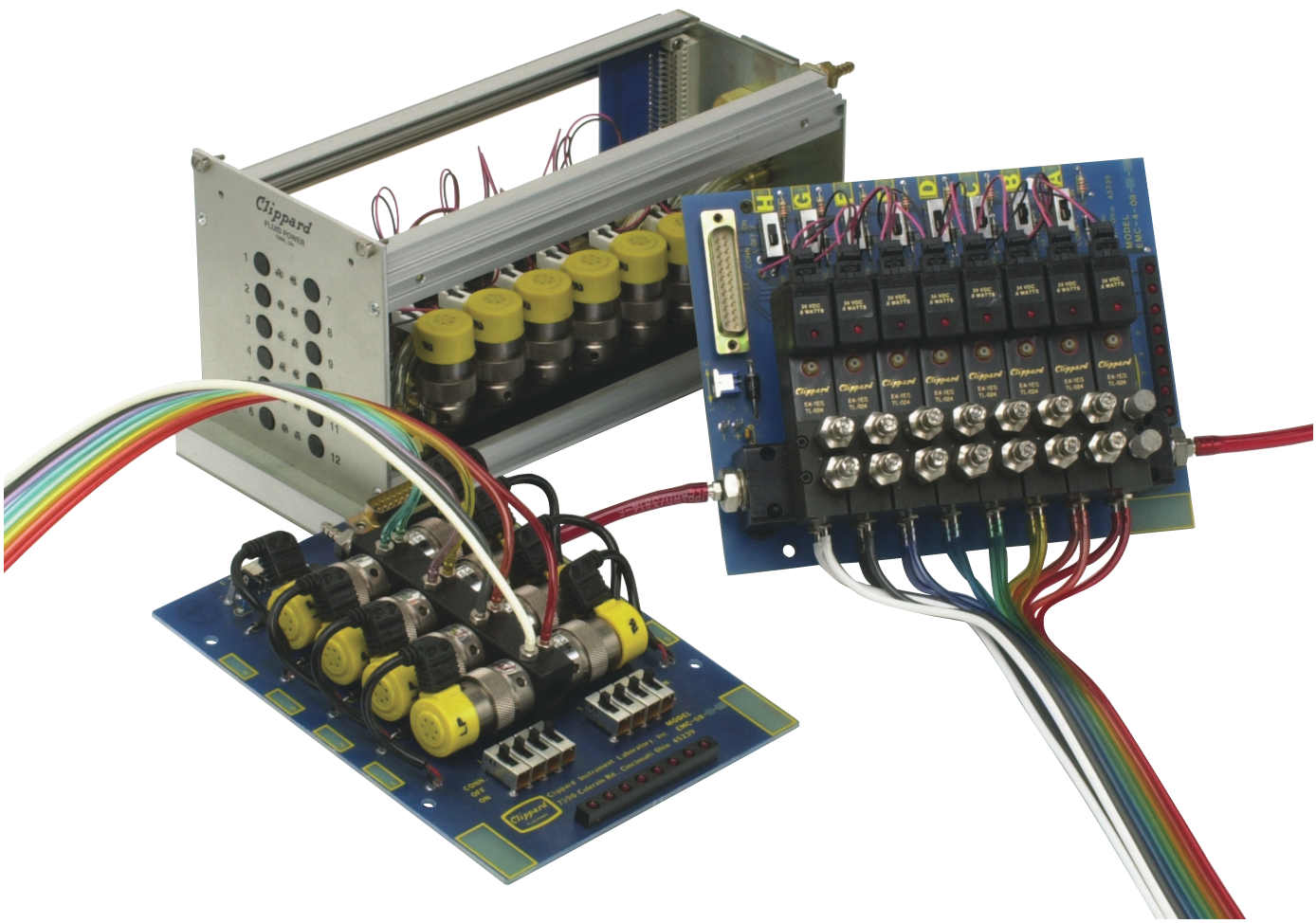
Electronic Manifold Cards



EMC Cards

MANIFOLD NUMBERING SYSTEM

❑ ❑ ❑ ❑ - ❑ ❑ - ❑ ❑ - ❑ ❑

Type
EMC Electronic Manifold Card with ET or ETO valves
EMC4 Electronic Manifold Card with E4 valves

