



Series 400

General

These are 2 stage valves actuated electro-pneumatically. A serie 300 directly operated solenoid valve actuates pneumatically the principal power distributor.

This integrated system allows configurations of systems requiring very little space.

The pilot air is normally taken from the inlet port (autofeed) and the only actuating signal is electric.

The range of the solenoid valves, as far as dimensions and mechanical construction, is similar to series 200.

We have therefore solenoid valves G 1/8", G 1/4", G 1/2" and G 1" with identical pneumatic characteristics that are, however, actuated electrically.

They have a balanced spool, insensitive to presence or absence of pressure. They are constructed in 3 and 5 way with 1 solenoid (monostable) or 2 solenoids (bistable) and also 5 ways 3 positions with closed centres, open centres and pressured centres.

It should be noted that the autofeed of the electric pilot requires always inlet through port 1 and if a 3 ways normally open configuration is desired, it is necessary to switch the operators.

Solenoid valves G 1/8" and G 1/4" can be equipped with microsolenoids as well as standard solenoids and they can be mounted in line or in 90 degrees on valves.

Please note that while the microsolenoid can be mounted in any direction, standard solenoid requires mounting as indicated in the photographs and diagrams.

The order codes pertain only to the solenoid valve with mechanical actuator "M2" or solenoid "S*" already assembled.

M2 coils are not included and have to be ordered separately (see Series 300).

Coils for M2 and solenoids "S" homologated are available in 24V DC (see Series 300).

Construction characteristics

Body	Aluminium
Operators	Aluminium Technopolymer for spring bottom plate G 1/8", G1/4", G 1/2" and aluminium for G 1"
Seals	NBR Polyurethane compound for oil free applications (G 1/8", G 1/4" and G 1/2")
Spacer	Technopolymer (aluminium for G1")
Spools	Steel
Springs	Stainless steel or spring steel

Use and maintenance

This valves have an average life of 15 million cycles depending on the application and air quality.

Filtered and lubricated air using specified lubricants will reduce the wear of the seals and ensures long and trouble free operation.

Please ensure that the valve is being used according with the manufacturers specification, such as air pressure and temperature.

The exhaust port of the distributor has to be protected in a dusty and dirty environment.

Repair kits including the spool complete with seals are available for overhauling the valves.

However, although this is a simple operation it should be carried out by a competent person.

ATTENTION: use hydraulic oil class H for lubrication such as MAGNA GC 32 (Castrol).

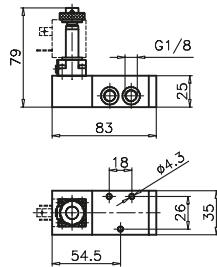
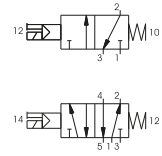
1 AIR DISTRIBUTION

Solenoid - Spring

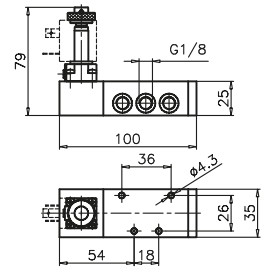
Coding: 468.Ⓡ.0.1.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

TYPE	
Ⓡ	32 = 3 ways
	52 = 5 ways



Weight 240 g
Minimum working pressure 2,5 bar
468.32.0.1.M2



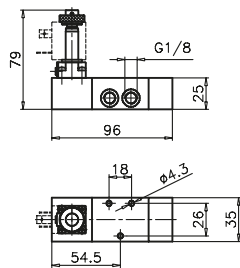
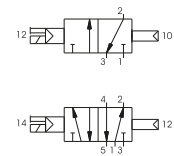
Weight 240 g
Minimum working pressure 2,5 bar
468.52.0.1.M2

Solenoid - Differential

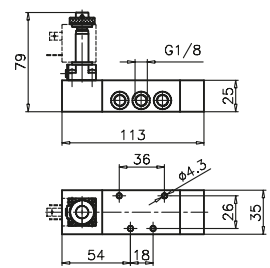
Coding: 468.Ⓡ.0.12.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

