

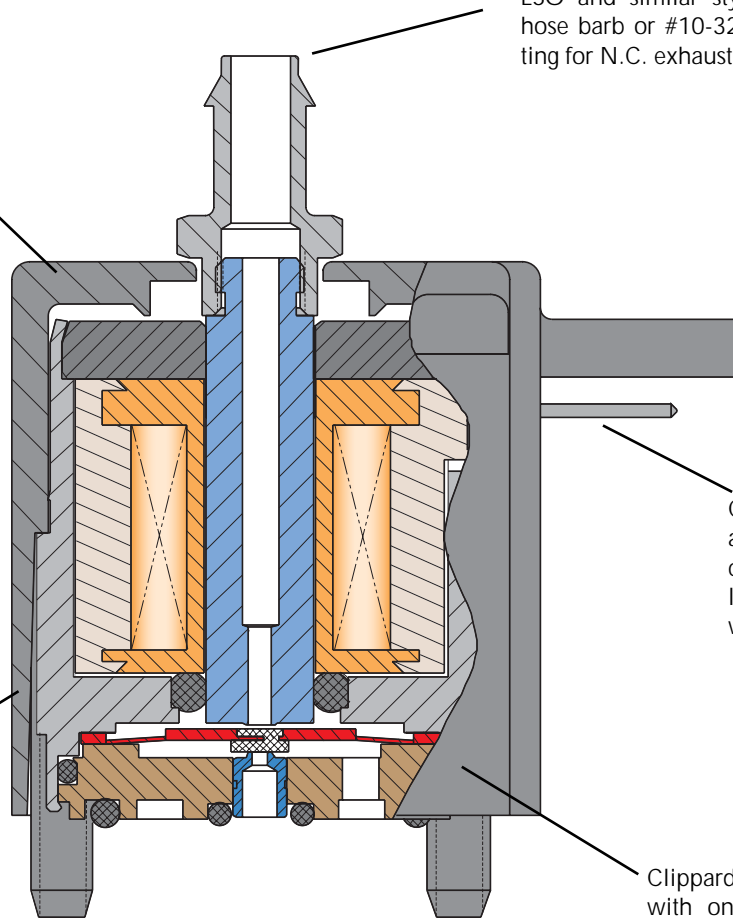


## ES, ESO SERIES COMPACT VALVES

Valves are small in size with a variety of coil voltages and flow options. Mounting is as close as 7/8" on center.

Housing is molded Zytel ST 801 for toughness and rigidity.

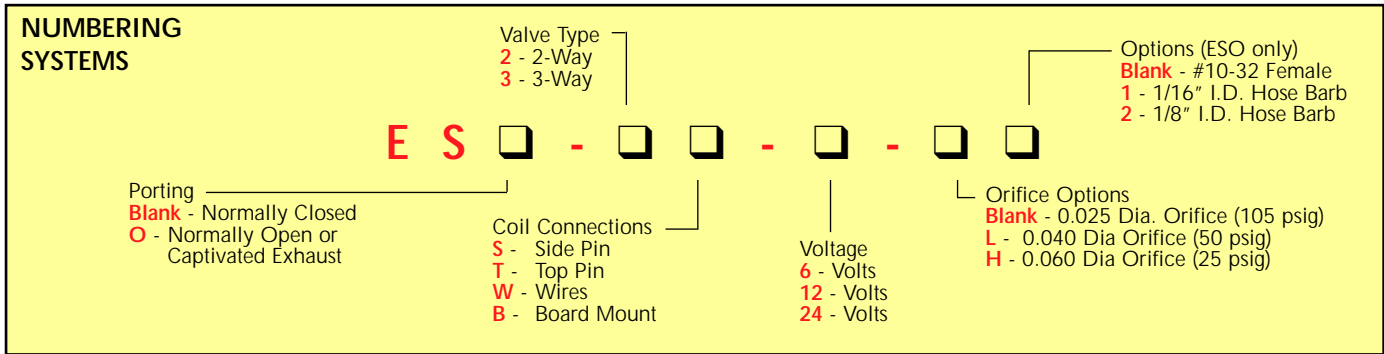
ESO and similar styles have top hose barb or #10-32 threaded fitting for N.C. exhaust or N.O. inlet.



