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TECHNOLOGY GROUP

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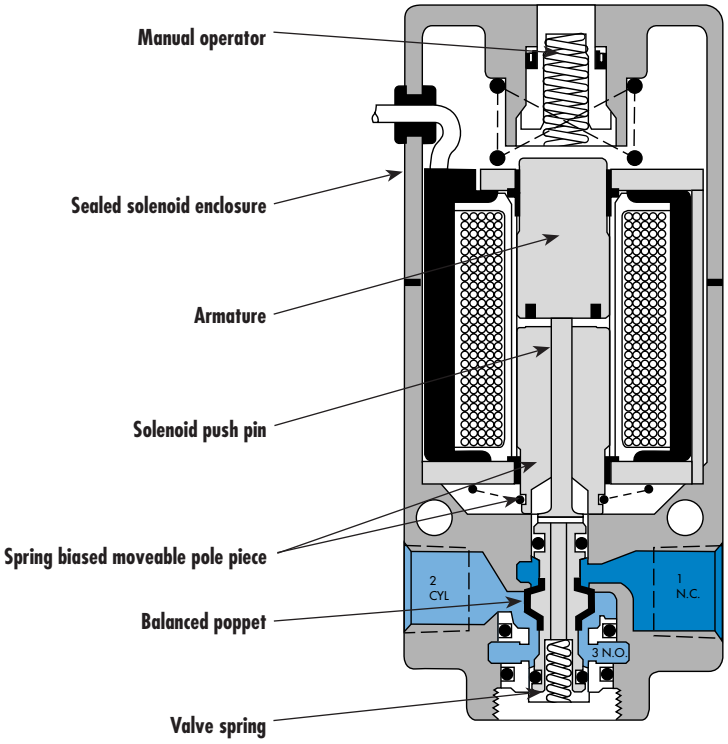
Find the *MAC 225B-111AA* at our website: *Click HERE*

### Individual mounting

| inline | inline hazardous location |
|---|---|

### Manifold mounting

| sub-base non "plug-in" | sub-base with pressure regulators | sub-base hazardous location |
|---|---|---|




## SERIES FEATURES

- The patented MACSOLENOID® with its non-burn out feature on AC service.
- Six valve functions with one Inline valve and four valve functions with one Manifold valve.
- A triple rated coil for 120/60, 110/50 or 24 VDC (6 Watt).
- Inline & add-a-unit manifold capability.
- Use on lube or non-lube service.
- Extremely rapid response and cycle rate.
- Various types of manual operators and electrical enclosures.
- Extremely long service life.
- Optional low wattage DC solenoids down to 1 watt.





Consult "Precautions" page 364 before use, installation or service of MAC Valves

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

**APPLICATION CONVERSION PROCEDURE:**

**INDIVIDUAL MODELS**

The balanced poppet design facilitates using the same valve for 6 functions with any port being connected to vacuum, pressure or plugged. Piping is shown in the chart below.

**MANIFOLD MODELS**

The interchangeable function plate between the valve body and base permits selection for 2- or 3-way, Normally Closed or Normally Open operation, instead of through piping as shown below in the Inlines. On 3-way applications, one function plate is used for both N.C. and N.O. When "3-C" is visible on the plate, the function will be N.C. When "3-O" is visible, the function is N.O. On 2-way applications, a separate plate is used and like the 3-way plate is marked "2-C" for N.C. and "2-O" on the other side for N.O. The 2-way plates block the exhaust at the valve, permitting the mixing in a stack of 3-ways and 2-ways. Changes within a stack from one function to another can be made without disturbing the plumbing.

**SPECIAL APPLICATIONS:**

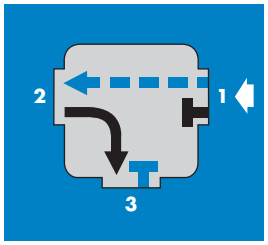
**N.C. ONLY MODELS**

A single purpose Normally Closed Only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired.

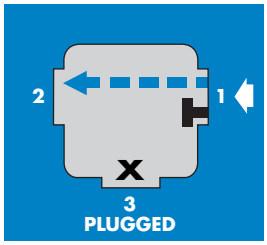
**EXPLOSION PROOF MODELS**

These models are designed to meet C.S.A. standards for Division 1, Class I, Groups B, C, D and Class II, Groups E, F and G (NEMA equivalent to Class I is NEMA 7; Class II is NEMA 9). Explosion proof models are available in either inline or manifold versions but only with the no operator ("O") manual operator.

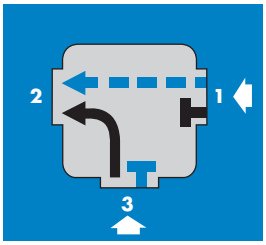
**PIPING CHART FOR INDIVIDUAL MODELS**



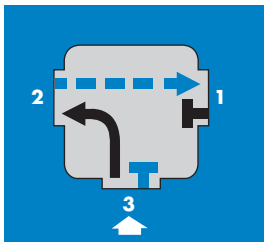

**3 Way**
**Normally Closed**



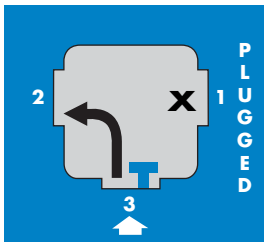

**2 Way**
**Normally Closed**



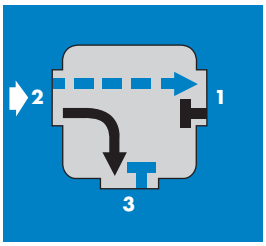

**Selector**




**3 Way**
**Normally Open**




**2 Way**
**Normally Open**




**Divertor**

Supply

Operator De-Energized

Operator Energized



Consult "Precautions" page 364 before use, installation or service of MAC Valves

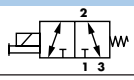
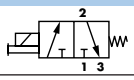
| Function | Port size | Flow (Max) | Individual mounting | Series |
|---|---|---|---|---|
| **3/2 NO-NC, 2/2 NO-NC** | **1/8" - 1/4"** | **0.5 $C_v$** | inline | |

**OPERATIONAL BENEFITS**

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.



