

Directional Control Valves
M3 - M5 - G1/8

Catalogue PD0C00005GB01-ev



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ADEX Valves

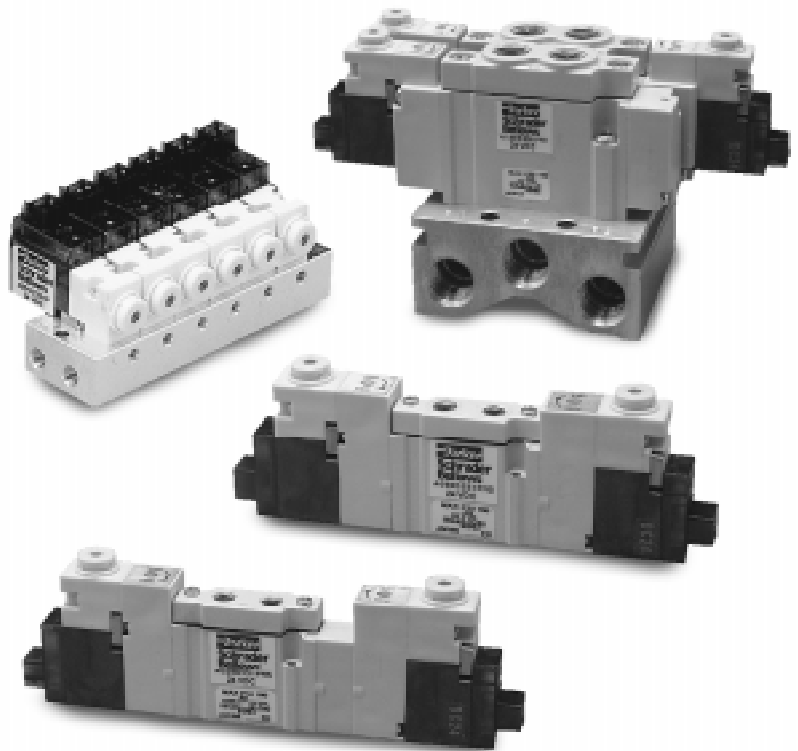
ADEX

Valves

A00 Series

A05 Series

A12 Series



Compact body with large flow

Providing flexibility for your application plus saving space and costs saving in maintenance and installation. This series is ideal for driving cylinders of Ø10 to Ø100 in diameter.

A00

3/2 NO and 3/2 NC versions

Body width
10 mm



A05

5/2 and 5/3 versions

Body width
10 mm



A12

5/2 and 5/3 versions

Body width
15 mm



Quick response time, faster than 10ms

(A05 series, Single solenoid)
Uniquely designed pilot valve with fast response time and low power consumption.

Tested life time more than 50,000,000 times

(Based on Parker laboratory test conditions)
ADEX valves feature the well-reputed WCS (Wear Compensation System) in the main spool, resulting in low sliding friction and long service life.

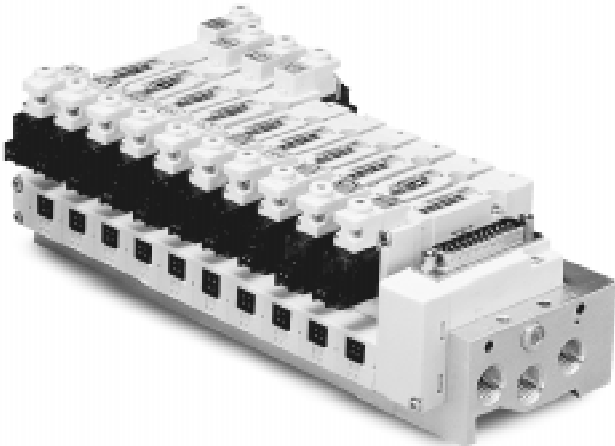
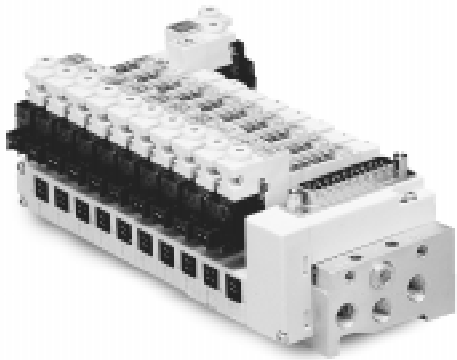
Low power consumption only 0,6W

(With indicator light and surge suppressor)
Direct drive from PLC is possible, contributing to cost reduction as well as down sizing of the DC power supply.

Multipin connector version

Connection by sub-D 25 on subbase.

Inline or subbases mounted (side ported) versions



Captured exhaust from main valve and pilot valve

(Subbase mounting type)

Exhaust air from pilot valve is captured together with exhaust air from main valve.

Unlike conventional exhaust systems, exhaust air from pilot valve is not directly discharged to outside. This helps prevent air contamination in the atmosphere.

Outputs ports selectable

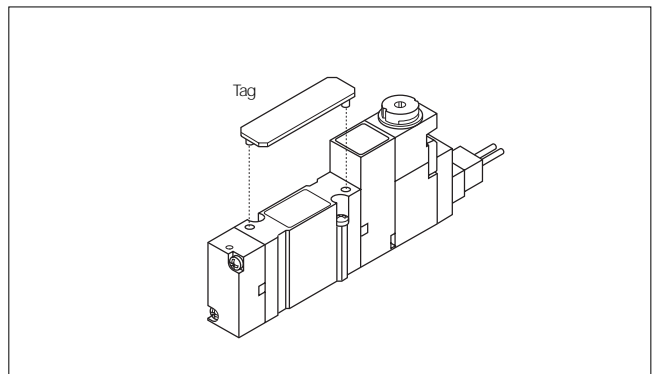
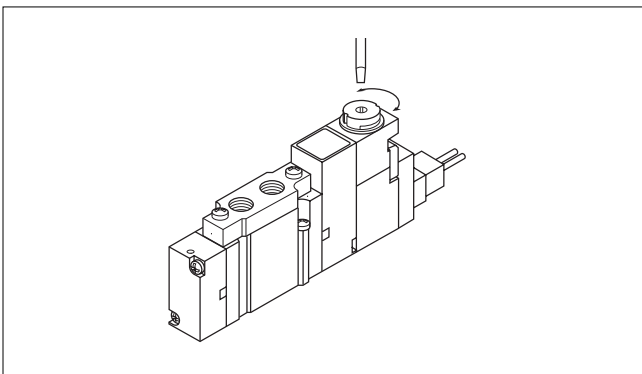
Series	Standard
	Tapped hole
A00	M3 - M5
A05	M5
A12	G $\frac{1}{8}$

Manual override

Screwdriver-operated manual override is standard.

