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Find the *Madison M5602* at our website: *Click HERE*

M Series

Multi-Point Liquid Level Switches



A selection of engineered multi-level switches

Madison Company offers a complete line of Standard and Configured (slightly modified Standard designs) models. These products continue to meet the needs of applications in many markets, at competitive prices. In addition, Madison Company offers the capability to design specific liquid level switches for OEM applications that require unique considerations in materials, configurations and system interfacing.

Engineered designs incorporate over 45 years of experience in liquid level switch applications in a variety of environments and installation configurations. High reliability of the magnetic reed switch technology assures repeatability at an economical price. Our design experience and flexible manufacturing techniques also offer customers many value-added design and assembly options to reduce their product cost.

Features

- Multi-point
- Customer-designed
- Magnetic reed switch technology
- High reliability
- Wide selection of available materials
- Three basic sizes: full, miniature and subminiature
- Direct interface to controllers available

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Material Selection Guide

The first consideration is the type of liquid, temperature and pressure to which the switch will be subjected. Madison manufactures liquid level switches in various styles, in a variety of materials, to cover a broad range of conditions. Following are some basic recommendations for selecting the proper liquid level switch material for your application.

See Approvals pages in Reference Section

Material	Application
316 Stainless Steel	For high-temperature (to 300˚C), high-pressure (to 300 PSIG) and corrosive conditions. Commonly used in food processing, medical, heating and cooling equipment.
Polypropylene **Polysulfone**	For acidic conditions, such as found in electroplating and metal cleaning. Another choice for lower-temperature (to 105˚C) food processing applications (Madison Company uses only polypropylene that is FDA-approved for food contact). Also a good choice for general-purpose applications in commercial or consumer appliances and equipment. Available in white and other colors.
Brass & Buna-N **PBT & Buna-N**	The selection for petroleum-based liquids, such as lubricating oils, gasoline and diesel fuels. Widely used in storage tanks of vehicles, generators, transmissions and hydraulic systems. Other uses are in lubrication, recovery, refining and fuel processing equipment. *Please note: PBT is not suitable for use in temperatures above 130˚C.*
Kynar **PTFE**	Chemical- and solvent-resistant properties make this material a problem solver for many applications. Its high-purity nature is ideal for food handling and sensitive laboratory or test equipment.

Once a suitable material has been selected, the type of switch and configuration are the next considerations. Madison Company stocks a full line of standard products that can meet the requirements of many applications. For specific designs, Madison can custom build, to order, switches with an infinite number of variations and options. Please utilize our multi-level specification sheet which, when completed, will allow our engineering department to better meet your needs.

All specifications are subject to change without notice.

Madison®

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CERTIFIED ISO 9001:2000

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Madison Europe – Phone: + 31 (0) 548 659 034 • Fax: + 31 (0) 548 659 010 • E-mail: madison@eurodev.com

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Madison® *M Series* Stainless Steel *Liquid Level Switches*

Multi-Point Switches

MODEL	DWG NO.	FLOAT MATL	STEM MATL	MAX TEMP (CELSIUS)	MAX PSIG	FLOAT SG	NOMINAL VA	LEAD WIRES	** APPROVALS
M5602-XXXX	7	316SS	316SS	200°	200	0.55	60	22 ga. Teflon 24"	A,B,C,D,E,I
M5605	7	316SS	316SS	200°	200	0.55	60	22 ga. Teflon 24"	C
M4602-XXXX	8	Buna-N	316SS	105°	150	0.45	60	22 ga. Teflon 24"	A,B,C
M8602-XXXX	8	PP†	316SS	105°	100	0.75	60	22 ga. Teflon 24"	A,B,C,D
M5002-XXXX	9	316SS	316SS	200°	300	0.70	30	22 ga. Teflon 24"	A,B,C,D,I
M4402-XXXX	10	Buna-N	316SS	105°	150	0.45	30	22 ga. Teflon 24"	A,B,C
M8002-XXXX	10	PP†	316SS	105°	100	0.80	30	22 ga. Teflon 24"	A,B,C,D

