

Individual mounting

Inline	
--------	--

Manifold mounting

Stacking	Manifold base "plug-in"	Manifold base "plug-in" with pressure regulators
----------	-------------------------	--

Series

33

34

**36**

32

37

38

52

67

69

44

46

42

47

48P

48

400

92

93

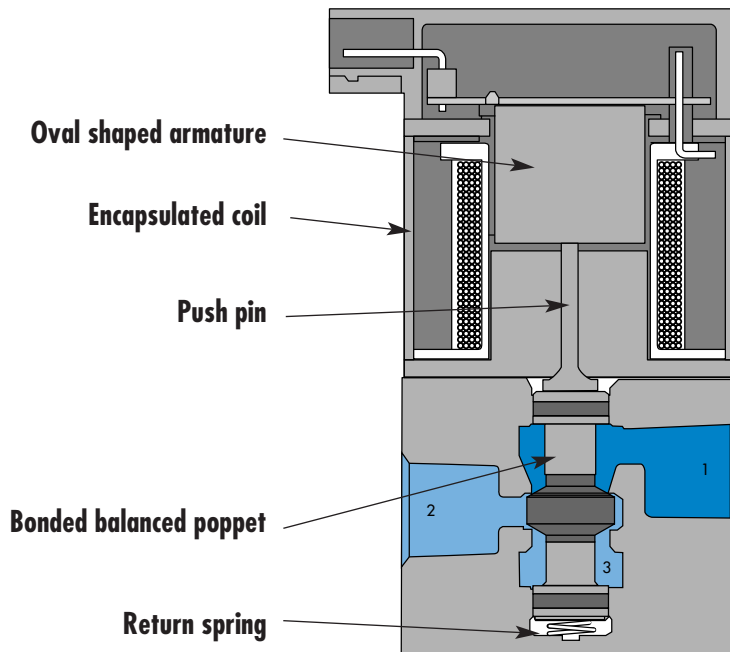
ISO 01

ISO 02

ISO 1

ISO 2

ISO 3



**SERIES FEATURES**

- Patented high force MACSOLENOID® for fastest possible response times.
- Bonded balanced poppet for high flow, precise repeatability, and consistent operation.
- Balanced poppet permits versatility in function — may be used as 3-way or 2-way normally open or normally closed and may be used for vacuum, divertor, or selector applications.
- Extremely high cycle rate capability.
- Use on lube or non-lube service.
- Manual overrides as standard.
- Various solenoid enclosures and plug-in connectors.
- Optional surge suppression available.
- Low wattage DC solenoids — down to 1.8 watts.
- Rectified AC voltage.



# Direct solenoid and solenoid pilot operated valves

Function	Port size	Flow [Max]	Individual mounting	Series
<b>3/2</b>	<b>1/8"</b>	<b>0.3 C<sub>v</sub></b>	Inline	

### OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Patented solenoid develops high shifting forces.
3. Short stroke with high flow.
4. Higher forces result in lower wattages for given flow.
5. Powerful return spring.



33  
34  
**36**

32  
37  
38  
52  
67

### HOW TO ORDER

Port size	Universal valve	NC only valve
<b>1/8" NPTF</b>	36A-AAA-J <b>XXX-XXX</b>	36A-AAB-J <b>XXX-XXX</b>

69  
44  
46

### SOLENOID OPERATOR >

J **XXX-XXX\*** (-G) Add "G" for ground

XX	Voltage	X	Lead wire length	X	Manual operator	XX	Electrical connection
AA	120 VAC (5.4W)	A	18"	1	Non-locking recessed	BA	Flying leads
DA	24 VDC (5.4W)	B	24"	2	Locking recessed	GA	MAC JAC solenoid plug-in
DB	12 VDC (5.4W)	C	36"			GB	MAC JAC solenoid plug-in with diode
DC	24 VDC (2.4W)					GD	MAC JAC solenoid plug-in with light
DD	12 VDC (2.4W)					GG	MAC JAC solenoid plug-in with rectifier

42  
47  
48P

48  
400

92  
93

ISO 01  
ISO 02  
ISO 1  
ISO 2  
ISO 3

\* Other options available, see page 317.  
 Note : - AC voltage requires connector with rectifier.  
 - With the MAC JAC, washdown capability is possible. Consult factory for washdown modification number.

