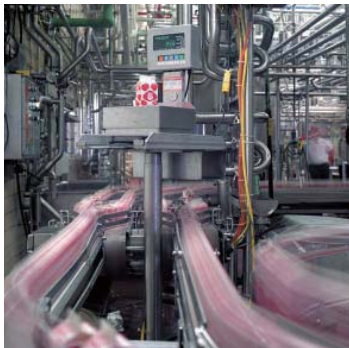




aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ADEX Plus

In-Line type solenoid valve



ENGINEERING YOUR SUCCESS.

Basic Technical Information

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In-Line type pilot operated solenoid valve


P2A05 Port M5, 10mm width.....	6
P2A12 Port 1/8, 15mm width.....	7
P2A20 Port 1/4, 18mm width.....	8

Order code summary


Solenoid valve, Lead wire with connector, Mounting bracket	9
Manifold, Blanking plate	10

Dimensions


P2A05R	11-13
P2A15R	14-10
P2A20R	17-19
Manifold block	20-21



Important !
 Before carrying out any service work, ensure that the valve and manifold have been vented. Remove the primary supply air hose to ensure total disconnection of the air supply before dismantling valves or blank connection blocks.



NB !
 All technical data in this catalogue is typical only. The air quality is decisive for the valve life: see ISO 8573.



WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Basic Technical Information

Working media, air quality

For best possible service life and trouble free operation, ISO 8573-1 quality class 3.4.3 should be used. This means 5µm filter (standard filter) dew point +3°C for indoor operation (a lower dew point should be selected for outdoor operation) and oil concentration 1.0 mg oil/m³, which is what a standard compressor with a standard filter gives.

ISO 8573-1 quality classes

Quality class	Pollution		Water max. press. dew point [°C]	Oil max. concentration [mg/m ³]
	particle size [µm]	max. concentration [mg/m ³]		
1	0.1	0.1	-70	0.01
2	1	1	-40	0.1
3	5	5	-20	1.0
4	15	8	+3	5.0
5	40	10	+7	25
6	-	-	+10	-

Pneumatic actuator sizing map

Pneumatic standard cylinder

Products	P1Q compact cylinder						
	P1A mini ISO cylinder						
	P1D ISO cylinder						
Cylinder bore [mm]	<20	20 - 25	32	40 - 50	63	80	100
P2A05	M5, 1/8	M5, 1/8	M5, 1/8	M5, 1/8	M5, 1/8		
P2A12	1/8, 1/4	1/8, 1/4	1/8, 1/4	1/8, 1/4	1/8, 1/4	1/8, 1/4	
P2A20		1/4, 1/4	1/4, 1/4	1/4, 1/4	1/4, 1/4	1/4, 1/4	1/4, 1/4

- Less than 500mm/s
- Less than 700mm/s
- Less than 1000mm/s



Compact cylinder P1Q series



Mini ISO cylinder P1A series



ISO cylinder P1D series

Basic Technical Information

Pneumatic actuator sizing map
 Vane type rotary actuator "Hi-Rotor"



Hi-Rotor Part Number		PRNA1S	PRNA1D	PRNA3S PRNA3D	PRNA10S PRNA10D	PRNA20S PRNA20D	PRN30S PRN30D	PRN50S PRN50D	PRN150S PRN150D	PRN300S PRN300D	PRN800S PRN800D
Oscillating time [s]at 0.5 Mpa	90'	0.03 - 0.3	0.03 - 0.6	0.04 - 0.8	0.045 - 0.9	0.05 - 1.0	0.07 - 0.7	0.08 - 0.8	0.12 - 1.2	0.16 - 1.6	0.22 - 2.2
	180'	0.06 - 1.2	-	0.08 - 1.6	0.09 - 1.8	0.1 - 2.0	0.14 - 1.4	0.16 - 1.6	0.24 - 2.4	0.32 - 3.2	0.44 - 4.4
	270'	0.09 - 1.8	-	0.12 - 2.4	0.135 - 2.7	0.15 - 3.0	0.21 - 2.1	0.24 - 2.4	0.36 - 3.6	0.48 - 4.8	0.66 - 6.6
Hi-Rotor port		M5	M5	M5	M5	M5	1/8	1/8	1/4	3/8	1/2
P2A05											
P2A12											
P2A20											

Material specification

P2A05R, P2A12R, P2A20R

Valve

VALVE Body	Aluminum
SPOOL	Aluminum
End cover	Plastic
Piston housing	Plastic
Piston	Plastic
Base gasket	Rubber

Accessories

Bracket	Steel
Manifold base	Aluminum

In-Line type pilot operated solenoid valve

P2A05R Port M5, 10mm width

Specifications

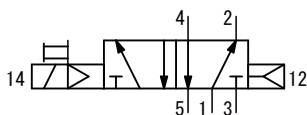
Part Number	P2A05RS25	P2A05RD25	P2A05RD35	P2A05RE35	P2A05RO35	
Function	5/2 Single solenoid	5/2 Double Solenoid	5/3 Closed Centre	5/3 Exhaust centre	5/3 Pressure centre	
Media	Air, Non-Reactive Gases					
Operating Pressure [MPa]	0.2 ~ 0.7					
Port Size	M5					
Effective Orifice [mm ²]	Port 1→4	4		4		
	Port 1→2					
Cv Value	0.22		0.22			
Operating Temperature [°C]	+5 ~ 50					
Operating Humidity [%RH]	≤ 85					
Storage Temperature [°C]	-20 ~ 70					
Storage Humidity [%RH]	≤ 85					
Manual Operation	Manual Lockable Override					
Max.operating frequency [Hz]	10					
Response Time [ms]	ON	10	10	30	30	30
	OFF	24	-	30	30	30
Vibration resistance [m/s ²]	30					
Shock resistance [m/s ²]	150					
Weight [g]	30	43	55	55	55	
Mounting Position	Free					

Electrical Specifications

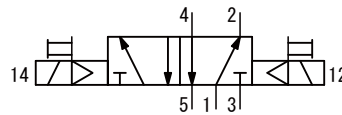
Supply Voltage [V]	DC24
Permissible Voltage fluctuation %	±10
Power consumption [W]	0.6
Insulation Class	E (120)
Wiring	Connector with Leadwire
Surge Suppressor	Diode
Indicator light	LED

Symbol

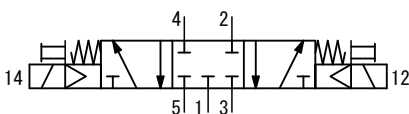
5/2 Single solenoid "P2A05RS25"



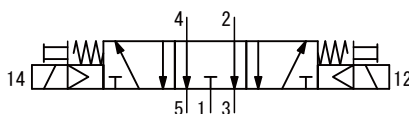
5/2 double solenoid "P2A05RD25"



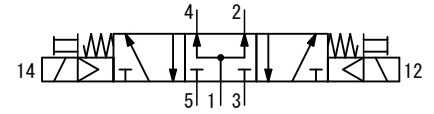
5/3 Closed Centre "P2A05RD35"



5/3 Exhaust centre "P2A05RE35"



5/3 Pressure centre "P2A05RO35"