Coils are available with an AMP# 103959-2 pin connection or 18" wire leads which utilize #26 wire.

Valves feature low power, cool running, quiet operation and fast response time. They convert low voltage, low current signals into high pressure pneumatic outputs.

Clippard ES valves are unique, with only one internal moving part that travels a mere 0.007 inches.



## Quality Design

The compact ES valve, like Clippard EV and ET valves, converts low voltage, low current signals into high pressure (0-105 psig) pneumatic outputs, utilizing a unique, patented, valving principle. Since there are no sliding parts, and complete poppet travel is only 0.007", low power consumption and exceptionally long life are assured with this design. No flow is required for cooling because the compact ES is cool, as well as quiet, in operation.



The compact nature of design makes this valve well suited to a wide range of applications in biomedical, environmental test equipment, textile machines, packaging machinery, computerized industrial automation, and portable systems.

## Features

- Temperature Range: 30° - 180° F
- Medium: Air (40 micron filtration)
- Low power consumption - 1 watt at rated voltage
- Close mounting - 7/8" on center
- Voltage Options: 6, 12 or 24 VDC
- Overall height less than 1 inch
- Easy to mount on manifold with two #4-40 screws
- Response: 5-10 ms at max rated pressure
- Geometric design
- Polymer housing - Zytel ST 801® super tough
- Pin connectors - AMP # 103959-2 or 18" wire leads: #26 wire
- Flow up to 0.6 scfm/15 l/min

Zytel ST 801® super tough is a registered trademark of DuPont

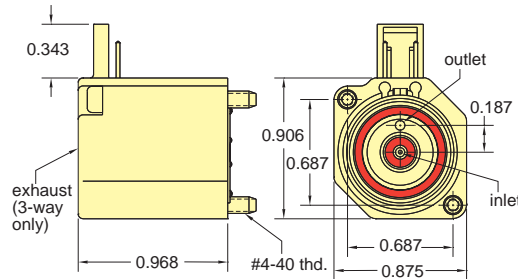


NOMINAL			Power (watts)	Working Range (cont. duty)
Voltage	Current (amps)	Resistance (ohms)		
6	0.17	36	1.0	90% - 150% of rated voltage
12	0.083	144	1.0	
24	0.042	576	1.0	



# ES SERIES 2- & 3-WAY VALVES

## Normally Closed 2 & 3-Way Electronic Poppet Valves with Side Pin Connector



**Input Pressure:** 28" Hg Vac. to 105 psig  
 28" Hg Vac. to 50 psig (L)  
 25" Hg Vac. to 50 psig (H)

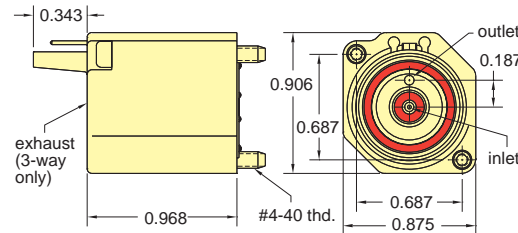
**Air Flow:** 0.6 scfm @ 100 psig  
 0.5 scfm @ 50 psig (L)  
 0.45 scfm @ 25 psig (H)

**Ports:** Inlet and outlet through manifold;  
 3-way exhaust through top of valve (3-way only)

**Order No.**

- ES-2S-□ 2-Way Electronic Poppet Valve
- ES-3S-□ 3-Way Electronic Poppet Valve

## Normally Closed 2- & 3-Way Electronic Poppet Valves with Top Pin Connector



**Input Pressure:** 28" Hg Vac. to 105 psig  
 28" Hg Vac. to 50 psig (L)  
 25" Hg Vac. to 50 psig (H)

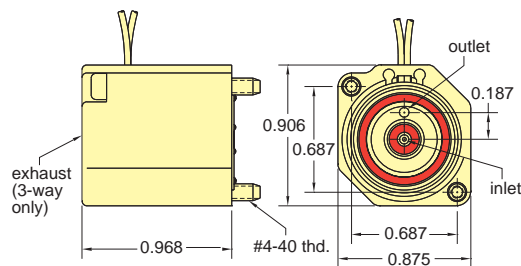
**Air Flow:** 0.6 scfm @ 100 psig  
 0.5 scfm @ 50 psig (L)  
 0.45 scfm @ 25 psig (H)