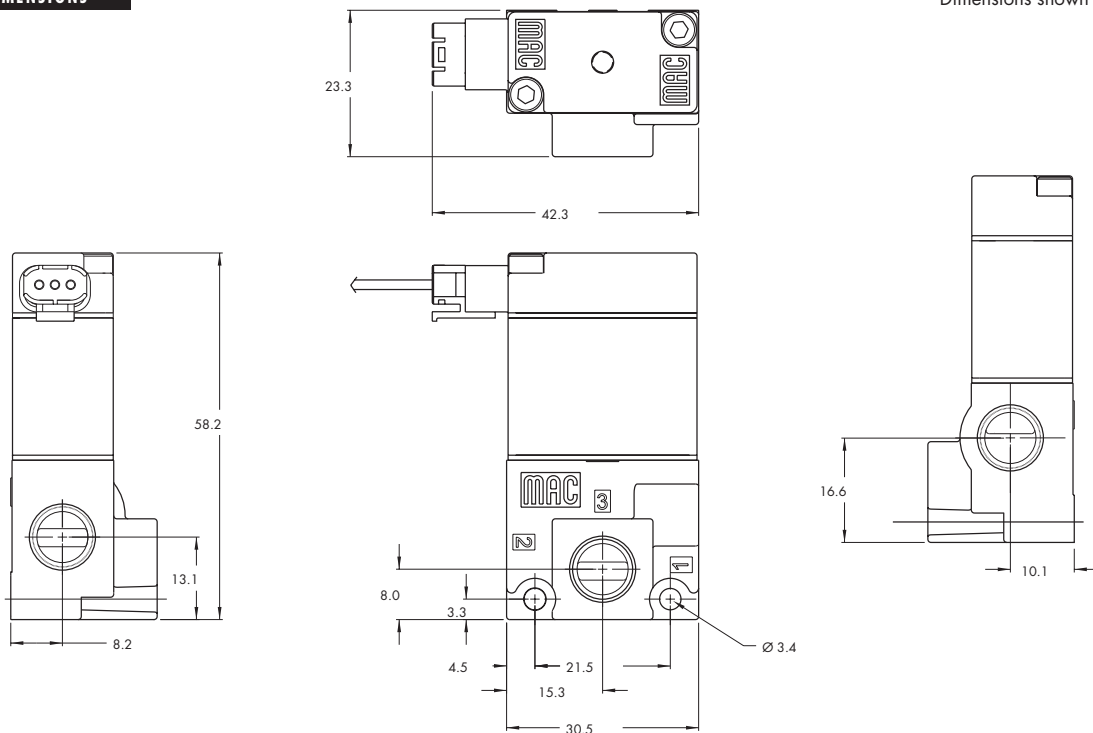
**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Vacuum to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 µ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1.8 Watt: (0.15 C <sub>v</sub> ), 2.4 Watt: (0.15 C <sub>v</sub> ), 5.4 Watt: (0.30 C <sub>v</sub> )
<b>Coil :</b>	Class A wire (#22 AWG x 12), continuous duty
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Protection :</b>	Consult factory
<b>Power :</b>	5.4 W – 2.4 W – 1.8 W

Option : • BSPP threads

**DIMENSIONS**

Dimensions shown are metric (mm)



Function	Port size	Flow [Max]	Individual mounting	Series
<b>3/2</b>	<b>1/8" - # 10-32</b>	<b>0.3 C<sub>v</sub></b>	Stacking	

### OPERATIONAL BENEFITS

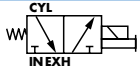
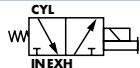
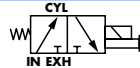
1. Balanced poppet, immune to variations of pressure.
2. Patented solenoid develops high shifting forces.
3. Short stroke with high flow.
4. Higher forces result in lower wattages for given flow.
5. Powerful return spring.