TYPE	
Ⓡ	32 = 3 ways
	52 = 5 ways



Weight 280 g
Minimum working pressure 2,5 bar
468.32.0.12.M2



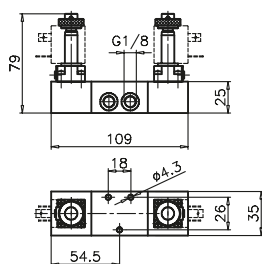
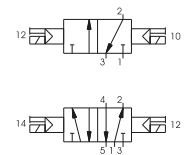
Weight 320 g
Minimum working pressure 2,5 bar
468.52.0.12.M2

Solenoid - Solenoid

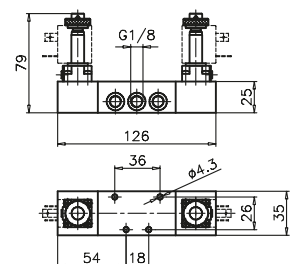
Coding: 468.Ⓡ.0.0.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

TYPE	
Ⓡ	32 = 3 ways
	52 = 5 ways



Weight 370 g
Minimum working pressure 2 bar
468.32.0.0.M2



Weight 410 g
Minimum working pressure 2 bar
468.52.0.0.M2

1
AIR DISTRIBUTION

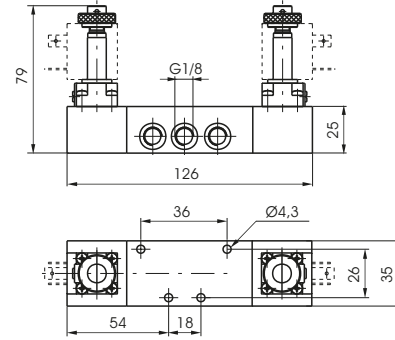
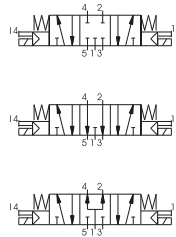
Solenoid - Solenoid 5 ways 3 connections

Coding: 468.53.F.0.0.M2

Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"

FUNCTION	
F	31 = Closed centres
	32 = Open centres
	33 = Pressured centres



Weight 420 g
Minimum working pressure 3 bar

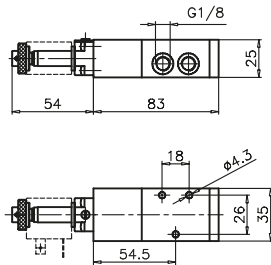
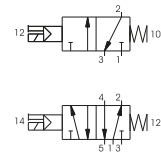
Solenoid - Spring

Coding: 468/1.T.0.1.M2

Operational characteristics

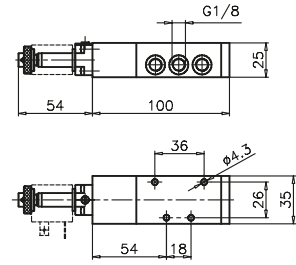
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

TYPE	
T	32 = 3 ways
	52 = 5 ways



Weight 240 g
Minimum working pressure 2,5 bar

468/1.32.0.1.M2



Weight 280 g
Minimum working pressure 2,5 bar

468/1.52.0.1.M2

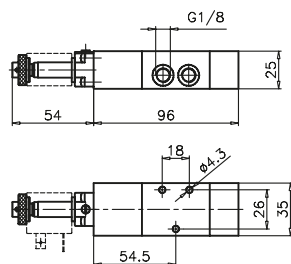
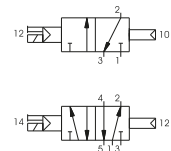
Solenoid - Differential

Coding: 468/1.T.0.12.M2

Operational characteristics

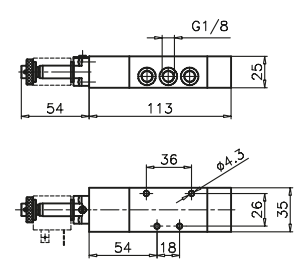
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