**Ports:** Inlet and outlet through manifold;  
 3-way exhaust through top of valve (3-way only)

**Order No.**

- ES-2T-□ 2-Way Electronic Poppet Valve
- ES-3T-□ 3-Way Electronic Poppet Valve

## Normally Closed 2- & 3-Way Electronic Poppet Valves with Wire Leads



**Input Pressure:** 28" Hg Vac. to 105 psig  
 28" Hg Vac. to 50 psig (L)  
 25" Hg Vac. to 50 psig (H)

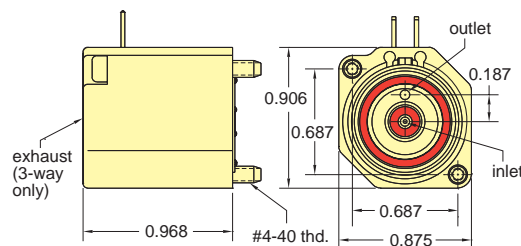
**Air Flow:** 0.6 scfm @ 100 psig  
 0.5 scfm @ 50 psig (L)  
 0.45 scfm @ 25 psig (H)

**Ports:** Inlet and outlet through manifold;  
 3-way exhaust through top of valve (3-way only)

**Order No.**

- ES-2W-□ 2-Way Electronic Poppet Valve
- ES-3W-□ 3-Way Electronic Poppet Valve

## Normally Closed 2- & 3-Way Electronic Poppet Valves with Board Mount



**Input Pressure:** 28" Hg Vac. to 105 psig  
 28" Hg Vac. to 50 psig (L)  
 25" Hg Vac. to 50 psig (H)

**Air Flow:** 0.6 scfm @ 100 psig  
 0.5 scfm @ 50 psig (L)  
 0.45 scfm @ 25 psig (H)

**Ports:** Inlet and outlet through manifold;  
 3-way exhaust through top of valve (3-way only)

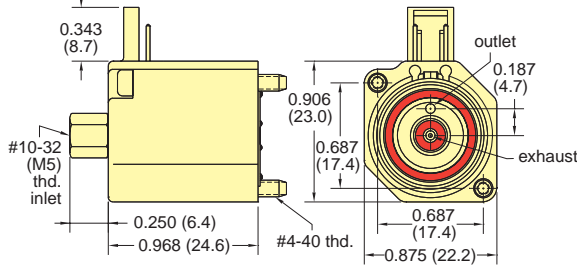
**Order No.**

- ES-2B-□ 2-Way Electronic Poppet Valve
- ES-3B-□ 3-Way Electronic Poppet Valve

For Cable and Connectors, see Page 215.

## ESO-3S- □

Fully Ported 3-Way Electronic Poppet Valve with Side Pin Connector



**Input Pressure:** 28" Hg Vac. to 105 psig;  
0-7 bar  
28" Hg Vac. to 50 psig (L);  
0-3.5 bar  
25" Hg Vac. to 50 psig (H);  
0-1.8 bar

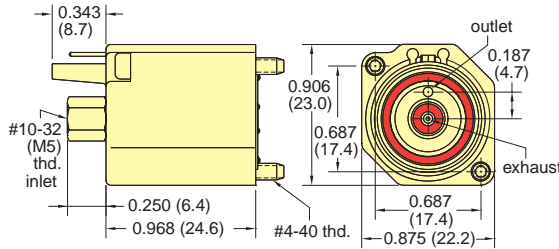
**Air Flow:** 0.6 scfm @ 100 psig;  
15 l/min @ 7 bar  
0.5 scfm @ 50 psig (L);  
15 l/min @ 3.5 bar  
0.45 scfm @ 25 psig (H);  
14 l/min @ 1.8 bar

