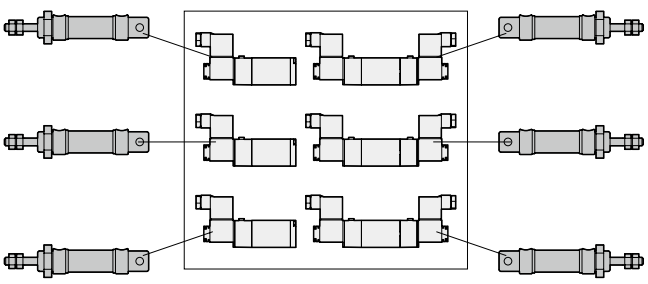
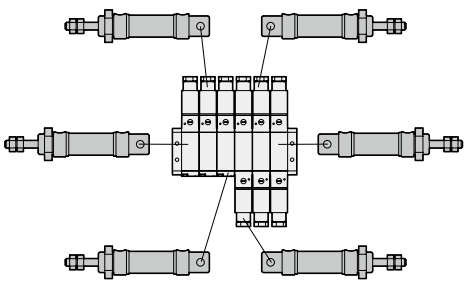
Pressure conversion chart

Pa	kPa	MPa	bar	mbar	kgf/cm^2	cmH_2O	mmH_2O	mmHg	psi
1	10^{-3}	10^{-6}	10^{-5}	10^{-2}	1.01972×10^{-5}	1.01972×10^{-2}	1.01972×10^{-1}	7.50062×10^{-3}	1.45038×10^{-4}
10^3	1	10^{-3}	10^{-2}	10	1.01972×10^{-2}	1.01972×10	1.01972×10^{2}	7.50062	1.45038×10^{-1}
10^6	10^3	1	10	10^4	1.01972×10	1.01972×10^{4}	1.01972×10^{5}	7.50062×10^{3}	1.45038×10^{2}
10^5	10^2	10^{-1}	1	10^3	1.01972	1.01972×10^{3}	1.01972×10^{4}	7.50062×10^{2}	1.45038×10
10^2	10^{-1}	10^{-4}	10^{-3}	1	1.01972×10^{-3}	1.01972	1.01972×10	7.50062×10^{-1}	1.45038×10^{-2}
9.80665×10^4	9.80665×10	9.80665×10^{-2}	9.80665×10^{-1}	9.80665×10^{2}	1	10^3	10^4	7.35559×10^{2}	1.42233×10
9.80665×10	9.80665×10^{-2}	9.80665×10^{-5}	9.80665×10^{-4}	9.80665×10^{-1}	10^{-3}	1	10	7.35559×10^{-1}	1.42233×10^{-2}
9.80665	9.80665×10^{-3}	9.80665×10^{-6}	9.80665×10^{-5}	9.80665×10^{-2}	10^{-4}	10^{-1}	1	7.35559×10^{-2}	1.42233×10^{-3}
1.33322×10^2	1.33322×10^{-1}	1.33322×10^{-4}	1.33322×10^{-3}	1.33322	1.35951×10^{-3}	1.35951	1.35951×10	1	1.93368×10^{-2}
6.89476×10^3	6.89476	6.89476×10^{-3}	6.89476×10^{-2}	6.89476×10	7.03069×10^{-2}	7.03069×10	7.03069×10^{2}	5.17149×10	1

Flow rate conversion chart

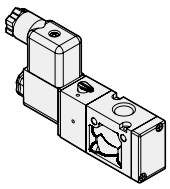
m^3/s	l/s	cm^3/s	m^3/h	m^3/min	l/h	l/min	ft^3/min (scfm)	gallon min UK	gallon min USA
1	1000	1000000	3600000	60	3600000	60000	2120	13200	15850
0.001	1	1000	3.6	0.06	3600	60	2.12	13.2	15.85
0.000001	0.001	1	0.0036	0.00006	3.6	0.06	0.0212	0.0132	0.01585
0.00028	0.28	280	1	0.1667	1000	16.67	0.59	3.67	4.4
0.01667	16.67	16670	60	1	60000	1000	35.31	219.97	264.17
0.00000028	0.00028	0.28	0.001	0.00001667	1	0.01667	0.00059	0.00367	0.0044
0.00001667	0.01667	16.67	0.06	0.001	60	1	0.03531	0.21997	0.264
0.00047	0.47	470	1.699	0.02832	1699	28.32	1	6.23	7.48
0.00007579	0.07577	75.77	0.273	0.00455	273	4.55	0.16	1	1.2
0.00006309	0.06309	63.09	0.227	0.00379	227	3.79	0.13	0.83	1

