

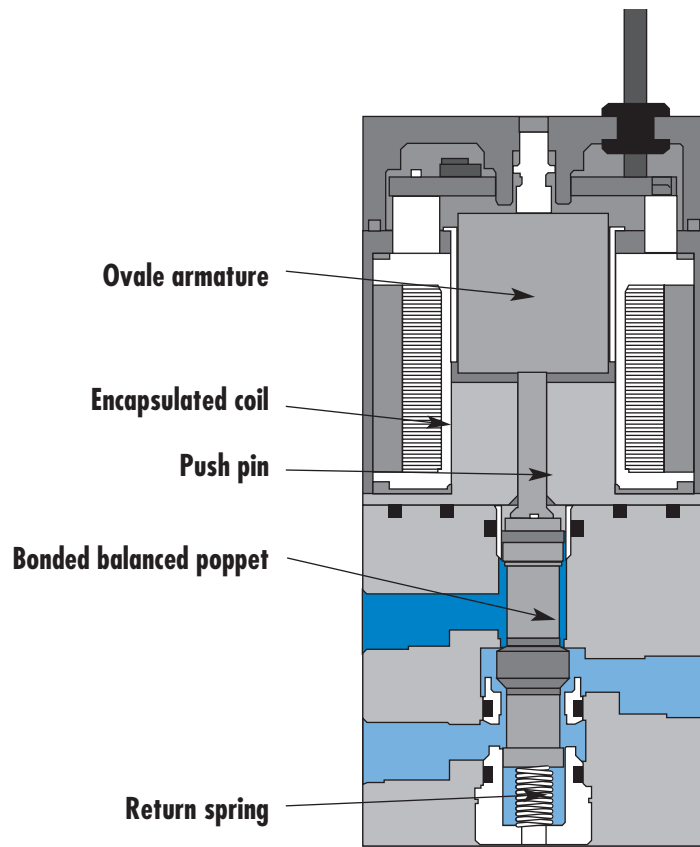
Direct solenoid and solenoid pilot operated valves

8 mm valve

Individual mounting

Series

Inline



Ovale armature

Encapsulated coil

Push pin

Bonded balanced poppet

Return spring

33

34

36

32

37

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67

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42

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48P

48

400

92

SERIES FEATURES

- Patented high force MACSOLENOID[®] for fastest possible response times.
- Bonded balanced poppet for high flow, precise repeatability, and consistent operation.
- Extremely high cycle rate capability.
- Use on lube or non-lube service.
- Low wattage DC solenoids-down to 0.5 W.
- 8 mm direct operated valve.
- Very fast response times.

93

ISO 01

ISO 02

ISO 1

ISO 2

ISO 3



Direct solenoid and solenoid pilot operated valves

8 mm valve

Function	Port size	Flow [Max]	Individual mounting	Series
3/2 NC	M3	0.082 C_v	Inline	

OPERATIONAL BENEFITS

1. 8mm valve direct solenoid operated.
2. Balanced poppet, immune to pressure variations.
3. Short stroke with high flow.
4. Patented solenoid develops high shifting forces.
5. Low wattage solenoids.
6. Powerful return spring.
7. Extremely fast response times.

Patents and patents pending



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ISO 01

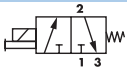
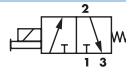
ISO 02

ISO 1

ISO 2

ISO 3

HOW TO ORDER

Port size	N.C. Only	N.C. Only **
M3	 33A-AAB-Rxxx-xxx	 33A-BAB-Rxxx-xxx

** For use with solenoids above 4.0 W - MOD number required. (Consult factory)

SOLENOID OPERATOR >

R **XXX-XXX**

XX	Voltage	X	Lead wire length	X	Manual operator	XX	Electrical connection
DA	24 VDC (0.5W)	0	No Lead wire*	0	No manual operator	BA	Flying leads
DB	24 VDC (1.0W)	A	18"	1	Non-locking recessed	BB	Flying leads w/LED
DC	24 VDC (1.8W)	B	24"	3	Non-locking extended	BC	Flying leads w/MOV
DF	24 VDC (4.0W)	C	36"			BD	Flying leads w/LED & MOV
DG	12 VDC (0.5W)	D	48"				
DH	12 VDC (1.0W)	E	72"			RA	Mini JAC Solenoid plug-in
DJ	12 VDC (1.8W)					RB	Mini JAC Solenoid plug-in w/LED
DM	12 VDC (4.0W)					RC	Mini JAC Solenoid plug-in w/MOV
						RD	Mini JAC Solenoid plug-in w/LED & MOV
						TA	JST Solenoid plug-in
						TB	JST Solenoid plug-in w/LED
						TC	JST Solenoid plug-in w/MOV
						TD	JST Solenoid plug-in w/LED & MOV

* Other options available, see page 321.