TYPE	
T	32 = 3 ways
	52 = 5 ways



Weight 280 g
Minimum working pressure 2,5 bar

468/1.32.0.12.M2



Weight 320 g
Minimum working pressure 2,5 bar

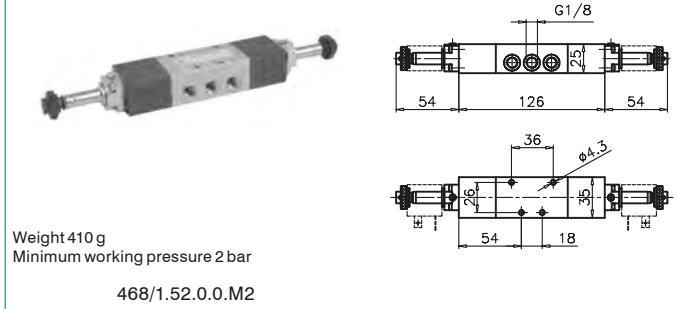
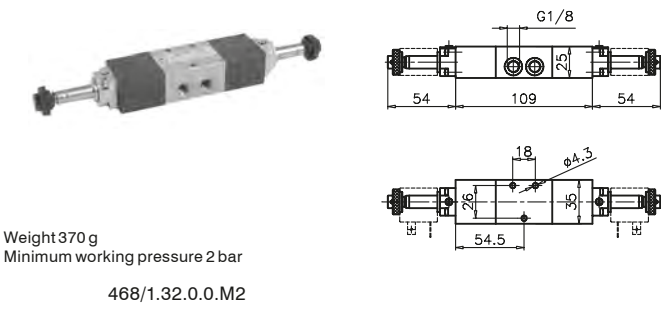
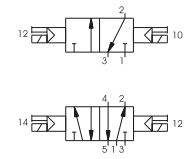
468/1.52.0.12.M2

Solenoid - Solenoid

Coding: 468/1.1.0.0.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

TYPE	
32	= 3 ways
52	= 5 ways

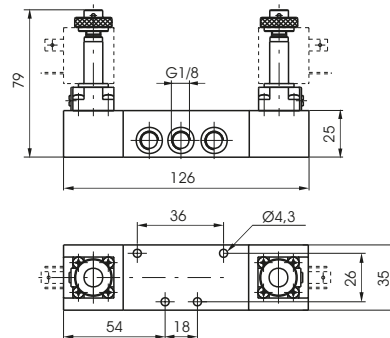


Solenoid - Solenoid 5 ways 3 connections

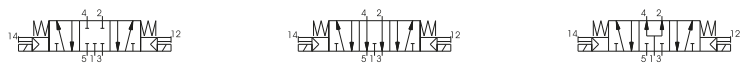
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Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"

FUNCTION	
31	= Closed centres
32	= Open centres
33	= Pressured centres



Weight 420 g
Minimum working pressure 3 bar



1
AIR DISTRIBUTION

Solenoid - Spring

Coding: 488.0.0.1.S

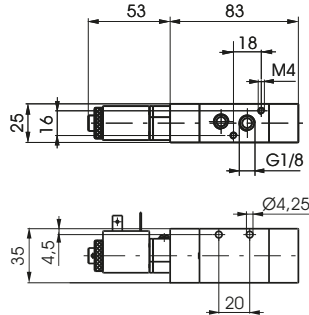
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	20,3 (3 ways) 22,5 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	44,5 (3 ways) 47,0 (5 ways)

TYPE	
① 32 = 3 ways	
52 = 5 ways	

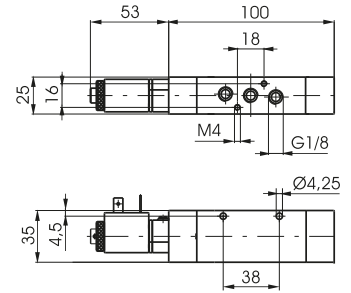
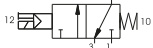
Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001

SOLENOID	
M11 =	24V D.C. (rating power 3,8W)
M56 =	24V 50/60Hz (starting power 9VA, rating power 6VA)
M57 =	110 V 50/60Hz (starting power 9 A, rating power 6 A)
M58 =	230V 50/60Hz (starting power 9VA, rating power 6VA)