Intergrated connection system offers improvements on facilities

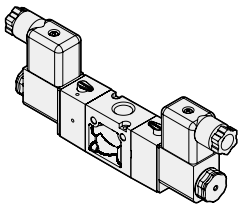
Facilities with traditional connection system	Facilities applied with intergrated connection system
• Longer distance from the controlling valve to the operating unit. • Slower response time. • More air consumption. • Complicated connection arrangements. • Mass electric wiring and connections to controlling valves task. • Higher cost to run the facilities. • Higher prossure drop.	• Shorter distance from the controlling valve to the operating unit. • Quicker response time. • Less air consumption. • Simple connection arrangements. • Moderate electric wiring connections task. • Lower cost to run the facilities. • Lower pressure drop.
	

SOLENOID **VALVE**

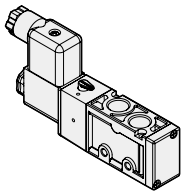
3E1
3 way / Single solenoid



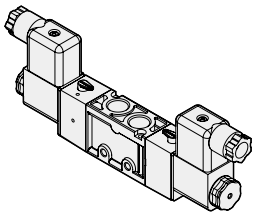
3E2
3 way / Double solenoid



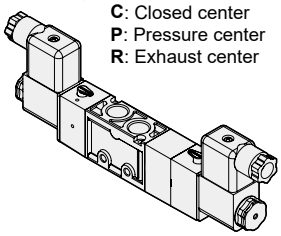
4E1
4 way / Single solenoid



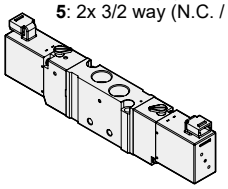
4E2
4 way / Double solenoid



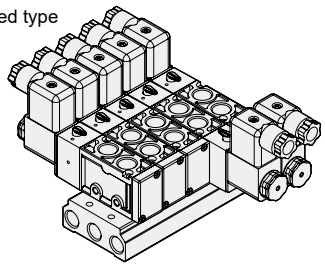
4E2C.P.R
4 way / Double solenoid
C: Closed center
P: Pressure center
R: Exhaust center



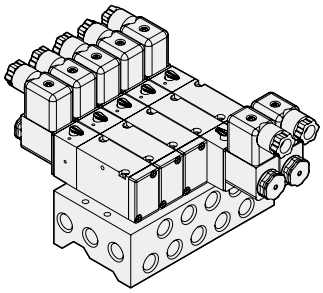
4E23.4.5
4 way / Double solenoid
3: 2x 3/2 way (N.C. / N.C.)
4: 2x 3/2 way (N.O. / N.O.)
5: 2x 3/2 way (N.C. / N.O.)



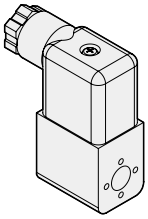
Body ported type



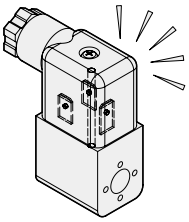
M
Manifold type



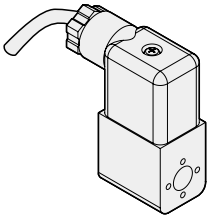
DIN connector



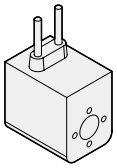
L LED indicator
KL Power saving LED indicator