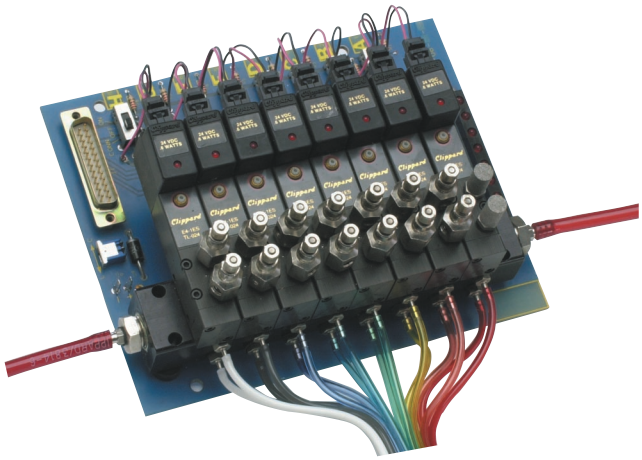
Number of Valves on Card
08 - 8 valves
12 - 12 valves

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
60 - E4-1EA-TO-XX
70 - E4-1ES-TO-XX

EMC-08-00-01, EMC-12-00-01, EMC4-08-00-01 and EMC4-12-00-01 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, 15482-12, E4M-08 and E4M-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

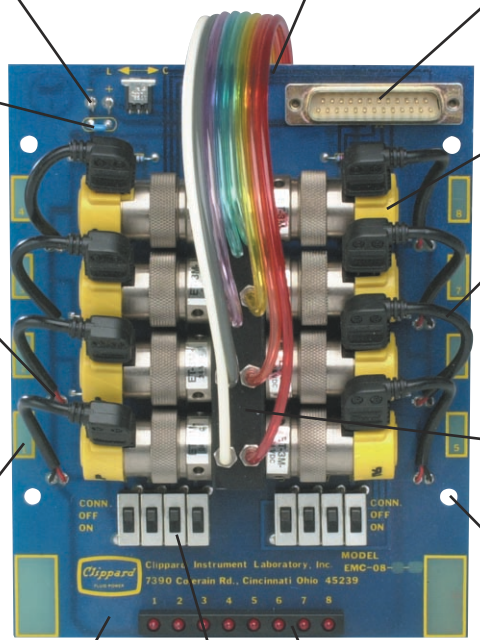
Auxiliary Power Input
Power to operate the valves may be provided through two sources: ONE, through the 25-pin connector if your signal source also has sufficient power to operate the bank of valves, or TWO, through a separate auxiliary power input connection built into the board. To isolate power from 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.

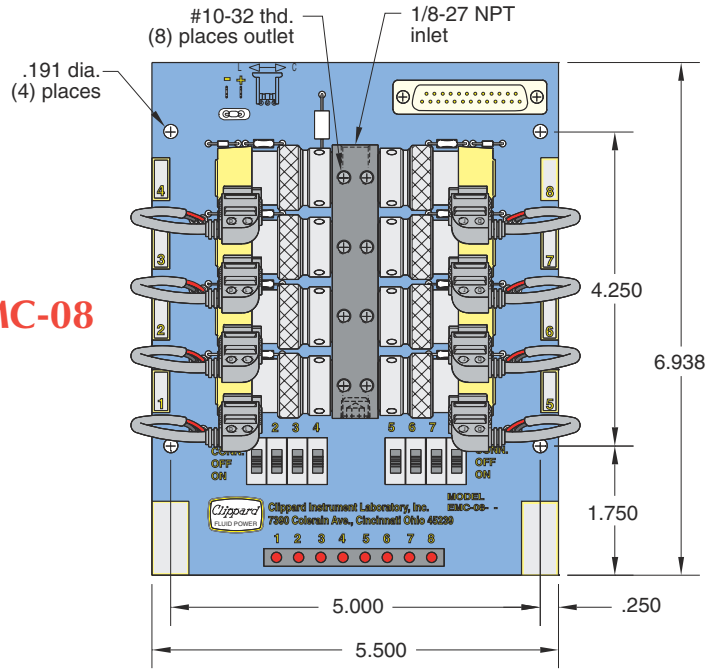
Mounting Holes
Four (EMC-08) and six (EMC-12) mounting holes .191" dia. are built into each board.