Multipurpose tag available

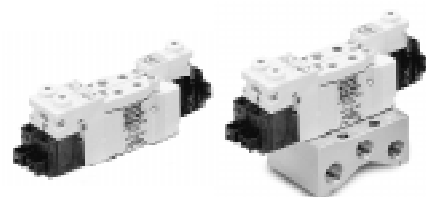
For the convenience of installation, testing, maintenance a tag can be fixed to the top side of solenoid valve body.



ADEX Valves

Direct Operated Solenoid

Inline IEM Valves



Series	A00	A05R
Internal Pilot Supply		●
Single Solenoid 3/2	●	
Single Solenoid 5/2		●
Double Solenoid 5/2		●
Closed Center 5/3		●
Vented Center 5/3		●
Pressurised Center 5/3		●
Indicator LED & Surge Suppressor	●	●
Manual Override	●	●
Inline Mounting		●
IEM Manifold Mounting		●
Subbase Mounting	●	
Electrical Collective Wiring		●
Port Sizes	M3 - M5	M5

Diameter of controlled cylinder

Pressure : 5 bar

Load factor : 0.5

Cylinder speed m/s

Tube length : 1m

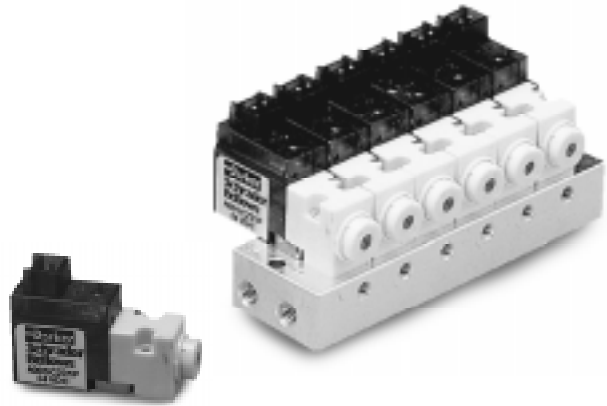
Tube diameter : A05 : 6 x 4 mm

A12 : 8 x 6 mm

0,15 0,30 0,45 0,60 0,75

Ø6					
Ø10					
Ø16					
Ø20					
Ø25					
Ø32					
Ø40					
Ø50					
Ø63					
Ø80					
Ø100					

- 0,6W low power solenoid
- NO or NC versions
- Ultra fast response time
- Suitable for vacuum operation
- Impulse or turn to lock manual override



Operating information

Working pressure	: NC : 0 to 7,1 bar or vacuum to 6,1 bar*	Orientation	: any plane
	: NO : 0 to 5,1 bar or vacuum to 4,2 bar*	Maximum operating frequency	: cycles/min: 600 (10Hz)
Working temperature	: -5°C to 50°C	Degree of protection	: IP40
Storage temperature	: -40°C + 70°C	Operating voltage	: 12 and 24 V DC -10% to +10% intermittent duty and -10% to 0% continuous duty
Fluid	: air or gas 50µm filtered lubricated or not	Surge suppression	: Diode for DC version
Response time	: DC on 5ms off 5ms	Consumption	: 0,55 W (without LED) 0,6W (with LED indicator light)
Expected mechanical life with dry air at 6 bar 20°C 1 Hz: 50 million cycles		Wiring	: Connector 2,54mm pin spacing
NOTE : All data applies for intermittent duty, for continuous duty : please consult Technical Dept'.		Cv	: 0,01

Additional information

* For vacuum operation: with normally open version; air supply is inverted i.e.

P - Vacuum, R - Pressured air

with normally closed version P - Pressured air, R - Vacuum

Normally closed valves (A005C23•P) cannot be mounted together with normally open valves (A005 23•P) on the same manifold

References

Solenoid	Function	Voltage	Connector
A00S	C23	1	P

C23 : NC
O23 : NO

1 : DC 24V
2 : DC 12V

P - Orientation top with LED and suppressor

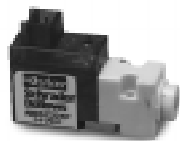
Manifold type	No. of stations	Type of solenoid	Output port A, size
MMFS	8	A00	M3

from 2 up to 16
(20 on request)

A00 series

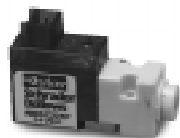
M3 or M5 ports

10mm Solenoid 3/2 N/C with mounting screws and base gasket



Symbol	Voltage	Weight (kg)	Order code
	24V DC	0,013	A00SC231P
	12V DC	0,013	A00SC232P

10mm Solenoid 3/2 N/O with mounting screws and base gasket



Symbol	Voltage	Weight (kg)	Order code
	24V DC	0,013	A00S0231P
	12V DC	0,013	A00S0232P

Stand alone subbase M3



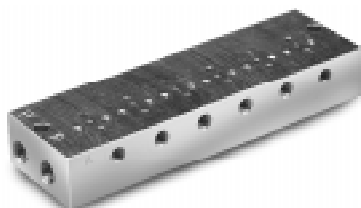
Description	Order code
Stand alone subbase	A00SBM3