**Ports:** Exhaust and outlet through manifold;  
3-way supply (#10-32/M5) through top of valve

**Metric:** Add -M5 to Part Number

## ESO-3T- □

Fully Ported 3-Way Electronic Poppet Valve with Top Pin Connector



**Input Pressure:** 28" Hg Vac. to 105 psig;  
0-7 bar  
28" Hg Vac. to 50 psig (L);  
0-3.5 bar  
25" Hg Vac. to 50 psig (H);  
0-1.8 bar

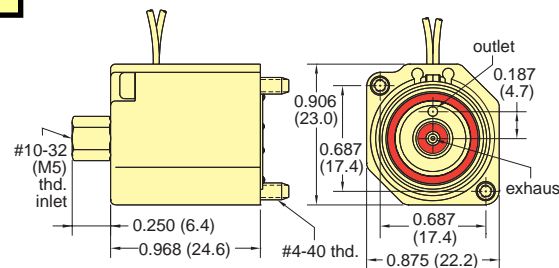
**Air Flow:** 0.6 scfm @ 100 psig;  
15 l/min @ 7 bar  
0.5 scfm @ 50 psig (L);  
15 l/min @ 3.5 bar  
0.45 scfm @ 25 psig (H);  
14 l/min @ 1.8 bar

**Ports:** Exhaust and outlet through manifold;  
3-way supply (#10-32/M5) through top of valve

**Metric:** Add -M5 to Part Number

## ESO-3W- □

Fully Ported 3-Way Electronic Poppet Valve with Wire Leads



**Input Pressure:** 28" Hg Vac. to 105 psig;  
0-7 bar  
28" Hg Vac. to 50 psig (L);  
0-3.5 bar  
25" Hg Vac. to 50 psig (H);  
0-1.8 bar

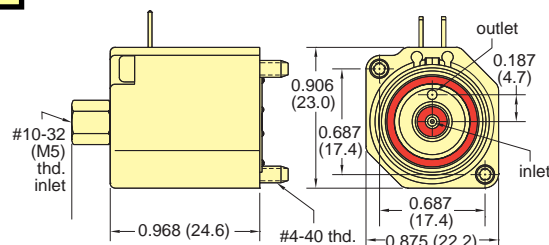
**Air Flow:** 0.6 scfm @ 100 psig;  
15 l/min @ 7 bar  
0.5 scfm @ 50 psig (L);  
15 l/min @ 3.5 bar  
0.45 scfm @ 25 psig (H);  
14 l/min @ 1.8 bar

**Ports:** Exhaust and outlet through manifold;  
3-way supply (#10-32/M5) through top of valve

**Metric:** Add -M5 to Part Number

## ESO-3B- □

Normally Open 3-Way Electronic Poppet Valve with Board Mount



**Input Pressure:** 28" Hg Vac. to 105 psig;  
0-7 bar  
28" Hg Vac. to 50 psig (L);  
0-3.5 bar  
25" Hg Vac. to 50 psig (H);  
0-1.8 bar

**Air Flow:** 0.6 scfm @ 100 psig;  
15 l/min @ 7 bar  
0.5 scfm @ 50 psig (L);  
15 l/min @ 3.5 bar  
0.45 scfm @ 25 psig (H);  
14 l/min @ 1.8 bar

**Ports:** Exhaust and outlet through manifold;  
3-way supply (#10-32/M5) through top of valve

**Metric:** Add -M5 to Part Number

For Cable and Connectors, see Page 215.