In-Line type pilot operated solenoid valve

P2A12R Port 1/8, 15mm width

Specifications

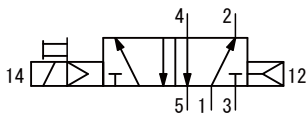
Part Number	P2A12RS25	P2A12RD25	P2A12RD35	P2A12RE35	P2A12RO35	
Function	5/2 Single solenoid	5/2 Double Solenoid	5/3 Closed Centre	5/3 Exhaust centre	5/3 Pressure centre	
Media	Air, Non-Reactive Gases					
Operating Pressure [MPa]	0.15 ~ 0.7		0.2 ~ 0.7			
Port Size	Rc 1/8					
Effective Orifice [mm ²]	Port 1→4 Port 1→2 9		7.5			
Cv Value	0.59		0.4			
Operating Temperature [°C]	+5 ~ 50					
Operating Humidity [%RH]	≤ 85					
Storage Temperature [°C]	-20 ~ 70					
Storage Humidity [%RH]	≤ 85					
Manual Operation	Manual Lockable Override					
Max.operating frequency [Hz]	10					
Response Time [ms]	ON	10	10	35	35	35
	OFF	24	-	-	-	-
Vibration resistance [m/s ²]	30					
Shock resistance [m/s ²]	150					
Weight [g]	68	87	96	96	96	
Mounting Position	Free					

Electrical Specifications

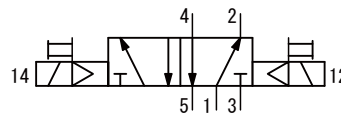
Supply Voltage [V]	DC24
Permissible Voltage fluctuation %	±10
Power consumption [W]	0.6
Insulation Class	E (120)
Wiring	Connector with Leadwire
Surge Suppressor	Diode
Indicator light	LED

Symbol

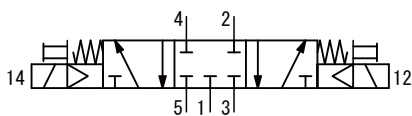
5/2 Single solenoid "P2A12RS25"



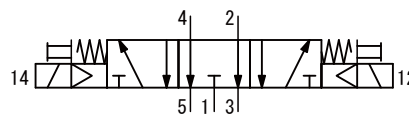
5/2 double solenoid "P2A12RD25"



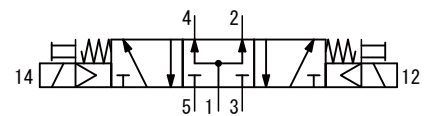
5/3 Closed Centre "P2A12RD35"



5/3 Exhaust centre "P2A12RE35"



5/3 Pressure centre "P2A12RO35"



In-Line type pilot operated solenoid valve

P2A20R Port 1/4, 18mm width

Specifications

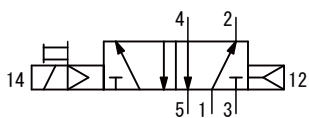
Part Number	P2A20RS25	P2A20RD25	P2A20RD35	P2A20RE35	P2A20RO35	
Function	5/2 Single solenoid	5/2 Double Solenoid	5/3 Closed Centre	5/3 Exhaust centre	5/3 Pressure centre	
Media	Air, Non-Reactive Gases					
Operating Pressure [MPa]	0.15 ~ 0.7		0.2 ~ 0.7			
Port Size	Rc 1/4					
Effective Orifice [mm ²]	Port 1→4 Port 1→2 14		12			
Cv Value	0.82		0.65			
Operating Temperature [°C]	+5 ~ 50					
Operating Humidity [%RH]	≤ 85					
Storage Temperature [°C]	-20 ~ 70					
Storage Humidity [%RH]	≤ 85					
Manual Operation	Manual Lockable Override					
Max.operating frequency [Hz]	10					
Response Time [ms]	ON	25	25	50	50	50
	OFF	50	-	50	50	50
Vibration resistance [m/s ²]	30					
Shock resistance [m/s ²]	150					
Weight [g]	68	87	96	96	96	
Mounting Position	Free					

Electrical Specifications

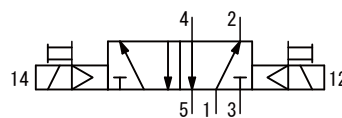
Supply Voltage [V]	DC24
Permissible Voltage fluctuation %	±10
Power consumption [W]	0.6
Insulation Class	E (120)
Wiring	Connector with Leadwire
Surge Suppressor	Diode
Indicator light	LED

Symbol

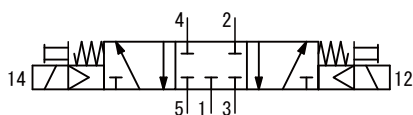
5/2 Single solenoid "P2A20RS25"



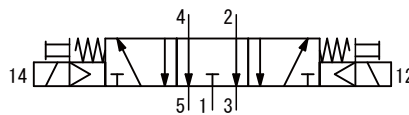
5/2 double solenoid "P2A20RD25"



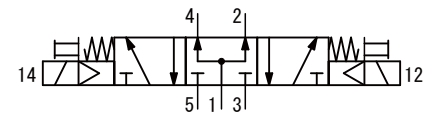
5/3 Closed Centre "P2A20RD35"



5/3Exhaust centre "P2A20RE35"



5/3 Pressure centre "P2A20RO35"



Order code summary

Solenoid valve

	1	2	3	4	5	6	7	8	9				
	P2	A	05	R	S25	X	-	1P	-	0	1	-	E

1. Series
A : ADEX Plus

2. Size of valve
05 : 10mm width
12 : 15mm width
20 : 18mm width

3. Body type
R : In-Line type

4. Function
S25 : 5/2 Single
D25 : 5/2 Double
D35 : 5/3 Closed Centre
E35 : 5/3 Exhaust Centre
O35 : 5/3 Pressure Centre

5. Internal or External pilot
Blank : nternal pilot

6. Voltage
1P : 24VDC

7. Thread type
M : Metric (A05)
0 : Rc (BSPT)

8. Port size
5 : M5 (A05)
1 : 1/8 (A12)
2 : 1/4 (A20)

9. Electric connector
E : Lead wire with connector

Lead wire with connector

					1		2
P2	A	05	P	-	DC	-	CL5

1. Voltage
DC : 24VDC

2. Size of valve
CL5 : Lead wire length approx. 500mm

*] It's for A05, 12 and 20

Mounting bracket

	1	2	3	4	
P2	A	05	R	-	BS

1. Series
A : ADEX Plus

2. Size of valve
05 : 10mm width
12 : 15mm width
20 : 18mm width

3. Body type
R : In-Line type

4. Mounting
BS : Side bracket
BF : Foot bracket
*) BF type only for sigle solenoid

In-Line type pilot operated solenoid valve

Manifold blocks

Manifold

	1			2
P2	A05R	-	MF	02

1. Servies of Mounting

A05R : for A05 In-Line type

A12R : for A12 In-Line type

A20R : for A20 In-Line type

2. # of stations

02 : 2 stations

04 : 4 stations

06 : 6 stations

08 : 8 stations

10 : 10 stations

12 : 12 stations

*) up to 20 stations

*) Even numbers are standard.