Manifold M3 for 10mm Solenoid 3/2





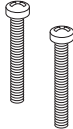
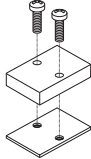
Number of stations	Order code
2	MMFS2 A00 M3
4	MMFS4 A00 M3
6	MMFS6 A00 M3
8	MMFS8 A00 M3
10	MMFS10 A00 M3
12	MMFS12 A00 M3
16	MMFS16 A00 M3

Manifold M5 for 10mm Solenoid 3/2

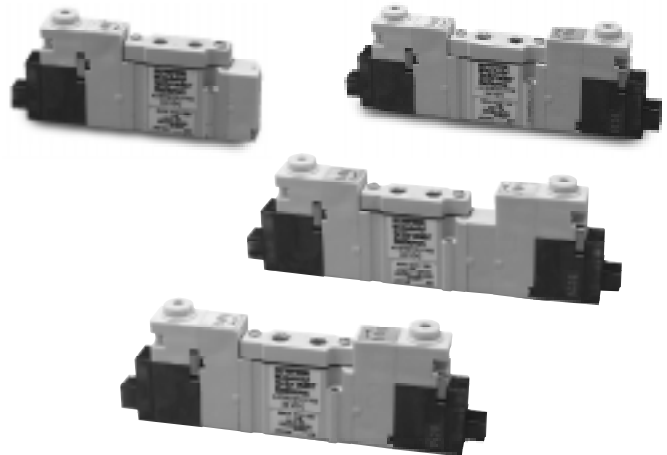


Number of stations	Order code
2	MMFS2 A00 M5
4	MMFS4 A00 M5
6	MMFS6 A00 M5
8	MMFS8 A00 M5
10	MMFS10 A00 M5
12	MMFS12 A00 M5
16	MMFS16 A00 M5

For dimensions see page 17

	Description	Order code
	<p>Connector with lead wire black (-), red (+), length 500mm</p> <p>Connector with lead wire black (-), red (+), length 1000mm</p>	<p>A05PDCCL5</p> <p>A05PDCCL10</p>
	<p>Base gasket (pack of 10)</p>	<p>A00SG</p>
	<p>Pack of screws (pack of 20)</p>	<p>A00SS</p>
	<p>Blanking plate kit</p>	<p>A00SBP</p>

- 0,6W low power solenoid
- Fast response time
- Vacuum version available on request
- Impulse and turn to lock manual override



Operating information

Working pressure : 5/2 monos. 1,5 to 7,1 bar
 5/2 bistable 1 to 7,1 bar
 5/3 CC, CV, CP 2 to 7,1 bar

Working temperature : -5°C to +50°C
 Storage temperature : -40°C to +70°C
 Fluid : air or gaz 50µm filtered
 lubricated or not

Response time :

		(V DC) Response time : ms		
		5/2 monos.	5/2 bi.	5/3
A05R	On	10	10	10
	Off	10	-	15
A12R	On	15	10	12
	Off	18	-	36
A05P	On	10	10	10
	Off	10	-	15
A12P	On	15	10	12
	Off	18	-	36

Expected mechanical life
 with dry air at 6 bar 20°C 1 Hz: 50 million cycles

Orientation : any plane

Maximum operating
 frequency : cycles/min. : 5/2; 600 (10Hz) - 5/3; 500

Degree of protection : IP 40

NOTE : All data applies for intermittent duty,
 for continuous duty : please consult Technical Dept'.

Operating voltage : 12 and 24 V DC
 -10% to +10% intermittent duty
 and -10% to 0% continuous duty

Surge suppression : Diode for DC version

Consumption : 0,55 W (without LED)
 0,6W (with LED indicator light)

Wiring : Connector 2,54mm pin spacing

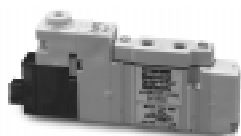
*Cv measurement : there are several ways to determine Cv valving, resulting in some Cv been overstated by 20 to 40%. This can adversely affect the user's application because the valve flows less than the quoted Cv. Parker's Cv valve is calculated using the ANSI (NFPA) T3-21-3-1990 standard. The ANSI (NFPA) method is a structured test using very specific tube sizes and length, inlet pressures, pressures drop and volume chambers.

Flow characteristics

		5/2 monostable	5/2 bistable	5/3 close center
Inline IEM		A05RS25	A05RD25	A05RD35
A05	Cv*	0,17	0,17	0,16
Inline IEM		A12RS25	A12RD25	A12RD35
A12	Cv*	0,47	0,47	0,43
Subbase		A05PS25	A05PD25	A05PD35
A05	Cv*	0,18	0,18	0,16
Subbase		A12PS25	A12PD25	A12PD35
A12	Cv*	0,44	0,44	0,40

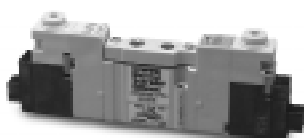
Main data for directional control valves A05R and A12R series

Electrically actuated 5/2 single solenoid



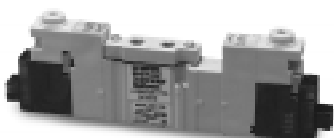
Symbol	Threaded connection	Voltage	Order code
	M5	24V DC	A05RS251PM5MF
	G1/8	24V DC	A12RS251PG1MF

Electrically actuated 5/2 double solenoid



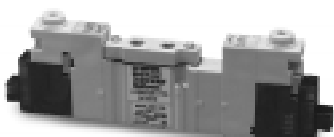
Symbol	Threaded connection	Voltage	Order code
	M5	24V DC	A05RD251PM5MF
	G1/8	24V DC	A12RD251PG1MF

