K-TEK
A MEMBER OF THE ABB GROUP

MS41

Magnetically Actuated 10 AMP Hermetically Sealed Electric Switch

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**



DESCRIPTION

The K-TEK 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 K-TEK 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.

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	-60 to 300°F / -51 to 149°C Standard; -320 to 850°F / -195 to 454°C with options
Switch Ambient Temperature	-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 APPROVED

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

GOST Russia:
0ExiaIICT6, 1ExdCT6

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

IEC:
Intrinsic Safety
Ex ia IIC T6 (-50°C Tamb 80°C),
Ex iaD 20/21 IP6X T85°C (-50°C Tamb 80°C)
Flameproof:
II 2 G/D Ex d IIC T6 (-50°C ≤ Tamb ≥ 65°C)
Ex tD A21 T80°C

ATEX
Flameproof:
Ex II 2GD T85°C EEx d IIC T6 (-50°C ≤ Tamb ≤ 65°C); Ⓓ 03 ATEX 132366
Intrinsically Safe:
Ex II 1GD T85°C EEx ia IIC T6 (-50°C ≤ Tamb ≤ 80°C); Ⓓ 03 ATEX 136189

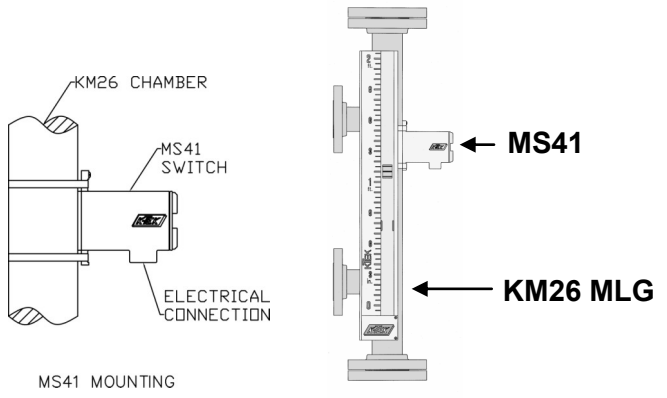
ORDERING INFORMATION:
MS41 / a / b / c:

/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

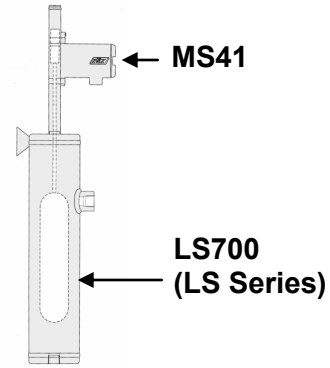
Note: Contact Factory for Special Application Requirements

Example Configurations:

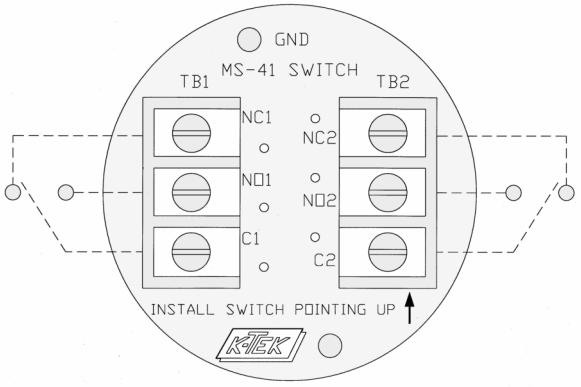
MS41 Mounted on KM26 Magnetic Level Gauge



MS41 mounted on LS Series Mechanical Level Switch



Wiring Connections



Contact closure is shown with the magnetic float below switch

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