**HOW TO ORDER**

| Port size | Universal valve | NC only valve |
|---|---|---|
| |  |  |
| **1/8" NPTF** | 224B-*XXYZZ* | 274B-*XXYZZ* |
| **1/4" NPTF** | 225B-*XXYZZ* | 275B-*XXYZZ* |

SOLENOID OPERATOR ➤ ***XX Y ZZ****

| *XX* | Voltage |
|---|---|
| *11* | 120/60, 110/50, 24 VDC (6.0 W) |
| *12* | 240/60, 220/50 |
| *22* | 24/60, 24/50 |
| *52* | 24 VDC (2.5 W) |
| *78* | 24 VDC (24.0 W) |
| *61* | 24 VDC (8.5 W) |

| *Y* | Manual operator |
|---|---|
| *1* | Non-locking |
| *2* | Locking |

| *ZZ* | Electrical connection |
|---|---|
| *JA* | Square connector |
| *JC* | Square connector with light |
| *BA* | Flying leads (18") |
| *CA* | Conduit 1/2" NPS |

* Other options available, see page 357.

Notes:
CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN
Individual inline valves can be changed from normally closed to normally open by connecting the inlet to port 3 instead of port 1.
NORMALLY CLOSED ONLY MODELS
A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

## TECHNICAL DATA

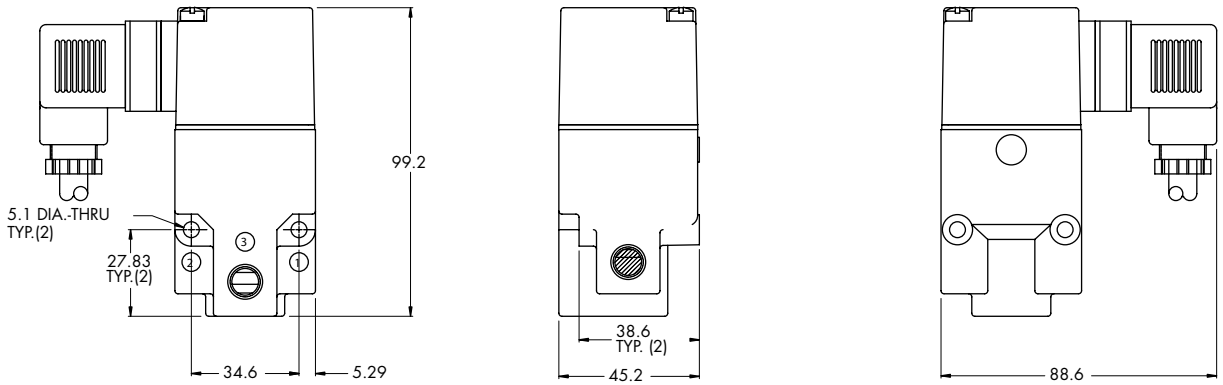
| | | | |
|---|---|---|---|
| **Fluid :** | Compressed air, vacuum, inert gases | | |
| **Pressure range :** | Vacuum to 150 PSI | | |
| **Lubrication :** | Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) | | |
| **Filtration :** | 40 µ | | |
| **Temperature range :** | 0°F to 140°F (-18°C to 60°C) | | |
| **Flow (at 6 bar, ΔP=1bar) :** | 0.5 $C_V$ | | |
| | | | |
| **Coil :** | General purpose class A, continuous duty, encapsulated | | |
| **Voltage range :** | -15% to +10% of nominal voltage | | |
| **Protection :** | Consult factory | | |
| **Power :** | ~ Inrush : 33 VA | Holding : 19.7 VA | |
| | = 1 to 24 W | | |
| **Response times :** | 24 VDC (8.5 W) | Energize : 15 ms | De-energize : 5 ms |
| | 120/60 | Energize : 3-8 ms | De-energize : 3-13 ms |

Spare parts : •-Solenoid operator (power ≥ 6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.

Options : • BSPP threads.

## DIMENSIONS

Dimensions shown are metric (mm)






Consult "Precautions" page 364 before use, installation or service of MAC Valves

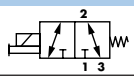
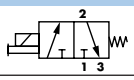
| Function | Port size | Flow (Max) | Individual mounting | Series |
|---|---|---|---|---|
| **3/2 NO-NC, 2/2 NO-NC** | **1/8" - 1/4"** | **0.5 $C_v$** | inline hazardous location | |

**OPERATIONAL BENEFITS**

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Burn-out proof solenoid on AC service.



**HOW TO ORDER**

| Port size | Universal valve | NC only valve |
|---|---|---|
| |  |  |
| **1/8" NPTF** | 224B-*XX0EA* | 274B-*XX0EA* |
| **1/4" NPTF** | 225B-*XX0EA* | 275B-*XX0EA* |

SOLENOID OPERATOR ➤ ***XX***

| *XX* | Voltage |
|---|---|
| *11* | 120/60, 110/50, 24 VDC (6.0 W) |
| *12* | 240/60, 220/50 |
| *22* | 24/60, 24/50 |
| *50* | 24 VDC (6.0 W) |
| *55* | 12 VDC (6.0 W) |
| *60* | 12 VDC (9.5 W) |
| *61* | 24 VDC (8.5 W) |

Notes:
The special version of the 200 Series designed for hazardous locations has been approved by CSA for Class I, Groups B, C & D; Class II, Groups E, F & G. Maximum rated fluid and ambient temperature is 40°C; maximum pressure is 150 p.s.i.
Approval is limited to certain common AC & DC voltages which are those designated in the table above.

These valves are supplied without manual operators. This version of the 200 Series can be supplied on the standard individual inline or the manifold valve body assemblies. It can also be supplied as a pilot for the 57, 58 and 59 Series (with special adapter plate # M-00012).

CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN
Individual inline valves can be changed from normally closed to normally open by connecting the inlet to port 3 instead of port 1.
NORMALLY CLOSED ONLY MODELS
A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

35
100
200
55
56
57
58
59
45
700
900
82
6300
6500
6600
1300
800
ISO 1
ISO 2
ISO 3
MAC 125A
MAC 250A
MAC 500A

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

## TECHNICAL DATA

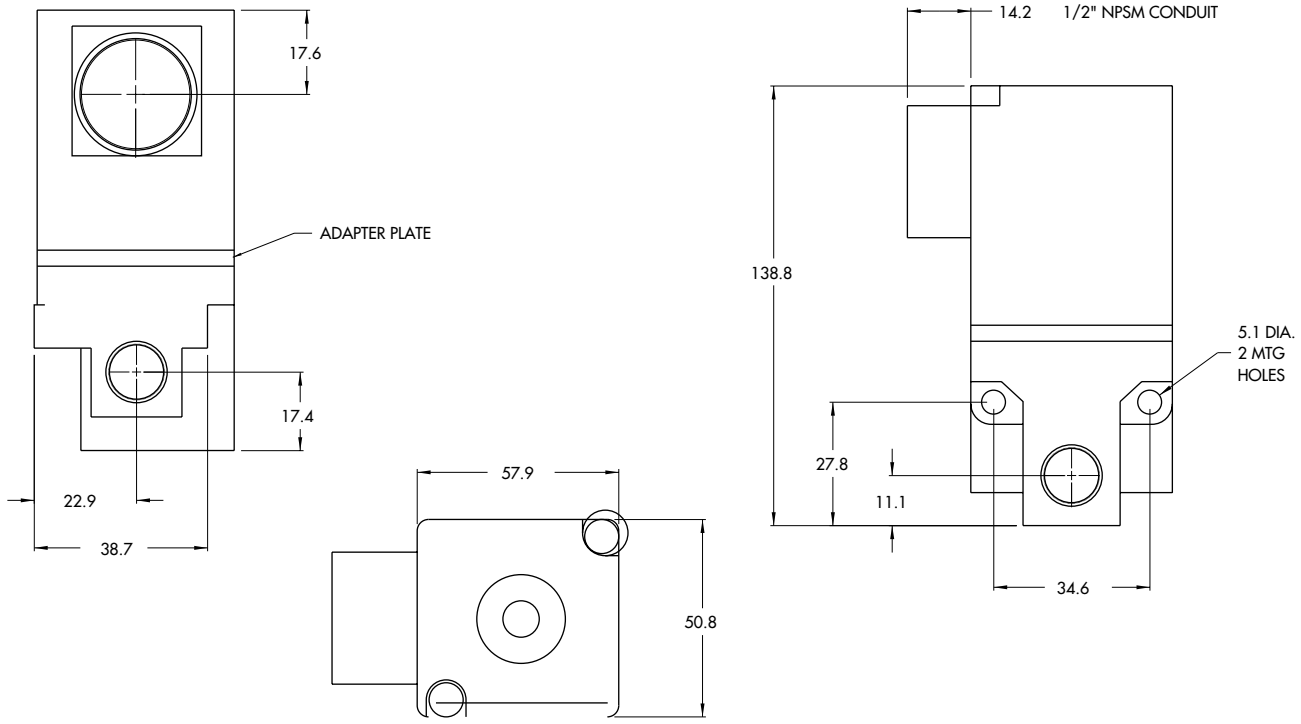
| | | | |
|---|---|---|---|
| **Fluid :** | Compressed air, vacuum, inert gases | | |
| **Pressure range :** | Vacuum to 150 PSI | | |
| **Lubrication :** | Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) | | |
| **Filtration :** | 40 µ | | |
| **Temperature range :** | 0°F to 104°F (-18°C to 40°C) | | |
| | | | |
| **Coil :** | General purpose class A, continuous duty, encapsulated | | |
| **Voltage range :** | -15% to +10% of nominal voltage | | |
| **Protection :** | NEMA 7, NEMA 9; Class I Groups B, C & D; Class II Groups E, F & G. | | |
| **Power :** | ~ Inrush : 33 VA | Holding : 19.7 VA | |
| | = 1 to 24 W | | |
| **Response times :** | 24 VDC (8.5 W) | Energize : 15 ms | De-energize : 5 ms |
| | 120/60 | Energize : 3-8 ms | De-energize : 3-13 ms |

Spare parts : •-Solenoid operator (power ≥ 6 W) : D4-XXAAB. • Adapter plate ass'y. : A3-0506.

Options : • BSPP threads.

## DIMENSIONS

Dimensions shown are metric (mm)






Consult "Precautions" page 364 before use, installation or service of MAC Valves

| Function | Port size | Flow (Max) | Manifold mounting | Series |
|---|---|---|---|---|
| **3/2 NO-NC, 2/2 NO-NC** | **1/8" - 1/4"** | **0.5 $C_v$** | sub-base non "plug-in" | |

**OPERATIONAL BENEFITS**

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.



**HOW TO ORDER**

| Port size | Universal valve (CYL / IN EXH) | NC only valve (CYL / IN EXH) |
|---|---|---|
| **Valve less base** | 250B-*XXYZZ* | 280B-*XXYZZ* |
| **1/8" base NPTF** | 256B-*XXYZZ* | 286B-*XXYZZ* |
| **1/4" base NPTF** | 257B-*XXYZZ* | 287B-*XXYZZ* |

SOLENOID OPERATOR ➤ ***XX Y ZZ****

| *XX* | Voltage |
|---|---|
| *11* | 120/60, 110/50, 24 VDC (6.0 W) |
| *12* | 240/60, 220/50 |
| *22* | 24/60, 24/50 |
| *52* | 24 VDC (2.5 W) |
| *78* | 24 VDC (24.0 W) |
| *61* | 24 VDC (8.5 W) |

| *Y* | Manual operator |
|---|---|
| *1* | Non-locking |
| *2* | Locking |

| *ZZ* | Electrical connection |
|---|---|
| *JC* | Square connector with light |
| *JA* | Square connector |
| *BA* | Flying leads (18") |
| *CA* | Conduit 1/2" NPS |

* Other options available, see page 357.

End plate kit required (Port size : 1/4") : A2-5003-01.