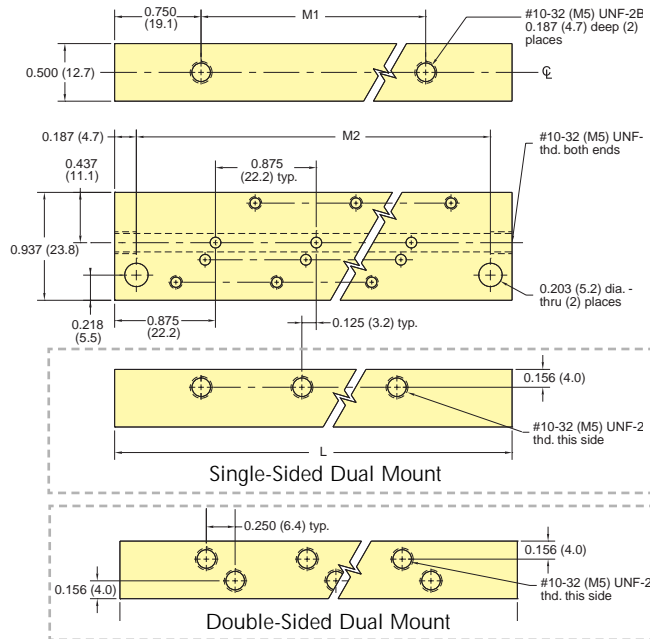
# ES, ESO SERIES VALVES MANIFOLDS

## 26081-□

Single-Sided Dual Mount



Suffix	Valves	L	M1	M2
-4	4	4.375"	2.875"	4.000"
-4-M5	4	111.1 mm	73.0 mm	101.6 mm
-6	6	6.125"	4.625"	5.750"
-6-M5	6	155.6 mm	117.5 mm	146.1 mm
-8	8	7.875"	6.375"	7.500"
-8-M5	8	200.0 mm	161.9 mm	190.5 mm



## 26082-□

Double-Sided Dual Mount

Suffix	Valves	L	M1	M2
-8	8	4.375"	2.875"	4.000"
-8-M5	8	111.1 mm	73.0 mm	101.6 mm
-12	12	6.125"	4.625"	5.750"
-12-M5	12	155.6 mm	117.5 mm	146.1 mm
-16	16	7.875"	6.375"	7.500"
-16-M5	16	200.0 mm	161.9 mm	190.5 mm

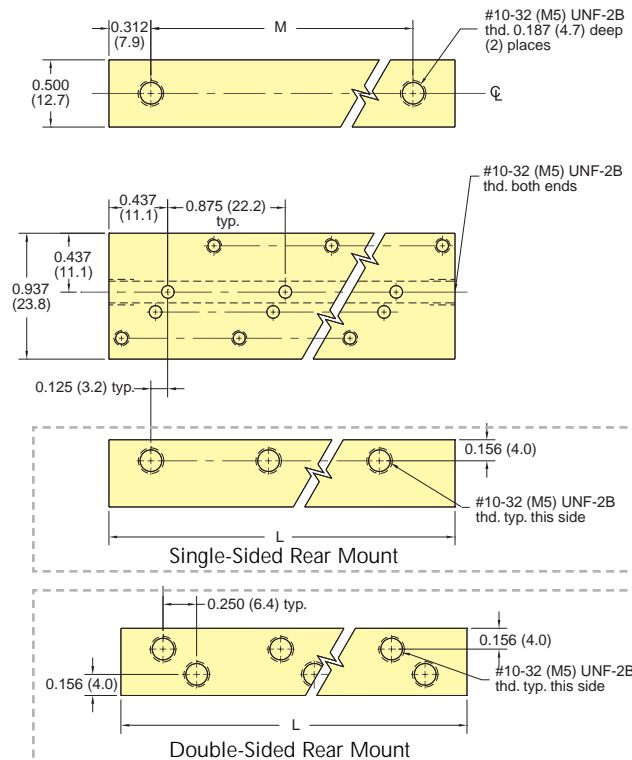
\* ESM-CP plate is to cover individual unused manifold station.

## 26083-□

Single-Sided Rear Mount



Suffix	Valves	L	M
-4	4	3.500"	2.875"
		88.9 mm	73.0 mm
-6	6	5.250"	4.625"
		133.4 mm	117.5 mm
-8	8	7.000"	6.375"
		177.8 mm	161.9 mm



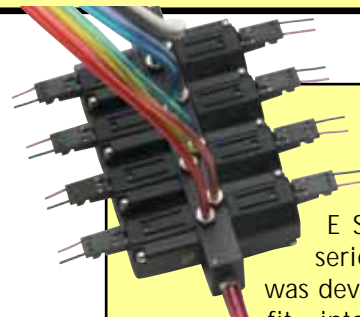
## 26084-□

Double-Sided Rear Mount

Suffix	Valves	L	M
-8	8	3.500"	2.875"
-8-M5	8	88.9 mm	73.0 mm
-12	12	5.250"	4.625"
-12-M5	12	133.4 mm	117.5 mm
-16	16	7.000"	6.375"
-16-M5	16	177.8 mm	161.9 mm

\* ESM-CP cover plate is available for one manifold station.