LED Bank
Illuminated LED signals that the valve is actuated.

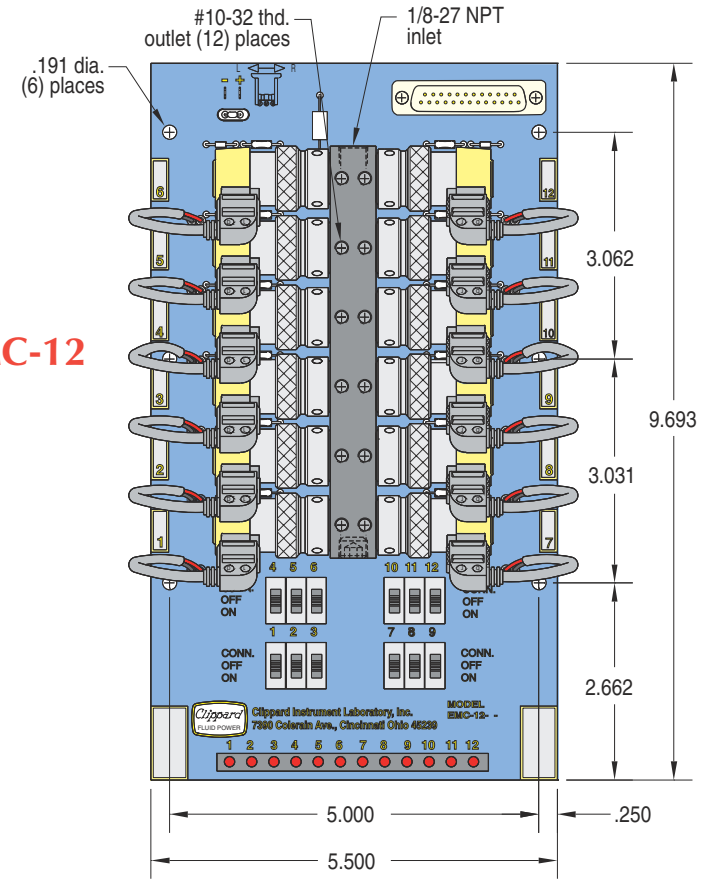
Printed Circuit Board
Basic board is a fiberglass laminated base with all components surface-mounted.