**OPTIONS**

26XB-*XXYZZ* — universal 2-way

206 (Base only - 1/8")

207 (Base only - 1/4")

CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN
For manifold base mounted valves a plate is provided between the valve and the base. Three plates are available; a reversible plate for 3 Way valves (N.C. & N.O.), one plate for 2 Way N.C. and one for 2 Way N.O. Appropriate plates, determined by the valve model number, are supplied automatically with the valve.
NORMALLY CLOSED ONLY MODELS
A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

## TECHNICAL DATA

| | | | |
|---|---|---|---|
| **Fluid :** | Compressed air, vacuum, inert gases | | |
| **Pressure range :** | Vacuum to 150 PSI | | |
| **Lubrication :** | Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) | | |
| **Filtration :** | 40 µ | | |
| **Temperature range :** | 0°F to 140°F (-18°C to 60°C) | | |
| **Flow (at 6 bar, ΔP=1bar) :** | 0.5 $C_v$ | | |
| | | | |
| **Coil :** | General purpose class A, continuous duty, encapsulated | | |
| **Voltage range :** | -15% to +10% of nominal voltage | | |
| **Protection :** | Consult factory | | |
| **Power :** | ~ Inrush : 33 VA | Holding : 19.7 VA | |
| | = 1 to 24 W | | |
| **Response times :** | 24 VDC (8.5 W) | Energize : 15 ms | De-energize : 5 ms |
| | 120/60 | Energize : 3-8 ms | De-energize : 3-13 ms |

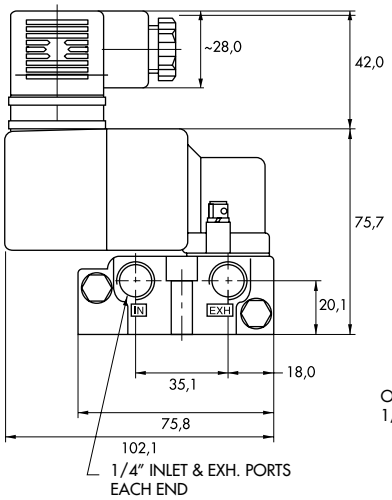
Spare parts : •-Solenoid operator (power ≥ 6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.
• Function plate : A2-7005. • Seal between bases : B5-5010. • Tie-rod (x2) : B4-9004.

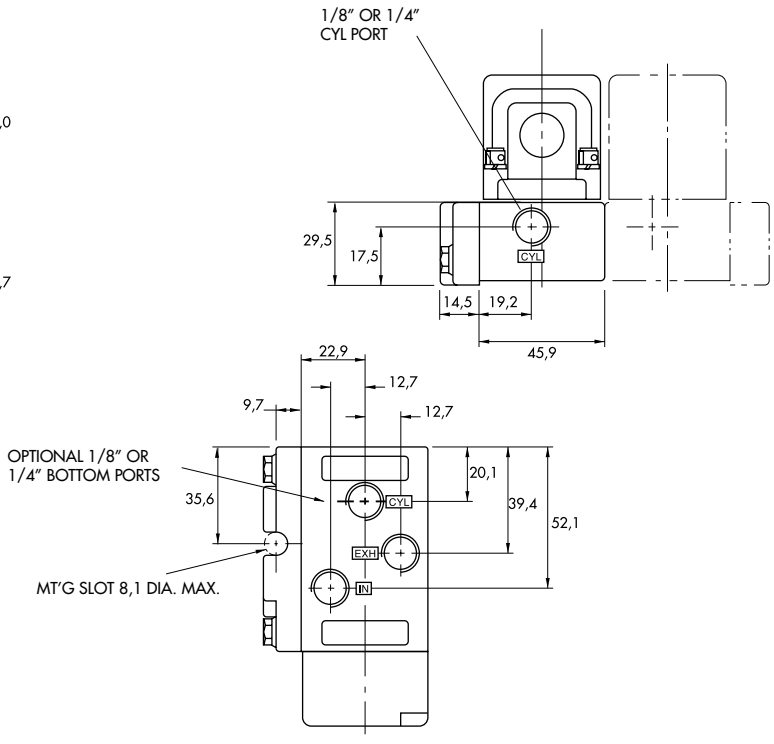
Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet : Mod. 313P. • Isolation of exhaust : Mod. 313E.
• Additional bottom inlet : Mod. 0210. • Bottom cyl. port : Mod. 0009. • All bottom & side ports : Mod. 0004.

Note : • Specify Mod. number after valve model number (i.e. 257B-111BA Mod. 0210)

## DIMENSIONS

Dimensions shown are metric (mm)






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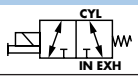
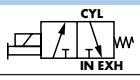
| Function | Port size | Flow (Max) | Manifold mounting | Series |
|---|---|---|---|---|
| **3/2 NO-NC, 2/2 NO-NC** | **1/4"** | **0.4 $C_v$** | sub-base with pressure regulators | |

**OPERATIONAL BENEFITS**

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.
7. Individual pressure control to each cylinder port.



**HOW TO ORDER**

| Port size | Universal valve   | NC only valve   |
|---|---|---|
| **Valve less base** | 250B-*XXYZZ* | 280B-*XXYZZ* |
| **1/4" base NPTF** | 252B-*XXYZZ* | 282B-*XXYZZ* |

SOLENOID OPERATOR ➤ ***XX Y ZZ****

| *XX* | Voltage |
|---|---|
| *11* | 120/60, 110/50, 24 VDC (6.0 W) |
| *12* | 240/60, 220/50 |
| *22* | 24/60, 24/50 |
| *52* | 24 VDC (2.5 W) |
| *78* | 24 VDC (24.0 W) |
| *61* | 24 VDC (8.5 W) |

| *Y* | Manual operator |
|---|---|
| *1* | Non-locking |
| *2* | Locking |

| *ZZ* | Electrical connection |
|---|---|
| *JA* | Square connector |
| *JC* | Square connector with light |
| *BA* | Flying leads (18") |
| *CA* | Conduit 1/2" NPS |

* Other options available, see page 357.

Manifold fastening kit required : N-02003

**MODEL**
**252B-**
3-Way N.C. or N.O.
**262B-**
2-Way N.C. or N.O.
**282B-**
3-Way N.C. only

INDIVIDUAL PRESSURE CONTROL TO EACH CYLINDER PORT
In this version the common inlet pressure supplies each individual valve in the stack. This common pressure passes through a relieving type regulator mounted on the same base as the valve and is supplied through the function plate to the Normally Closed or Normally Open poppet position. Through use of the appropriate function plate on the 200 Series basic valve, the operation can be Normally Closed Or Normally Open, 3-way or 2-way except for 282B models which are Normally Closed only. The exhaust ("out") port is common. Operation of the valves then opens or closes the cylinder port (See schematic diagram next page).





