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Find the *Clippard R481-24* at our website: ***Click HERE***



The Mouse Valve Series
EV, ET, EC Series Valves

Like a mouse, this valve is quiet, quick, eats very little (0.67 watts) and is cute. Valves accept low voltage, low current signals, convert them into high pressure (100 psig) pneumatic outputs. Optional low pressure/medium flow and low pressure/high flow are available. (The air supply should be reasonably clean and dry for optimum performance. Recommended filtration is 40 micron.)

Valve caps are of molded Hytrel®. Depending upon valve type, cap is:

- plain top on 2-way models
- with exhaust holes in cap on certain 3-way models
- with fitting, as shown, for 3-way N.O. styles for N.C. exhaust (inlet when N.O.)

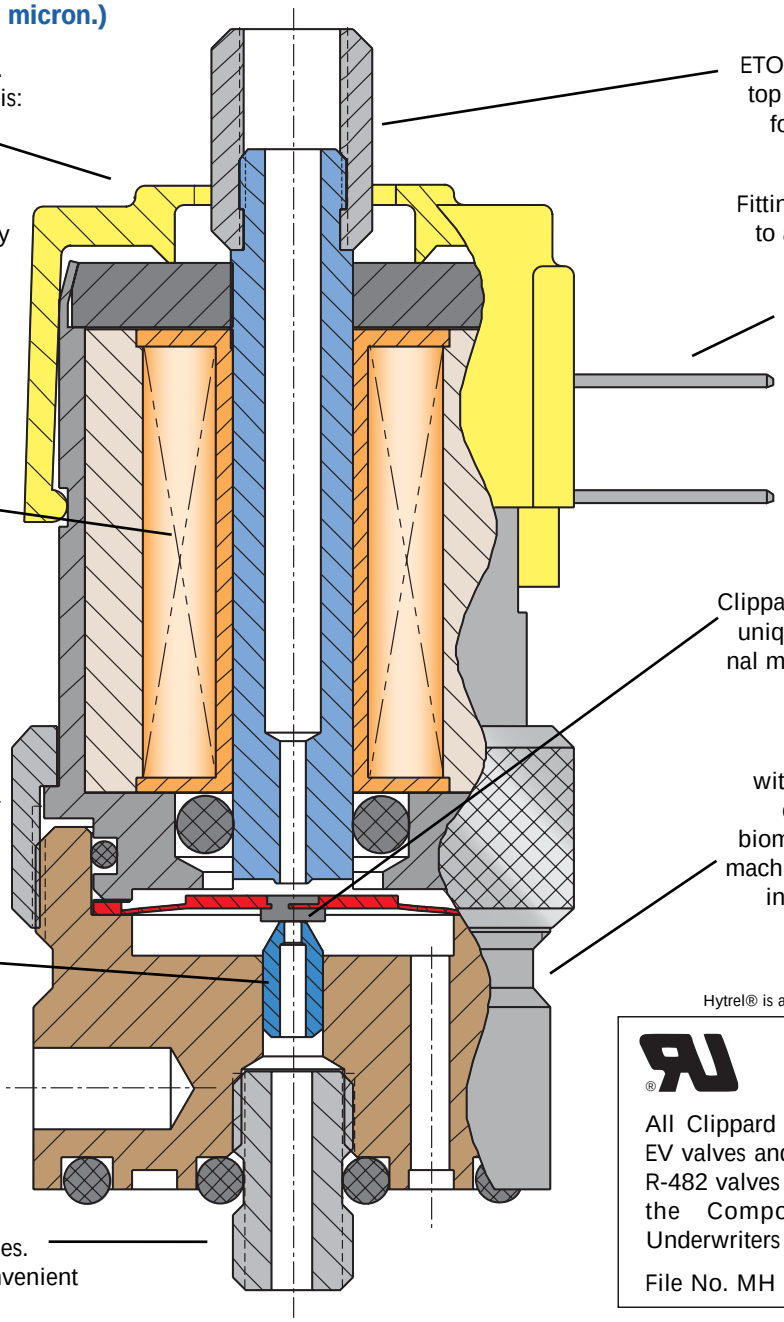
Low power coil uses only 0.67 watts at the rated voltage. Standard voltages include 6, 12 and 24. Other voltages are available.

Adjusting ring may be loosened for positioning to orient connections.

DO NOT REMOVE. Parts orientation will be lost and warranty voided.

Standard orifice is .025. Also available are:
L - 0.040 orifice
H - 0.060 orifice

Manifold mount base shown permits fast, secure mounting of electronic valves to manifolds for grouping in compact assemblies. Alternate standard model has convenient mounting holes.



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

Fittings should be tightened to a maximum of 9 in.-lb.

Quick-connect spade lugs are of tinned brass and furnished on all ET models. EV models are available with 18" wire leads for popular voltages. EC models are furnished with 0.025" square pin connector.

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

Valves are small in size with a variety of mounting options. Ideal for use in biomedical, test equipment, machines, computer-directed industrial systems, and in portable devices.

Hytrel® is a registered trademark of DuPont

All Clippard standard ET, EC and EV valves and Clippard R-481 and R-482 valves are recognized under the Component Program of Underwriters Laboratories, Inc.

File No. MH 13573

Clippard Minimatic electronic valves are precision-built 2-way or 3-way control valves, utilizing a unique, patented, valving principle. There are no sliding parts. Complete poppet travel is a mere 0.007". As a result, low power consumption and exceptionally long life are major benefits of this design.

The valves are very quiet in operation and also very cool. No flow is needed for cooling. The valves' small size makes them well suited to a wide range of applications in biomedical, EDP, environmental test equipment, textile machines, packaging machinery, computerized industrial automation, and portable systems.

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Features



Clippard Functional Simplicity

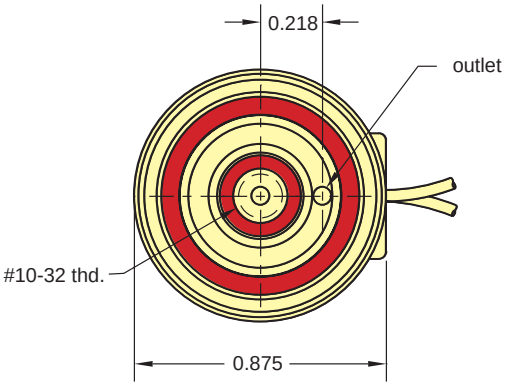
- The design of Clippard electronic valves is a deceptively simple arrangement with a minimum of operating parts, and remarkably straight forward low power operation.
- The Clippard “spider” is the only moving part and its motion to operate the valve is a mere 0.007” travel.
- Low voltage D.C. inputs, signals from simple manual switching up to computer directed systems, move the spider in extremely fast response time... 5-10 milliseconds.
- The unit uses extremely low power (0.67 watts at the rated voltage) and is cool running. The valves are light in weight, compact in physical size and mount easily in space-saving packages.

