

## 10 MM MINIATURE VALVES

### LATCHING 10 MM MINIATURE VALVES

Clippard's Latching series features a careful balance of forces—through the precise placement of a permanent magnet in the valve core—produces a bi-stable valve. A short pulse of current opens the valve, which “latches” open indefinitely after the current stops. A subsequent pulse of current in the opposite direction closes the valve. The valve consumes less energy and produces less heat than a standard solenoid valve.

<b>Working Pressure</b>	0 to 110 psig
<b>Max. Flow Rate</b>	31.2 l/min @ 110 psig
<b>Orifice</b>	0.030"
<b>Electrical Connection</b>	2-Wire reverse polarity, 300 mm, 24 AWG
<b>Wattage</b>	2.0 watts
<b>Voltage Tolerance</b>	±10%
<b>Connector</b>	Wire leads



- 2-Way & 3-Way Normally-Closed configurations
- Pulse-actuated (on or off)
- Polarity reverse required
- Stable latch

*Minimum order quantities may apply.*

Type	Part No.	Voltage
2-Way	E2L10C-7W012	12 VDC
	E2L10C-7W024	24 VDC
3-Way	E3L10C-7W012	12 VDC
	E3L10C-7W024	24 VDC

### HIGH FLOW 2-WAY 10 MM MINIATURE VALVES

<b>Working Pressure</b>	0 to 30 psig @ 30 psig
<b>Max. Flow Rate</b>	28 l/min
<b>Orifice</b>	0.055"
<b>Power Consumption</b>	3.5 watts in-rush phase; 15 ms/0.35 watts maintenance phase
<b>Voltage Tolerance</b>	±10%

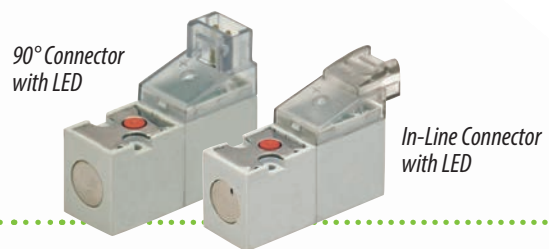


#### 10 MM HIGH FLOW SINGLE-STATION MANIFOLD

*Spare hardware and cover plates available.*

Part No.	Description
E10HM-01	10 mm Single-Station Manifold

Part No.	Connector	Voltage
E210H-3L012	90° Connector with LED	12 VDC
E210H-3L024		24 VDC
E210H-3C012	In-Line Connector with LED	12 VDC
E210H-3C024		24 VDC



### ISO 15218 10 MM 3-WAY MINIATURE VALVES

<b>Working Pressure</b>	0 to 102 psig @ 102 psig
<b>Maximum Flow Rate</b>	42 l/min @ 102 psig
<b>Exhaust Flow</b>	49 l/min
<b>Orifice</b>	0.043"
<b>Power Consumption</b>	3.5 watts in-rush phase; 15 ms/0.35 watts maintenance phase
<b>Voltage Tolerance</b>	±10%