Consult "Precautions" page 364 before use, installation or service of MAC Valves

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

## TECHNICAL DATA

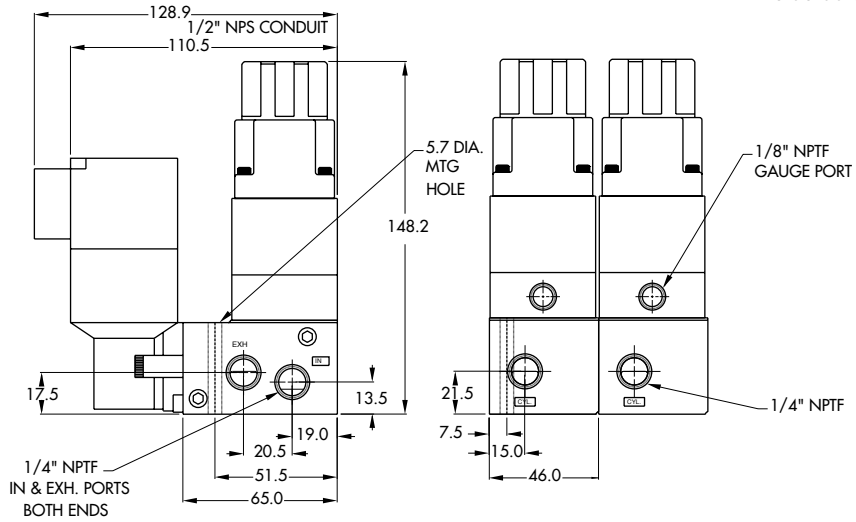
| | | | |
|---|---|---|---|
| **Fluid :** | Compressed air, vacuum, inert gases | | |
| **Pressure range :** | Vacuum to 150 PSI | | |
| **Lubrication :** | Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) | | |
| **Filtration :** | 40 µ | | |
| **Temperature range :** | 0°F to 140°F (-18°C to 60°C) | | |
| **Flow (at 6 bar, ΔP=1bar) :** | 0.4 $C_v$ | | |
| | | | |
| **Coil :** | General purpose class A, continuous duty, encapsulated | | |
| **Voltage range :** | -15% to +10% of nominal voltage | | |
| **Protection :** | Consult factory | | |
| **Power :** | ~ Inrush : 33 VA | Holding : 19.7 VA | |
| | = 1 to 24 W | | |
| **Response times :** | 24 VDC (8.5 W) | Energize : 15 ms | De-energize : 5 ms |
| | 120/60 | Energize : 3-8 ms | De-energize : 3-13 ms |

Spare parts : •-Solenoid operator (power ≥ 6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.
• Function plate : A2-7005. • Seal between bases (x2) : 17016-01. • Tie-rod (x2) : B4-9004. • Pressure regulator : PR02A-A0AA.

Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet and/or exhaust.
• Mod. PR80 (0-80 pressure range), Mod PR30 (0-30 pressure range)

## DIMENSIONS

Dimensions shown are metric (mm)






Consult "Precautions" page 364 before use, installation or service of MAC Valves

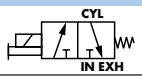
| Function | Inlet & outlet port size | Flow (Max) | Manifold mounting | Series |
|---|---|---|---|---|
| **3/2 NO-NC, 2/2 NO-NC** | **1/4"** | **0.4 $C_v$** | sub-base with pressure regulators | |

**OPERATIONAL BENEFITS**

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Manual operator standard on all valves.
6. Burn-out proof solenoid on AC service.
7. Selected pressure control to a single outlet.



**HOW TO ORDER**

| Port size | NC only valve |
|---|---|
| |   |
| **Valve** | 251B-*XXYZZ* |

SOLENOID OPERATOR ➤ ***XX Y ZZ****

| *XX* | Voltage |
|---|---|
| *11* | 120/60, 110/50, 24 VDC (6.0 W) |
| *12* | 240/60, 220/50 |
| *22* | 24/60, 24/50 |
| *52* | 24 VDC (2.5 W) |
| *78* | 24 VDC (24.0 W) |
| *61* | 24 VDC (8.5 W) |

| *Y* | Manual operator |
|---|---|
| *1* | Non-locking |
| *2* | Locking |

| *ZZ* | Electrical connection |
|---|---|
| *JA* | Square connector |
| *JC* | Square connector with light |
| *BA* | Flying leads (18") |
| *CA* | Conduit 1/2" NPS |

* Other options available, see page 357.

Manifold fastening kit required : N-02003

**MODEL**
**251B-**
3-Way Normally Closed

SELECTED PRESSURE CONTROL TO A SINGLE OUTLET
This version permits the alternate selection of any of the regulated pressures in the stack to one common outlet. With all valves de-energized the regulated pressure supplied to the Normally Open pressure port passes through the valves and out the corresponding port at the other end of the stack (Common Outlet Port). Pressure supplied to the common inlet port is regulated at each valve and blocked by the poppet of each valve. When a valve is shifted in the stack the Normally Open pressure is blocked and the regulated normally closed pressure of that valve is open to the common outlet. If two valves are energized at the same time the pressure at the common outlet would be that of the energized valve nearest the outlet. If the normally open pressure port is not used it is open to exhaust from the common outlet. The individual cylinder port in each base is non-operative. (See schematic diagram next page).