† Also available in Polysulfone (consult factory). PP=Polypropylene

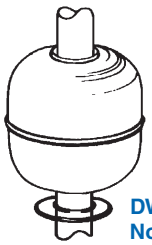
*** Refer to Approvals pages in Reference Section. Individual product explosion-proof (E) approvals vary. Consult factory for current product listings.*

Available Mountings and Options

MODEL	MOUNTINGS – NPT MALE THREAD	PIPE PLUG	FLANGE	BULKHEAD	SPST 100 W OPTION	SPDT 25 W OPTION
M5602-XXXX	3/8", 1/2"	2"	SPECIFY SIZE	1/2-13, 3/4-10	YES	YES
M5605	1/2"	–	–	–	NO	NO
M4602-XXXX	3/8", 1/2"	2", 1-1/2"	SPECIFY SIZE	1/2-13, 3/4-10	YES	YES
M8602-XXXX	3/8", 1/2"	2", 1-1/2"	SPECIFY SIZE	1/2-13, 3/4-10	YES	YES
M5002-XXXX	1/8", 1/4", 3/8", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	3/8, 3/4-10	NO	NO
M4402-XXXX	1/8", 1/4", 3/8", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	3/8, 3/4-10	NO	NO
M8002-XXXX	1/8", 1/4", 3/8", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	3/8, 3/4-10	NO	NO

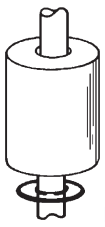


Multi-point switches are available in many materials and configurations and can contain as many float actuation points as the application and switch design may allow (normally up to five). These rugged units can be mounted within any vessel, utilizing the mounting options shown above, or customized to the specific application. The actuation points are defined by the customer and can be engineered to address offset locations within the vessel, allowing for the bypass of obstructions or saddle type tanks. For turbulent conditions, slosh shields, as well as electronic interface components and accessories, can be provided. Temperature sensors can also be incorporated into these models.



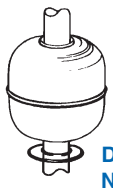
DWG No. 7

2.13" dia. max. (54.1)



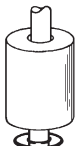
DWG No. 8

1.50" dia. max. (38.1)



DWG No. 9

1.13" dia. max. (28.7)



DWG No. 10

1" dia. max. (24.4)

Multi-Point Switch Kit

This kit provides the user with the opportunity to optimize their own multi-point switch and fabricate it in the field from the kit components. The kit is furnished with two floats and a 2" pipe plug. Maximum stem length is 36" (914.4mm). Please contact factory for additional components. See Multi-Point Switch Kits page for full specifications.

All specifications are subject to change without notice.

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Madison® *M Series* **Plastic** *Liquid Level Switches*

Multi-Point Switches

MODEL	DWG NO.	FLOAT MATL	STEM MATL	MAX TEMP (CELSIUS)	MAX PSIG	FLOAT SG	NOMINAL VA	LEAD WIRES	** APPROVALS
M8802-XXXX	37	PP†	PP†	105˚	100	0.75	60	22 ga. Teflon 24"	A,B,C,I
M8080-XXXX	38	PP†	PP†	105˚	25	0.80	30	22 ga. Teflon 24"	A,B,C,D,I
M8085	38	PP†	PP†	105˚	100	0.80	30	22 ga. Teflon 24"	C

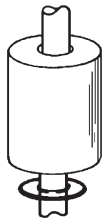
*† Also available in Polysulfone (consult factory). PP=Polypropylene ** Refer to Approvals pages in Reference Section*

Available Mountings and Options

MODEL	MOUNTINGS – NPT MALE THREAD	PIPE PLUG	FLANGE	BULKHEAD	SPST 100 W OPTION	SPDT 25 W OPTION
M8802-XXXX	1/2"	2", 1-1/2"	SPECIFY SIZE	1/2-13	YES	YES
M8080-XXXX	1/8", 1/4", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	1/2-13	NO	NO
M8085	1/4"	–	–	–	NO	NO



Multi-point switches are available in configurations containing up to six different levels, providing maximum flexibility for each user. These rugged units can be mounted within any vessel, utilizing either male pipe threads, pipe plugs, flanges or bulkhead fittings. The length of each switch, as well as the location of each of the floats, may be established by the designer. For difficult installations, stems can be bent to bypass obstructions within the vessel. Slosh shields are also available for turbulent conditions. Temperature sensors can be incorporated into these models.