Electrically actuated 5/3 closed center



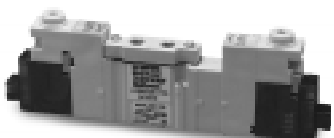
Symbol	Threaded connection	Voltage	Order code
	M5	24V DC	A05RD351PM5MF
	G1/8	24V DC	A12RD351PG1MF

Electrically actuated 5/3 vented center

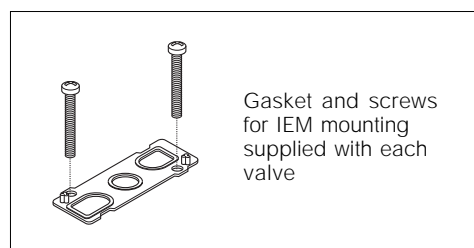


Symbol	Threaded connection	Voltage	Order code
	M5	24V DC	A05RE351PM5MF
	G1/8	24V DC	A12RE351PG1MF

Electrically actuated 5/3 pressurised center



Symbol	Threaded connection	Voltage	Order code
	M5	24V DC	A05R0351PM5MF
	G1/8	24V DC	A12R0351PG1MF



For dimensions see page 18

Main data for manifolds for directional control valves A05R/A12R series

Manifold for in line valve with individual electric connector



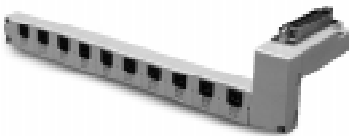
No. of stations	Port size	Size	Order Code
4	M5	A05	MMFU4A05G
	G ¹ / ₈	A12	MMFU4A12G
6	M5	A05	MMFU6A05G
	G ¹ / ₈	A12	MMFU6A12G
8	M5	A05	MMFU8A05G
	G ¹ / ₈	A12	MMFU8A12G
10	M5	A05	MMFU10A05G
	G ¹ / ₈	A12	MMFU10A12G
12	M5	A05	MMFU12A05G
	G ¹ / ₈	A12	MMFU12A12G

Manifold for in line valve with sub D collective wiring module



No. of stations	Port size	Size	Order Code
4	M5	A05	MMCU4A05G
	G ¹ / ₈	A12	MMCU4A12G
6	M5	A05	MMCU6A05G
	G ¹ / ₈	A12	MMCU6A12G
8	M5	A05	MMCU8A05G
	G ¹ / ₈	A12	MMCU8A12G
10	M5	A05	MMCU10A05G
	G ¹ / ₈	A12	MMCU10A12G
12	M5	A05	MMCU12A05G
	G ¹ / ₈	A12	MMCU12A12G

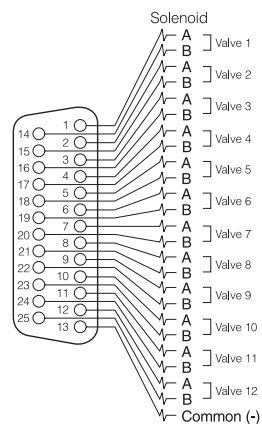
Collective wiring add-on module



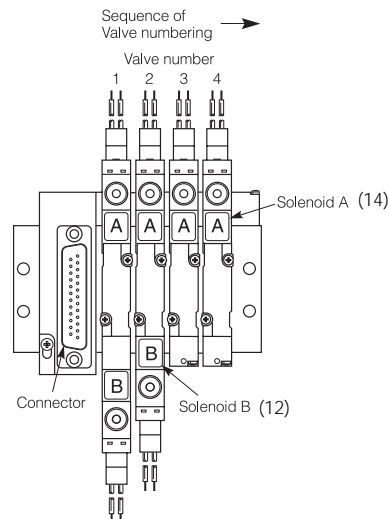
No. of stations	Size	Order Code
4	A05	MCS4A05PDL
	A12	MCS4A12PDL
6	A05	MCS6A05PDL
	A12	MCS6A12PDL
8	A05	MCS8A05PDL
	A12	MCS8A12PDL
10	A05	MCS10A05PDL
	A12	MCS10A12PDL
12	A05	MCS12A05PDL
	A12	MCS12A12PDL

For dimensions see page 19

Collective wiring pin mapping



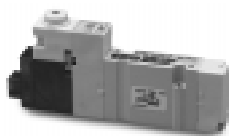
Pin map for Sub-D 25 connector



Valve and solenoid addresses

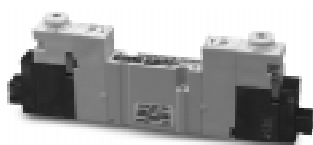
Main data for directional control valves A05P/A12P series

Electrically actuated 5/2 single solenoid



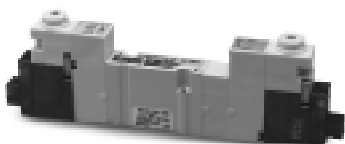
Symbol	Voltage	Size	Order code
	24V DC	A05	A05PS251P
	24V DC	A12	A12PS251P

Electrically actuated 5/2 double solenoid



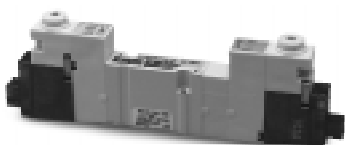
Symbol	Voltage	Size	Order code
	24V DC	A05	A05PD251P
	24V DC	A12	A12PD251P

Electrically actuated 5/3 closed center



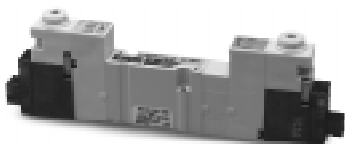
Symbol	Voltage	Size	Order code
	24V DC	A05	A05PD351P
	24V DC	A12	A12PD351P

