

# W

SERIES





# Wattmizer

Miniature Solenoid Valves (.65 to 9 Watts)

## General Specifications:

**One-inch stainless steel or brass bodies are standard.** The internal components of the valve that come in contact with the media are all stainless steel-compatible with common media including air, water and inert gases.

**Maximum Operating Pressure Differential:**  
up to 1200 psi (85 bar)

**Orifice Diameters:** Body – .025" to 1/8"  
Stop – .025" to 5/64"

**Response Time:** 6 to 10 milliseconds

**Coil Type:** Continuous Rating  
.65 watt through 9 watt—Class "F" (155°C) standard  
.65 watt through 9 watt—Class "B" (130°C) optional

**Standard Voltages:** 24V/50-60 Hz, 120V/50-60 Hz,  
240V/50-60 Hz, 6, 12, 24 VDC (other voltages  
and wattages available upon request)

**Power Consumption:** .65 to 9 watt continuous duty

**Vacuum:** 5 microns

**Port Size:** #10-32 UNF-2B, 1/8" NPT,

**Housing:** Strap housing (standard),  
grommet housing optional

**Seal Material:** Buna N, Viton, EPDM standard,  
others optional

**Leakage:** Bubble tight (1 x 10<sup>-5</sup> cc/sec.)

**Media Temperature Limitations:**  
Minimum— -40°F (-40°C); Maximum— +180°F (+82°C)

**Weight:** 2 3/4 – 3 1/4 ounces

**Lead wire:** 20 AWG, 18 inches long standard

## Wattmizer Solenoid Valves:

Wattmizer is a highly efficient, miniature solenoid valve designed for use in compact areas. These 2-way and 3-way solenoid valves are offered in a range of .65 to 9 watts of continuous power and operating pressure ranges up to 1200 psi (85 bar). The valves come standard with brass or stainless steel bodies and stainless steel internal parts, making this miniature valve compatible with most fluids and gases. Their energy efficient, low watt coils draw less current and are available for AC or DC operation while providing wide pressure and flow ratings. Plus they are long duty lasting in excess of 10 million cycles. Wattmizer valves are most commonly used in medical devices, beverage systems, gas analyzation systems, as well as many other gas and water applications.



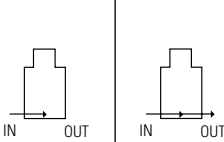
## Valve Model Number Matrix

2 WAYS	W1 FAMILY	3 FUNCTION	6 COIL TYPE	—	1 PORT SIZE	N PORT TYPE	B BODY MATERIAL	—	A SEAL MATERIALS	4 ORIFICE SIZE	D WATTAGE	5 VOLTAGE	U OPTIONS
2 2-Way	W1 Wattmizer	3 2-Way Normally Closed	Molded Class "F" W with 18" leads		1 1/8"	N NPT Female	B Brass		A Buna	0 .025 (.65)	A 0.65	1 120/60	B Mounting Brackets
3 3-Way		3 3-Way Normally Closed Line Connect	6 with 1/4" Spades		5 #10-32 Manifold Mount*	D Defined Elsewhere	R Stainless Steel		E EPDM	1 1/32" (.80)	B 1.5	2 24/60	P Exhaust Port Adapter
		4 Normally Open	Non-Molded Class "B" 0 with 18" Leads		7 #10-32*		O Without Body		V Viton	2 3/64" (1.2)	C 3.0	3 240/60 6 & 9 watt only	U UL Approval
		5 Directional Control	Molded Class "B" 1 with 18" Leads		9 5/16"-24 Manifold Mount				N Neoprene	3 .055 (1.4)	D 6.0	4 6 VDC	C CSA Approval
		6 Normally Closed Free Venting			Q Defined Else					4 1/16" (1.6)	E 9.0	5 12 VDC	L CUL Approval
		7 Universal								5 5/64" (2.0)		6 24 VDC	S UL/CSA Approval
										6 3/32" (2.4)			G Approval
										7 7/64" (2.8)			G CSA Approval Gas Valves Natural Gas & Propane
										8 1/8" (3.2)			

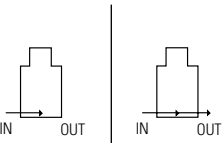
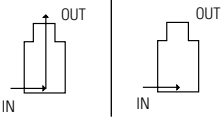
\*Note: #5 port size (#10-32 manifold mount) and #7 port size (#10-32) are limited to #5 (5/64") orifice.  
#5 port size (#10-32 manifold mount) is limited to 250 psig maximum pressure.