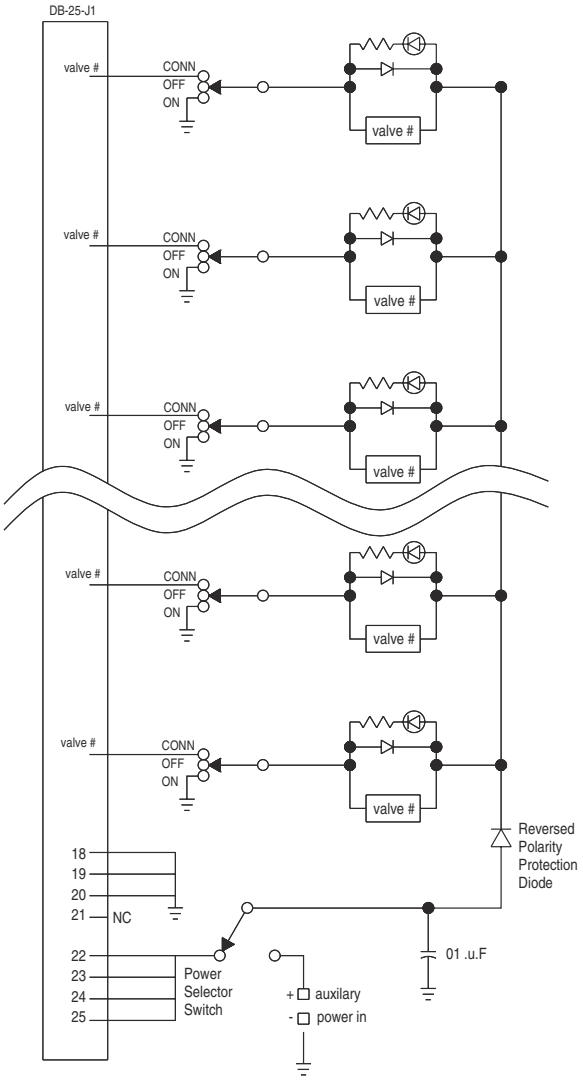
3-Position Detented Switches
Three position slide switch provides for:
ON - Power "ON"; valve is activated
OFF - Power "OFF"; valve not connected
CONN - Valve connected to 25-pin connector, and will be controlled through it.