MAC

Series 200

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

## TECHNICAL DATA

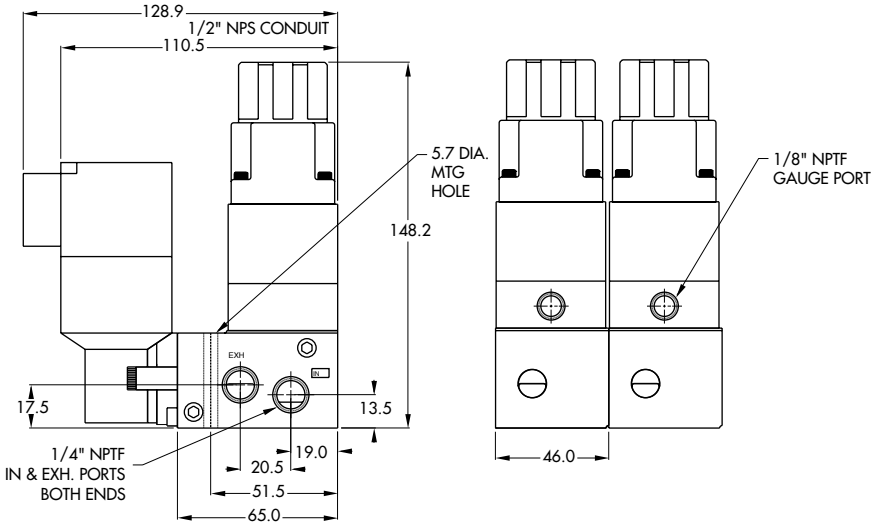
| | | | |
|---|---|---|---|
| **Fluid :** | Compressed air, vacuum, inert gases | | |
| **Pressure range :** | Vacuum to 150 PSI | | |
| **Lubrication :** | Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) | | |
| **Filtration :** | 40 µ | | |
| **Temperature range :** | 0°F to 140°F (-18°C to 60°C) | | |
| **Flow (at 6 bar, ΔP=1bar) :** | 0.4 $C_v$ | | |
| | | | |
| **Coil :** | General purpose class A, continuous duty, encapsulated | | |
| **Voltage range :** | -15% to +10% of nominal voltage | | |
| **Protection :** | Consult factory | | |
| **Power :** | ~ Inrush : 33 VA | Holding : 19.7 VA | |
| | = 1 to 24 W | | |
| **Response times :** | 24 VDC (8.5 W) | Energize : 15 ms | De-energize : 5 ms |
| | 120/60 | Energize : 3-8 ms | De-energize : 3-13 ms |

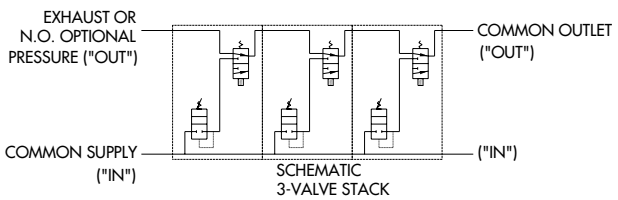
Spare parts : •-Solenoid operator (power ≥ 6 W) : D4-XXAAB, cover mounting screws 32222 and seal B5-6001.
• Function plate : A2-7005. • Seal between bases (x2) : 17016-01. • Tie-rod (x2) : B4-9004. • Pressure regulator : PR02A-A0AA.

Options : • BSPP threads. • Explosion-proof model. • Isolation of inlet and/or exhaust.
• Mod. PR80 (0-80 pressure range), Mod PR30 (0-30 pressure range)

## DIMENSIONS

Dimensions shown are metric (mm)



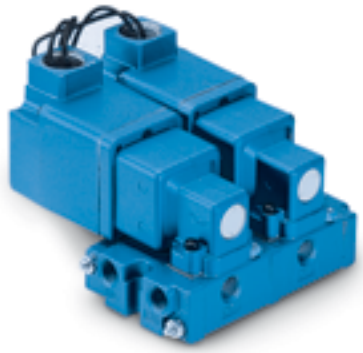



Consult "Precautions" page 364 before use, installation or service of MAC Valves

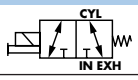
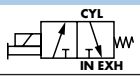
| Function | Port size | Flow (Max) | Manifold mounting | Series |
|---|---|---|---|---|
| **3/2 NO-NC, 2/2 NO-NC** | **1/8" - 1/4"** | **0.5 $C_v$** | sub-base hazardous location | |

## OPERATIONAL BENEFITS

1. Balanced poppet, immune to variations of pressure.
2. Short stroke with high flow.
3. The patented solenoid develops high shifting forces.
4. Powerful return spring.
5. Burn-out proof solenoid on AC service.



## HOW TO ORDER

| Port size | Universal valve | NC only valve |
|---|---|---|
| |  |  |
| **Valve less base** | 250B-*XX0EA* | 280B-*XX0EA* |
| **1/8" base NPTF** | 258B-*XX0EA* | 288B-*XX0EA* |
| **1/4" base NPTF** | 259B-*XX0EA* | 289B-*XX0EA* |

SOLENOID OPERATOR ➤ ***XX***

| *XX* | Voltage |
|---|---|
| *11* | 120/60, 110/50, 24 VDC (6.0 W) |
| *12* | 240/60, 220/50 |
| *22* | 24/60, 24/50 |
| *50* | 24 VDC (6.0 W) |
| *55* | 12 VDC (6.0 W) |
| *60* | 12 VDC (9.5 W) |
| *61* | 24 VDC (8.5 W) |

End plate kit required (Port size : 1/4") : A2-5003-01.

## OPTIONS

| 26XB-*XX0EA* | 208 | 209 |
|---|---|---|
| - universal 2-way | (Base only - 1/8") | (Base only - 1/4") |

Notes:
The special version of the 200 Series designed for hazardous locations has been approved by CSA for Class I, Groups B, C & D; Class II, Groups E, F & G.
Maximum rated fluid and ambient temperature is 40°C; maximum pressure is 150 p.s.i.
Approval is limited to certain common AC & DC voltages which are those designated in the table above.
These valves are supplied without manual operators. This version of the 200 Series can be supplied on the standard individual inline or the manifold valve body assemblies. It can also be supplied as a pilot for the 57, 58 and 59 Series (with special adapter plate # M-00012).

CHANGING FROM NORMALLY CLOSED TO NORMALLY OPEN
For manifold base mounted valves a plate is provided between the valve and the base. Three plates are available; a reversible plate for 3 Way valves (N.C. & N.O.), one plate for 2 Way N.C and one for 2 Way N.O. Appropriate plates, determined by the valve model number, are supplied automatically with the valve.
NORMALLY CLOSED ONLY MODELS
A single purpose Normally Closed only model is available for those applications where a greater tolerance for heavy concentrations of water, compressor products and other air line contaminants is desired. Model numbers are indicated above.