Electrically actuated 5/3 vented center

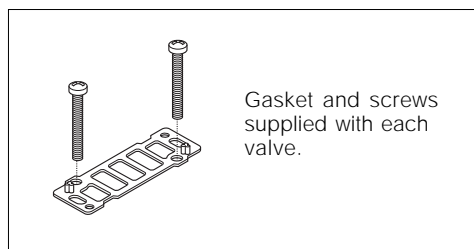


Symbol	Voltage	Size	Order code
	24V DC	A05	A05PE351P
	24V DC	A12	A12PE351P

Electrically actuated 5/3 pressurised center



Symbol	Voltage	Size	Order code
	24V DC	A05	A05P0351P
	24V DC	A12	A12P0351P



For dimensions see page 20

Main data for manifolds for directional control valves A05P/A12P series**Manifold side ported BSPP thread, for valves with individual electrical wiring**

No. of stations	Port size	Size	Order Code
4	M5	A05	MMFS4A05GM5
	G ¹ / ₈	A12	MMFS4A12GG1
6	M5	A05	MMFS6A05GM5
	G ¹ / ₈	A12	MMFS6A12GG1
8	M5	A05	MMFS8A05GM5
	G ¹ / ₈	A12	MMFS8A12GG1
10	M5	A05	MMFS10A05GM5
	G ¹ / ₈	A12	MMFS10A12GG1
12	M5	A05	MMFS12A05GM5
	G ¹ / ₈	A12	MMFS12A12GG1

Manifold side ported BSPP thread, for Sub D collective wiring module


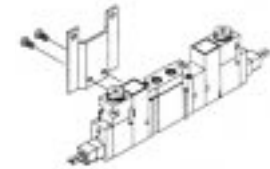
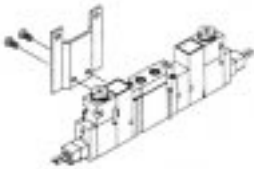
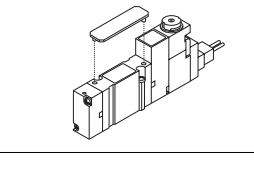
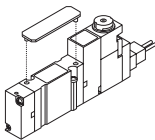
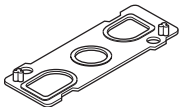
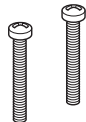
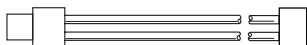
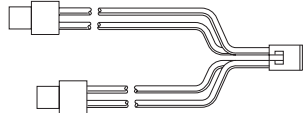
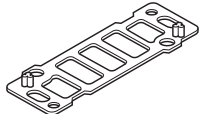
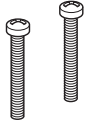
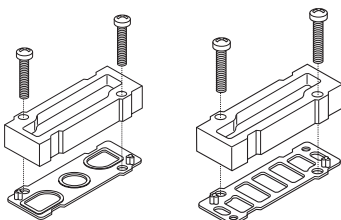
No. of stations	Port size	Size	Order Code
4	M5	A05	MMCS4A05GM5
	G ¹ / ₈	A12	MMCS4A12GG1
6	M5	A05	MMCS6A05GM5
	G ¹ / ₈	A12	MMCS6A12GG1
8	M5	A05	MMCS8A05GM5
	G ¹ / ₈	A12	MMCS8A12GG1
10	M5	A05	MMCS10A05GM5
	G ¹ / ₈	A12	MMCS10A12GG1
12	M5	A05	MMCS12A05GM5
	G ¹ / ₈	A12	MMCS12A12GG1

Collective wiring add-on module (supplied with mounting screws) for MMCS... manifolds

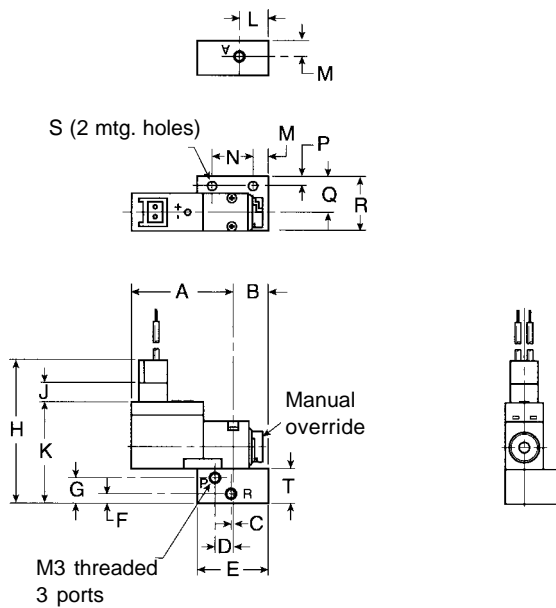
No. of stations	Size	Order Code
4	A05	MCS4A05PDL
	A12	MCS4A12PDL
6	A05	MCS6A05PDL
	A12	MCS6A12PDL
8	A05	MCS8A05PDL
	A12	MCS8A12PDL
10	A05	MCS10A05PDL
	A12	MCS10A12PDL
12	A05	MCS12A05PDL
	A12	MCS12A12PDL

For wiring pin mapping see page 13

For dimensions see page 21

	Description	Order code
	Connector with lead wire black (-), red (+), length 500mm	A05PDCCCL5
	Connector with lead wire black (-), red (+), length 1000mm	A05PDCCCL10
	Mounting bracket A05R (1 bracket with 2 screws)	A05RBS
	Mounting bracket A12R (1 bracket with 2 screws)	A12RBS
	Identification tag for subbase valves (pack of 10)	A05PN
	IEM gasket (pack of 10) for A05R/A12R	A05RG A12RG
	IEM mounting screws (pack of 20) for A05R/A12R	A05RS A12RS
	Collective wiring connector Single solenoid PNP	A05PSCCM A12PSCCM
	Collective wiring connector Double solenoid PNP	A05PDCCM A12PDCCM
	Subbase gasket (pack of 10) for A05P/A12P	A05PG A12PG
	Subbase mounting screws (pack of 20) for A05P/A12P	A05PS A12PS
	IEM blanking plate kit (pack of 5)	A05RGBP A12RGBP
	Subbase blanking plate kit (pack of 5)	A05PGBP A12PGBP