## Maximum Operating Pressure Differential (PSI)

### 2-Way AC Pressure Ratings

		Orifice Diameter			Cv Factor		Nominal Wattage					
		Orif. No.	Body	Stop	Body	Stop	.65 Watts (A)*	1.5 Watts (B)†	3.0 Watts (C)	6.0 Watts (D)‡	9.0 Watts (E)§	
	<b>2-Way Normally Closed</b>		0	.025 (.65)		.015 (.011)		450 (31.6)	750 (51.7)	1200 (82.8)	1200 (82.8)	1200 (82.8)
			1	1/32 (.80)		.020 (.015)		350 (24.1)	625 (43.1)	900 (62.0)	1000 (69.0)	1200 (82.8)
			2	3/64 (1.2)		.030 (.023)		225 (15.5)	475 (32.8)	725 (50.0)	800 (55.2)	900 (62.0)
			3	.055 (1.4)		.050 (.038)		110 (7.6)	275 (18.9)	500 (34.5)	650 (44.8)	725 (50.0)
			4	1/16 (1.6)		.080 (.062)		75 (5.2)	200 (13.8)	325 (2.44)	500 (34.5)	550 (37.9)
			5	5/64 (2.0)		.120 (.092)			110 (7.6)	200 (13.8)	350 (24.1)	400 (27.6)
			6	3/32 (2.4)		.170 (.131)				125 (8.6)	225 (15.5)	250 (17.2)
			7	7/64 (2.8)		.250 (.192)				75 (5.2)	125 (8.6)	175 (12.1)
			8	1/8 (3.2)		.280 (.215)					35 (2.4)	75 (5.2)

### 2-Way DC Pressure Ratings

	<b>2-Way Normally Closed</b>		0	.025 (.65)		.015 (.011)	150 (10.3)	350 (24.1)	750 (51.7)	1000 (69.0)	1200 (82.8)
			1	1/32 (.80)		.020 (.015)	110 (7.6)	200 (13.8)	500 (34.5)	900 (62.0)	1000 (69.0)
			2	3/64 (1.2)		.030 (.023)	40 (2.8)	125 (8.6)	250 (17.2)	500 (34.5)	575 (39.7)
			3	.055 (1.4)		.050 (.038)	15 (1.0)	50 (3.4)	125 (8.6)	255 (17.6)	300 (20.7)
			4	1/16 (1.6)		.080 (.062)	10* (.7)	35 (2.4)	90 (6.2)	175 (12.1)	225 (15.5)
			5	5/64 (2.0)		.120 (.092)		15 (1.0)	45 (3.1)	100 (6.9)	125 (8.6)
			6	3/32 (2.4)		.170 (.131)			30 (2.1)	60 (4.1)	100 (6.9)
			7	7/64 (2.8)		.250 (.192)			20 (1.4)	40 (2.8)	60 (4.1)
			8	1/8 (3.2)		.280 (.215)				10 (.7)◆	35 (2.4)
	<b>2-Way Normally Open</b>		0	.025 (.65)		.015 (.011)	100 (6.9)	300 (20.7)	625 (43.1)	850 (58.6)	1000 (69.0)
			1	1/32 (.80)		.020 (.015)	75 (5.2)	175 (12.1)	425 (29.3)	750 (51.7)	850 (58.6)
			2	3/64 (1.2)		.030 (.023)	30 (2.1)	100 (6.9)	200 (13.8)	425 (29.3)	475 (32.8)
			3	.055 (1.4)		.050 (.038)		40 (2.8)	100 (6.9)	190 (13.1)	250 (17.2)
			4	1/16 (1.6)		.080 (.062)		30 (2.1)	75 (5.2)	150 (10.3)	190 (13.1)
			5	5/64 (2.0)		.120 (.092)		10 (.7)◆	35 (2.4)	85 (5.9)	100 (6.9)