EMC-08



EMC-12

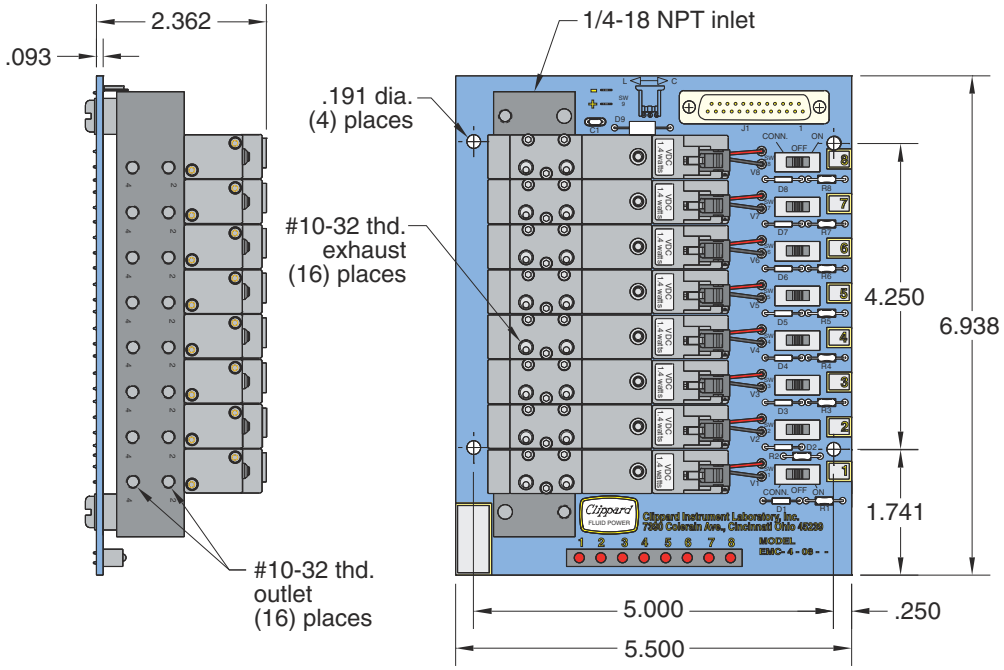




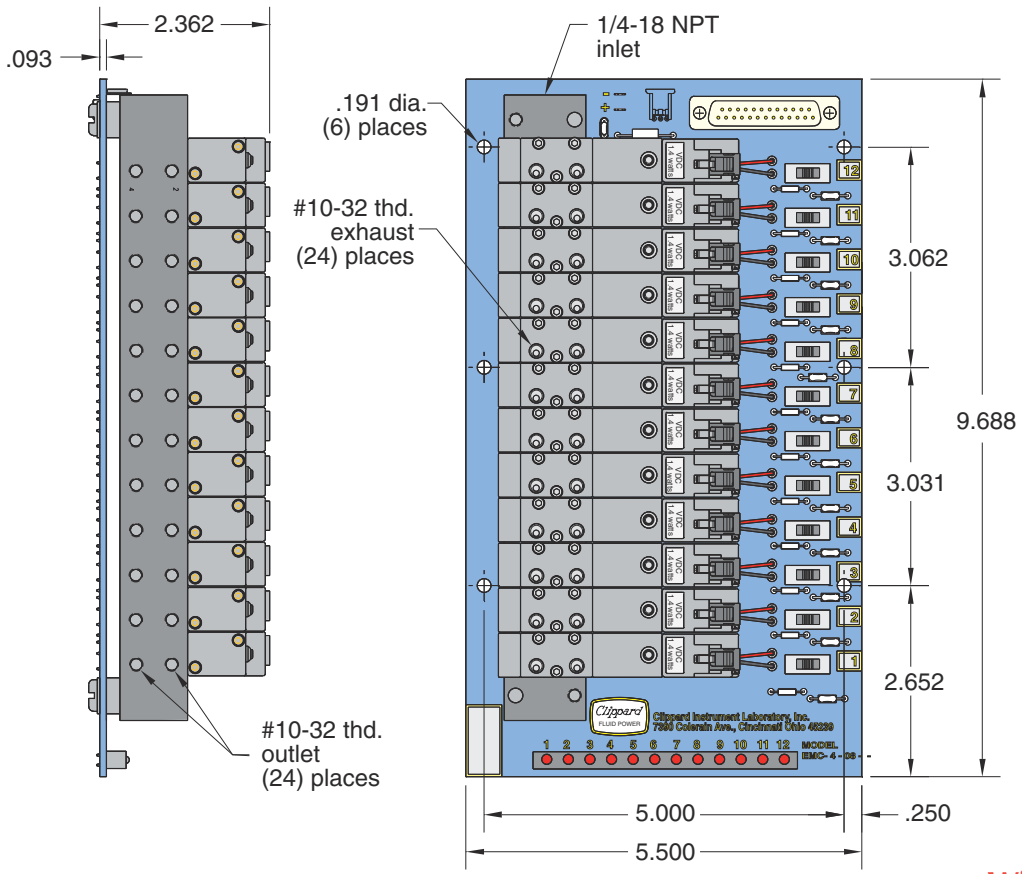
Wiring Diagram
for EMC and EMC4

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.

EMC4-08



EMC4-12



Wiring Diagram
same as EMC

NOTES

CRS VALVE DRAWER NUMBERING SYSTEM

C R S ❑ - ❑ ❑ - ❑ ❑ - ❑ ❑ - ❑ ❑

- Control Wiring: **1** - Sinking; **5** - Sourcing
- Voltage of Valves: **00** w/o valves; **06** 6 VDC (EC only); **12** 12 VDC; **24** 24 VDC
- Options: **B** Booster; **Blank** no options; **S** 3 Position Switch; **BS** booster & switch
- Clippard Rack System
- Number of Valves: ***10** - E4 valves; **12** - EC valves
- Type of Valves: **01** w/o valves; **20** EC-2M; **25** EC-2M-L; **30** EC-3M; **35** EC-3M-L; **40** ECO-3M; **45** ECO-3M-L; **60** E4-1EA-TO; **70** E4-1ES-TO