1.50" dia. max.
(38.1)

DWG No. 37



1" dia. max.
(24.4)

DWG No. 38

Multi-Point Switch Kit

This kit provides the user with the opportunity to optimize their own multi-point switch and fabricate it in the field from the kit components. The kit is furnished with two floats and a 2” pipe plug. Maximum stem length is 36” (914.4mm). Please contact factory for additional components. See Multi-Point Switch Kits page for full specifications.

All specifications are subject to change without notice.

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Madison® *M Series* **Brass** *Liquid Level Switches*

Multi-Point Switches

MODEL	DWG NO.	FLOAT MATL	STEM MATL	MAX TEMP (CELSIUS)	MAX PSIG	FLOAT SG	NOMINAL VA	LEAD WIRES	** APPROVALS
M4302-XXXX	25	Buna-N	Brass	105°	150	0.45	60	22 ga. Teflon 24"	A,B,C,I
M4502-XXXX	27	Buna-N	Brass	105°	150	0.45	30	22 ga. Teflon 24"	A,B,C,I
M5042-XXXX	26	316SS	Brass	200°	300	0.70	30	22 ga. Teflon 24"	A,B,C
M5402-XXXX	24	316SS	Brass	200°	200	0.55	60	22 ga. Teflon 24"	A,B,C
M8042-XXXX	27	PP	Brass	105°	100	0.80	30	22 ga. Teflon 24"	A,B,C
M8402-XXXX	25	PP	Brass	105°	100	0.75	60	22 ga. Teflon 24"	A,B,C

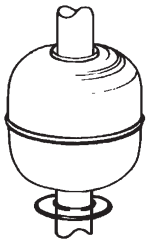
PP=Polypropylene *** Refer to Approvals pages in Reference Section*

Available Mountings and Options

MODEL	MOUNTINGS – NPT MALE THREAD	PIPE PLUG	FLANGE	BULKHEAD	SPST 100 W OPTION	SPDT 25 W OPTION
M4302-XXXX	1/2"	2", 1-1/2"	SPECIFY SIZE	1/2-13	YES	YES
M4502-XXXX	1/8", 1/4", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	3/8	NO	NO
M5042-XXXX	1/8", 1/4", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	3/8	NO	NO
M5402-XXXX	1/2"	2"	SPECIFY SIZE	1/2-13	YES	YES
M8042-XXXX	1/8", 1/4", 1/2"	2", 1-1/2", 1-1/4"	SPECIFY SIZE	3/8	NO	NO
M8402-XXXX	1/2"	2", 1-1/2"	SPECIFY SIZE	1/2-13	YES	YES

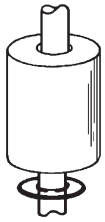


Multi-point switches are available in configurations containing up to six different levels, providing maximum flexibility for each user. These rugged units can be mounted within any vessel, utilizing either male pipe threads, pipe plugs, flanges or bulkhead fittings. The length of each switch, as well as the location of each of the floats, may be established by the designer. For difficult installations, stems can be bent to bypass obstructions within the vessel. Slosh shields are also available for turbulent conditions. Temperature sensors can be incorporated into these models.