# ES, ESO SERIES VALVES SINGLE MANIFOLDS



The ES/ESO series valve was developed to fit into tighter physical envelopes. By reducing the size of the base as well as the size of the coil, a considerable volume savings was achieved.

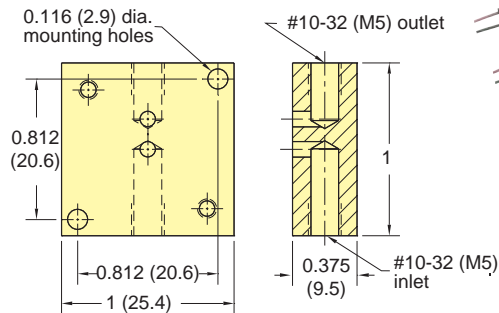
As in the case of the EV/EVO product, the ES/ESO uses the single moving part design proven many times in the EV/ET/EC series valves. Of course, given the reduced size of the coil the power to operate increases to 1 watt.

Because of its reliability, the ES/ESO series valve is found in many of the same applications and industries as its predecessor, the EV/ET/EC. However, the smaller size finds it used more commonly in portable or mobile equipment. This makes the valve particularly applicable in home healthcare applications.

## 26090-1



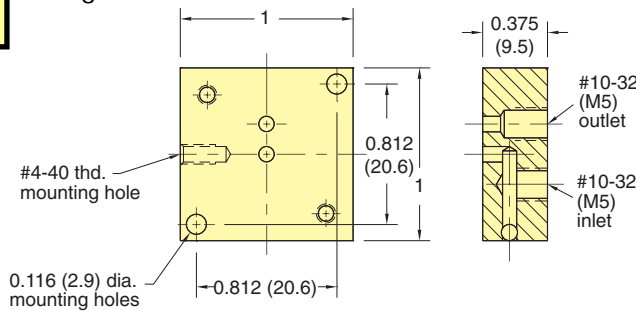
Single Station Side Port Manifold



## 26090-2



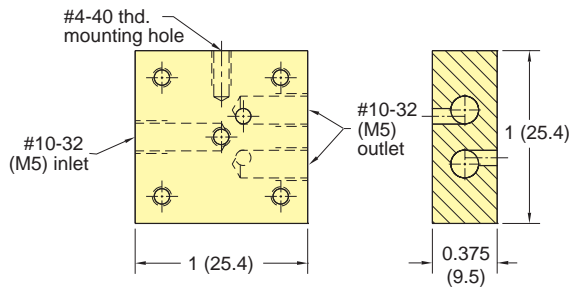
Single Station Bottom Port Manifold



## 26090-3



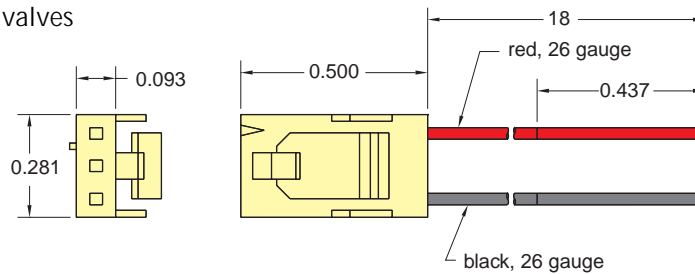
Dual Station Manifold



## C3-RXB18



AMP Connector #103960-2 with 18" wire leads for ES/ESO valves



Lead Set Chart For ES Valve						
Part No.	Used On	Wire Colors			Lead Length	Wire Gage
		pin 1	pin 2	pin 3		
C3-RXB18	ES	red	~	black	18"	#26