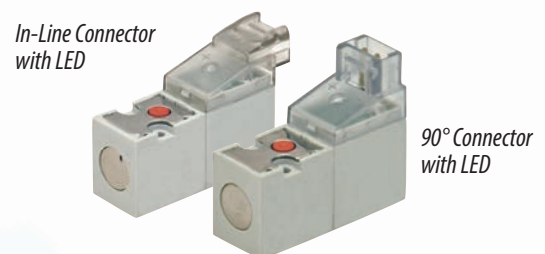


#### 10 MM SINGLE-STATION ISO MANIFOLD

*Spare hardware and cover plates available.*

Part No.	Description
E10LM-01	ISO 10 mm Single-Station Manifold

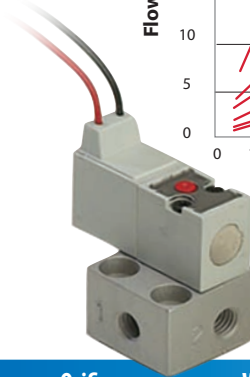
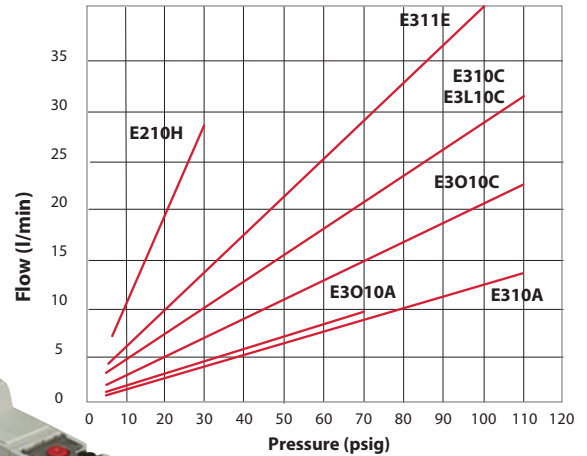
Part No.	Connector	Voltage
E311E-3L012	90° Connector with LED	12 VDC
E311E-3L024		24 VDC
E311E-3C012	In-Line Connector with LED	12 VDC
E311E-3C024		24 VDC



# 10 MM MINIATURE VALVES

<b>Medium</b>	Air, gas, or other compatible fluids
<b>Max. Flow Rate</b>	<b>0.020" Orifice:</b> 14 l/min @ 110 psig <b>0.030" Orifice:</b> 31.2 l/min @ 110 psig
<b>Exhaust Flow</b>	<b>0.020" Orifice:</b> 22.7 l/min @ 110 psig <b>0.030" Orifice:</b> 34 l/min @ 110 psig
<b>Response Time</b>	8 ms when energized, 10 ms when de-energized
<b>Voltage Tolerance</b>	±10%
<b>Power Consumption</b>	0.6 or 1.3 watts <i>Dependent on orifice size and pressure</i>
<b>Material</b>	Stainless steel core and springs, nylon body, FKM dynamic seals, nitrile gasket and static seals
<b>Coil Insulation Class</b>	F 311°F
<b>Temperature Range</b>	23 to 122°F (If below 32°F, must use clean, dry air)
<b>CE, RoHS Compliant</b>	

Typical Air Flow



For more details, visit [clippard.com/link/10-15mm](http://clippard.com/link/10-15mm)

Type	Base Part No.*	Connector	Orifice	Wattage	Working Pressure
2-Way Normally-Closed  	E210A-1E □□□	90° Connector	0.020"	0.6 watts	14.7 to 110 psig
	E210C-2E □□□		0.030"	1.3 watts	0 to 110 psig
	E210A-1L □□□	90° Connector with LED	0.020"	0.6 watts	14.7 to 110 psig
	E210C-2L □□□		0.030"	1.3 watts	0 to 110 psig
	E210A-1F □□□	In-Line Connector	0.020"	0.6 watts	14.7 to 110 psig
	E210C-2F □□□		0.030"	1.3 watts	0 to 110 psig
	E210A-1C □□□	In-Line Connector with LED	0.020"	0.6 watts	14.7 to 110 psig
	E210C-2C □□□		0.030"	1.3 watts	0 to 110 psig
E210A-1W □□□	Wire Leads, 11.8"	0.020"	0.6 watts	14.7 to 110 psig	
E210C-2W □□□		0.030"	1.3 watts	0 to 110 psig	
3-Way Normally-Closed  	E310A-1E □□□	90° Connector	0.020"	0.6 watts	14.7 to 110 psig
	E310C-2E □□□		0.030"	1.3 watts	0 to 110 psig
	E310A-1L □□□	90° Connector with LED	0.020"	0.6 watts	14.7 to 110 psig
	E310C-2L □□□		0.030"	1.3 watts	0 to 110 psig
	E310A-1F □□□	In-Line Connector	0.020"	0.6 watts	14.7 to 110 psig
	E310C-2F □□□		0.030"	1.3 watts	0 to 110 psig
	E310A-1C □□□	In-Line Connector with LED	0.020"	0.6 watts	14.7 to 110 psig
	E310C-2C □□□		0.030"	1.3 watts	0 to 110 psig
E310A-1W □□□	Wire Leads, 11.8"	0.020"	0.6 watts	14.7 to 110 psig	
E310C-2W □□□		0.030"	1.3 watts	0 to 110 psig	
3-Way Normally-Open  	E3010A-1E □□□	90° Connector	0.020"	0.6 watts	14.7 to 70 psig
	E3010C-2E □□□		0.030"	1.3 watts	0 to 110 psig
	E3010A-1L □□□	90° Connector with LED	0.020"	0.6 watts	14.7 to 70 psig
	E3010C-2L □□□		0.030"	1.3 watts	0 to 110 psig
	E3010A-1F □□□	In-Line Connector	0.020"	0.6 watts	14.7 to 70 psig
	E3010C-2F □□□		0.030"	1.3 watts	0 to 110 psig
	E3010A-1C □□□	In-Line Connector with LED	0.020"	0.6 watts	14.7 to 70 psig
	E3010C-2C □□□		0.030"	1.3 watts	0 to 110 psig
E3010A-1W □□□	Wire Leads, 11.8"	0.020"	0.6 watts	14.7 to 70 psig	
E3010C-2W □□□		0.030"	1.3 watts	0 to 110 psig	