Blanking plate

	1			
P2	A05R	-	MF	BP

1. Servies of Mounting

A05R : for A05 In-Line type

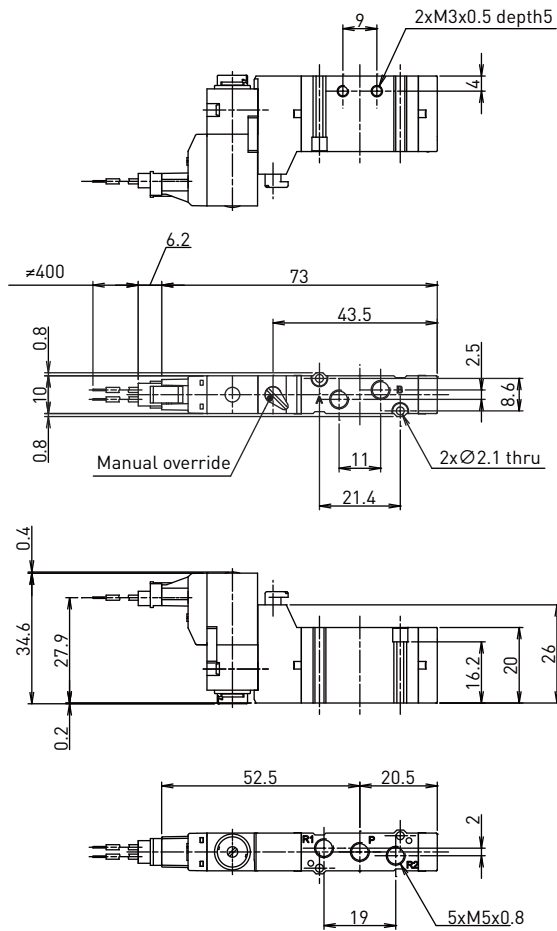
A12R : for A12 In-Line type

A20R : for A20 In-Line type

Dimensions / P2A05R Port M5, 10mm width

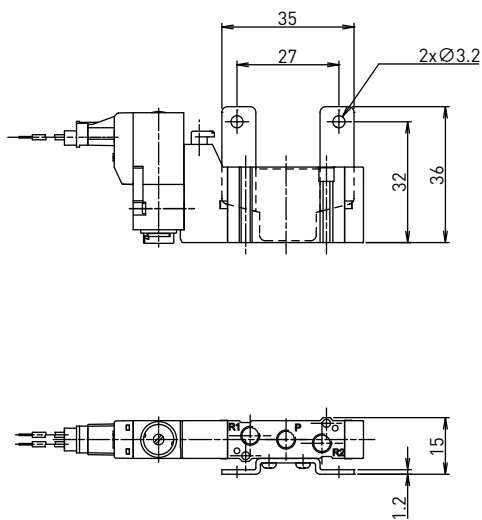
P2A05RS25-1P-M5-E

5/2 single solenoid

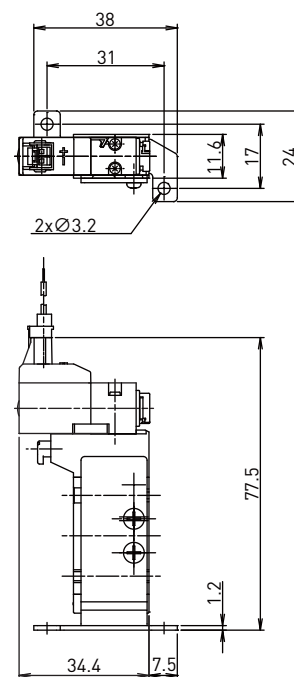


Mounting bracket

Side bracket (P2A05R-BS)



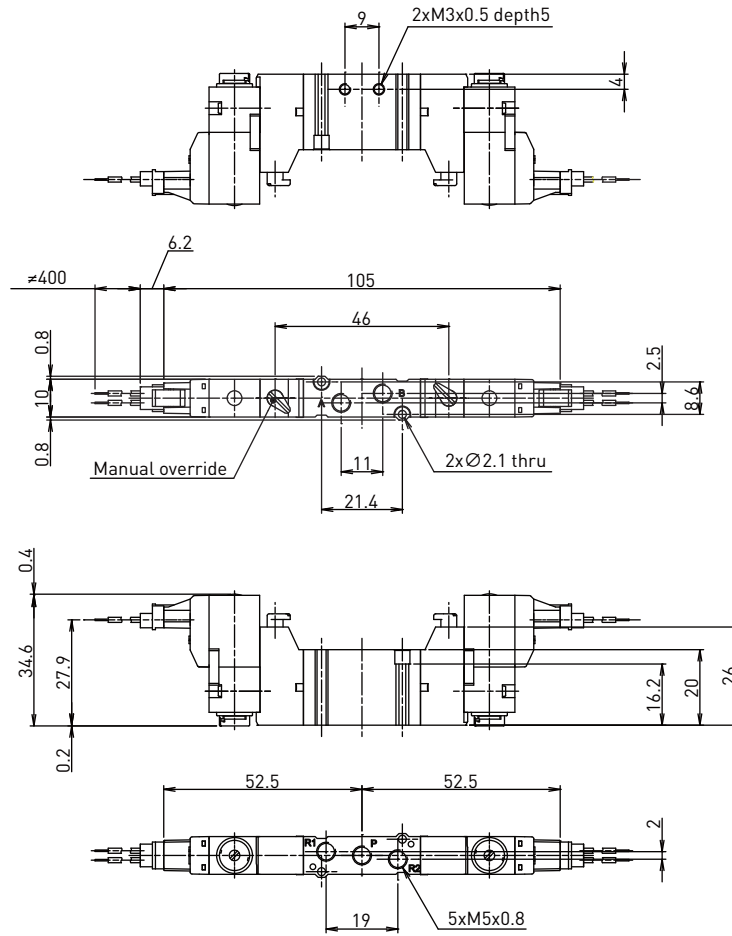
Foot bracket (P2A05R-BF)



Dimensions / P2A05R Port M5, 10mm width

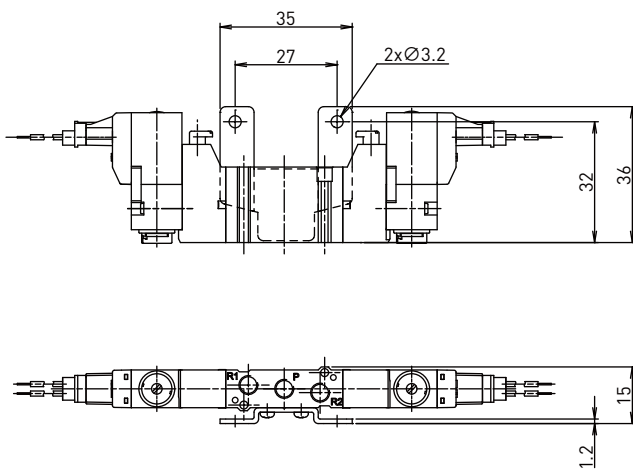
P2A05RD25-1P-M5-E

5/2 double solenoid



Mounting bracket

Side bracket (P2A05R-BS)