## 3-Way DC Pressure Ratings

		Orifice Diameter		Cv Factor		Nominal Wattage					
De-energized	Energized	Orif. No.	Body	Stop	Body	Stop	.65 Watts (A)*	1.5 Watts (B)†	3.0 Watts (C)	6.0 Watts (D)‡	9.0 Watts (E)◆
<b>3-Way Normally Closed</b> Free Vent and Line Connection 		0	.025 (.65)	.025 (.65)	.015 (.011)	.015 (.011)	100 (6.9)	180 (12.4)	350 (24.1)	450 (31.6)	550 (37.9)
		1	1/32 (.80)	1/32 (.80)	.020 (.015)	.020 (.015)	65 (4.5)	115 (7.9)	250 (17.2)	300 (20.7)	400 (27.6)
		2	3/64 (1.2)	3/64 (1.2)	.030 (.023)	.030 (.023)	10 (.7)	70 (4.8)	175 (12.1)	250 (17.2)	300 (20.7)
		3	.055 (1.4)	.055 (1.4)	.050 (.038)	.050 (.038)		20 (1.4)	100 (6.9)	160 (11.0)	190 (13.1)
		4	1/16 (1.6)	1/16 (1.6)	.080 (.062)	.080 (.062)		10 (.7) ◆	75 (5.2)	125 (8.6)	175 (12.1)
		5	5/64 (2.0)	5/64 (2.0)	.120 (.092)	.120 (.092)			30 (2.1)	65 (4.5)	90 (6.2)
		6	3/32 (2.4)	5/64 (2.0)	.170 (.131)	.120 (.092)			15 (1.0)	40 (2.8)	60 (4.1)
		8	1/8 (3.2)	5/64 (2.0)	.280 (.215)	.120 (.092)				15 (1.0)	25 (1.7)
<b>3-Way Normally Open</b> 		0	.025 (.65)	.025 (.65)	.015 (.011)	.015 (.011)	100 (6.9)	175 (12.1)	200 (13.8)	300 (20.7)	350 (24.1)
		1	1/32 (.80)	1/32 (.80)	.020 (.015)	.020 (.015)	50 (3.4)	100 (6.9)	150 (10.3)	200 (13.8)	250 (17.2)
		2	3/64 (1.2)	3/64 (1.2)	.030 (.023)	.030 (.023)	15 (1.0)	60 (4.1)	125 (8.6)	175 (12.1)	200 (13.8)
		3	.055 (1.4)	.055 (1.4)	.050 (.038)	.050 (.038)			55 (3.8)	125 (8.6)	150 (10.3)
		4	1/16 (1.6)	1/16 (1.6)	.080 (.062)	.080 (.062)			20 (1.4)	90 (6.2)	100 (6.9)
		5	5/64 (2.0)	5/64 (2.0)	.120 (.092)	.120 (.092)				45 (3.1)	50 (3.4)
		6	3/32 (2.4)	5/64 (2.0)	.170 (.131)	.120 (.092)				20 (1.4)	40 (2.8)
		8	1/8 (3.2)	5/64 (2.0)	.280 (.215)	.120 (.092)					15 (1.0)
<b>3-Way Directional Control</b> 		0	.025 (.65)	.025 (.65)	.015 (.011)	.015 (.011)	75 (5.2)	150 (10.3)	175 (12.1)	255 (17.6)	350 (24.1)
		1	1/32 (.80)	1/32 (.80)	.020 (.015)	.020 (.015)	40 (2.8)	90 (6.2)	125 (8.6)	200 (13.8)	250 (17.2)
		2	3/64 (1.2)	3/64 (1.2)	.030 (.023)	.030 (.023)	15 (1.0)	55 (3.8)	100 (6.9)	175 (12.1)	200 (13.8)
		3	.055 (1.4)	.055 (1.4)	.050 (.038)	.050 (.038)			45 (3.1)	125 (8.6)	150 (10.3)
		4	1/16 (1.6)	1/16 (1.6)	.080 (.062)	.080 (.062)			15 (1.0)	90 (6.2)	100 (6.9)
		5	5/64 (2.0)	5/64 (2.0)	.120 (.092)	.120 (.092)				45 (3.1)	50 (3.4)
		6	3/32 (2.4)	5/64 (2.0)	.170 (.131)	.120 (.092)				20 (1.4)	40 (2.8)
		8	1/8 (3.2)	5/64 (2.0)	.280 (.215)	.120 (.092)					15 (1.0)
<b>3-Way Multi-Purpose</b> 		0	.025 (.65)	.025 (.65)	.015 (.011)	.015 (.011)	65 (4.5)	125 (8.6)	150 (10.3)	200 (13.8)	300 (20.7)
		1	1/32 (.80)	1/32 (.80)	.020 (.015)	.020 (.015)	30 (2.1)	75 (5.2)	100 (6.9)	175 (12.1)	200 (13.8)
		2	3/64 (1.2)	3/64 (1.2)	.030 (.023)	.030 (.023)	10 (.7)	45 (3.1)	80 (5.5)	150 (10.3)	175 (12.1)
		3	.055 (1.4)	.055 (1.4)	.050 (.038)	.050 (.038)			35 (2.4)	80 (5.5)	100 (6.9)
		4	1/16 (1.6)	1/16 (1.6)	.080 (.062)	.080 (.062)			10 (.7) ◆	65 (4.5)	75 (5.2)
		5	5/64 (2.0)	5/64 (2.0)	.120 (.092)	.120 (.092)				25 (1.7)	35 (2.4)
		6	3/32 (2.4)	5/64 (2.0)	.170 (.131)	.120 (.092)				15 (1.0)	25 (1.7)
		8	1/8 (3.2)	5/64 (2.0)	.280 (.215)	.120 (.092)					10 (.7) ◆