\*Add voltage choice to the end of each base part number  
12 VDC (012) or 24 VDC (024), Example: E210A-1C012

# 15 MM MINIATURE VALVES

## CONNECTOR OPTIONS

Terminal Connector



Industrial form C connector ordered separately (p. 44)

DIN Connector



DIN connector ordered separately (p. 44)

In-Line Connector with LED



90° Connector with LED



Wire Leads

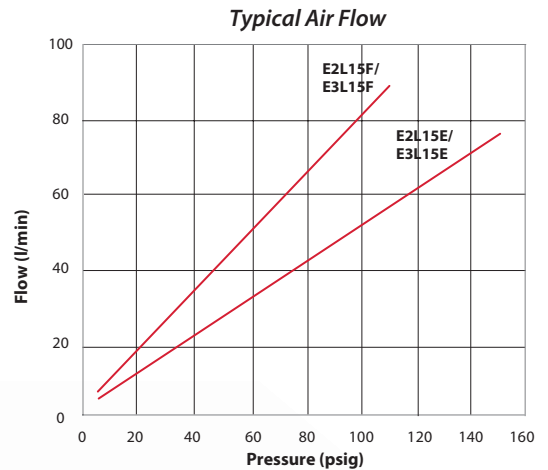


## LATCHING 15 MM MINIATURE VALVES

Through the precise placement of a permanent magnet in the valve core, a careful balance of forces produces a bi-stable valve. A short pulse of current to the brown lead opens the valve, which “latches” open indefinitely after the current stops. A subsequent pulse of current to the blue lead closes the valve. The valve consumes less energy and produces less heat than a standard solenoid valve.

- Max. Flow Rate**      **0.043" Orifice:** 59 l/min @ 150 psig  
                                  **0.063" Orifice:** 84 l/min @ 110 psig
- Electrical Connection**    3-Wire molded cord, 300 mm, 24 AWG 4.5 mm external jacket; tinned copper wires; silicone jacket and conductor insulation
- Voltage Tolerance**       ±10%
- Wattage**                    4.0 watts

Type	Part No.	Orifice	Voltage	Pressure
2-Way	E2L15E-4W012	0.043"	12 VDC	0 to 150 psig
	E2L15E-4W024	0.043"	24 VDC	0 to 150 psig
	E2L15F-4W012	0.063"	12 VDC	0 to 110 psig
	E2L15F-4W024	0.063"	24 VDC	0 to 110 psig
3-Way	E3L15E-4W012	0.043"	12 VDC	0 to 150 psig
	E3L15E-4W024	0.043"	24 VDC	0 to 150 psig
	E3L15F-4W012	0.063"	12 VDC	0 to 110 psig
	E3L15F-4W024	0.063"	24 VDC	0 to 110 psig



- 2-Way & 3-Way Normally-Closed configurations
- Pulse-actuated (on or off)
- 3-wire coil—no polarity reverse required
- Stable latch
- Minimum order quantities may apply