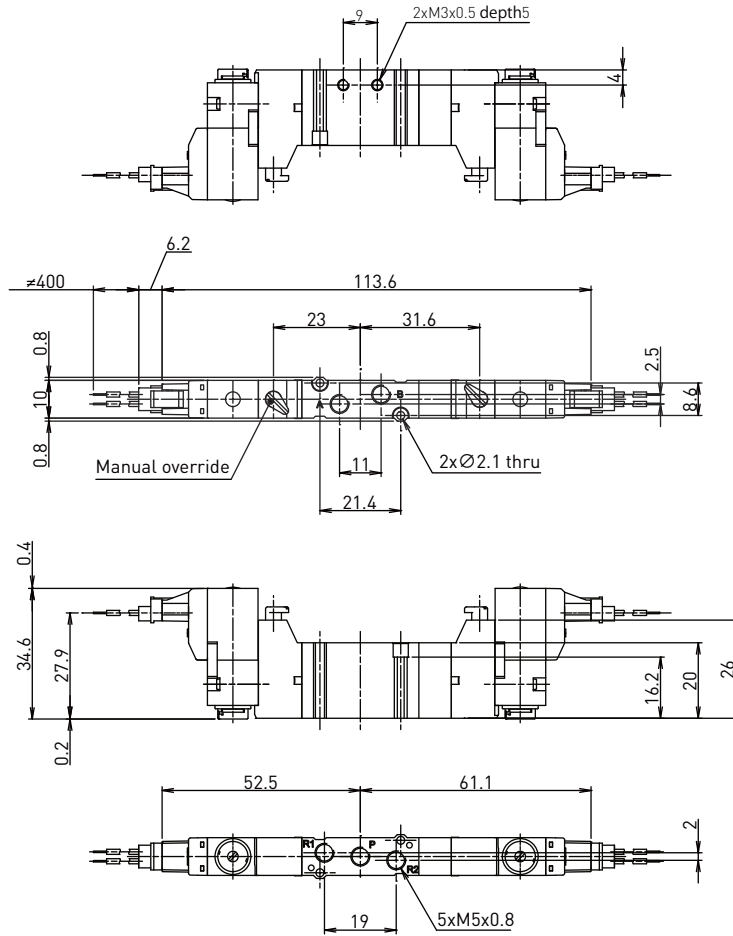


*Note] Foot bracket is not available for double solenoid.

Dimensions / P2A05R Port M5, 10mm width

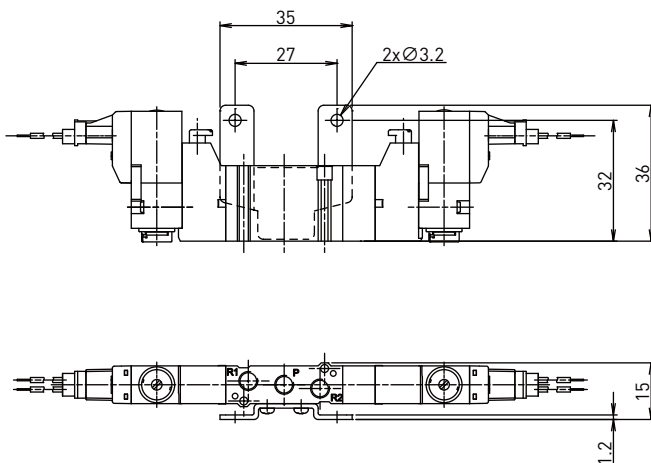
P2A05RD35-1P-M5-E, P2A05RE35-1P-M5-E, P2A05R035-1P-M5-E

5/3 Closed centre, 5/3 Exhaust centre, 5/3 Pressure centre



Mounting bracket

Side bracket (P2A05R-BS)

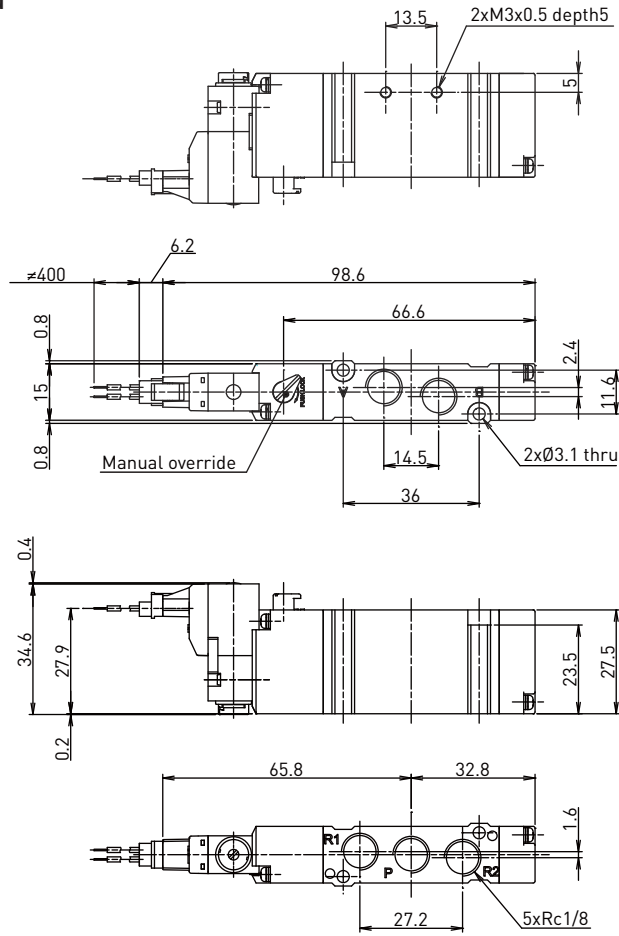


*Note) Foot bracket is not available for double solenoid.

Dimensions / P2A12R Port 1/8, 15mm width

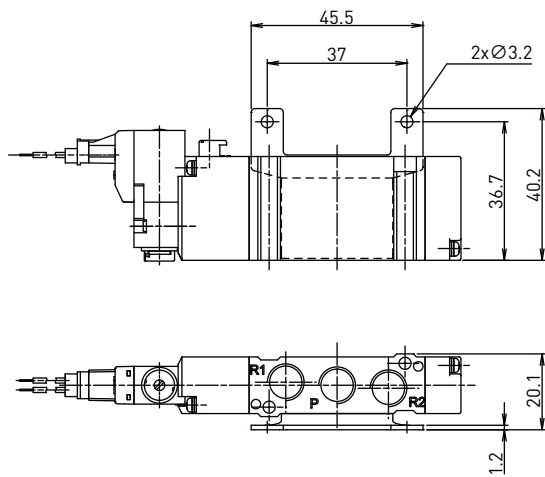
P2A12RS25-1P-01-E

5/2 single solenoid

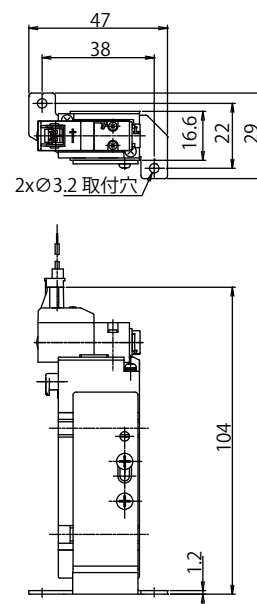


Mounting bracket

Side bracket (P2A12R-BS)



