A unique Magnetic Linkage isolates the electrical compartment from controlled product, reducing maintenance and improving sensitivity. The sealed switch compartment and sealed leads yield the utmost in reliable operation. A wide selection of diaphragms and switches are available with choices of flange or suspension mounting to fit your specific application. The dry level Ultra-Mag Level Switch is extremely sensitive and very economical. The magnetic linkage makes this simple explosion-proof diaphragm switch the most rugged and reliable level control for a variety of products (see cut-away above).

**Mounting Selection:** A choice of either suspension or flange mounting is available to match your application. Flange mounting is the best choice for control of low or intermediate level in vessels containing granular product that does not “bridge”, “rat hole”, or otherwise build up on vessel walls. Choose suspension mounting for high level in vessels and for better operation with “bridging” product. See next page for more information on suspension and flange mounting kits. Note that the mounting configuration is represented by the letter “S” for suspension or “F” for flange which is the second digit in the part number on the next page.

**Diaphragm Selection:** A wide variety of diaphragms are available to match product bulk density, flowability, abrasiveness and temperature requirements while providing maximum sensitivity. The best choice for vessels subject to pressure or vacuum is "breathable" fabric (P Series), requiring no venting. Non-porous elastomer (G Series) type diaphragms are the best choice for more abrasive product and broader temperature range applications. Venting is always required with the G series and if used in pressurized vessels, venting to the tank atmosphere is required to allow pressure equalization. A slide rule "Diaphragm Selector" is available from the factory to help you choose the diaphragm best suited to your application.

**SPECIFICATIONS**

**Service:** Compatible powder or bulk solids.

**Wetted Materials:**
- Mounting Flange: See model chart. Aluminum or 304 SS;
- Diaphragm: See model chart. Urethane, Buna-N, PTFE, silicone rubber, polyester, fluoroelastomers, white Buna-N (food grade), or EPDM.
- Temperature Limits: Depends on diaphragm material, see model chart.
- Standard switch: -40 to 185°F (-40 to 85°C); High temperature switch: -40 to 350°F (-40 to 176°C).
- Pressure Limit: 60 psig (4.14 bar).
- Enclosure Rating: General purpose or weatherproof and explosion-proof. See model chart.
- Switch Type: See model chart.
- Electrical Rating: See model chart.
- Electrical Connections: 18 gage solid core, 600 volt TEW 105°C, style 1015. Epoxy sealed at conduit entrance. 12” (304.8 mm) long.
- Conduit Connection: 1/2” female NPT.
- Process Connection: For flanged models standard is 8-3/8” (212.725 mm) diameter bolt hole circle.
- Mounting Orientation: Flange mount or suspend depending on model.
- Set Point Adjustment: Internal screw.
- Weight: 7 lb (3.18 kg).
- Options: Suspension kits and flange adapter rings.
- Agency Approvals: UL and CSA.
Proximity Ultra Mag™ Level Switch

Suspension Mounting is normally used for high level monitoring in vessels. For product over 20 pounds/cu.ft., the level switch (diaphragm face) should be located about 1/2 the distance from the vessel wall to the point of entry. Pressure required to depress the diaphragm and trip the switch is in the range of 5–15 oz in the horizontal direction (perpendicular to the diaphragm). Suspension mounting provides the easiest vertical adjustment capability, greatest sensitivity and best maintenance conditions.

Suspension Assembly Kits: Pre-assembled kits are available from the factory, or you can build your own kits using standard pipe fittings shown in our Proximity Bill of Materials (Form No. 101). Pipes and fittings are normally galvanized steel, but aluminum and stainless steel pipes and fittings are available. Units pictured on the previous page are secured to a steel cover plate that rests on a rectangular steel flange.

Aluminum Flange Adapter Rings

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Note: OD = Outside Diameter