## HIGH FLOW 2-WAY N.C. 15 MM VALVES

- Working Pressure**            0 to 43 psig
- Maximum Flow Rate**        120 l/min @ 43 psig
- Orifice**                        0.118"
- Voltage Tolerance**         ±10%
- Power Consumption**        4.0 watts

Part No.	Connector	Voltage
E215H-3L012	90° Connector	12 VDC
E215H-3L024	with LED	24 VDC
E215H-3C012	In-Line Connector	12 VDC
E215H-3C024	with LED	24 VDC



### 15 MM HIGH FLOW SINGLE-STATION MANIFOLD

Spare hardware and cover plates available.

Part No.	Description
E15HM-01	15 mm Single-Station Manifold

90° Connector with LED

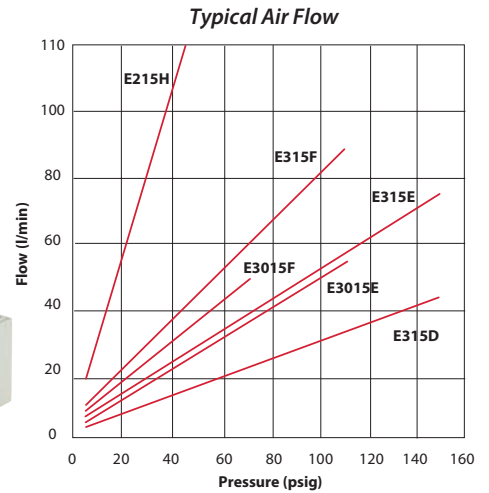


In-Line Connector with LED



# 15 MM MINIATURE VALVES

<b>Medium</b>	Air, gas, or other compatible fluids
<b>Max. Flow Rate</b>	<b>0.032" Orifice:</b> 45 l/min @ 150 psig <b>0.043" Orifice:</b> 70 l/min @ 150 psig <b>0.063" Orifice:</b> 91 l/min @ 110 psig
<b>Response Time</b>	10 ms when energized; 12 ms when de-energized
<b>Voltage Tolerance</b>	±10%
<b>Power Consumption</b>	1.0 or 2.5 watts <i>Dependent on orifice size and pressure</i>
<b>Material</b>	Stainless steel core and springs, nylon body, FKM seals, nitrile gasket
<b>Coil Insulation Class</b>	F 311°F
<b>Temperature Range</b>	23 to 122°F (If below 32°F, must use clean, dry air)
<b>More Details</b>	<a href="http://clippard.com/link/10-15mm">clippard.com/link/10-15mm</a>