Quick Connect



Clippard ET valves feature spade lugs for simple, quick secure low voltage connections. Wire crimp-on spade lug connectors are available separately to adapt electronic wiring where necessary. Clippard original EV type valves are available in popular voltages with 18” wire leads. The EC model utilizes a 0.025” square pin connector.

Easy Mount



The complete line of EC, EV, and ET electronic valves are available with two mounting options. Standard base models have two 6-32 threaded, 7/32” deep mounting holes. Manifold models are equipped with a bottom stud, 5/32” long with #10-32 thread, which fits Clippard standard and special manifolds, accessory valves and subplates. Spanner holes in the valve body permit tightening.

NOMINAL			Power (watts)	Working Range (cont. duty)
Voltage	Current (amps)	Resistance (ohms)		
6	0.11	54	0.67	90% - 150% of rated voltage
12	0.055	218	0.67	
24	0.028	864	0.67	

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ACCESSORIES



EVB-2 & EVB-3 Booster

Clippard EVB-2 & EVB-3 booster valves mate with manifold mount EC, EV, and ET valves and manifolds to provide increased flow. Direct piloting from a Clippard EC, EV and ET valve provides a flow of up to 6.1 SCFM at 100 psig.

2020/2021 High Flow Valves

Model 2020 and 2021 high flow valves are piloted 3-way valves that work with the Clippard EC, EV, and ET 3-way manifold valves. Output from the EC, EV, or ET will actuate the valve and produce output up to 22 SCFM at 100 psig. Piloted 4-way valves are also available as R-481 and R-482.



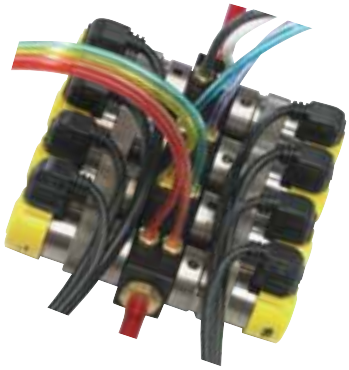


Dual Supply Manifold

Shown is the 15490-3 Clippard Dual Supply Manifold with two ET-3M electronic/pneumatic interface valves. 1/8" NPT inlet is seen at the left of the manifold with the dual #10-32 port outlets at the right.

Multi-Valve Manifolds

Multi-valve manifolds are available in two lengths with either single or double (top or top and bottom) rows of outputs for versatility in application. Input to all valves mounted on this manifold is through the manifold end. Outputs are individual #10-32 ports for hose barb fittings and vinyl or urethane hose.





Pilot Manifold

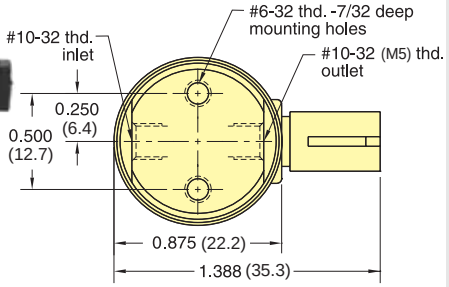
Here a Clippard ET valve is mounted to the 15491-1 Clippard Pilot manifold, making it possible for the ET-3M valve controlled by an electronic signal to actuate a larger air-piloted valve or an air cylinder.

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EV, ET, EC Series 2- & 3-Way Normally Closed Valves
In-line Mount

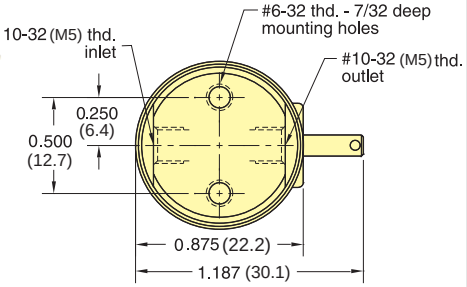
EC - ❑ - ❑ - ❑





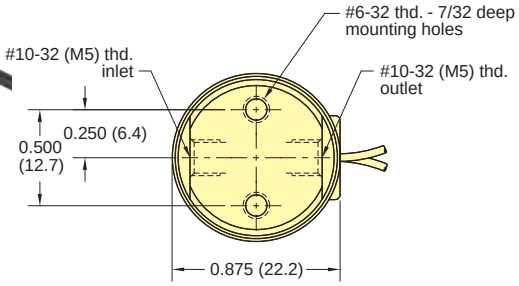
ET - ❑ - ❑ - ❑





EV - ❑ - ❑ - ❑





Type: Normally Closed 2- or 3-Way

Medium: Air (40 micron filtration)

Temperature Range: 30˚ to 180˚F

Power Consumption: 0.67 watt

Response: 5 - 10 milliseconds

Mounting: In-line

Ports: #10-32 (M5)

Operating Range: 90% to 150% of rated voltage

Air Flow: 0.6 scfm @ 100 psig;
17 l/min @ 7 bar
"L" option - 0.5 scfm @ 50 psig;
14 l/min @ 3.5 bar
"H" option - 0.45 scfm @ 25 psig;
13 l/min @ 1.8 bar

Pressure Range:
28" Hg Vac. to 105 psig;
0-7 bar max
"L" option:
28" Hg Vac. to 50 psig;
0-3.5 bar max
"H" option:
28" Hg Vac. to 25 psig;
0-1.8 bar max



For Cable and Connectors, see Page 187.

NUMBERING SYSTEM

E ❑ - ❑ - ❑ - ❑ - ❑ — **M5** - Metric

- **C** - Connector
- **T** - Terminal Spades
- **V** - Wire Leads

- **3** - 2-Way
- **2** - 3-Way

Voltages: *
- **6** - 6 Volts
- **12** - 12 Volts
- **24** - 24 Volts

Standard Options:
- **Blank** - Standard orifice 0.025
- **L** - 0.040 orifice
- **H** - 0.060 orifice
- **V** - Fluorocarbon seals

Non-Standard Options:
- **E** - EPR seals
- **S** - Silicon seals
- **D** - Diode

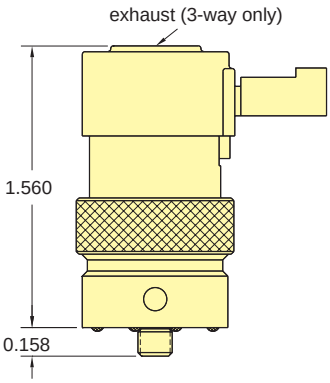
* Consult factory for availability of non-standard voltages and other options

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EV, ET, EC Series 2- & 3-Way Normally Closed Valves
Manifold Mount

