M Series

Switches for Harsh Environments & High-Purity Applications

Representative PTFE switches

Madison Company has a complete line of level switches that offer all wetted polytetrafluoroethylene (PTFE) materials. PTFE is a chemically inert material that offers exceptional performance when aggressive solvents such as alcohols, esters and ketones, or other corrosive acids and bases, oils, steam and most chemicals, are present in your application.

These M Series switches are ideal for medical, pharmaceutical and food or beverage applications where high-purity contact is essential. Other applications with stringent requirements, such as electronic component manufacturing, sterilization systems and those systems requiring biosafety performance standards of the liquid level switch, will find this Madison material capability suitable.

PTFE's characteristics are ideal for withstanding extreme operating temperatures, strenuous chemical environments and those applications where highly abrasive-resistant performance is required.

The switch's float is designed with an advanced chemically modified PTFE. While retaining the exceptional chemical properties of the conventional PTFE, superior thermal and mechanical properties have been introduced. This modified PTFE has also allowed some designs to be offered without the spring assist that is found in many heavier float designs.

With the highly reliable reed switch technology and the PTFE wetted material, these liquid level switches offer dependability over a long service life.

Features

- All PTFE wetted surfaces
- Chemically inert
- Low particulate generation
- High purity reduces contamination
- Standard and engineered liquid level designs available

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Specifications

Specific Gravity – Stem & Float: 2.16 g/cm^3

Melting Point – Stem & Float: 327˚C (620˚F)

Operating Temperature – Stem & Float: -200˚C to 260˚C (-328˚F to 500˚F)

Hardness – Stem: 56 ShD
– Float: 59 ShD

Surface Roughness – Stem & Float: 0.9^3

Dielectric Constant – Stem & Float: 2.1

Approvals – CE, FDA Regulation 21 CFR 177.1550, USP Class 6

Standard Models

	Maximum Temperature*	Maximum Pressure	Float SG	Fitting	Switch Rating
M9200	150°C (221°F)	25 PSIG	0.69	1/8-27 NPT	60-Watt SPST
M9200-E	150°C (221°F)	25 PSIG	0.69	G 1/8 A	60-Watt SPST
M9200-NO	150°C (221°F)	25 PSIG	0.69	1/8-27 NPT	60-Watt SPST
M9200-NO-E	150°C (221°F)	25 PSIG	0.69	G 1/8 A	60-Watt SPST
M9500	150°C (221°F)	40 PSIG	0.63	1/4-18 NPT	60-Watt SPST
M9500-E	150°C (221°F)	40 PSIG	0.63	G 1/4 A	60-Watt SPST
M9202-XXXX	Multi-point switch with M9200 characteristics				
M9502-XXXX	Multi-point switch with M9500 characteristics				

NO – Normally Open; SPST – Single Pole Single Throw

Notes: – When ordering, specify if NEMA 6 (IP67) rating is required.
– *A solid float design is required to reach operating temperatures above 150°C (up to 260°C).
– Lead wires are PTFE jacketed unless otherwise specified.

All specifications are subject to change without notice.

Madison®

Sensor solutions for today and the future™

CERTIFIED ISO 9001:2000 INTERTEK CERTIFICATION

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