Introduction
The MS41 electric switch is a magnetically actuated double pole double throw switch. When the MS41 is mounted on a KM26, LS Series, or an External Chamber that contains a magnetic float, it can sense a high or low level within a vessel. The unique magnetic coupling action eliminates the need for seals, diaphragm springs, or torque tubes because there is no physical contact with the process. The switch configuration also has no process connections which insures complete isolation from the process. The maintenance free design requires no periodic cleaning or operational checks and contains hermetically sealed contacts that insure high reliability and extended product life.

Features
- Hermetically sealed DPDT switch
- NEMA 4X sealed 316L stainless steel enclosure
- Separate terminal compartment eliminates corrosion potential
- Easy mounting and adjustment - only screwdriver required
- Trip point infinitely adjustable without changing process piping
- Vibration resistant
- Compact design
- Process temperatures from −320 to 850°F/-195 to 454°C
## SPECIFICATIONS

### Switch
- **Switch Type**: Magnetically actuated, cam driven snap action bistable switch; DPDT
- **Switch Action**: Break before make
- **Max Deadband**: Approximately ±0.75" of float travel

### Contact Rating
- **Material**: Silver-Cadmium Alloy
- **AC Rating**: Max - 10 amp resistive, 1/4 HP @ 125 AC or 250 VAC and less than 187 Watts
- **DC Rating**: 2.6 amp @ 24 VDC, 1/2 amp @ 125 VDC, 1/4 amp @ 250 VDC
- **Lamp Load Rating**: 1.5A @ 125 VAC

### Process Temperature
- **Switch Ambient Temperature**: -60 to 300°F / -51 to 149°C Standard; -320 to 850°F / -195 to 454°C with options
- **-58 to 176°F / -50 to 100°C** (max. ambient temp. de-rated depending on approval rating, see below)

### Housing
- **Material**: 316L Stainless Steel, Dual Compartment Housing, NEMA 4X
- **Electrical Connections**: 3/4" FNPT conduit and terminal block with #6 screws

### Approvals
- **FM & CSA Explosion Proof Ratings**:
  - CL I / Div 1&2 / GP ABCD / DIP
  - CL II / Div 1&2 /GP EFG, CL III
  - FM: CL I, Zn 1, AEx d IIC
  - CSA: CL I, Zn 1, Ex d IIC
  - Housing: NEMA 4X OR TYPE 4X

- **FM & CSA IS Ratings**:
  - CL I / Div 1 / ABCD; CL II / Div 2 / EFG
  - CL I / Div 2 / ABCD; CL II / Div 2 / FG; CL III
  - FM: CL 1, Zn 0, AEx, ia, IIC
  - CSA: CL 1, Zn 0, Ex, ia, IIC

- **ATEX Flameproof**:
  - II 2GD T85°C     EEx d IIC T6 (-50°C ≤ Tamb ≥ 65°C)
  - Ex iaD 20/21 IP6X T85°C (-50°C Tamb ≥ 65°C)
  - Ex ID A21 T80°C

- **Intrinsically Safe**:
  - II 1GD T85°C     EEx ia IIC T6 (-50°C ≤ Tamb ≤ 65°C)
  - Ex ia IIC T6 (-50°C ≤ Tamb ≤ 80°C)

- **GOST Russia**:
  - 0ExialICT6, 1ExdCT6

- **IEC**:
  - Intrinsic Safety
    - Ex ia IIC T6 (-50°C Tamb ≤ 65°C)
    - Ex iaD 20/21 IP6X T85°C (-50°C Tamb ≥ 65°C)
  - Flameproof
    - II 2GD T85°C     EEx d IIC T6 (-50°C ≤ Tamb ≥ 65°C)
    - Ex ID A21 T80°C
ORDERING INFORMATION:
MS41 / a / b / c:

/a  Mounting
  S Standard up to 300°F / 149°C
  IH Includes Switch Insulation Pad; Process Temperatures up to 600°F / 315°C
  RD Includes Rod Mount Brackets for use with insulated KM26 Magnetic Level Gauges or ST95 Seal Fluid Supply Tanks with Switch Rods; Process Temperatures up to 850°F / 454°C

/b  Electrical Connection
  F7 3/4” FNPT Standard
  M2 M20 Adapter

/c  Approvals
  X None
  FMX Factory Mutual System (FM) and Canadian Standards Association (CSA) Flameproof
  FMI Factory Mutual System (FM) and Canadian Standards Association (CSA) Intrinsically Safe
  CEX ATEX Flameproof
  CEI ATEX Intrinsically Safe
  GR GOST Russia
  IEI International Electromechanical Commission I.S.
  IEX International Electromechanical Commission Flameproof

Note: Contact Factory for Special Application Requirements

Example Configurations:

<table>
<thead>
<tr>
<th>MS41 Mounted on KM26 Magnetic Level Gauge</th>
<th>MS41 mounted on LS Series Mechanical Level Switch</th>
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<tbody>
<tr>
<td><img src="image1" alt="MS41 Mounted on KM26 MLG" /></td>
<td><img src="image2" alt="MS41 mounted on LS Series" /></td>
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Wiring Connections

Contact closure is shown with the magnetic float below switch