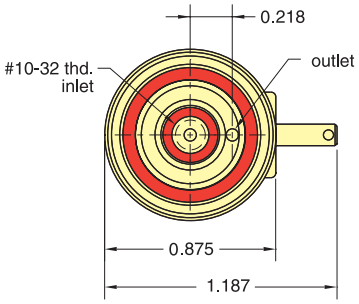
EC - ❑ M - ❑ - ❑



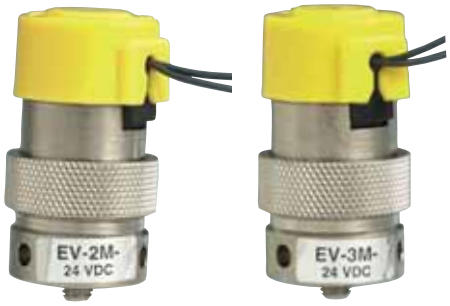


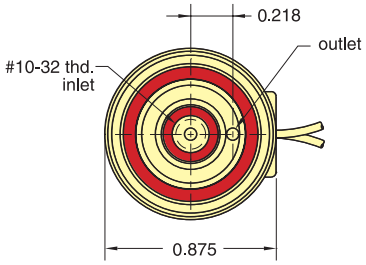
ET - ❑ M - ❑ - ❑





EV - ❑ M - ❑ - ❑





Type: Normally Closed 2- or 3-Way

Medium: Air (40 micron filtration)

Temperature Range: 30˚ to 180˚F

Power Consumption: 0.67 watt

Response: 5 - 10 milliseconds

Mounting: Manifold

Ports: Manifold mounted with #10-32 stud

Operating Range: 90% to 150% of rated voltage

Air Flow: 0.6 scfm @ 100 psig; 17 l/min @ 7 bar
"L" option - 0.5 scfm @ 50 psig; 14 l/min @ 3.5 bar
"H" option - 0.45 scfm @ 25 psig; 13 l/min @ 1.8 bar

Pressure Range:
28" Hg Vac. to 105 psig
"L" option:
28" Hg Vac. to 50 psig
"H" option:
28" Hg Vac. to 25 psig



For Cable and Connectors, see Page 187.

NUMBERING SYSTEM

E ❑ - ❑ M - ❑ - ❑

- **C** - Connector
- **T** - Terminal Spades
- **V** - Wire Leads

- **2** - 2-Way
- **3** - 3-Way

Voltages: *
- **6** - 6 Volts
- **12** - 12 Volts
- **24** - 24 Volts

Standard Options:
- **Blank** - Standard orifice 0.025
- **L** - 0.040 orifice (50 psig max)
- **H** - 0.060 orifice (25 psig max)
- **V** - Fluorocarbon seals

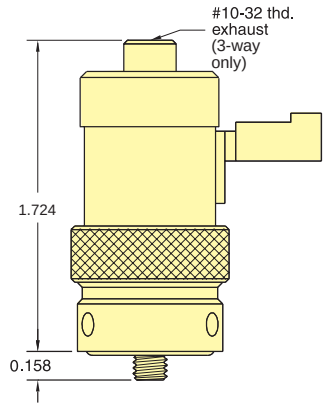
Non-Standard Options:
- **E** - EPR seals
- **S** - Silicon seals
- **D** - Diode

* Consult factory for availability of non-standard voltages and other options

EV, ET, EC Series 2- & 3-Way Normally Open Valves
Manifold Mount

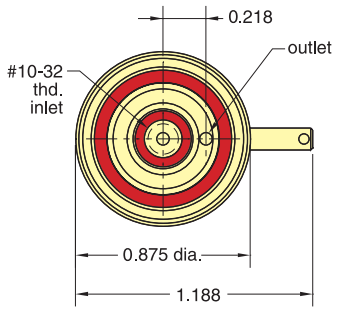
ECN - ❑ M - ❑ - ❑





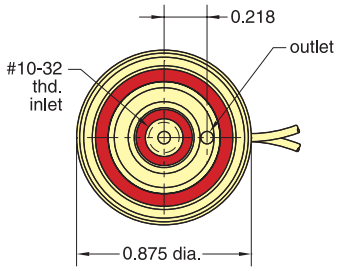
ETN - ❑ M - ❑ - ❑





EVN - ❑ M - ❑ - ❑





Type: Normally Open 2- or 3-Way

Medium: Air (40 micron filtration)

Temperature Range: 30˚ to 180˚F

Power Consumption: 0.67 watt

Response: <15 milliseconds

Mounting: Manifold

Ports: Manifold mounted with #10-32 stud

Operating Range: 90% to 150% of rated voltage

Air Flow: 0.9 scfm @ 100 psig; 25 lpm @ 7 bar

Pressure Range: 28" Hg Vac. to 105 psig; 7 bar max

ECN, ETN & EVN series valves are 2- & 3-way N.O. solenoid valves. The normally open inlet is through the center mounting stud, so the valves can be supplied directly from the manifold without external tubing.



For Cable and Connectors, see Page 187.

NUMBERING SYSTEM

E ❑ N - ❑ M - ❑ - ❑

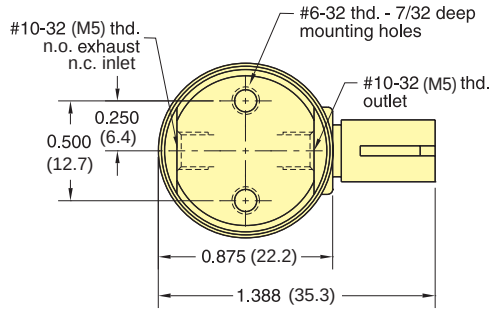
- **C** - Connector
  T - Terminal Spades
  V - Wire Leads
- **2** - 2-Way
  3 - 3-Way
- **Voltages:** *
  6 - 6 Volts
  12 - 12 Volts
  24 - 24 Volts
- **Standard Options:**
  Blank - Buna-N seals
  V - Fluorocarbon seals
- **Non-Standard Options:**
  E - EPR seals
  D - Diode

* Consult factory for availability of non-standard voltages and other options

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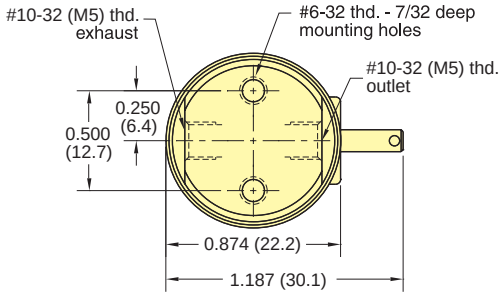
ECO - 3 - ❑ - ❑





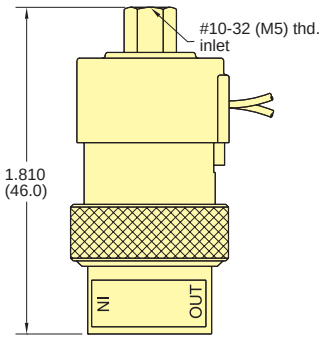
ETO - 3 - ❑ - ❑





EVO - 3 - ❑ - ❑





Type: Fully Ported 3-Way

Medium: Air (40 micron filtration)

Temperature Range: 30˚ to 180˚F

Power Consumption: 0.67 watt

Response: 5 - 10 milliseconds

Mounting: In-line or Manifold

Ports: #10-32 (M5) or

Operating Range: 90% to 150% of rated voltage

Air Flow: 0.6 scfm @ 100 psig*; 17 l/min @ 7 bar
"L" option - 0.5 scfm @ 50 psig; 14 l/min @ 3.5 bar
"H" option - 0.45 scfm @ 25 psig; 13 l/min @ 3.8 bar

* When air supply is connected to the top port to operate valve normally open, main flow is 0.8 scfm and exhaust flow is 0.6 scfm at 100 psig.