A00 - Subbase

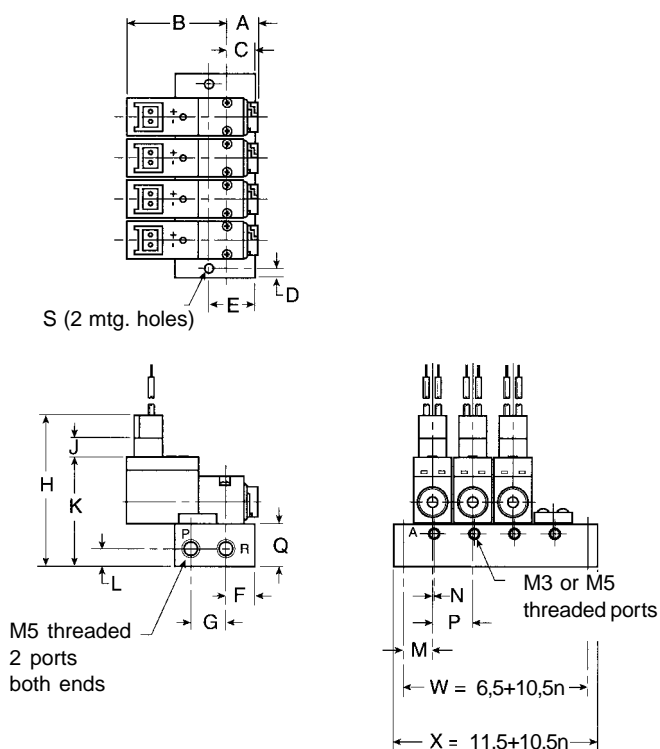


A00 - Subbase

A	B	C	D	E
25,4	10,5	0,4	4,4	20
F	G	H	J	K
3	7	39,2	5	28,2
L	M	N	P	Q
8,2	4,5	12	2,5	10
R	S	T		
15	2,7	9,7		

Dimensions in mm

A00 - Manifold



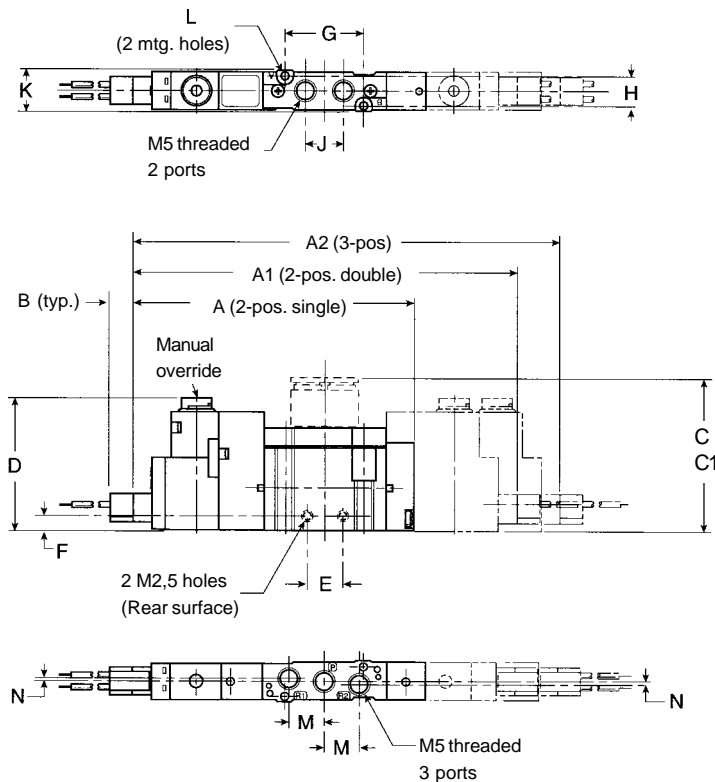
A00 - Manifold

A	B	C	D	E
9,2	25,4	8	2,5	13
F	G	H	J	K
8	10	41,5	5	30,5
L	M	N	P	Q
5	8,5	0,6	10,5	12

Dimensions in mm

n = number of stations

A05R - Single and double operators - Body ported

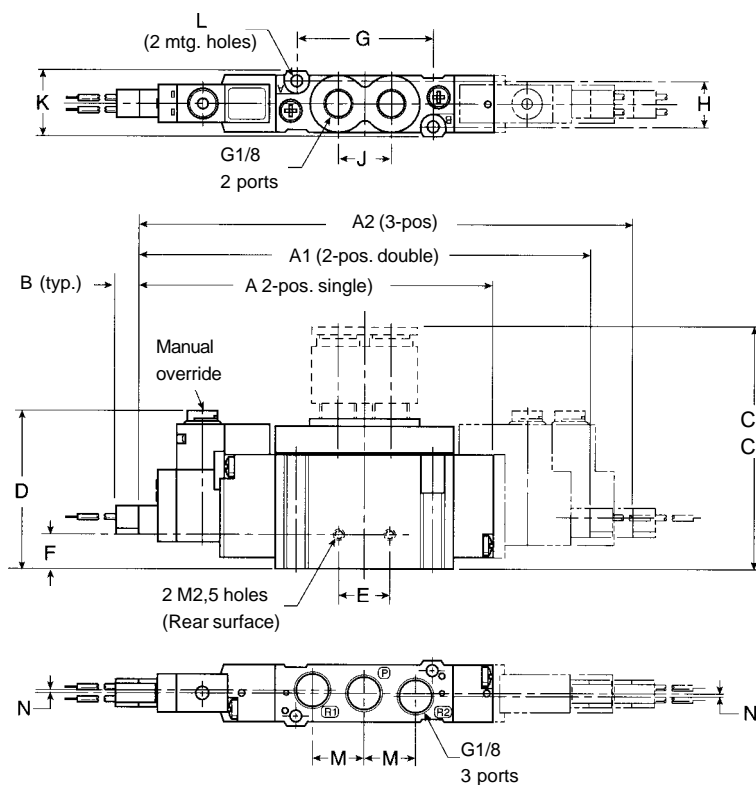


A05R - Body ported

A	A1	A2	B	C
74	100	108	6	-
C1	D	E	F	G
-	34,6	9,6	4	21
H	J	K	L	M
8,5	10,2	11,4	Ø2,1	9,5
N				
1				

Dimensions in mm

A12R - Single and double operators - Body ported

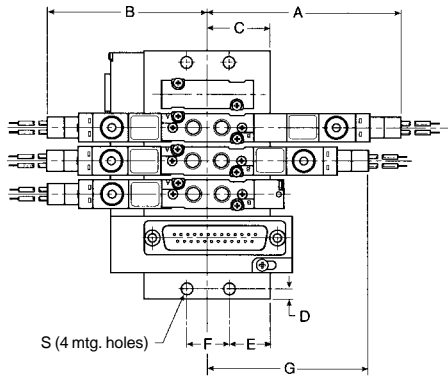


A12R - Body ported

A	A1	A2	B	C
93,5	119	130	6	-
C1	D	E	F	G
-	41,6	13,4	9	36
H	J	K	L	M
12	14	17,2	Ø3,1	13,6