33  
34  
**36**

32  
37  
38  
52  
67

### HOW TO ORDER

Port size	NC only stacking	NC stacking Universal poppet	NO stacking Universal poppet
			
<b>1/8" NPTF</b>	36A-SAB-J <b>XXX-XXX</b>	36A-SAC-J <b>XXX-XXX</b>	36A-SAD-J <b>XXX-XXX</b>
<b># 10-32</b>	36A-SBB-J <b>XXX-XXX</b>	36A-SBC-J <b>XXX-XXX</b>	36A-SBD-J <b>XXX-XXX</b>

69  
44  
46  
42

### SOLENOID OPERATOR >

J **XXX-XXX\*** (-G) Add "G" for ground

XX	Voltage	X	Lead wire length	X	Manual operator	XX	Electrical connection
AA	120 VAC (5.4W)	A	18"	1	Non-locking recessed	BA	Flying leads
DA	24 VDC (5.4W)	B	24"	2	Locking recessed	GA	MAC JAC solenoid plug-in
DB	12 VDC (5.4W)					GB	MAC JAC solenoid plug-in with diode
DC	24 VDC (2.4W)					GD	MAC JAC solenoid plug-in with light
DD	12 VDC (2.4W)					GG	MAC JAC solenoid plug-in with rectifier

47  
48P  
48  
400  
92

\* Other options available, see page 317.  
 Note : - AC voltage requires connector with rectifier.  
 - With the MAC JAC, washdown capability is possible. Consult factory for washdown modification number.  
 End plate kit required (port size 1/4") : M-36001-01.

### BODY TYPE OPTIONS

36A- <del>S</del> AB-J <b>xxx-xxx</b>	
	S Stacking body
	T Stacking body with bottom inlet

93  
ISO 01  
ISO 02  
ISO 1  
ISO 2  
ISO 3

**TECHNICAL DATA**

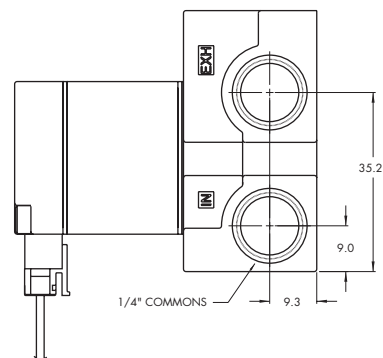
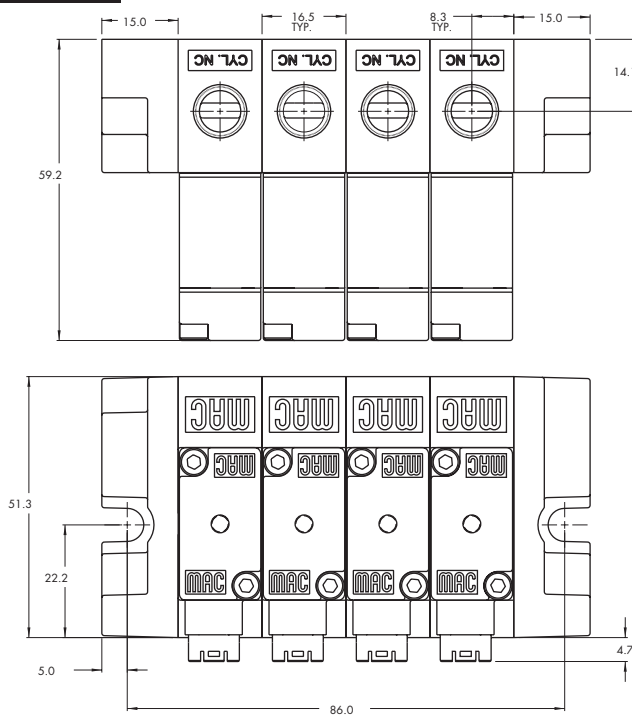
<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Vacuum to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1.8 Watt: (0.15 C <sub>v</sub> ), 2.4 Watt: (0.15 C <sub>v</sub> ), 5.4 Watt: (0.30 C <sub>v</sub> )
<b>Coil :</b>	Class A wire (#22 AWG x 12), continuous duty
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Protection :</b>	Consult factory
<b>Power :</b>	5.4 W – 2.4 W – 1.8 W

- Option :                   • BSPP threads
- Spare parts :           • Inlet & exhaust isolator plate : N-36001 • Inlet isolator : N-36002  
                               • Exhaust isolator : N-36003 • Tie rod (x2) : 79411

**DIMENSIONS**

Dimensions shown are metric (mm)

Note: Isolator adds 2.5 mm to length of stack.



Function	Port size	Flow [Max]	Individual mounting	Series
3/2	1/8" - 5/32 Pressed-in tube receptacle	0.3 C <sub>v</sub>	Manifold base "plug-in"	

**OPERATIONAL BENEFITS**

1. Balanced poppet, immune to variations of pressure.
2. Patented solenoid develops high shifting forces.
3. Short stroke with high flow.
4. Higher forces result in lower wattages for given flow.
5. Powerful return spring.