Pressure Range:
28" Hg Vac. to 105 psig; 7 bar max
"L" option:
28" Hg Vac. to 50 psig; 3.5 bar max
"H" option:
28" Hg Vac. to 25 psig; 1.8 bar max

For Cable and Connectors, see Page 187.

NUMBERING SYSTEM

E ❑ O - 3 - ❑ - ❑ - ❑

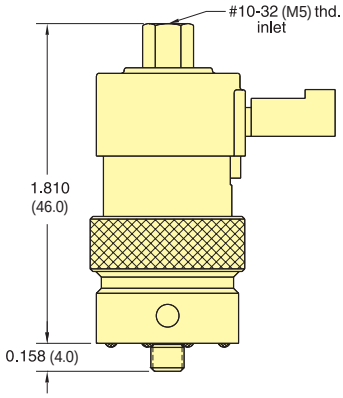
- ❑ (Connector): **C** - Connector; **T** - Terminal Spades; **V** - Wire Leads
- ❑ (Voltages): **6** - 6 Volts; **12** - 12 Volts; **24** - 24 Volts
- ❑ (Standard Options): **Blank** - Standard orifice 0.025; **L** - 0.040 orifice; **H** - 0.060 orifice; **V** - Fluorocarbon seals
  Non-Standard Options: **E** - EPR seals; **S** - Silicon seals; **D** - Diode
- ❑ (Metric): **M5** - Metric

* Consult factory for availability of non-standard voltages and other options

EV, ET, EC Series 3-Way Fully Ported Valves
Manifold Mount

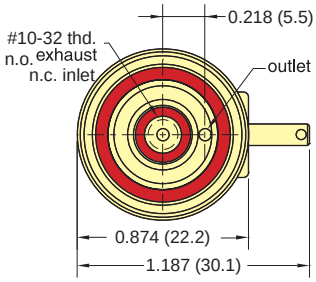
ECO - 3M - ❑ - ❑





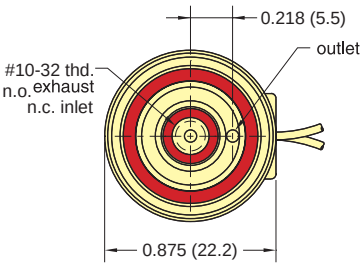
ETO - 3M - ❑ - ❑





EVO - 3M - ❑ - ❑





Type: Fully Ported 3-Way

Medium: Air

Temperature Range: 30˚ to 180˚F

Power Consumption: 0.67 watt

Response: 5 - 10 milliseconds

Mounting: Manifold

Ports: Manifold mounted with #10-32 (M5) stud

Operating Range: 90% to 150% of rated voltage

Air Flow: 0.6 scfm @ 100 psig*;
17 l/min @ 7 bar
"L" option - 0.5 scfm @ 50 psig;
14 l/min @ 3.5 bar;
"H" option - 0.45 scfm @ 25 psig;
13 l/min @ 1.8 bar;

* When air supply is connected to the top port to operate valve normally open, main flow is 0.8 scfm and exhaust flow is 0.6 scfm at 100 psig.

Pressure Range:
28" Hg Vac. to 105 psig;
7 bar max
"L" option:
28" Hg Vac. to 50 psig;
3.5 bar max
"H" option:
28" Hg Vac. to 25 psig;
1.8 bar max

For Cable and Connectors, see Page 187.

NUMBERING SYSTEM

E ❑ O - 3 M - ❑ - ❑ - ❑

- **C** - Connector
- **T** - Terminal Spades
- **V** - Wire Leads

Voltages: *
- **6** - 6 Volts
- **12** - 12 Volts
- **24** - 24 Volts

Standard Options:
- **Blank** - Standard orifice 0.025
- **L** - 0.040 orifice
- **H** - 0.060 orifice
- **V** - Fluorocarbon seals

Non-Standard Options:
- **E** - EPR seals
- **S** - Silicon seals
- **D** - Diode

M5 - Metric

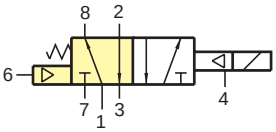
* Consult factory for availability of non-standard voltages and other options

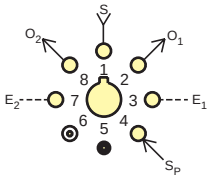
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R-481-❑

For more information please see page 260 in the Modular Valve section of this catalog.







Note: Supply pressure must be applied to both ports 1 & 4. Minimum pressure on port 4 should be 40 psig.

Type: 4-way combination electronic and modular spool type interface valve. Fully ported ET-3 & R401 hybrid

Medium: Air, water, or oil; pilot - air only

Input Pressure: Pilot - 40 psig minimum
Working - 0-150 psig

Air Flow: Valve - 9 scfm @ 100 psig

Voltages: R-481-6 6 VDC
R-481-12 12 VDC
R-481-24 24 VDC

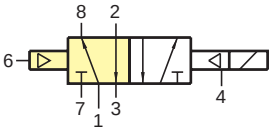
Mounting: Uses Octoport base and two captivated screws

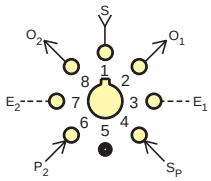
Ports: Valve has patented Octoport system

R-482-❑

For more information please see page 260 in the Modular Valve section of this catalog.







Note: Supply pressure must be applied to both ports 1 & 4. Minimum pressure on port 4 should be 40 psig.