N				
0,8				

Dimensions in mm

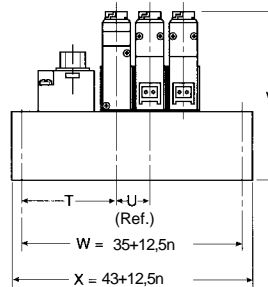
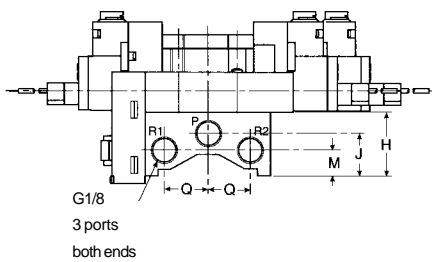
A05R - Manifold - Valve body ports



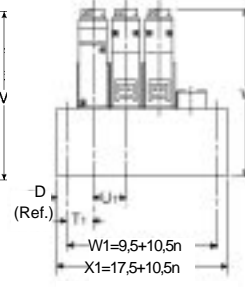
A05R - Manifold - valve body port

A 64	B 56	C 23,5	D 4	E 15,5
F 16	G 56	H 24	J 15,5	M 9,5
Q 16	S Ø4,5	T 34	T1 10	U 12,5
U1 10,5	V 63			

Dimensions in mm



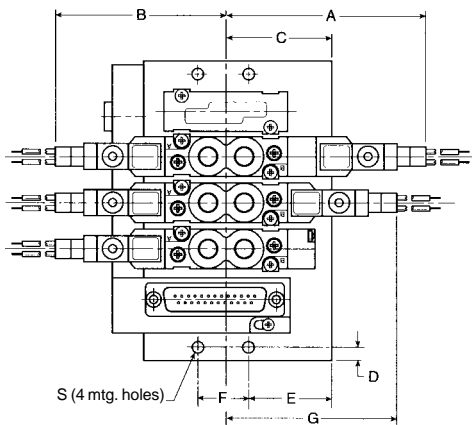
MMCU...



MMFU...

n = number of stations

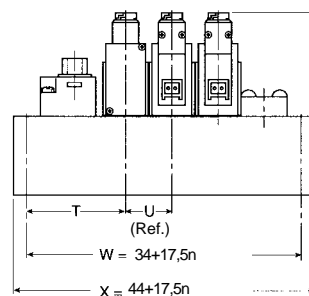
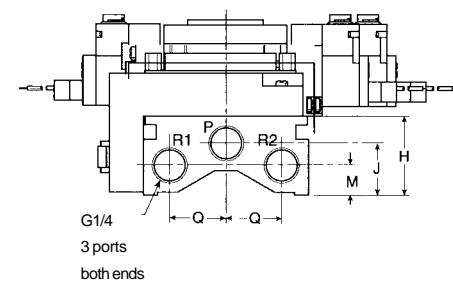
A12R - Manifold - Valve body ports



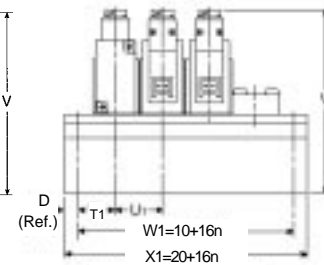
A12R - Manifold - Valve body port

A 77	B 66	C 29	D 5	E 19,2
F 19,6	G 66	H 27,5	J 18	M 10,5
Q 19,5	S Ø4,5	T 37,5	T1 12,2	U 17,5
U1 16	V 70			

Dimensions in mm



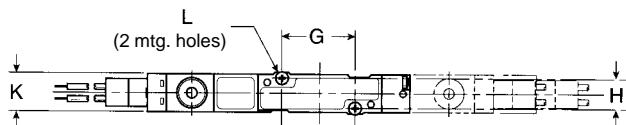
MMCU...