Notes: \* Maximum available voltage: 80 volts AC or DC.

Values in parenthesis are metric.

Example: inch (millimeter) – psi (bar)

† Maximum available voltage: 120 volts AC or DC.

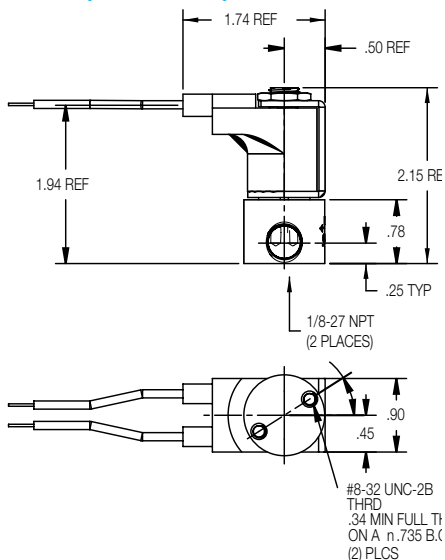
‡ Maximum available duty rating for Class B 266° F (130° C) DC coils.

◆ Maximum continuous duty rating for Class B 266° F (130° C) full wave rectified AC coils and Class F 311° F (155° C) DC coils.

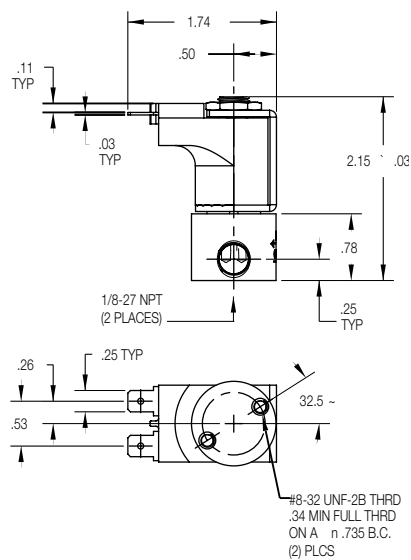
◆ Do not use for vacuum applications in excess of rated pressure.

Note: 240/60 VAC coils available in 6 watt configurations only.