Type: 4-way combination electronic and modular spool type interface valve. Fully ported ET-3 & R402 hybrid

Medium: Air, water, or oil; pilot - air only

Input Pressure: Pilot - 40 psig minimum
Working - 0 to 150 psig

Air Flow: Valve - 9 scfm @ 100 psig

Voltages: R-482-6 6 VDC
R-482-12 12 VDC
R-482-24 24 VDC

Mounting: Uses Octoport base and two captivated screws

Ports: Valve has patented Octoport system

ET-C48
ET-C120

Black molded lug connectors are available for easy push on connection ET-C48 is 48" in length, ET-C120 is 120" in length

ET Valve Connectors



3831

Insulated crimp-on spade lug connectors are available for wiring up leads to connect electronic circuit to ET style valves. Accepts #22, #24, or #26 wire

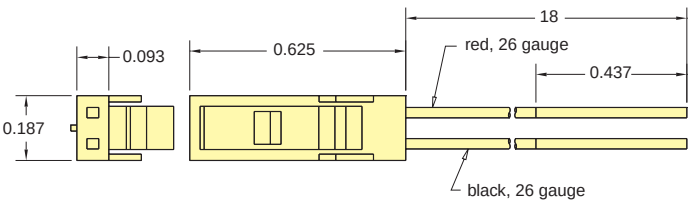


C2-RB18
C2-RB120

AMP connector #103959-1 with 18" or 120" wire leads for EC/ECO and EI/EIO valves

EC & EI Valve Connectors





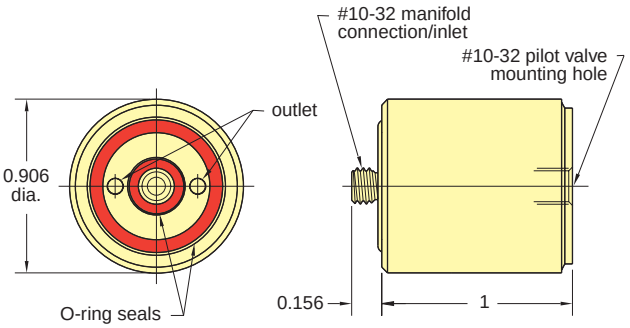
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EVB-2

EC, EV and ET Piloted 2-Way Valve, Manifold Mount

Electronic Valve Booster Amplifies the flow capacity of EC, EV and ET type valves by over twelve times. Manifold style electronic valves mount onto booster body, which, in turn, mounts on Clippard manifolds.





Type: 2-Way Normally Closed, Pressure Piloted Valve

Medium: Air

Input Pressure: 20 to 150 psig

Air Flow: 6.1 scfm @ 100 psig

Response: 20 milliseconds at 20 psig
13 milliseconds at 100 psig

Mounting: Mounts to manifold

Ports: Inlet and outlet through manifold

Materials: Nickel plated brass, acetyl, stainless steel and Buna-N

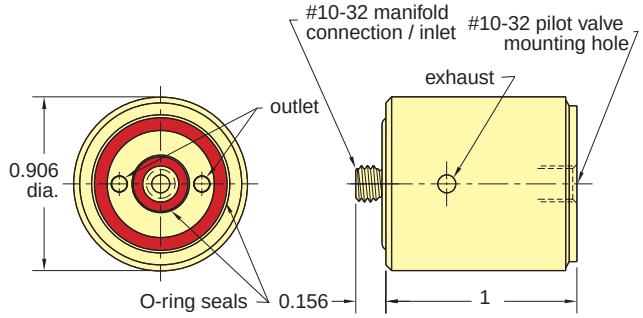
Additional Note Use only normally closed 3-way pilot valves in conjunction with EVB-2

EVB-3

EC, EV and ET Piloted 3-Way Valve, Manifold Mount

Electronic Valve Booster Amplifies the flow capacity of EC, EV and ET type valves by over twelve times. Manifold style electronic valves mount onto booster body, which, in turn, mounts on Clippard manifolds.





Type: 3-Way Normally Closed, Pressure Piloted Valve

Medium: Air

Input Pressure: 20 to 150 psig

Air Flow: 6.1 scfm @ 100 psig

Response: 20 milliseconds at 20 psig
13 milliseconds at 100 psig

Mounting: Mounts to manifold

Ports: Inlet and outlet through manifold

Materials: Nickel plated brass, acetyl, stainless steel and Buna-N

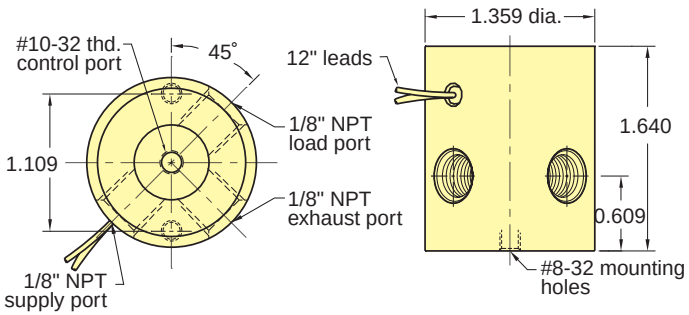
Additional Note Use only normally closed 3-way pilot valves in conjunction with EVB-3

2013 - ❑

Electronic Fluidamp

Low-power DC solenoid solid state output signals can be directly converted to high pressure pneumatic power without amplification





Type: 3-Way Normally Closed, Electronic Valve

Medium: Air

Input Pressure: 30 to 100 psig

Air Flow: 22 scfm @ 100 psig

Bleed Flow: 0.10 scfm @ 100 psig

Filtration: 10 micron

Frequency Response: 50 Hz @ 100 psig
70 Hz @ 30 psig

Ports: 1/8" NPT female

Switching Speed: 10 milliseconds

Electrical Data

Continuous Overload: 350% @ 25˚C ambient
250% @ 50˚C ambient

Power Consumption: Less than .50 watts at rated voltage (80 ma. @ 6V, 40 ma. @ 12 V, 20 ma. @ 24V)

Leads: 28 gauge stranded P.V.C. insulated

Standard Options:

2013-6	6 volts DC
2013-12	12 volts DC
2013-24	24 volts DC

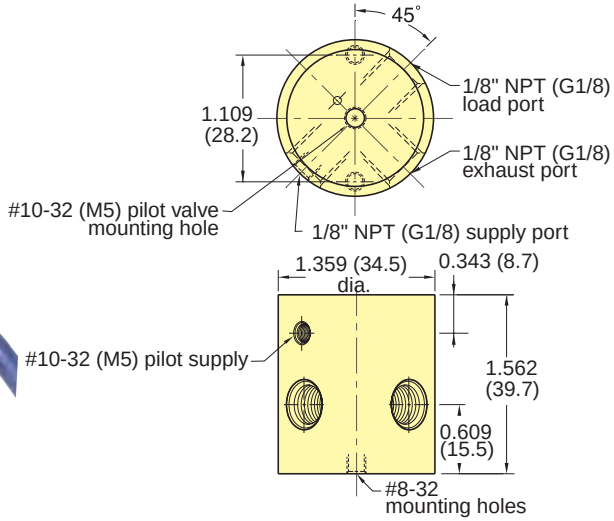
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2020/2021

High Flow EC, EV and ET Piloted 3-Way Valves

Designed to be piloted by a Clippard EC, EV and ET manifold mount electronic valve. Output from the EC, EV and ET actuates the valve to produce outputs up to 22 scfm at 100 psig. Combines low wattage, long life and cool running of the EC, EV and ET valves with quick response and high flow of Clippard "Fluidamp" type valves. The 2020 and 2021 are identical in all respects except one. The 2020 has an external #10-32 port for the pressure supply to the EC, EV, and ET electronic pilot valve.