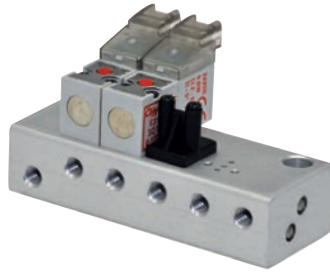
Type	Base Part No.*	Connector	Voltage					Orifice	Wattage	Working Pressure
			12 VDC	24 VDC	24 VAC	110 VAC	220 VAC			
<b>2-Way Normally-Closed</b> 	E215D-1T □□□□	Terminal	•	•				0.032"	1.0	0 to 150 psig
	E215E-2T □□□□		•	•	•			0.043"	2.5	0 to 150 psig
	E215F-2T □□□□		•	•	•			0.063"	2.5	0 to 110 psig
	DIN Connector	E215D-1D □□□□	•	•				0.032"	1.0	0 to 150 psig
		E215E-2D □□□□	•	•	•	•		0.043"	2.5	0 to 150 psig
		E215F-2D □□□□	•	•	•	•		0.063"	2.5	0 to 110 psig
	Wire Leads, 11.8"	E215D-1W □□□□	•	•				0.032"	1.0	0 to 150 psig
		E215E-2W □□□□	•	•	•			0.043"	2.5	0 to 150 psig
		E215F-2W □□□□	•	•	•			0.063"	2.5	0 to 110 psig
	90° Connector with LED	E215D-1L □□□□	•	•				0.032"	1.0	0 to 150 psig
		E215E-2L □□□□	•	•				0.043"	2.5	0 to 150 psig
		E215F-2L □□□□	•	•				0.063"	2.5	0 to 110 psig
In-Line Connector with LED	E215D-1C □□□□	•	•				0.032"	1.0	0 to 150 psig	
	E215E-2C □□□□	•	•				0.043"	2.5	0 to 150 psig	
	E215F-2C □□□□	•	•				0.063"	2.5	0 to 110 psig	
<b>3-Way Normally-Closed</b> 	E315D-1T □□□□	Terminal	•	•				0.032"	1.0	0 to 150 psig
	E315E-2T □□□□		•	•	•			0.043"	2.5	0 to 150 psig
	E315F-2T □□□□		•	•	•			0.063"	2.5	0 to 110 psig
	DIN Connector	E315D-1D □□□□	•	•				0.032"	1.0	0 to 150 psig
		E315E-2D □□□□	•	•	•	•		0.043"	2.5	0 to 150 psig
		E315F-2D □□□□	•	•	•	•		0.063"	2.5	0 to 110 psig
	Wire Leads, 11.8"	E315D-1W □□□□	•	•				0.032"	1.0	0 to 150 psig
		E315E-2W □□□□	•	•	•			0.043"	2.5	0 to 150 psig
		E315F-2W □□□□	•	•	•			0.063"	2.5	0 to 110 psig
	90° Connector with LED	E315D-1L □□□□	•	•				0.032"	1.0	0 to 150 psig
		E315E-2L □□□□	•	•				0.043"	2.5	0 to 150 psig
		E315F-2L □□□□	•	•				0.063"	2.5	0 to 110 psig
In-Line Connector with LED	E315D-1C □□□□	•	•				0.032"	1.0	0 to 150 psig	
	E315E-2C □□□□	•	•				0.043"	2.5	0 to 150 psig	
	E315F-2C □□□□	•	•				0.063"	2.5	0 to 110 psig	
<b>3-Way Normally-Open (110 psig max.)</b> 	E3015E-2T □□□□	Terminal	•	•	•			0.043"	2.5	0 to 110 psig
	E3015F-2T □□□□		•	•	•			0.063"	2.5	0 to 75 psig
	DIN Connector	E3015E-2D □□□□	•	•	•	•		0.043"	2.5	0 to 110 psig
		E3015F-2D □□□□	•	•	•	•		0.063"	2.5	0 to 75 psig
	Wire Leads, 11.8"	E3015E-2W □□□□	•	•	•			0.043"	2.5	0 to 110 psig
		E3015F-2W □□□□	•	•	•			0.063"	2.5	0 to 75 psig
90° Connector with LED	E3015E-2L □□□□	•	•				0.043"	2.5	0 to 110 psig	
	E3015F-2L □□□□	•	•				0.063"	2.5	0 to 75 psig	
In-Line Connector with LED	E3015E-2C □□□□	•	•				0.063"	2.5	0 to 110 psig	
	E3015F-2C □□□□	•	•				0.063"	2.5	0 to 75 psig	

\*Add voltage choice to end of base part number: 12 VDC (012), 24 VDC (024), 24 VAC (24A), 110 VAC (110), or 220 VAC (220). Example: E315D-1C012

# 10 & 15 MM MANIFOLDS, COVER PLATES & CONNECTORS

## STANDARD MANIFOLDS

Standard manifolds are available for one to 16 valves with ported exhaust. Spare hardware and cover plates also available.



10 mm	15 mm	Description
E10M-01	E15M-01	Single-Station Manifold
E10M-02	E15M-02	2-Station Manifold
E10M-04	E15M-04	4-Station Manifold
E10M-06	E15M-06	6-Station Manifold
E10M-08	E15M-08	8-Station Manifold
E10M-10	E15M-10	10-Station Manifold
E10M-12	E15M-12	12-Station Manifold
E10M-14	E15M-14	14-Station Manifold
E10M-16	E15M-16	16-Station Manifold

## COVER PLATES

Includes plate, gasket and two screws.