33

34

36

32

37

38

52

67

69

44

46

42

47

48P

48

400

92

93

ISO 01

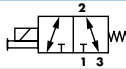
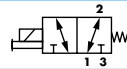
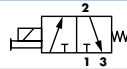
ISO 02

ISO 1

ISO 2

ISO 3

**HOW TO ORDER**

Port size	Universal Valve Normally Closed	Universal Valve Normally Open	Normally Closed Only
			
<b>Valve less base</b>	36A-J00-00-J <b>XX</b> P- <b>XXX</b>	36A-K00-00-J <b>XX</b> P- <b>XXX</b>	36A-L00-00-J <b>XX</b> P- <b>XXX</b>
<b>1/8" NPTF</b>	36A-JSA-AE-J <b>XX</b> P- <b>XXX</b>	36A-KSA-AF-J <b>XX</b> P- <b>XXX</b>	36A-LSA-AE-J <b>XX</b> P- <b>XXX</b>
<b>5/32 tube receptacle</b>	36A-JSF-AE-J <b>XX</b> P- <b>XXX</b>	36A-KSF-AF-J <b>XX</b> P- <b>XXX</b>	36A-LSF-AE-J <b>XX</b> P- <b>XXX</b>

SOLENOID OPERATOR >

J **XX** P-**XXX**\* (-G) Add "G" for ground

XX Voltage	X Manual operator	XX Electrical connection
<b>AA</b> 120 VAC (5.4W)	<b>1</b> Non-locking recessed	<b>FA</b> Base plug-in
<b>DA</b> 24 VDC (5.4W)	<b>2</b> Locking recessed	<b>FB</b> Base plug-in with diode
<b>DB</b> 12 VDC (5.4W)		<b>FG</b> Base plug-in with rectifier
<b>DC</b> 24 VDC (2.4W)		
<b>DD</b> 12 VDC (2.4W)		

\* Other options available, see page 317.

Note : AC voltage requires connector with rectifier.

Example : Manifold base only : 36A-0SA-AE (Normally closed manifold base).

End plate kit required (port size 1/4") : M-46003-01.

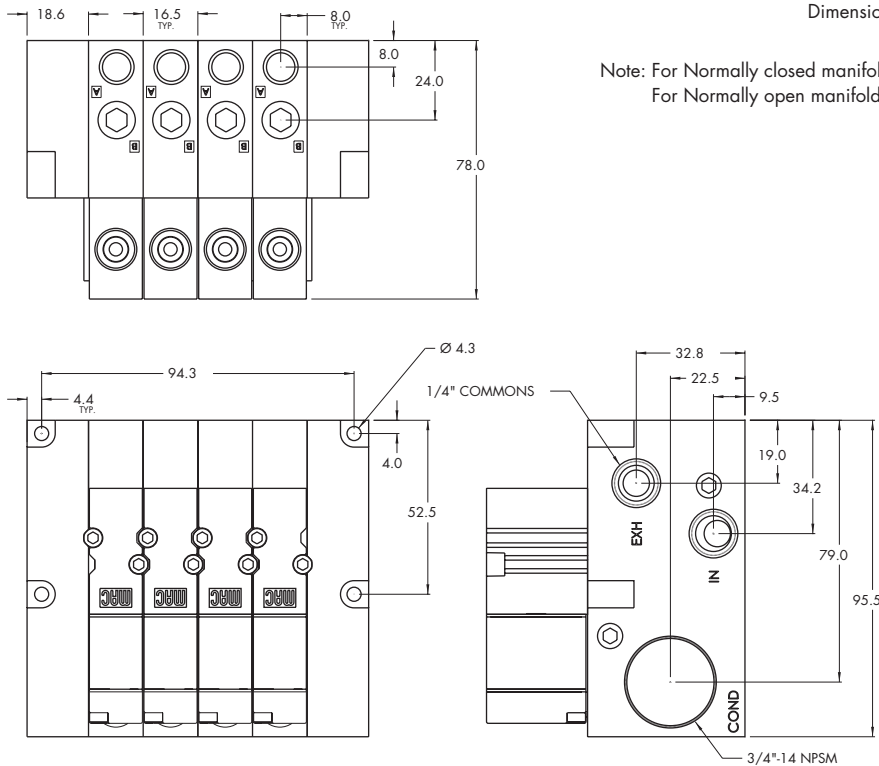
**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Vacuum to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 μ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1.8W : (0.20 C <sub>v</sub> ) – 2.4W : (0.20 C <sub>v</sub> ) – 5.4W : (0.30 C <sub>v</sub> )
<b>Coil :</b>	Class A continuous duty, #22 AWG x 12 base leads
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Protection :</b>	Consult Factory
<b>Power :</b>	5.4 W – 2.4 W – 1.8 W