Type: 3-Way Normally Closed, Pressure Piloted Valve

Medium: Air

Input Pressure: 30 to 100 psig; 2.1 to 6.9 bar

Pilot Pressure: (2020) 60% of supply pressure, minimum

Air Flow: 22 scfm at 100 psig/620 l/min @ 6 bar

Response: Approximately 20 milliseconds

Mounting: Mounting holes provided

Ports: Inlet and outlet, exhaust 1/8" NPT Pilot supply on 2020 is #10-32 female

Materials: Anodized Aluminum, Stainless Steel and Buna-N

Additional Note Use only normally closed 3-way pilot valves in conjunction with 2020/2021

Option: Add -MG for Metric Version

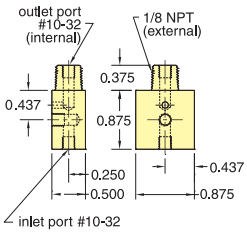
Specialized Manifolds



Material: Nickel plated brass

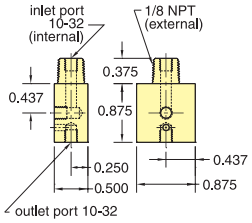
Use: Mount EC, EV and ET valves to any 1/8" NPT supply port

15490-1 and 15490-1-MR (metric).
#10-32 (M5) Inlet
1/8" NPT (R1/8) Outlet



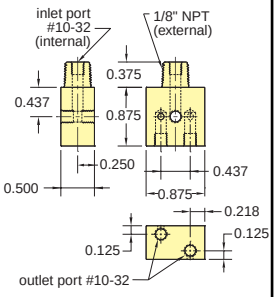


15490-2 and 15490-2-MR (metric).
1/8" NPT (R1/8) Inlet
#10-32 (M5) Outlet



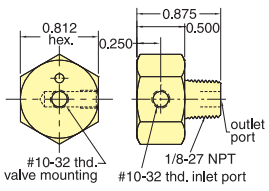


15490-3 and 15490-3-MR (metric) Dual Supply.
1/8" NPT (R1/8) Inlet
#10-32 (M5) Outlet



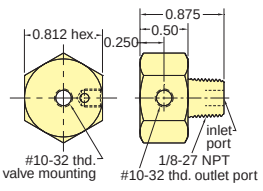


15491-1 and 15491-1-MR (metric).
#10-32 (M5) Inlet
1/8" NPT (R1/8) Outlet





15491-2 and 15491-1-MR (metric).
1/8" NPT (R1/8) Inlet
#10-32 (M5) Outlet





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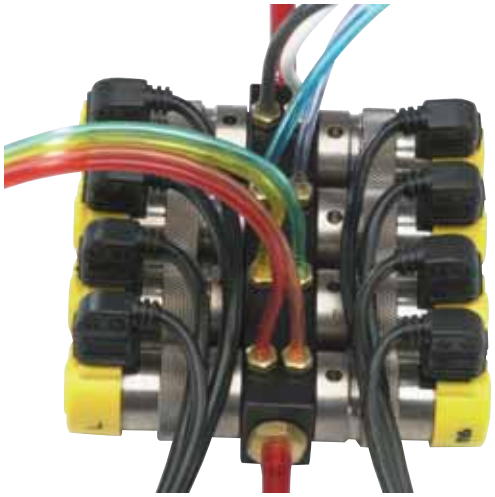
1548 ❑ - ❑

Multi-Valve Manifolds

Construction: Black anodized aluminum



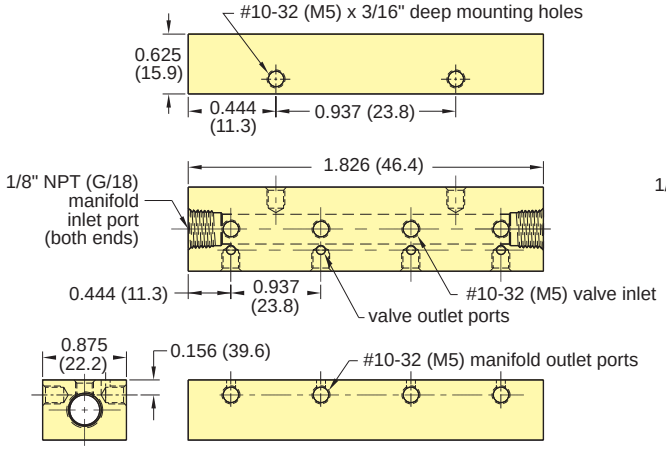
Order No.	# of Valves	"A"	"B"
15481-4	4	1.875"	3.750"
15481-4-M5	4	42.6 mm	95.3 mm
15481-6	6	3.750"	5.625"
15481-6-M5	6	95.3 mm	142.9 mm



Eight ET valves mounted on a 15482-8

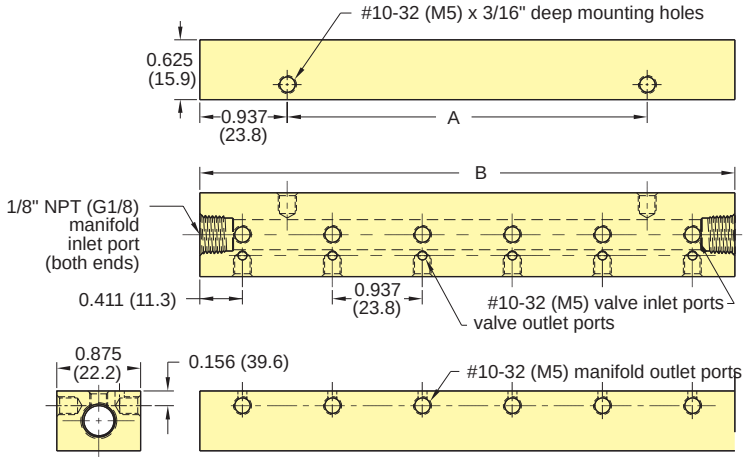
15481-2 & 15481-2-M5 (Metric)

Mounts two valves on one side only



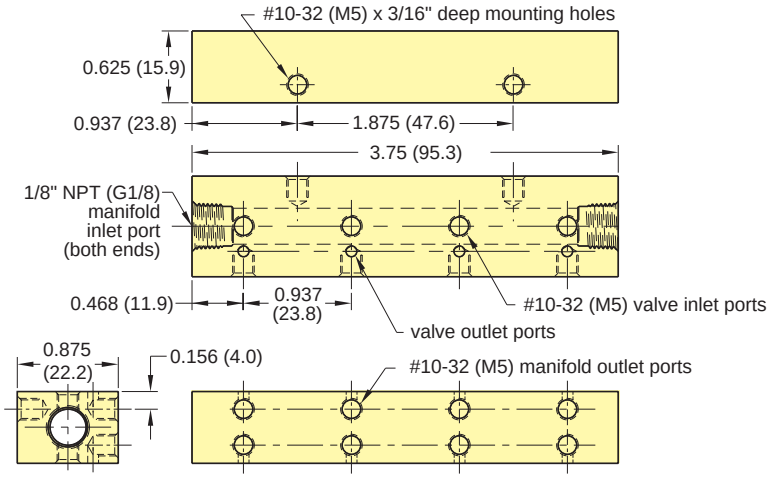
15481-4 & 15481-4-M5 (Metric)
15481-6 & 15481-6-M5 (Metric)