## 2-Way Normally Closed with Leads

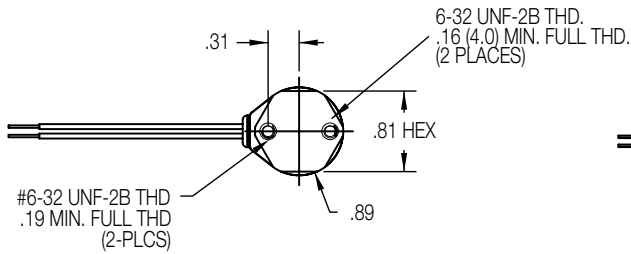
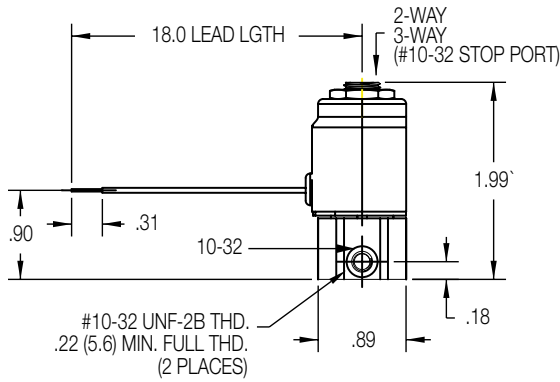


## 2-Way Normally Closed with Spades

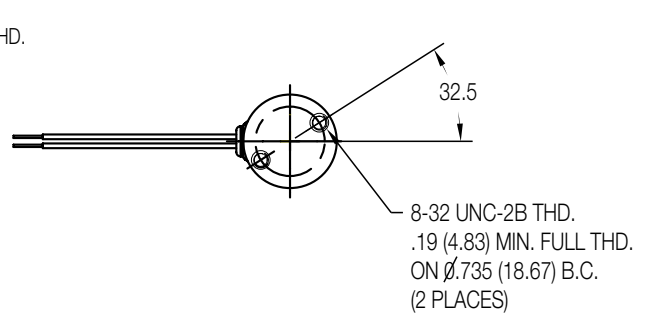
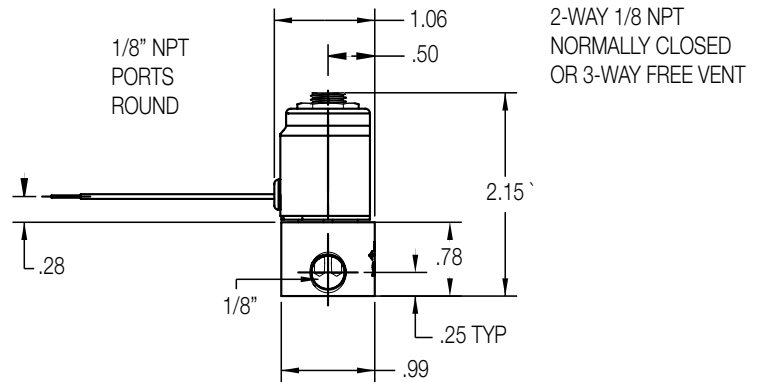


## Dimensions

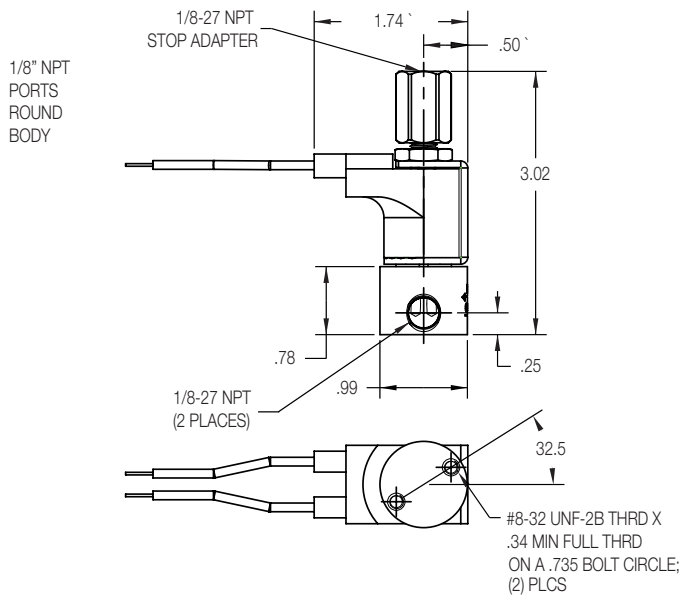
### 2-WAY NORMALLY CLOSED & 3-WAY FREE VENT