100% OF PRODUCTION TESTED 100%

WARRANTY 18 MONTHS

## TECHNICAL DATA

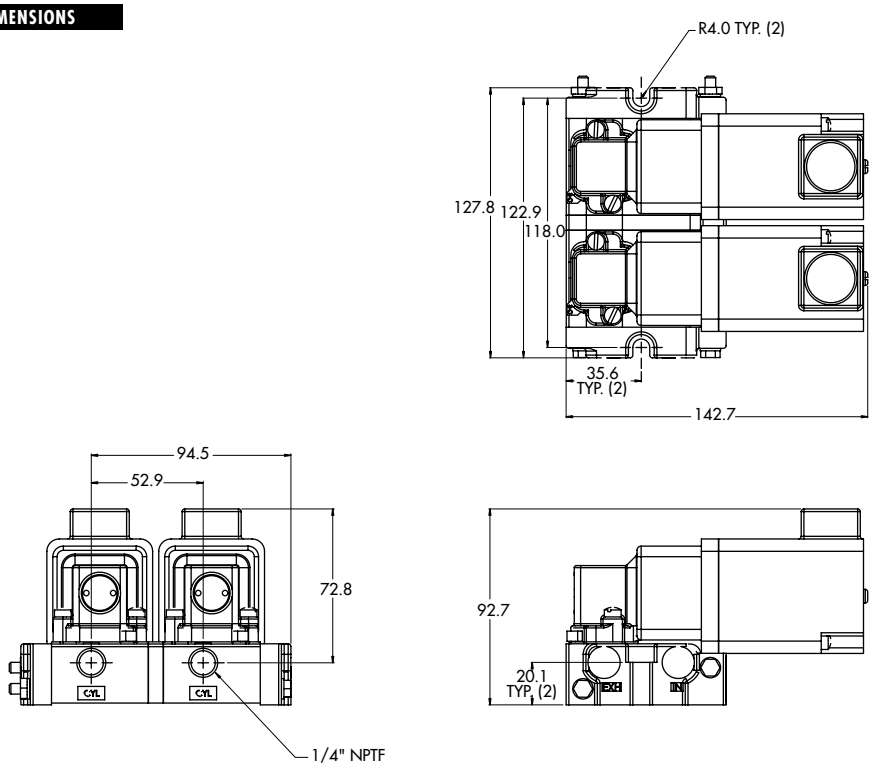
| | | | |
|---|---|---|---|
| **Fluid :** | Compressed air, vacuum, inert gases | | |
| **Pressure range :** | Vacuum to 150 PSI | | |
| **Lubrication :** | Not required, if used select a medium aniline point lubricant (between 180°F and 210°F) | | |
| **Filtration :** | 40 µ | | |
| **Temperature range :** | 0°F to 140°F (-18°C to 60°C) | | |
| **Flow (at 6 bar, ΔP=1bar) :** | 0.5 $C_v$ | | |
| | | | |
| **Coil :** | General purpose class A, continuous duty, encapsulated | | |
| **Voltage range :** | -15% to +10% of nominal voltage | | |
| **Protection :** | Consult factory | | |
| **Power :** | ~ Inrush : 33 VA | Holding : 19.7 VA | |
| | = 1 to 24 W | | |
| **Response times :** | 24 VDC (8.5 W) | Energize : 15 ms | De-energize : 5 ms |
| | 120/60 | Energize : 3-8 ms | De-energize : 3-13 ms |

Spare parts : •-Solenoid operator (power ≥ 6 W) : D4-XXAAC-0EA. • Function plate : A2-7005. • Seal between bases : B5-5010.
• Tie-rod (x2) : 19598.

Options : • BSPP threads. • Isolation of inlet : Mod. 313P. • Isolation of exhaust : Mod. 313E.
• Additional bottom inlet : Mod 0210.

## DIMENSIONS

Dimensions shown are metric (mm)






Consult "Precautions" page 364 before use, installation or service of MAC Valves

## Codification table for voltages / Manual operator / Electrical connection / Wire length

VALVE CODE ➤ $-\underset{1}{XX}\ \underset{2}{Y}\ \underset{3}{ZZ}\ \underset{4}{(-VV)}$

| OPTIONS AVAILABLE FOR | OPTIONS AVAILABLE FOR |
|---|---|
| - valves type 100 Series<br>- pilot valves "CNOMO" | - valves type 200 Series |
| - Pilot operated valves with pilots type 100 Series<br>Series : 55 - 56 - 700 - 800 - 900<br>- 6300 - 6500 - 6600 - 1300<br>- ISO 1 - ISO 2 - ISO 3.<br>- MAC 125 - MAC 250 - MAC 500 | - pilot operated valves with pilots type 200 Series<br>Series : 200 - 57 - 58 - 59. |
| - Pilot operated valves with pilots "CNOMO"<br>Series : ISO1 - ISO2 - ISO3 | |

Used on valve series: 100, 55, 56, 700, 800, 900, 6300, 6500, 6600, 1300, MVA1C, MVA2B, MVA3B, MAC125, MAC250, MAC500.

## 1. VOLTAGE (100 Serie type coil)

| - XX Y ZZ | VOLTAGE |
|---|---|
| 11 | 120/60, 110/50 |
| 12 | 240/60, 220/50 |
| 13 | 100/60, 100/50 |
| 15 | 200/60, 200 /50 |
| 16 | 10/60 |
| 20 | 6/60 |
| 21 | 12/50, 12/60 |
| 22 | 24/60, 24/50 |
| 23 | 32/60, 32/50 |
| 24 | 48/60, 42/50 |
| 26* | 380/50, 440/50, 440/60, 480/60 |
| 29 | 220/60 |
| 34 | 127/50, 120/50 |
| 35 | 48/50 |
| 36 | 16/60 |
| B1 | 24/50 |
| 50 | 24 VDC (6 W) |
| 51 | 24 VDC (4 W) |
| 54 | 12 VDC (4 W) |
| 55 | 12 VDC (6 W) |
| 57 | 12 VDC (2.5 W) |
| 59 | 24 VDC (2.5 W) |
| 60 | 12 VDC (8.5 W) |
| 61 | 24 VDC (8.5 W) |
| 64 | 6 VDC (6 W) |
| 65 | 32 VDC (7 W) |
| 66 | 48 VDC (5.8 W) |
| 67 | 64 VDC (7.5 W) |
| 68 | 120 VDC (6.4 W) |
| 69* | 220 VDC (8.7 W), 250 VDC (11.2 W) |
| 75 | 90 VDC (8.8 W) |
| 76* | 100 VDC (6.9 W) |
| 84* | 125 VDC (10.9 W) |
| 87* | 24 VDC (17.1 W) |
| 88* | 12 VDC (17.4 W) |
| 89* | 36 VDC (18.8 W) |
| 90 | 28 VDC (8.2 W) |
| 91* | 6 VDC (10.6 W) |
| 92 | 190 VDC (6.5 W) |
| 94 | 3 VDC (7 W) |
| 95 | 38 VDC (6.4 W) |
| A1 | 24 VDC (1 W) |
| A2 | 12 VDC (1 W) |
| A3 | 9 VDC (1 W) |

MOD. DD01 : Protection diode (DC) - MAX. 8.5W

MOD. MOV1 : Protection varistor (AC) - MAX. 8.5W

* Voltages are CLSF only

Used on valve series: 200, 57, 58, 59.