- Option : • BSPP threads
- Spare parts : • Inlet isolator : 28501 • Exhaust isolator : 28502 • Valve cover plate : M-46002  
• Tie rod (x2) : 79443

**DIMENSIONS**

Dimensions shown are metric (mm)



Note: For Normally closed manifold the "A" port is plugged.  
For Normally open manifold the "B" port is plugged.

Function	Port size	Flow [Max]	Individual mounting	Series
<b>3/2</b>	<b>1/8" - 5/32 Pressed-in tube receptacle</b>	<b>0.3 C<sub>v</sub></b>	Manifold base "plug-in" with pressure regulators	

### OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Patented solenoid develops high shifting forces.
3. Short stroke with high flow.
4. Higher forces result in lower wattages for given flow.
5. Powerful return spring.



33  
34  
**36**

32  
37  
38  
52  
67

69  
44  
46

42

47  
48P

48

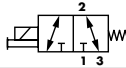
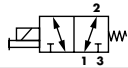
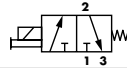
400

92

93

ISO 01  
ISO 02  
ISO 1  
ISO 2  
ISO 3

### HOW TO ORDER

Port size	Universal Valve Normally Closed	Universal Valve Normally Open	Normally Closed Only
			
<b>Valve less base</b>	36A-J00-00-J <b>XX</b> P- <b>XXX</b>	36A-K00-00-J <b>XX</b> P- <b>XXX</b>	36A-L00-00-J <b>XX</b> P- <b>XXX</b>
<b>1/8" NPTF</b>	36A-JSA-AG-J <b>XX</b> P- <b>XXX</b>	36A-KSA-AH-J <b>XX</b> P- <b>XXX</b>	36A-LSA-AG-J <b>XX</b> P- <b>XXX</b>
<b>5/32 tube receptacle</b>	36A-JSF-AG-J <b>XX</b> P- <b>XXX</b>	36A-KSF-AH-J <b>XX</b> P- <b>XXX</b>	36A-LSF-AG-J <b>XX</b> P- <b>XXX</b>

### SOLENOID OPERATOR >

J **XX** P-**XXX**\* (-G) Add "G" for ground

<b>XX</b> Voltage	<b>X</b> Manual operator	<b>XX</b> Electrical connection
<b>AA</b> 120 VAC (5.4W)	<b>1</b> Non-locking recessed	<b>FA</b> Base plug-in
<b>DA</b> 24 VDC (5.4W)	<b>2</b> Locking recessed	<b>FB</b> Base plug-in with diode
<b>DB</b> 12 VDC (5.4W)		<b>FG</b> Base plug-in with rectifier
<b>DC</b> 24 VDC (2.4W)		
<b>DD</b> 12 VDC (2.4W)		

\* Other options available, see page 317.  
Note : AC voltage requires connector with rectifier.

### OPTIONS

36A-JSA-AG-J**XX**P-**XXX**

- G** NC manifold & regulator with slotted stem adjustment
- S** NC manifold & regulator with locking slotted stem adjustment
- J** NC manifold & regulator with knob adjustment

36A-KSA-AH-J**XX**P-**XXX**

- H** NO manifold & regulator with slotted stem adjustment
- T** NO manifold & regulator with locking slotted stem adjustment
- K** NO manifold & regulator with knob adjustment

Note : All manifold bases are only available with a bottom cylinder port.

Example : Manifold base only : 36A-OSA-AJ (Normally closed manifold base & regulator with knob).

End plate kit required (port size 1/4") : M-46003-01.