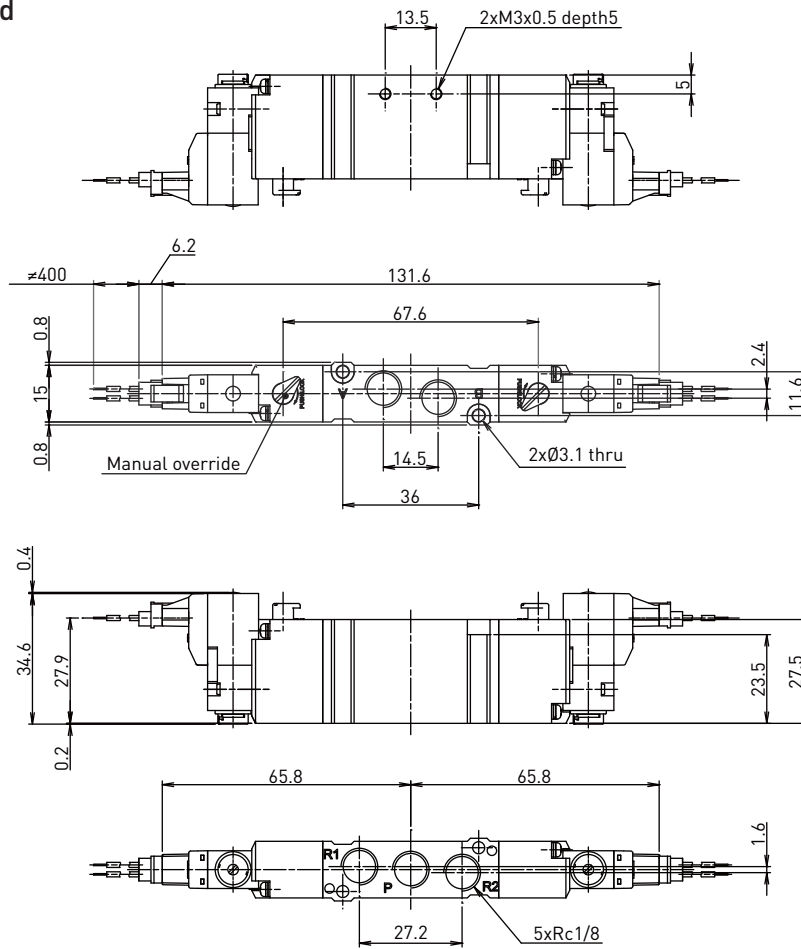
Foot bracket (P2A12R-BF)



Dimensions / P2A12R Port 1/8, 15mm width

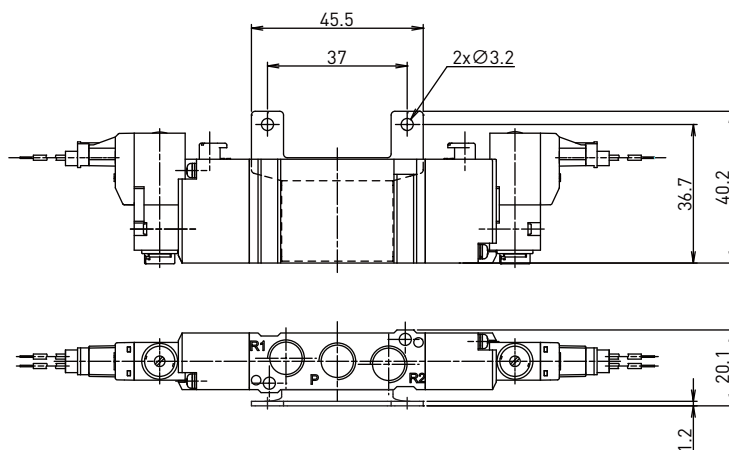
P2A12RD25-1P-01-E

5/2 double solenoid



Mounting bracket

Side bracket (P2A12R-BS)

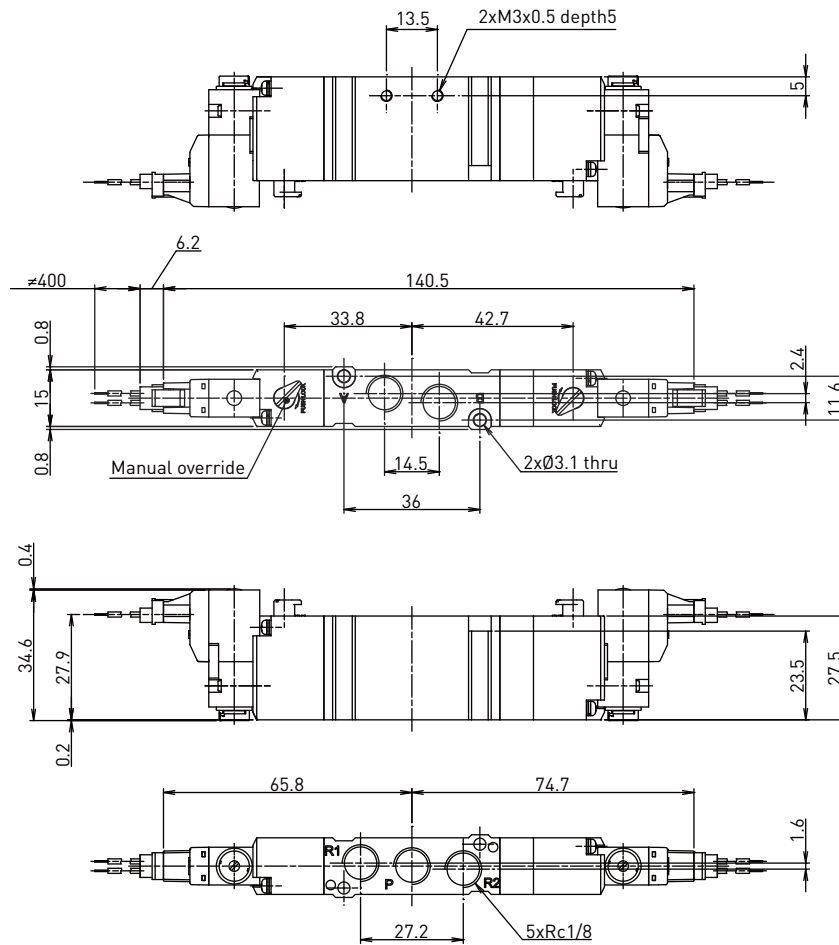


*Note) Foot bracket is not available for double solenoid.

Dimensions / P2A12R Port 1/8, 15mm width

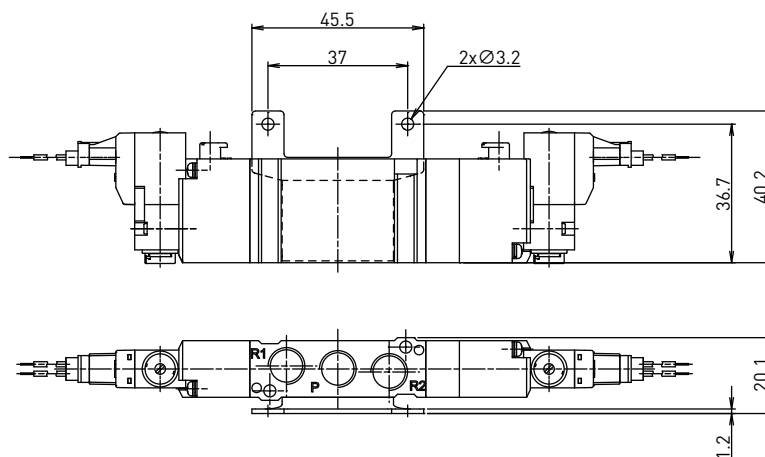
P2A12RD35-1P-01-E, P2A12RE35-1P-01-E, P2A12R035-1P-01-E