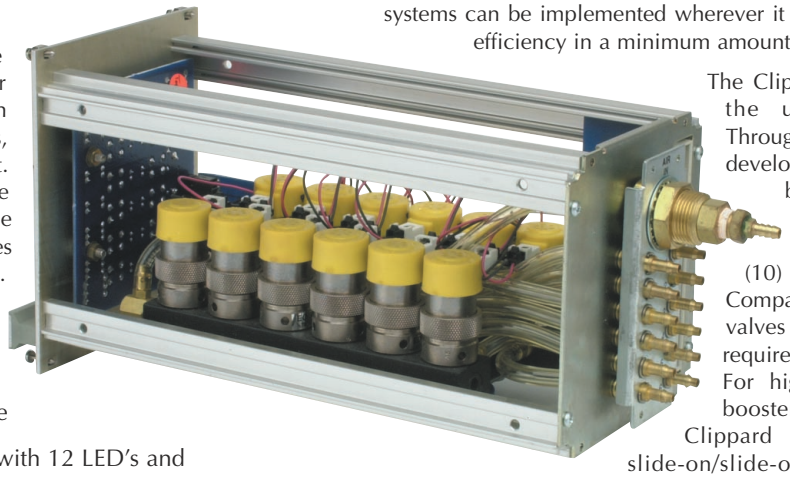
*Consult factory for availability of CRS with E4 valves

Rack System Valve Drawer

Flexible Design

When the valve drawer is disconnected, the air supply is blocked, so it is unnecessary to turn off the main air supply. This allows the primary system to remain in operation, avoiding downtime.

Each individual valve can be quickly removed from the drawer for service. A special connection on the end of each EC valve loosens, allowing for ease of replacement. The electronic connection, on the back panel, is similar to the pneumatic connections and provides operational control capabilities. The valve drawer can be interfaced with any common computer or data base.



Type: 2-way, 3-way & 4-way valve

Design: 3U plug-in I/O Drawer with 12 LED's and 12 manual overrides

Air Supply: Unlubricated - 30 psig minimum with booster 0 - 105 maximum

Air Connection Supply: 1/8" NPT female connection

Output: Barb for 1/8" I.D. polyurethane hose

Electrical Connection: 64 pin #41612, IEC #603-2 use type C connector, positive connector, and negative connect

Electronic Control Options: 12 control connectors, sinking or sourcing, with a working range of 6 to 30 VDC

Electronic Valve Options: Twelve 2-way or 3-way valves, normally closed and 10 4-way valves

Flow: 3-way: .6 scfm @ 100 psig; 6.0 scfm @ 100 psig with booster valve; 4-way; .9 scfm @ 100 psig

Electrical Current (2 & 3-way valve): .028 amps per valve / 24 VDC; .065 amps per valve / 12 VDC; .120 amps per valve / 6 VDC

Compact and Powerful

Pneumatic / Electronic valve drawer is for use in rack systems. State-of-the-art design technology has integrated maximum efficiency and power into a single compact unit.

Designed for ease of operation and installation where space is limited, rack systems have been used extensively in many industries, including: textile, metal working, painting, and petrochemical. Rack systems can be implemented wherever it is necessary to maximize efficiency in a minimum amount of space.

The Clippard valve drawer offers the utmost in capability. Through extensive research and development, this drawer has been designed to house up to (12) Clippard EC valves and boosters, or (10) 4-way Eagle E4 valves. Compact, yet powerful, these valves offer the high flow rates required for many applications. For higher flow requirements, boosters can be used with Clippard EC valves. The simple slide-on/slide-out pneumatic/electronic connection featured with the valve drawer helps eliminate downtime and offers easy access for serviceability.

Electrical Current (4-way valve):
.058 amps per valve / 24 VDC
.117 amps per valve / 12 VDC

Power Consumption:
.67 watts per valve (EC valve)
1.4 watts per valve (E-4 valve)