MMFU...

n = number of stations

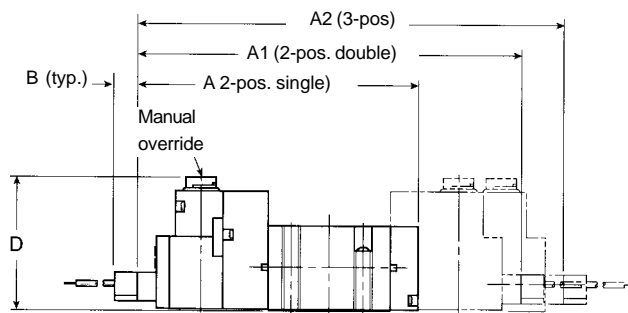
A05P - Single and double operators - Subbase



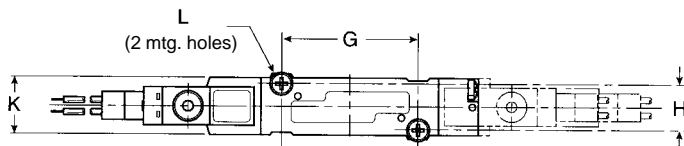
A05P - Subbase

A	A1	A2	B	D
74	100	108	6	35,1
G	H	K	L	
19	8,5	10	Ø2,1	

Dimensions in mm



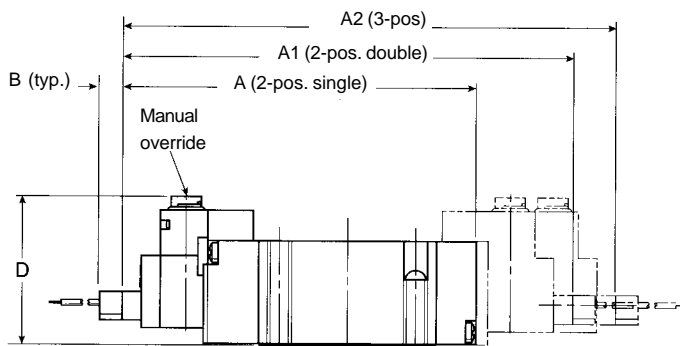
A12P - Single and double operators - Subbase



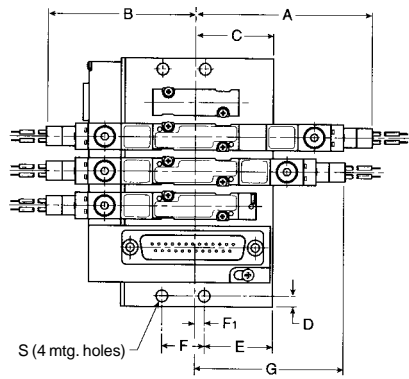
A12P - Subbase

A	A1	A2	B	D
93,5	119	130	6	39,1
G	H	K	L	
34	12	15	Ø3,1	

Dimensions in mm



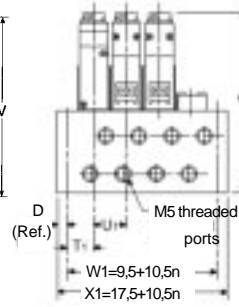
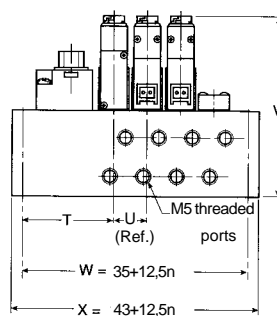
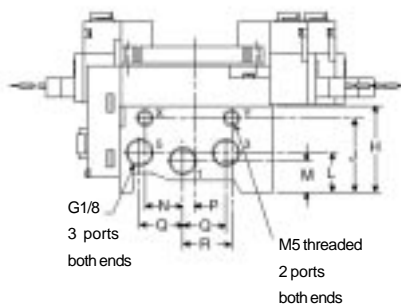
A05P - Manifold - Side ports



A05P - Manifold - Side ports

A 64	B 56	C 30,2	D 4	E 25,5
F 16	F1 4,7	G 56	H 32	J 28
L 14,5	M 11,5	N 14	P 3	Q 16
R 18	S Ø4,5	T 33,8	T1 10	U 12,5
U1 10,5	V 67			

Dimensions in mm

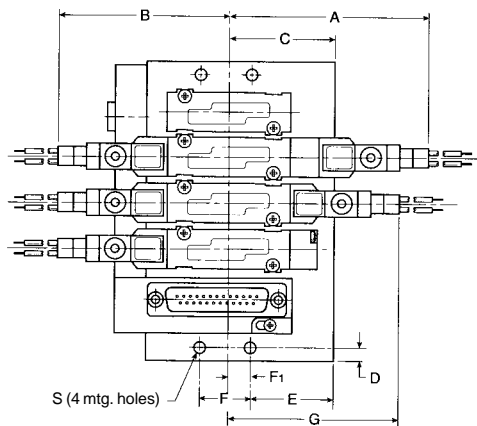


n = number of stations

MMCS...

MMFS...

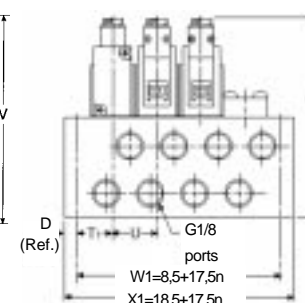
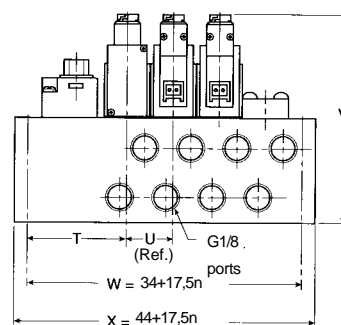
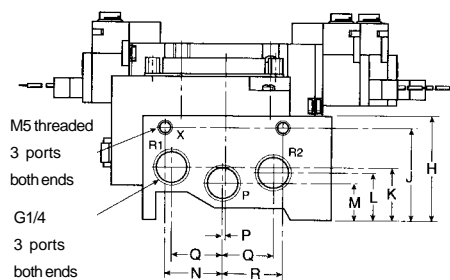
A12P - Manifolds - Side ports



A12P - Manifold - Side ports

A 77	B 66	C 40,4	D 5	E 31,7
F 19,6	F1 11	G 66	H 39,5	J 35
K 20,5	L 18	M 14	N 22	P 1
Q 19,5	R 23	S Ø4,5	T 37,2	T1 12,7
U 17,5	V 79			

Dimensions in mm



n = number of stations

MMCS...

MMFS...