5/3 Closed centre, 5/3 Exhaust centre, 5/3 Pressure centre



Mounting bracket

Side bracket (P2A12R-BS)

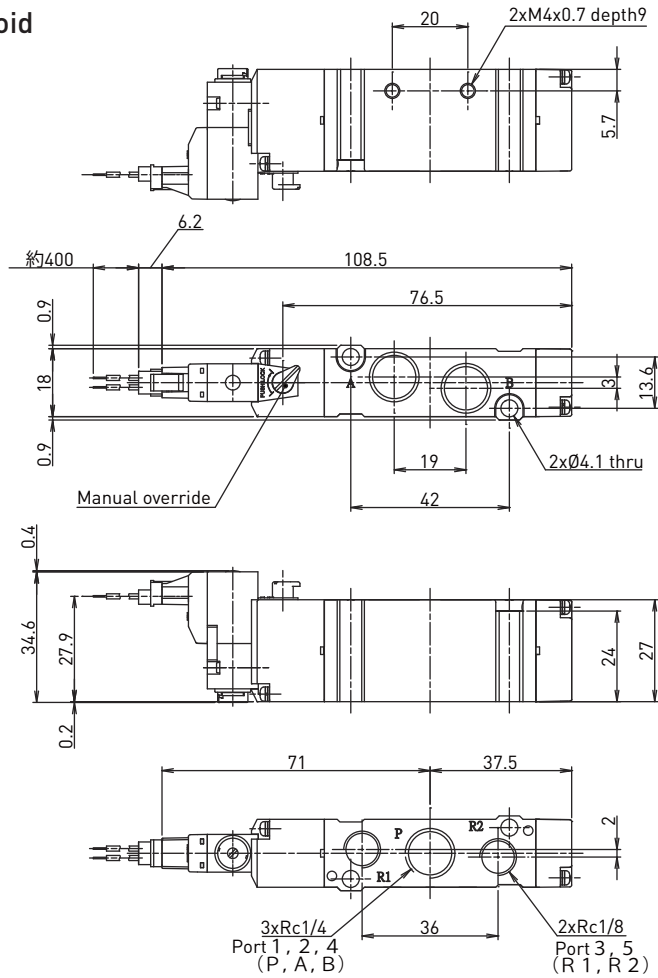


*Note] Foot bracket is not available for double solenoid.

Dimensions / P2A20R Port 1/4, 18mm width

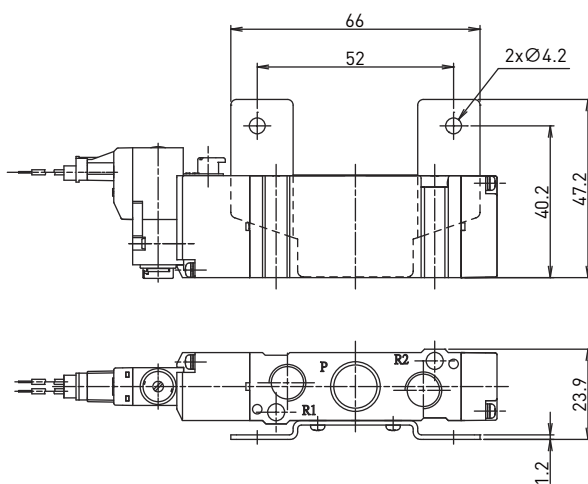
P2A20RS25-1P-02-E

5/2 single solenoid

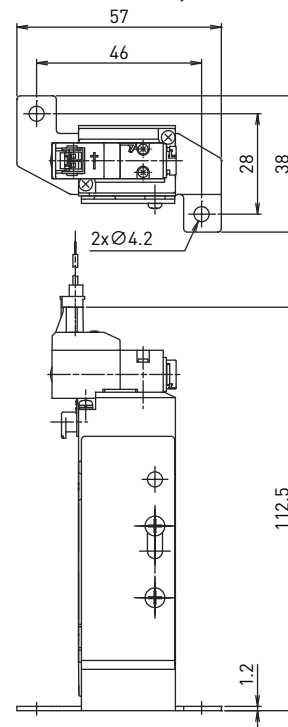


Mounting bracket

Side bracket (P2A20R-BS)



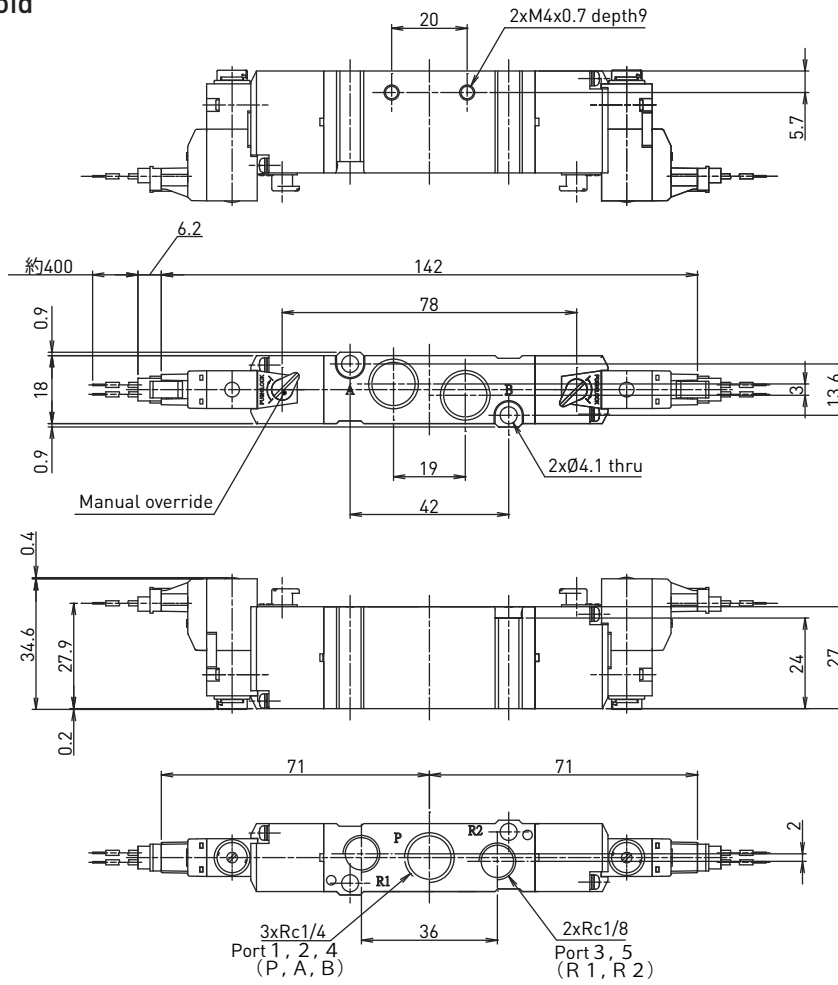
Foot bracket (P2A20R-BF)