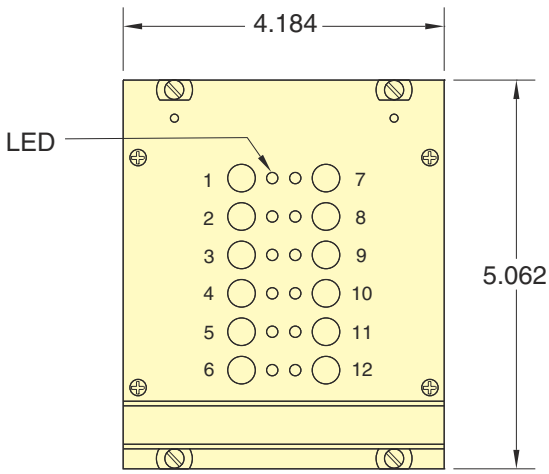
Temperature Range: 30° to 180° F

Size: Fits into standard 19" rack system 220 deep, 3U high and 21 HP width

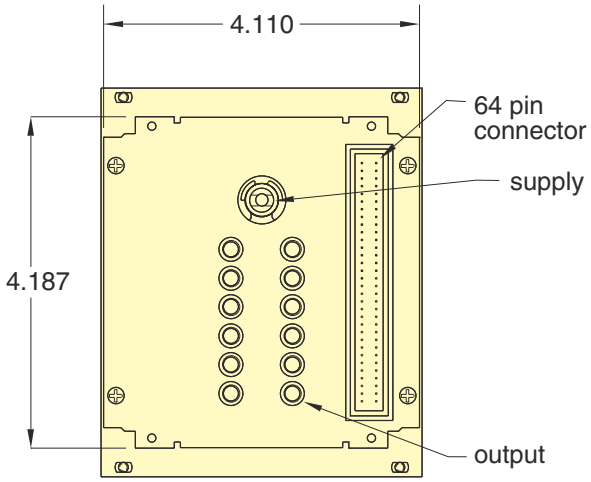
Weight: 3-way rack: 6 lbs.; 4-way rack: 6 lbs.