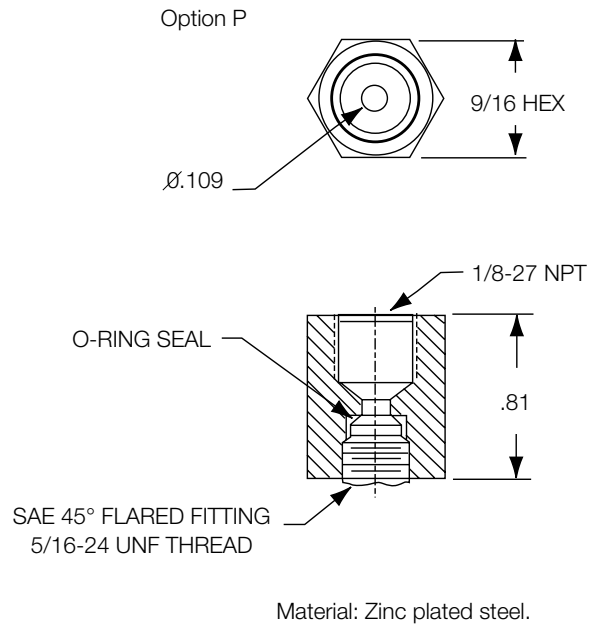
### 2-WAY NORMALLY CLOSED/OPEN & 3-WAY FREE VENT\*\*



### 2-WAY NORMALLY OPEN & 3-WAY\* LINE CONNECT



### STOP ADAPTOR\* (Plated Carbon Steel Only)

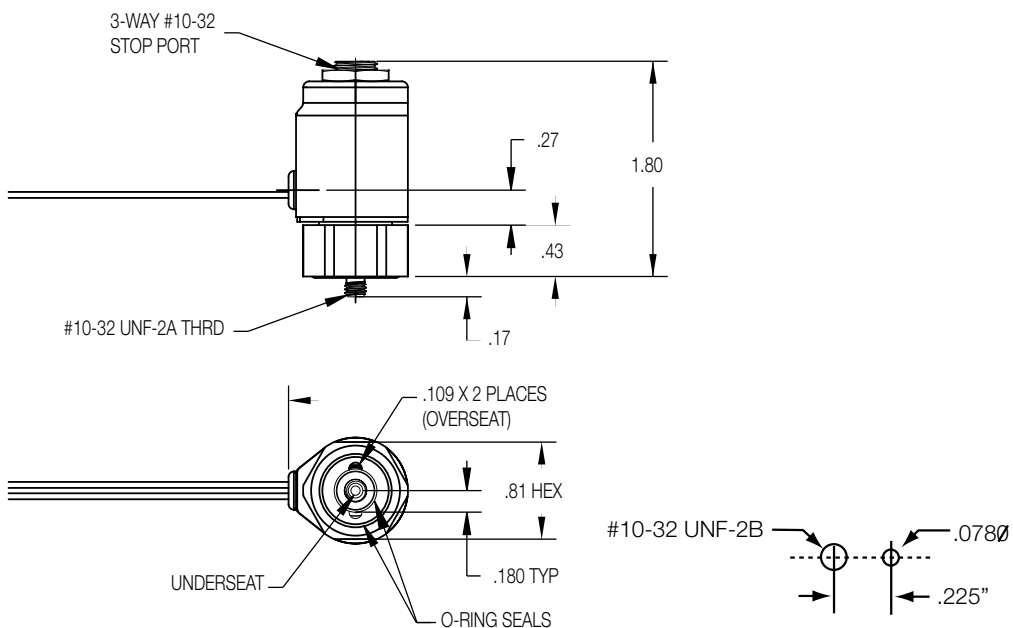


\* Stop Adaptor supplied as an option. Standard line connect is SAE 45° X 1/8" flare tube fitting.

\*\* 3-way free vent is supplied with #10-32UNF-2B exhaust port.

## Dimensions

### #5 Manifold Mount



### #9 Manifold Mount

