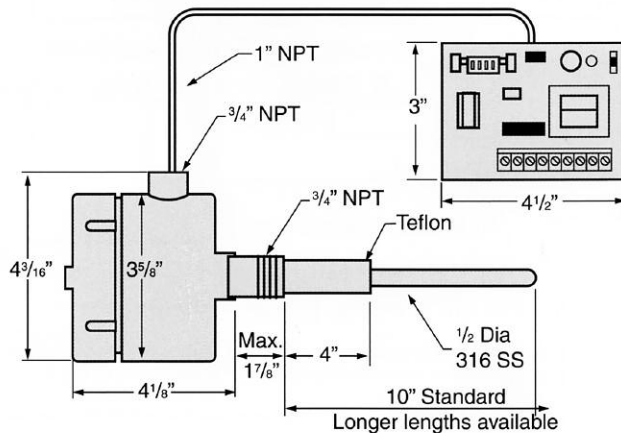
The LS 8000 remote-mounted level switch is the perfect choice when it is unsafe or inconvenient to mount electronics directly to the probe.

The probe consists of a maintenance-free, epoxy encapsulated transmitter in an explosion-proof housing. The transmitter is connected to a receiver with a twisted, shielded pair of wires (Belden 8761 or equal). The receiver board is wired to the supply voltage and has all the necessary calibration adjustments, failsafe and time delay adjustments, and the relay output.

It is possible to calibrate the LS 8000 without climbing a tall tank. A probe can be located up to one mile from the nearest supply voltage.

Remote mounting does not sacrifice the reliability, stability or performance that make Magtech level switches superior.

- Inexpensive interconnect cable
- Failsafe high or low level
- On-board fuse protection
- Adjustable time delay
- Optional enclosure for receiver



## Specifications

Electrical	LS 6000	LS 7000	LS7000/2	LS8000
Power	115 VAC ( $\pm 15\%$ ), 50/60 Hz, 2 Watts - Standard (112 VDC, 24 VDC, or 230 VAC optional)			
Output	2 Form C Contacts, DPDT Relay, 5 Amp Resistive @ 125, 230 VAC; 30 VDC			
On-Board Fuse	.25 Amp	.25 Amp	.25 Amp	.25 Amp
Selectable Failsafe	High or Low Level	High or Low Level	N/A	High or Low Level
Time Delay	N/A	Select: On or Delay Adjust: 1/ Sec - 2 Hrs	N/A	Select: On or Delay Adjust: 1/ Sec - 2 Hrs
RF Frequency	1.3 MHz (approx)	1.3 MHz (approx)	1.3 MHz (approx)	1.3 MHz (approx)
Mechanical	LS 6000	LS 7000	LS7000/2	LS8000
Vessel Entry	1" MNPT	1" MNPT	1" MNPT	1" MNPT
Conduit Entry	1" MNPT	1" MNPT	1" MNPT	1" MNPT
Probe	1/2" Diameter 316 Stainless Steel Standard (Halar/Other Coatings Optional)			
Insulator	Delrin	Teflon	Teflon	Teflon
Housing	Explosion-Proof, Copper Free, Cast Aluminum			Transmitter: Explosion-Proof Receiver: Track Mounted PC Optional Enclosures
Environmental	LS 6000	LS 7000	LS7000/2	LS8000
Hazardous Area	☞ Approved Class I, Div. I, Groups C&D; Class II, Div. I Groups G, Class III, Div. 1			
Temperature: Electronics	-40° F to 185° F	-40° F to 185° F	-40° F to 185° F	-40° F to 185° F
Temperature: Probe	-30° F to 250° F	-30° F to 450° F	-30° F to 450° F	-30° F to 450° F
Pressure Probe	1000 PSI @ 75° F (Higher Upon Request)			

## Ordering Information

Model # (Example): **LS 7000 - 115 VAC - S - 10\***

Model \_\_\_\_\_  
 Supply Voltage \_\_\_\_\_  
 "S" - 316 stainless steel probe \_\_\_\_\_  
 "H" - Halar coated probe \_\_\_\_\_  
 Probe length in inches \_\_\_\_\_

\* This describes an LS 7000, powered by 115 VAC, with a 316 SS probe, 10" long.  
 The probe length is measured from the end of the nipple to the tip of the probe.  
 For CSA Option use Prefix CSA (i.e. CSA-LS-7000-115 VAC S-10).

## Warranty

Every unit is warranted for two years against defects in material or workmanship. See owners manual for complete details.

### ***Application Performance Guarantee***

If within 60 days of purchase, our product does not perform according to our claims and was properly installed in an approved application that does not exceed the stated performance specifications, the unit may be returned for full credit.



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