Mounts six valves on one side only



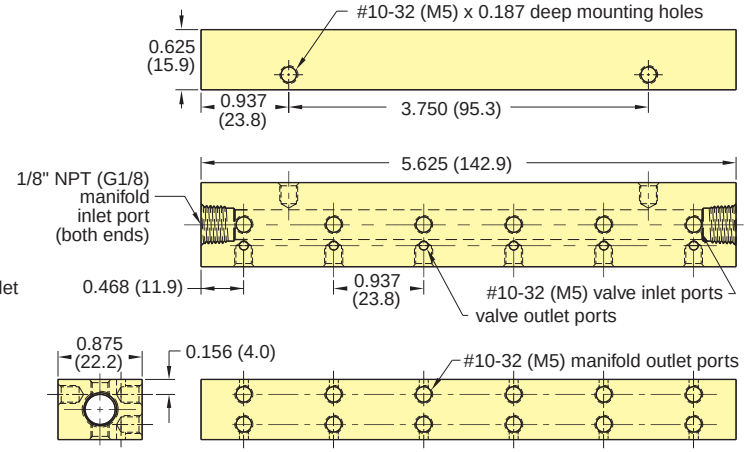
15482-8 & 15482-8-M5 (Metric)

Mounts eight valves, four each on opposite sides



15482-12 & 15482-12-M5 (Metric)

Mounts twelve valves, six each on opposite sides



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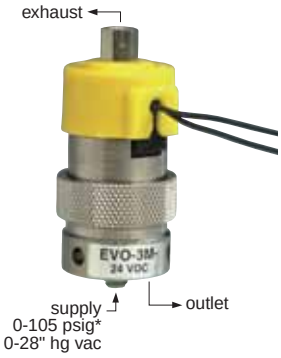
Models Offered



EV-2M
Normally Closed



EV-3M
Normally Closed



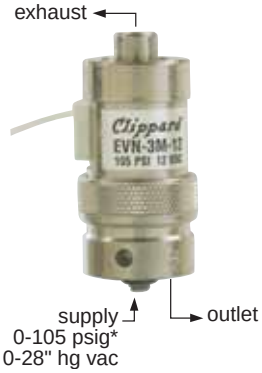
EVO-3M
Normally Closed



EVO-3M
Normally Open



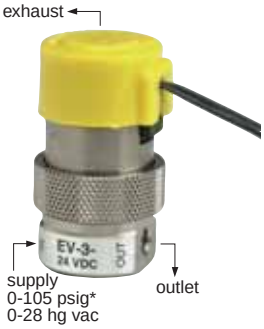
EVN-2M
Normally Open



EVN-3M
Normally Open



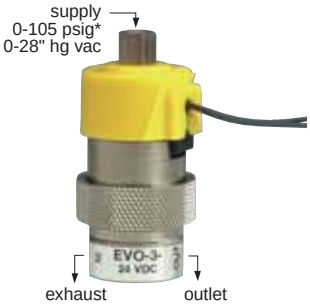
EV-2
Normally Closed



EV-3
Normally Closed



EVO-3
Normally Closed



EVO-3
Normally Open



EVO-3
as Diverter



For Cable and Connectors, see Page 187.

MANIFOLD NUMBERING SYSTEM

E M C - ❑ ❑ - ❑ ❑ - ❑ ❑

Electronic Manifold Card with ET or ETO valves

Number of Valves on Card
08 - 8 Valves
12 - 12 Valves

Voltage of Valves
00 - w/o valves
06 - 6 VDC
12 - 12 VDC
24 - 24 VDC

Type of Valve
01 - w/o valves
20 - ET-2M-XX
22 - ET-2M-XX-H
25 - ET-2M-XX-L
30 - ET-3M-XX
32 - ET-3M-XX-H
35 - ET-3M-XX-L
40 - ETO-3M-XX
42 - ETO-3M-XX-H
45 - ETO-3M-XX-L

EMC-08-00-01 and EMC-12-00-01 are part numbers for cards without any valves, and without manifold. Manifold mounting hardware is included. Manifolds may be ordered separately, if desired.

Part numbers are: 15482-8 and 15482-12

Convenience in interfacing electronics and pneumatics... fast mounting, completely assembled, manifolded valve cards.

Clippard Electronic Manifold Cards

Now you can direct low-voltage DC signals from controllers, systems, computers or other sources to operate powerful pneumatic valves with a minimum of piping and hook-up.

Self-contained card includes:

- 8 or 12 Clippard ET interface valves
- Manifold mount for single air supply
- Circuit board fully wired
- Instant plug-in with 25-pin connector
- Resistor, diode, LED and switch for each valve
- Auxiliary power supply connection

Ready to operate quickly. Just mount the card and make external connection.

And each valve may be individually removed and replaced without any need for desoldering!

Features

- Fast, easy to mount
- Pre-assembled; all valves mounted
- 8 or 12 valve sizes
- 6, 12 or 24 volts DC
- Low power requirements (0.67 watt per valve)
- Choice of valve types
- Each valve switchable
- Shut-off spike protection
- 25-pin connector
- No expensive card rack required

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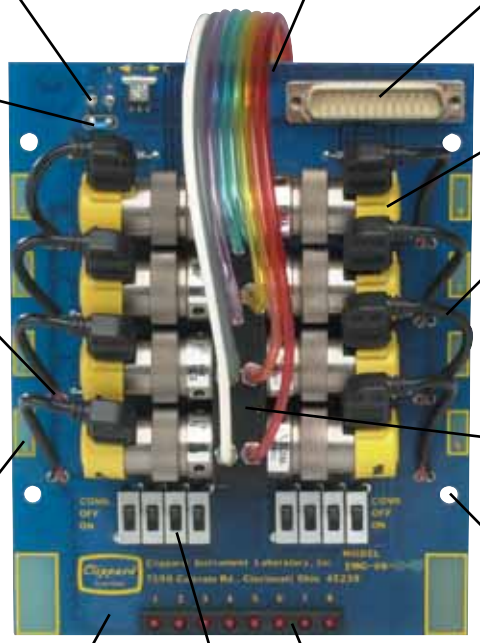
Auxiliary Power Input
Power to operate the valves may be provided through two sources: ONE, through the 25-pin connector if your signal source also has sufficient power to operate the bank of valves, or TWO, through a separate auxiliary power input connection built into the board. To isolate power from the 25-pin connector, use the power source selector switch.
NOTE: In applying power on a temporary basis, use care to observe proper circuit polarity.

Power Selector Switch
Two-position selector switch enables choice of power input source (25-pin connector or auxiliary).