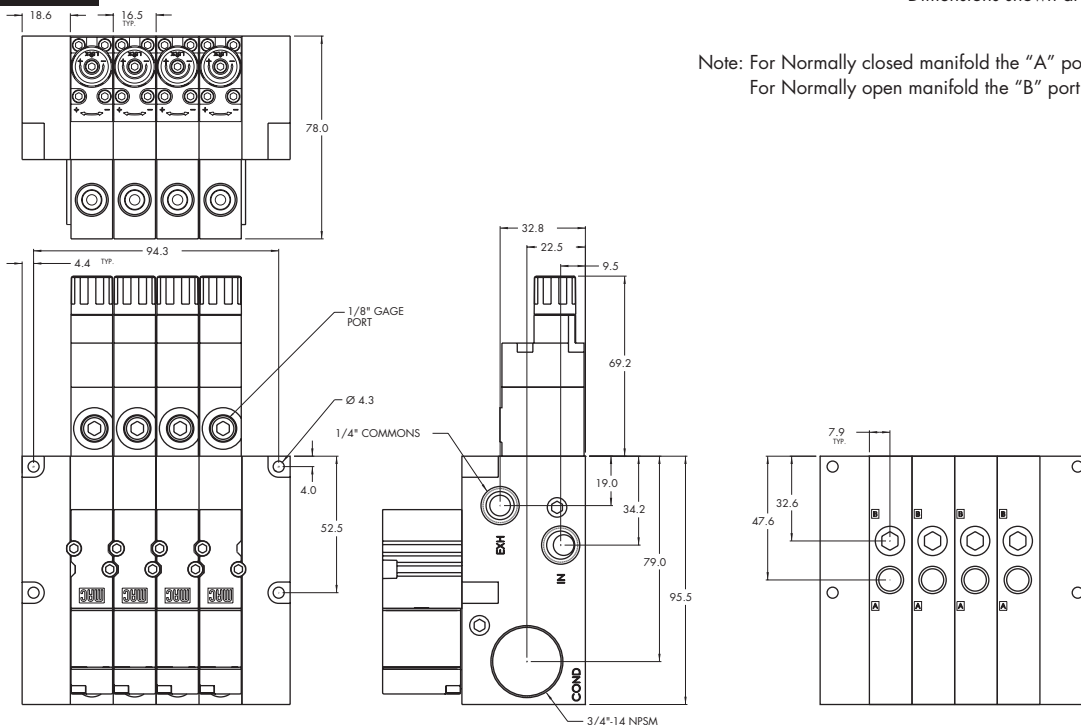
**TECHNICAL DATA**

<b>Fluid :</b>	Compressed air, vacuum, inert gases
<b>Pressure range :</b>	Vacuum to 120 PSI
<b>Lubrication :</b>	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
<b>Filtration :</b>	40 µ
<b>Temperature range :</b>	0°F to 120°F (-18°C to +50°C)
<b>Flow :</b>	1.8W : (0.20 C <sub>v</sub> ) – 2.4W : (0.20 C <sub>v</sub> ) – 5.4W : (0.30 C <sub>v</sub> )
<b>Coil :</b>	Class A continuous duty, #22 AWG x 12 base leads
<b>Voltage range :</b>	-15% to +10% of nominal voltage
<b>Protection :</b>	Consult Factory
<b>Power :</b>	5.4 W – 2.4 W – 1.8 W

- Option :                   • BSPP threads
- Spare parts :           • Inlet isolator : 28501 • Exhaust isolator : 28502 • Valve cover plate : M-46002  
                               • Tie rod (x2) : 79443

**DIMENSIONS**

Dimensions shown are metric (mm)



Note: For Normally closed manifold the "A" port is plugged.  
 For Normally open manifold the "B" port is plugged.



---

**Codification table for voltages / Manual operators / Electrical connections**

---

VALVE CODE >

**J XX X-X XX**  
**1 2 3 4**

**OPTIONS AVAILABLE FOR**

- Solenoid valves 36, 46, ISO 01 and ISO 02 Series

---

**1. VOLTAGE**

J-XX X-X XX	VOLTAGE
AA	120VAC (5.4W)
AC	24VAC (5.4W)
DE	24VDC (1.8W)
DF	12VDC (1.8W)
DJ	24VDC (1.3W)
DL	12VDC (1.3W)
DN	12VDC (0.5W)*
DR	12VDC (1.0W)*
DS	24VDC (0.5W)*
DU	24VDC (1.0W)*

\* Not available on 36 series universal valve

**2. WIRE LENGTH**

J-XX X-X XX	WIRE LENGTH
A	18" coil leads
B	24" coil leads
C	36" coil leads
D	48" coil leads
E	72" coil leads
F	96" coil leads
P	Base plug-in
O	No leads (use with J, K & L type connectors)