## 1. VOLTAGE (200 Serie type coil)

| - XX Y ZZ | VOLTAGE |
|---|---|
| 11 | 120/60, 110/50, 24 VDC (6 W) |
| 12 | 240/60, 220/50 |
| 13 | 100/60, 100/50 |
| 14 | 200/60, 200/50 |
| 20 | 6/60 |
| 21 | 12/60 |
| 22 | 24/60, 24/50 |
| 23 | 32/60, 32/50 |
| 24 | 48/60, 42/50 |
| 25 | 240/50 |
| 26 | 480/60, 440/50 |
| 27 | 127/60 |
| 28 | 415/50 |
| 29 | 220/60 |
| 30 | 380/50 |
| 31 | 550/60, 550/50 |
| 32 | 120/60, 110/50 |
| 33 | 600/60 |
| 34 | 127/50 |
| 35 | 48/50 |
| 50 | 24 VDC (6 W) |
| 51 | 24 VDC (4.5 W) |
| 52 | 24 VDC (2.5 W) |
| 53 | 24 VDC (1.0 W) |
| 55 | 12 VDC (6 W) |
| 57 | 12 VDC (2.5 W) |
| 58 | 48 VDC (2.5 W) |
| 60 | 12 VDC (9.5 W) |
| 61 | 24 VDC (8.5 W) |
| 64 | 6 VDC (8.5 W) |
| 65 | 32 VDC (10 W) |
| 66 | 48 VDC (11.5 W) |
| 67 | 64 VDC (10.5 W) |
| 68 | 120 VDC (12.3 W) |
| 69 | 250 VDC (9.2 W) |
| 71 | 8 VDC (8.2 W) |
| 72 | 24 VDC (12 W) |
| 73 | 198 VDC (10 W) |
| 74 | 72 VDC (11.3 W) |
| 75 | 90 VDC (11.3 W) |
| 76 | 100 VDC (9 W) |
| 77 | 220 VDC (10 W), 230 VDC (11.6 W) |
| 78* | 24 VDC (24 W) |
| 80 | 55 VDC (10.6 W) |
| 82 | 170 VDC (11.1 W) |
| 83 | 15 VDC (8.1 W) |
| 84 | 125 VDC (10 W) |
| 86 | 36 VDC (11 W) |
| 93* | 12 VDC (24 W) |



Consult “Precautions” page 364 before use, installation or service of MAC Valves

## 2. MANUAL OPERATOR (Common options for 100 & 200 Series type coils)

| - XX Y ZZ | MANUAL OPERATOR | | |
|---|---|---|---|
| 0 | No operator | 5* | No Operator with Light |
| 1 | Non-locking recessed | 6* | Non-Locking Recessed with Light |
| 2 | Locking recessed | 7* | Locking Recessed with Light |
| 3 | Non-locking extended | 8* | Non-Locking Extended with Light |
| 4 | Locking extended | 9* | Locking Extended with Light |

* Lights used with "AA" electrical connection

## 3. ELECTRICAL CONNECTION (100 Serie type coil)

| - XX Y ZZ | ELECTRICAL CONNECTION |
|---|---|
| AA | Wiring box with 1/2" NPS conduit |
| BA | Flying leads |
| CA | 1/2" NPS conduit |
| CC | 1/2" NPT conduit |
| FA | Military type 2 PIN |
| GA | Military type 3 PIN |
| HA | AA with ground wire |
| JA* | Square connector |
| JB | Rectangular connector |
| JC* | Square connector with light |
| JD | Rectangular connector with light |
| JE | Square connector on top (ISO2, ISO3) |
| JF | Rectangular connector on top (ISO1, ISO2, ISO3) |
| JG | JE with light |
| JH | JF with light |
| JJ | Square connector, male only |
| JM | Rectangular connector, male only |
| MA | Electrical common conduit (100 Series-Manifold/900 Series) |
| MB | Electrical common conduit (100 Series-Stacking/700 Series) |
| NA | CA with ground wire |
| NC | CC with ground wire |
| RA | 3/8" NPS conduit |

* Not to be used with 100, 800 and 900 Series manifold mounting

## 3. ELECTRICAL CONNECTION (200 Serie type coil)

| - XX Y ZZ | ELECTRICAL CONNECTION |
|---|---|
| AA | Wiring box with 1/2" NPS conduit |
| BA | Flying leads |
| CA | 1/2" NPS conduit |
| CC | 1/2" NPT conduit |
| EA | Explosion proof (200 Series) |
| EA | Explosion proof (57, 58 & 59 Series) |
| FA | Military type 2 PIN |
| GA | Military type 3 PIN |
| HA | AA with ground wire |
| JA* | Square connector |
| JC | Square connector with light |
| JJ | Square connector, male only |
| NA | CA with ground wire |
| NC | CC with ground wire |

## 4. COIL WIRE LENGTH (Common options for 100 & 200 Serie type coils)

| - XX Y ZZ (-VV) | WIRE LENGTH |
|---|---|
| AA | 18″ |
| AB | 24″ |
| AD | 36″ |
| AE | 48″ |
| AF | 72″ |
| AG | 6″ |
| AR | 12″ |
| AU | 120″ |
| BA | 60″ |
| BB | 144″ |
| Series 6000 : wire length, from the base | |
| MOD L024 | 24″ |
| MOD L036 | 36″ |
| MOD L048 | 48″ |
| MOD L060 | 60″ |
| MOD L072 | 72″ |
| MOD L120 | 120″ |



Consult “Precautions” page 364 before use, installation or service of MAC Valves

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