25-Pin Connector

Clippard Electronic Valves

Reverse Polarity Protection
Circuit using diodes and capacitor provides input voltage protection against reverse polarity.



Valve Connection Cords
Cord and plug leads are terminated with solder connections on the board, and connect by molded plug to the valves. All connections are completed at the factory.

Resistor-Diode-LED Circuit
Individual circuit to each valve provides protection against shut-off spikes. LED is illuminated when valve is actuated.

Clippard Valve Manifold
Compact, efficient mounting of the valves is by Clippard multi-valve manifolds.

Valve Identification
Valve numbers are silk-screened on each panel.

Mounting Holes
Four (EMC-08) and six (EMC-12) mounting holes 0.191" dia. are built into each board.

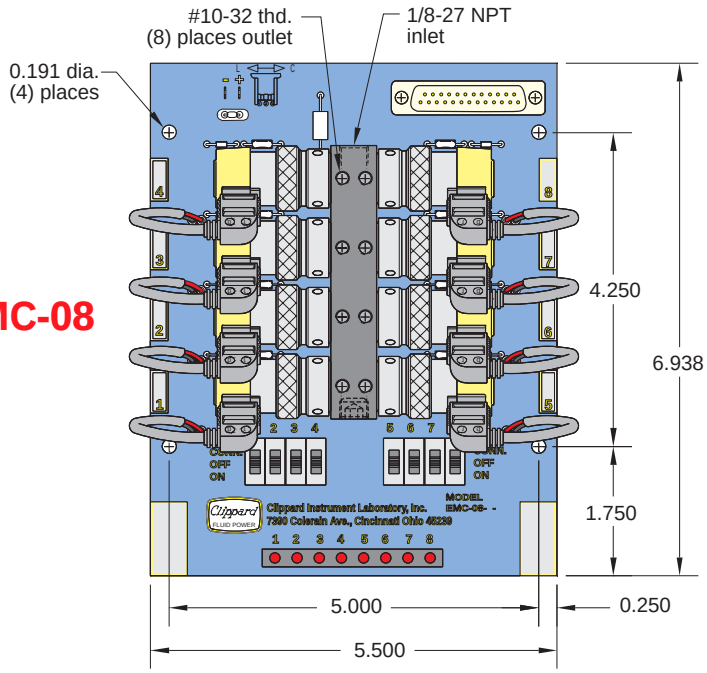
LED Bank
Illuminated LED signals that the valve is actuated.

Printed Circuit Board
Durable laminated fiberglass

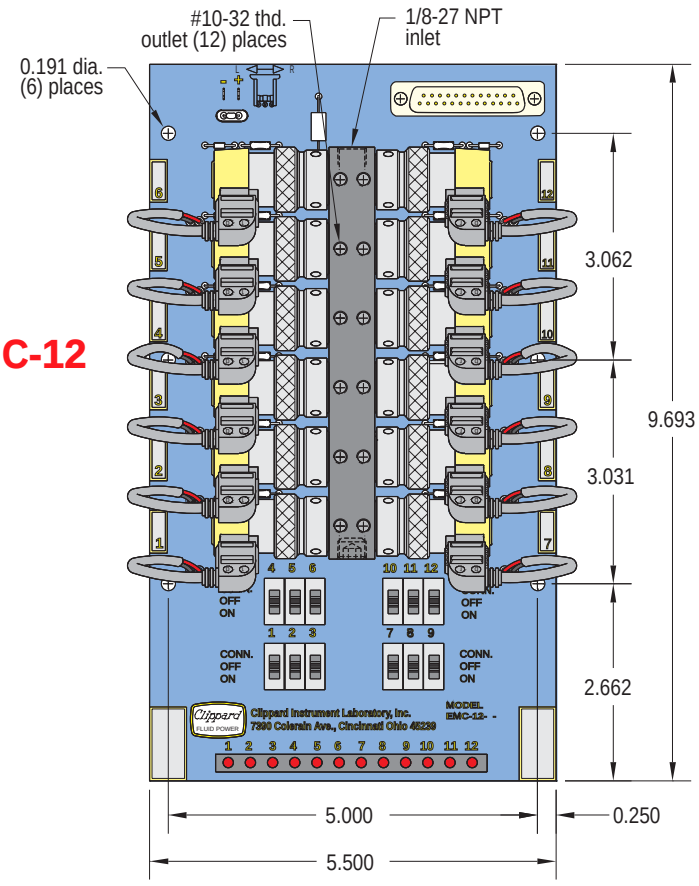
3-Position Detented Switches
Three position slide switch provides for:
ON - Power "ON"; valve is activated
OFF - Power "OFF"; valve not connected
CONN - Valve connected to 25-pin connector, and will be controlled through it.

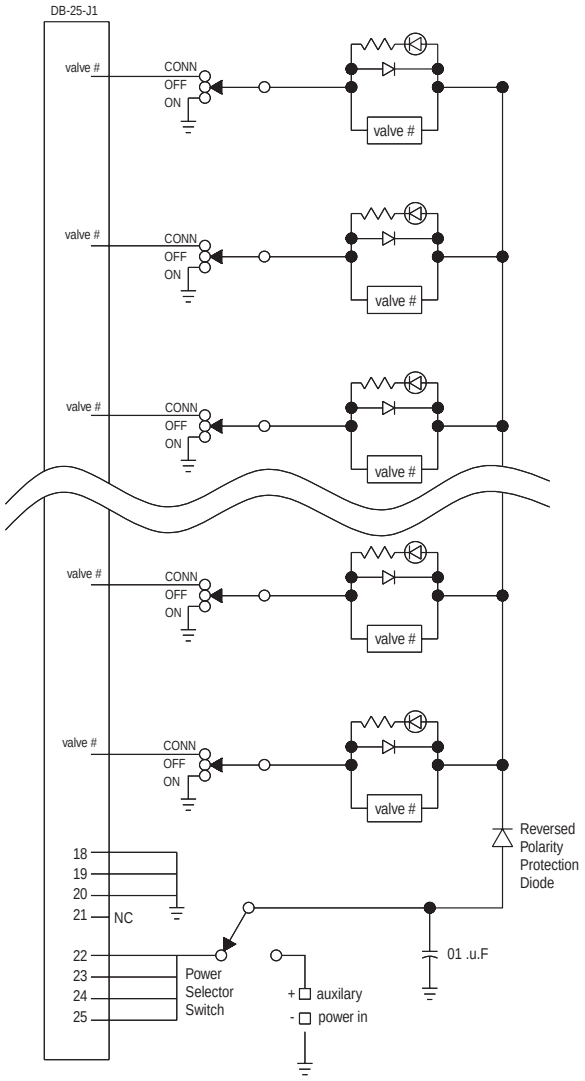
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EMC-08



EMC-12





Wiring Diagram

Note: Manifold mounted valves are normally closed. Use ETO models if exhaust must be ported. ETO models cannot be used "Normally Open" without special piping.

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