**3. MANUAL OPERATOR**

J-XX X-X XX	MANUAL OPERATOR
0	No operator
1	Non-locking recessed
2	Locking recessed
3	Non-locking extended
4	Locking extended

**4. ELECTRICAL CONNECTION**

J-XX X-X XX	CONNECTORS FOR NON PLUG-IN VALVES ELECTRICAL CONNECTION
BA	Flying leads
GA	MAC JAC solenoid plug-in
GB	MAC JAC solenoid plug-in with diode
GC	MAC JAC solenoid plug-in with MOV
GD	MAC JAC solenoid plug-in with light
GE	MAC JAC solenoid plug-in with diode and light
GF	MAC JAC solenoid plug-in with MOV and light
GG	MAC JAC solenoid plug-in with rectifier
GH	MAC JAC solenoid plug-in with rectifier and light
GJ	MAC JAC solenoid plug-in - Male only
GK	MAC JAC solenoid plug-in with diode - Male only
GL	MAC JAC solenoid plug-in with MOV - Male only
GM	MAC JAC solenoid plug-in with light - Male only
GN	MAC JAC solenoid plug-in with diode and light - Male only
GP	MAC JAC solenoid plug-in with MOV and light - Male only
GR	MAC JAC solenoid plug-in with rectifier - Male only
GS	MAC JAC solenoid plug-in with rectifier and light - Male only
*JA	Square Connector
*JC	Square Connector with light
*JE	Square Connector with diode
*JF	Square Connector with MOV
*JG	Square Connector with diode/light
*JH	Square Connector with MOV/light
*JK	Square Connector with Rectifier

**J-XX X-X XX**

*JL	Square Connector with Rectifier with light
*JJ	Square Connector Male only (Plain)
*JB	Rectangular Connector
*JD	Rectangular Connector with light
*JN	Rectangular Connector with diode
*JP	Rectangular Connector with MOV
*JR	Rectangular Connector with diode/light
*JS	Rectangular Connector with MOV/light
*JT	Rectangular Connector with Rectifier
*JU	Rectangular Connector with Rectifier with light
*JM	Rectangular Connector Male only (Plain)

\* Not available on manifold or stacking valves

**CONNECTORS FOR NON PLUG-IN VALVES  
MINI SQUARE PLUG-IN CONNECTORS  
9.4 MM SPACING BETWEEN PINS**

J-XX X-X XX	
KA	Mini plug-in
KB	Mini plug-in with diode
KC	Mini plug-in with MOV
KD	Mini plug-in with light
KE	Mini plug-in with diode and light
KF	Mini plug-in with MOV and light
KG	Mini plug-in with rectifier
KH	Mini plug-in with rectifier and light
KJ	Mini plug-in - Male only
KK	Mini plug-in with diode - Male only
KL	Mini plug-in with MOV - Male only
KM	Mini plug-in with light - Male only
KN	Mini plug-in with diode and light - Male only
KP	Mini plug-in with MOV and light - Male only
KR	Mini plug-in with rectifier - Male only
KS	Mini plug-in with rectifier and light - Male only

**CONNECTORS FOR NON PLUG-IN VALVES  
MINI SQUARE PLUG-IN CONNECTORS  
8.0 MM SPACING BETWEEN PINS  
ISO SPECIFICATION 15217**

J-XX X-X XX	
LA	Mini plug-in
LB	Mini plug-in with diode
LC	Mini plug-in with MOV
LD	Mini plug-in with light
LE	Mini plug-in with diode and light
LF	Mini plug-in with MOV and light
LG	Mini plug-in with rectifier
LH	Mini plug-in with rectifier and light
LJ	Mini plug-in - Male only
LK	Mini plug-in with diode - Male only
LL	Mini plug-in with MOV - Male only
LM	Mini plug-in with light - Male only
LN	Mini plug-in with diode and light - Male only
LP	Mini plug-in with MOV and light - Male only
LR	Mini plug-in with rectifier - Male only
LS	Mini plug-in with rectifier and light - Male only

**J-XX X-X XX CONNECTORS FOR PLUG-IN VALVES**

FA	Base plug-in
FB	Base plug-in with diode
FC	Base plug-in with MOV
FD	Base plug-in with light
FE	Base plug-in with diode and light
FF	Base plug-in with MOV and light
FG	Base plug-in with rectifier
FH	Base plug-in with rectifier and light