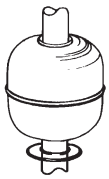
2.13" dia. max. (54.1)

DWG No. 24



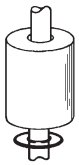
1.50" dia. max. (38.1)

DWG No. 25



1.13" dia. max. (28.7)

DWG No. 26



1" dia. max. (24.4)

DWG No. 27

Multi-Point Switch Kit

This kit provides the user with the opportunity to optimize their own multi-point switch and fabricate it in the field from the kit components. The kit is furnished with two floats and a 2" pipe plug. Maximum stem length is 36" (914.4mm). Please contact factory for additional components. See Multi-Point Switch Kits page for full specifications.

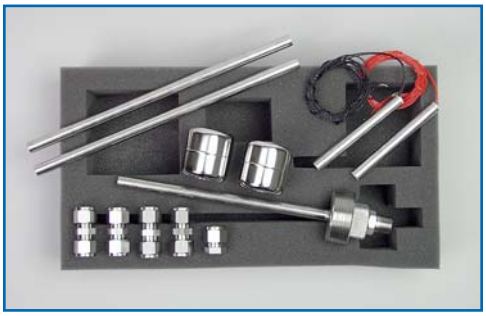
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Madison® *M Series* Multi-Point *Switch Kits*

These kits provide the user with the opportunity to optimize their own multi-point switches and fabricate them in the field from the kit components. The kits are furnished with two floats and a 2” pipe plug. Maximum stem length is 36” (914.4mm). Please contact Madison Company for additional components.

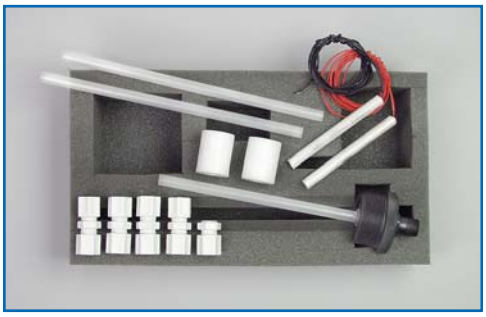
Stainless Steel



MODEL	FLOAT MATL	STEM MATL	MAX TEMP (CELSIUS)	MAX PSIG	FLOAT SG	NOMINAL VA
ML-5555	316SS	316SS	200°	200	0.55	60

** Approvals: UL, CE

Plastic

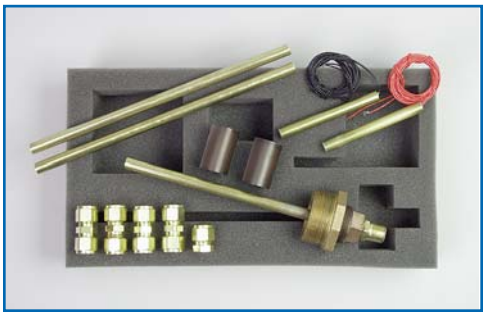


MODEL	FLOAT MATL	STEM MATL	MAX TEMP (CELSIUS)	MAX PSIG	FLOAT SG	NOMINAL VA
ML-8888	PP	PP	105°	100	0.75	60

** Approvals: UL, CE

PP=Polypropylene

Brass



MODEL	FLOAT MATL	STEM MATL	MAX TEMP (CELSIUS)	MAX PSIG	FLOAT SG	NOMINAL VA
ML-4444	Buna-N	Brass	105°	150	0.45	60

** Approvals: UL, CE

Assembly of Madison’s Multi-Point Switch Kits generally involves the following steps: Lay out the supplied components in the configuration that your application requires. Determine the lengths of the Connecting Tubes and cut them accordingly; de-burr and smooth the sharp edges of the cut tubes prior to installation. Perform a trial assembly and, using a continuity indicator (light, buzzer, Ohm Meter, etc.), verify that the switch actuation levels (L1 and L2) are at the required levels and the switch action (normally open or normally closed) is correct for your application. When switch set-up is satisfactory, tighten the fittings and apply thread sealant to the pipe threads on the top fitting before installing the switch into your tank.

For full assembly guidelines and a sample configuration, please visit www.madisonco.com.

All specifications are subject to change without notice.

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