Part No.	Description
E10M-CP	10 mm Cover Plate
E15M-CP	15 mm Cover Plate



## CONNECTORS

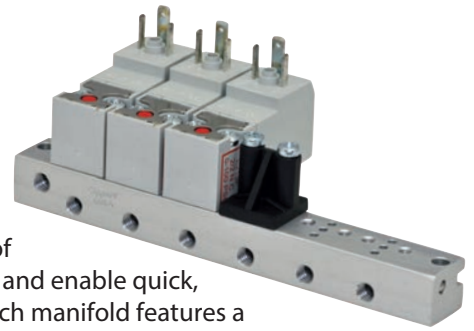
Wire connector must be ordered separately. 24 AWG. Stranding 7/32.



Part No.	Description
C2A-RB300	Connector with Cable, 11.8"
C2A-RB500	Connector with Cable, 19.7"
C2A-RB1000	Connector with Cable, 39.4"

## MINIATURE MANIFOLDS

Small, compact manifolds provide efficient grouping of 10 or 15 mm valves and enable quick, easy installation. Each manifold features a common inlet, individually ported outlets, and exhaust to atmosphere.



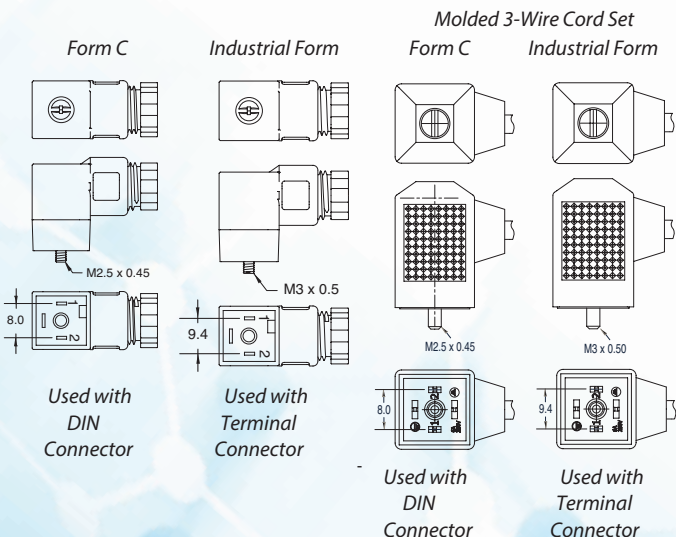
10 mm	15 mm	Description	Supply Ports
E10SM-02	E15SM-02	2-Station Manifold	1
E10SM-04	E15SM-04	4-Station Manifold	1
E10SM-06	E15SM-06	6-Station Manifold	1
E10SM-08	E15SM-08	8-Station Manifold	1
E10SM-10	E15SM-10	10-Station Manifold	2
E10SM-12	E15SM-12	12-Station Manifold	2
E10SM-14	E15SM-14	14-Station Manifold	2
E10SM-16	E15SM-16	16-Station Manifold	2

**Note:** When using these multi-station manifolds with Normally-Open valve configurations, they cannot be used with Normally-Closed valves on the same manifold.

## DIN CONNECTORS

For use with 15 mm valves only

DIN 43650 Form C connectors with 8 mm spade center spacing mate with the 15 mm DIN connector coil. Industrial Form connectors with 9.4 mm spade center spacing are designed to connect to 15 mm terminal coils. Both are available with or without surge suppression, and PVC molded three-wire cord set.



Form C Part No.	Industrial Form Part No.	Volts	LED	Cord
CC-C	CC-I	6-240	no	-
CC-C-P6	CC-I-P6	6-240	no	6'
CC-C-P15	CC-I-P15	6-240	no	15'
CC-CLL	CC-ILL	6-24	yes	-
CC-CLL-P6	CC-ILL-P6	6-24	yes	6'
CC-CLL-P15	CC-ILL-P15	6-24	yes	15'
CC-CLM	CC-ILM	48-110	yes	-
CC-CLM-P6	CC-ILM-P6	48-110	yes	6'
CC-CLM-P15	CC-ILM-P15	48-110	yes	15'