Dimensions / P2A20R Port 1/4, 18mm width

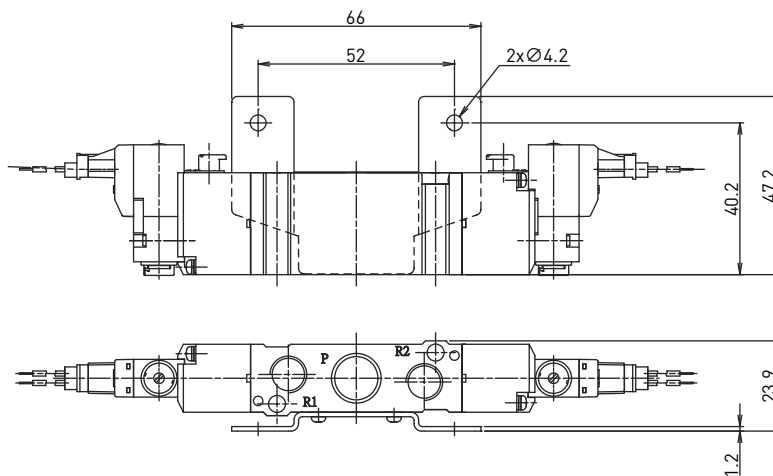
P2A20RD25-1P-02-E

5/2 single solenoid



Mounting bracket

Side bracket (P2A20R-BS)

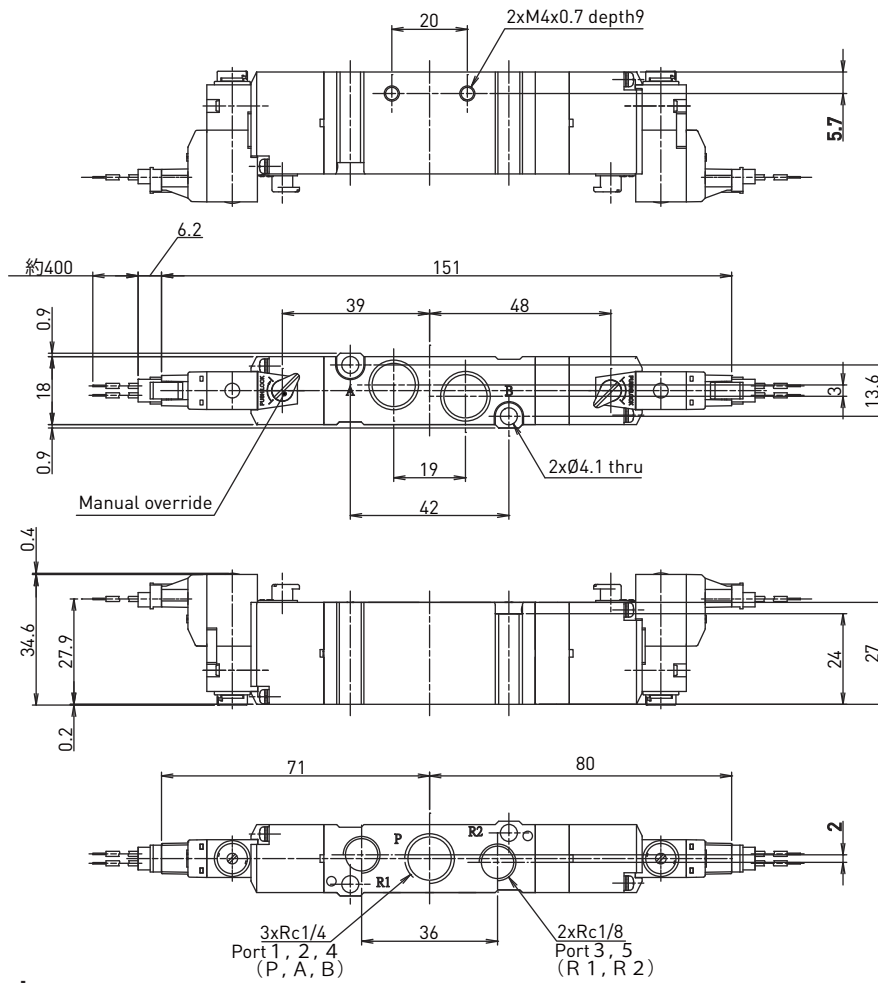


*Note) Foot bracket is not available for double solenoid.

Dimensions / P2A20R Port 1/4, 18mm width

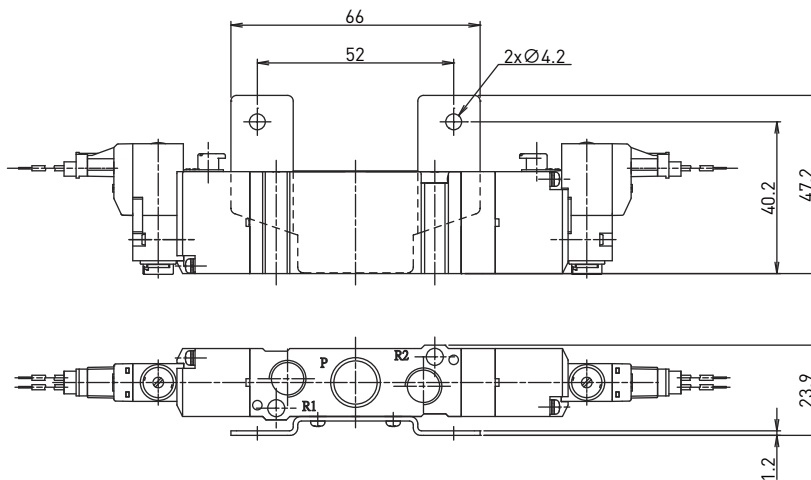
P2A20RD35-1P-02-E, P2A20RE35-1P-02-E, P2A20R035-1P-02-E

5/3 Closed centre, 5/3 Exhaust centre, 5/3 Pressure centre



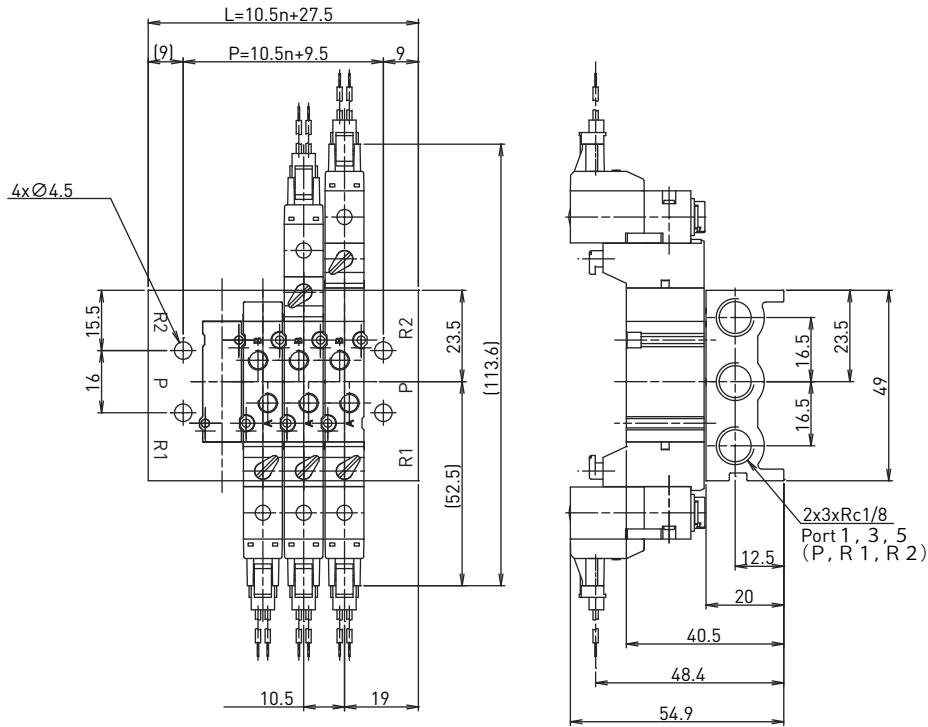
Mounting bracket

Side bracket (P2A20R-BS)