Washdown capability is possible for the "B" and "R" type electrical connectors. Consult factory for ordering information.

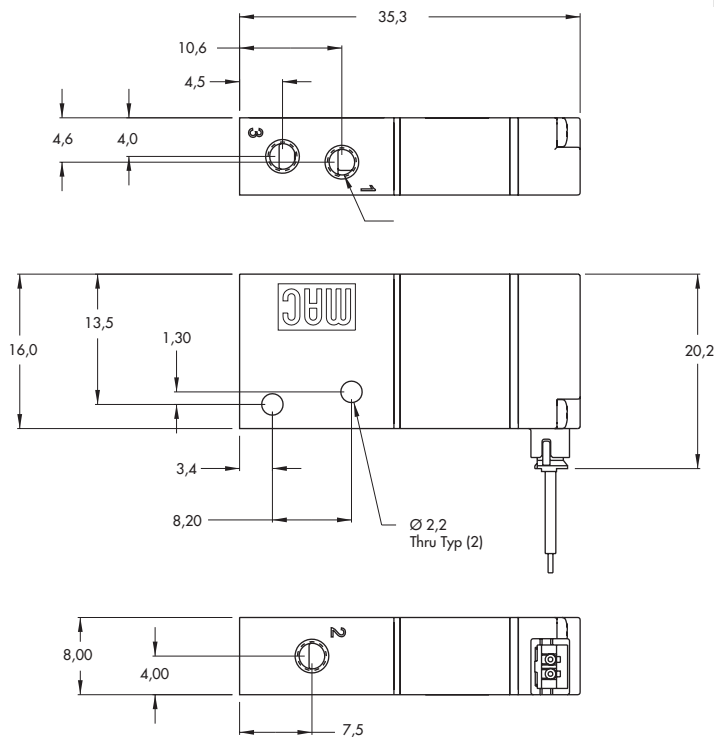
TECHNICAL DATA

Fluid :	Compressed air, vacuum, inert gases
Pressure range :	Vacuum to 120 PSI
Lubrication :	Not required, if used select a medium aniline point lubricant (between 180°F and 210°F)
Filtration :	40µ
Temperature range :	0°F to 120°F (-18°C to +50°C)
Flow :	4W: (Cv .082) - 3W: (Cv .062) - 2.5W: (Cv .062) - 1.8W: (Cv .055) - 1.0W: (Cv .030) - 0.5W: (Cv .020)
Coil :	Class A wire (#26 AWG x18), continuous duty
Voltage range :	-15% to +10% of nominal voltage
Power :	4.0W - 3.0W - 2.5W - 1.8W - 1.0W - 0.5W

DIMENSIONS

Dimensions shown are metric (mm)

Shown with JST Connector





Codification table for voltages / Manual operators / Electrical connections

VALVE CODE > **R XX X-X XX**
1 2 3 4

OPTIONS AVAILABLE FOR

- Solenoid valves 33 Series

1. VOLTAGE

R-XX X-X XX	VOLTAGE
DA	24 VDC (0.5W)
DB	24 VDC (1.0W)
DC	24 VDC (1.8W)
DD	24 VDC (2.5W)
DE	24 VDC (3.0W)
DF	24 VDC (4.0W)
DG	12 VDC (0.5W)
DH	12 VDC (1.0W)
DJ	12 VDC (1.8W)
DK	12 VDC (2.5W)
DL	12 VDC (3.0W)
DM	12 VDC (4.0W)
EA*	24 VDC (60W)
EB*	24 VDC (90W)
EC*	24 VDC (230W)

2. WIRE LENGTH (all series)

R-XX X-X XX	WIRE LENGTH
0**	No lead wire
A	18"
B	24"
C	36"
D	48"
E	72"
F	96"
G	120"
H	144"

3. MANUAL OPERATOR

R-XX X-X XX	MANUAL OPERATOR
0	No operator
1	Non-locking recessed
3	Non-locking extended

4. ELECTRICAL CONNECTOR

R-XX X-X XX	NON PLUG-IN
BA	Flying leads
BB	Flying leads with LED
BC	Flying leads with MOV
BD	Flying leads with LED and MOV
RA	Mini JAC solenoid plug-in
RB	Mini JAC solenoid plug-in with LED
RC	Mini JAC solenoid plug-in with MOV
RD	Mini JAC solenoid plug-in with LED and MOV
TA	JST solenoid plug-in
TB	JST solenoid plug-in with LED
TC	JST solenoid plug-in with MOV
TD	JST solenoid plug-in with LED and MOV

*MOD numbers required for these voltages (consult factory) ** Not available for flying leads connector