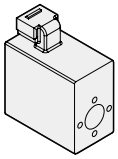
E
Explosion protection



W
Lead wire

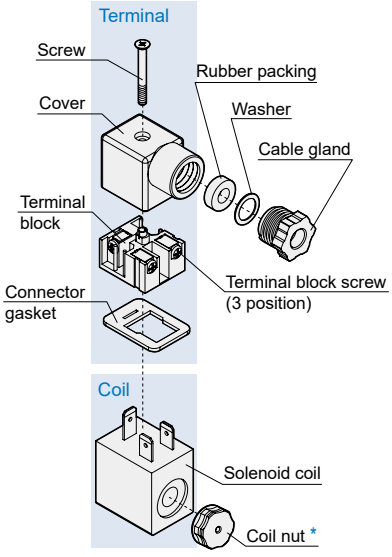


H
Horizontal connector
With LED indicator

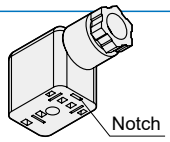


DIN connector

Recommended tightening torque
Screw: 0.5 Nm
Screw of terminal block: 0.5 Nm
Cable gland: 1.65 ~ 2.5 Nm



Wiring steps



1. Loosen the screw and remove the terminal from the coil.
2. Insert a flathead screwdriver into the notch below the terminal block and gently pry it to separate from the cover.
3. Loosen the terminal block screw, insert the wire, then tighten the screw to secure the wire.
4. After wiring is completed, press the cover back onto the terminal block.
5. Reinstall the terminal onto the solenoid coil and tighten the screw.

Procedure for changing wire outlet direction

Separate the terminal block from the cover. The cover can be rotated 180° for installation to adjust the wire outlet direction. (If the device is equipped with an indicator light, take care to avoid damage)

* Coil nut tightening torque

Model	Spec.	Max. tightening torque (Nm)	Cable diameter (mm)
MVSC-220	M8	0.5	ø5~ø7
MVSC-260	M8	0.5	
MVSC-300	M8	0.5	
MVSC-460	M8	0.5	
MVSD2-180	M7	0.5	ø4~ø6
MVSE-260	M8	0.5	ø5~ø7
MVSE(2)-300	M8	0.5	
MVSE-500	M8	0.5	
MVSE-510	G1/4	0.6	

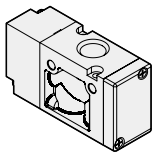
Model	Spec.	Max. tightening torque (Nm)	Cable diameter (mm)
MVSE-600	G1/4	0.6	ø5~ø7
MVSI-260	M8	0.5	
MVSI-450	M8	0.5	
MVSI-510	G1/4	0.6	
MVSN-220	M8	0.5	
MVSN(2)-300	M8	0.5	
MVSV-220	M8	0.5	
MVDC-220	M8	0.5	
MVDC-300	M8	0.5	

Technical data

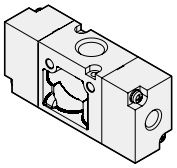
PILOT / MECHANICAL **VALVE**

PILOT **VALVE**

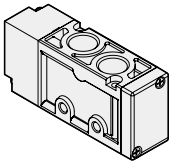
3A1
3/2 Single pilot



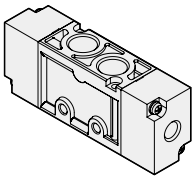
3A2
3/2 Double pilot



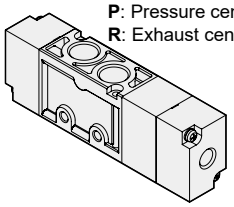
4A1
5/2 Single pilot



4A2
5/2 Double pilot



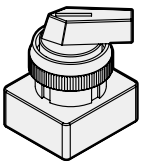
4A2(C.P.R)
5/3 Double pilot
C: Closed center
P: Pressure center
R: Exhaust center



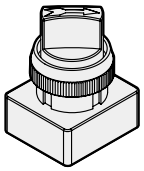
MECHANICAL **VALVE**

EB
Latching palm button

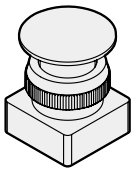
LB
Extended twist button



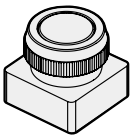
TB
Twist button



PB
Mushroom palm button



PP
Push button



R1
Roller lever