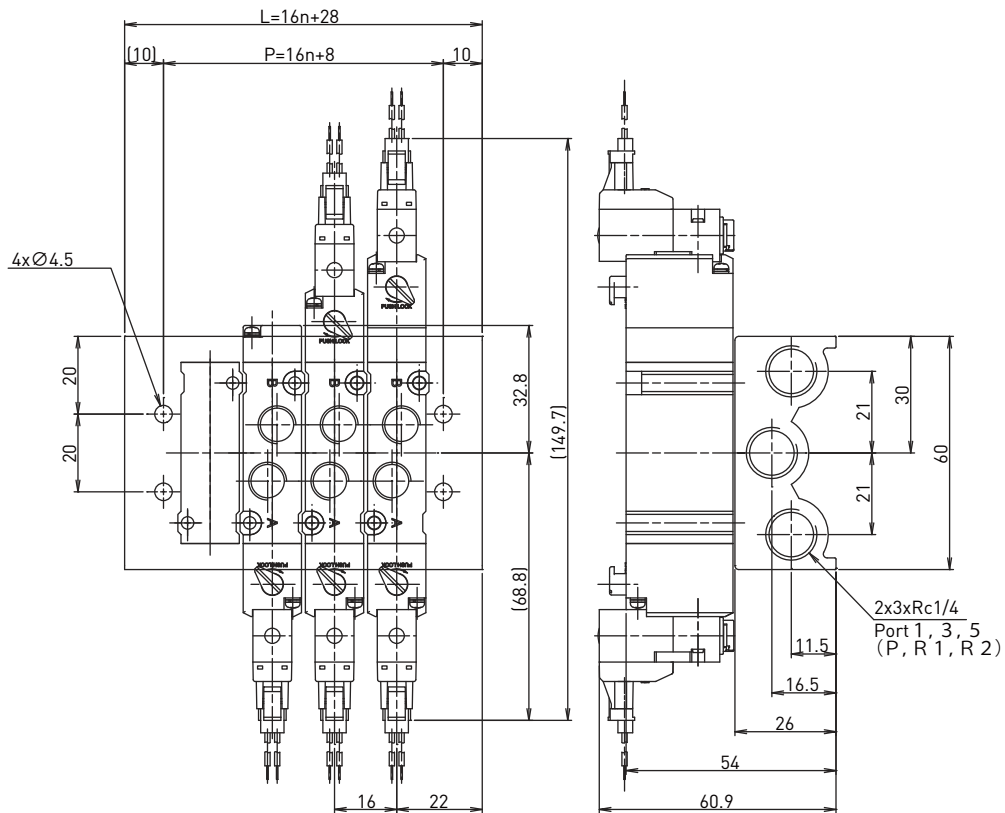
*Note) Foot bracket is not available for double solenoid.

Dimensions / Manifold block for P2A05R



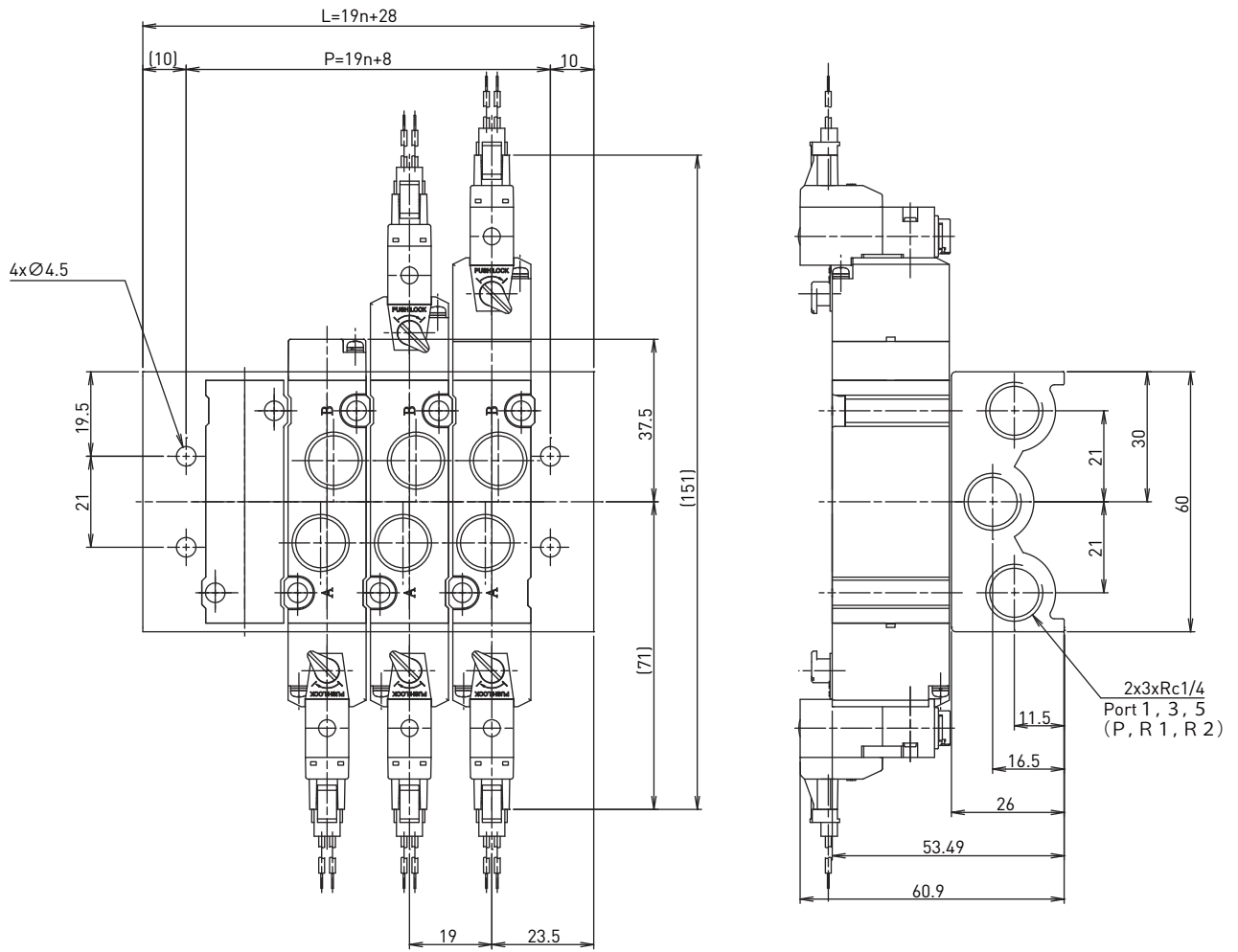
* $n=2$ to 20 (Even numbers are standard)

Dimensions / Manifold block for P2A12R



* $n=2$ to 20 (Even numbers are standard)

Dimensions / Manifold block for P2A20R



* n=2 to 20(Even numbers are standard)

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