Electrical Connector: 64 pin for pin #14612, IEC #603-2 use type C connector

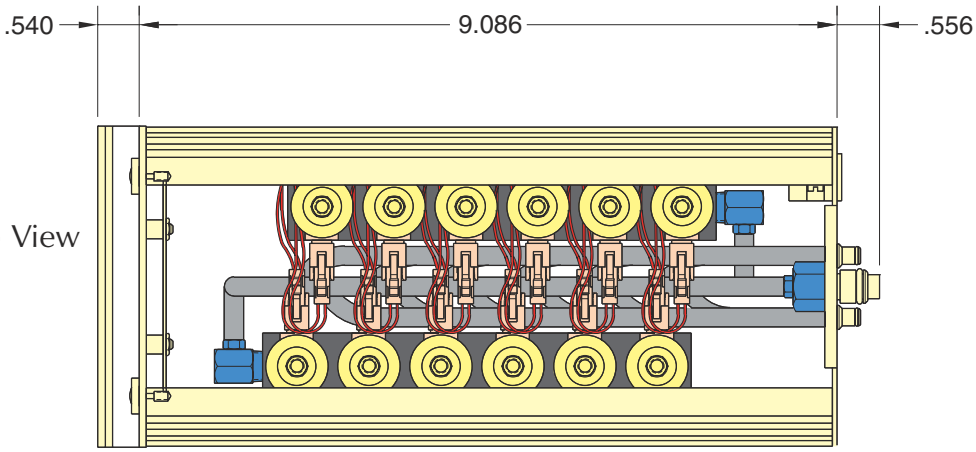
CRS 2 & 3-Way Valve Drawer



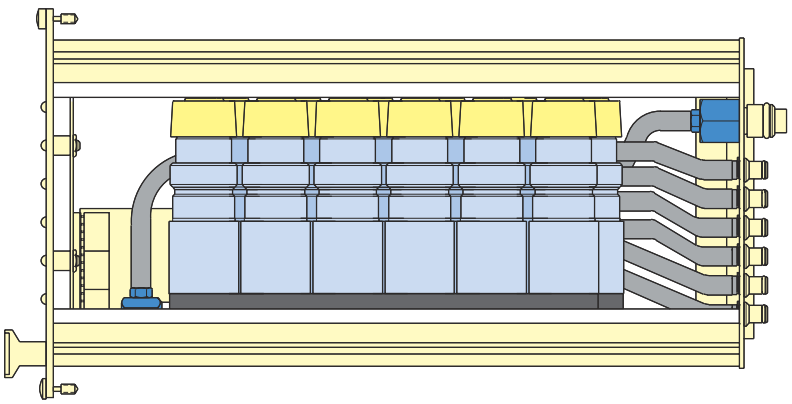
Front View



Back View of 3-Way

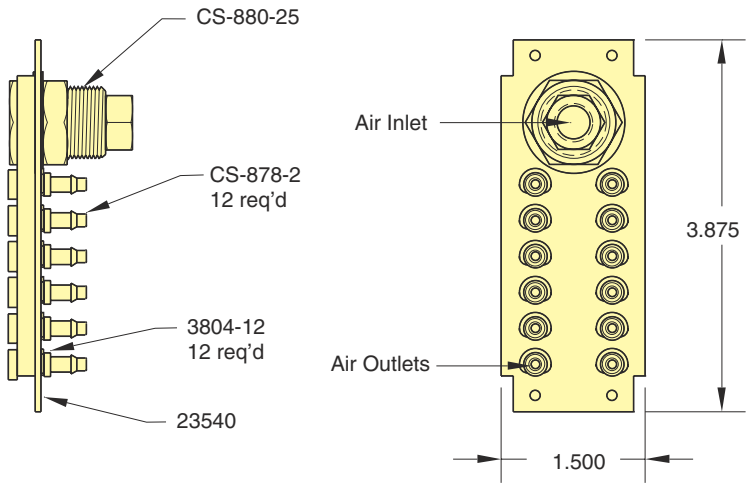


Top View



Left Side View

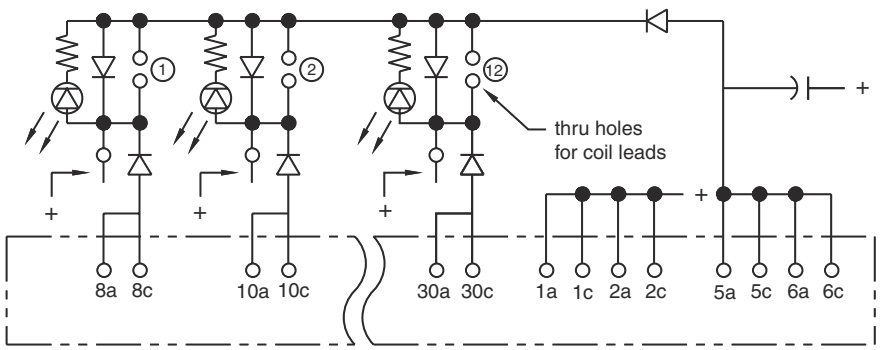
Rack Pneumatic Connection



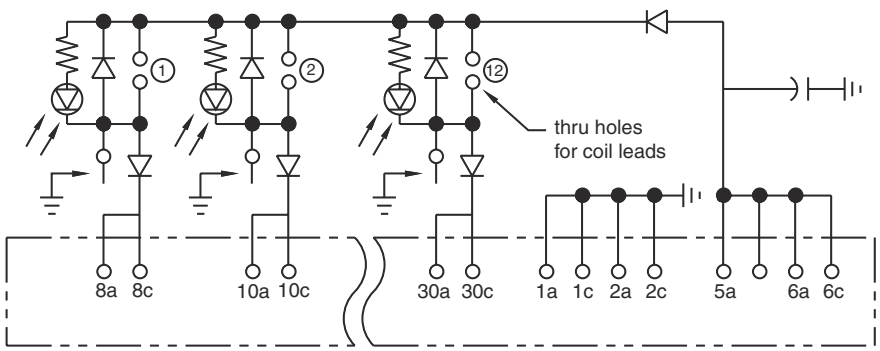
Side View

Back View

CRS Valve Drawer Schematic



Sourcing



Sinking

Notes