Weight 220 g
Minimum working pressure 2,5 bar

488.32.0.1.S



Weight 260 g
Minimum working pressure 2,5 bar

488.52.0.1.S



Solenoid - Differential

Coding: 488.0.0.12.S

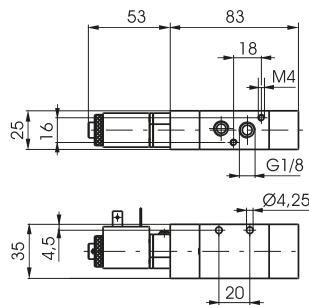
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	620
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	28,0 (3 ways) 28,3 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	34,5 (3 ways) 35,5 (5 ways)

TYPE	
① 32 = 3 ways	
52 = 5 ways	

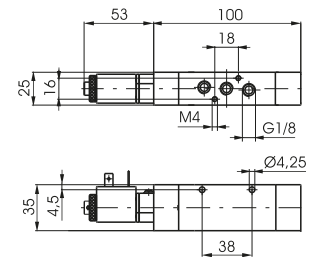
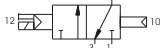
Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001

SOLENOID	
M11 =	24V D.C. (rating power 3,8W)
M56 =	24V 50/60Hz (starting power 9VA, rating power 6VA)
M57 =	110 V 50/60Hz (starting power 9 A, rating power 6 A)
M58 =	230V 50/60Hz (starting power 9VA, rating power 6VA)



Weight 220 g
Minimum working pressure 2,5 bar

488.32.0.12.S



Weight 260 g
Minimum working pressure 2,5 bar

488.52.0.12.S



Solenoid - Solenoid

Coding: 488.0.0.0.S

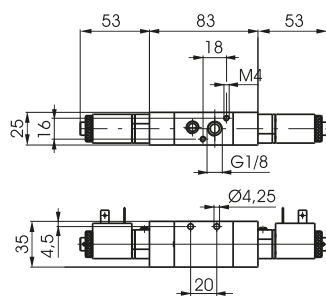
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	19,0 (3 ways) 18,2 (5 ways)
Response time according to ISO 12238, deactivation time (ms)	21,1 (3 ways) 18,5 (5 ways)

TYPE	
① 32 = 3 ways	
52 = 5 ways	

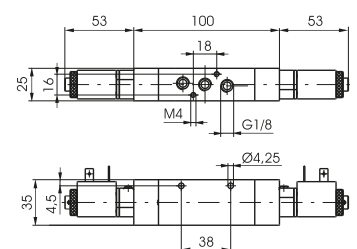
Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001

SOLENOID	
M11 =	24V D.C. (rating power 3,8W)
M56 =	24V 50/60Hz (starting power 9VA, rating power 6VA)
M57 =	110 V 50/60Hz (starting power 9 A, rating power 6 A)
M58 =	230V 50/60Hz (starting power 9VA, rating power 6VA)



Weight 320 g
Minimum working pressure 2 bar

488.32.0.0.S



Weight 360 g
Minimum working pressure 2 bar

488.52.0.0.S



Solenoid - Solenoid 5 ways 3 connections

Coding: 488.53.ⓕ.0.0.Ⓢ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation time (ms)	23,0 (closed centres) 21,5 (open centres) 18,9 (pressured centres)
Response time according to ISO 12238, deactivation time (ms)	41,0 (closed centres) 38,0 (open centres) 40,2 (pressured centres)

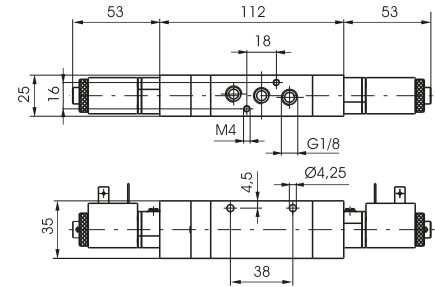
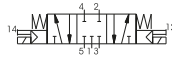
FUNCTION		SOLENOID	
ⓕ	31 = Closed centres	M11 =	24V D.C. (rating power 3,8W)
	32 = Open centres	M56 =	24V 50/60Hz (starting power 9VA, rating power 6VA)
	33 = Pressured centres	M57 =	110 V 50/60Hz (starting power 9 A, rating power 6 A)
Ⓢ		M58 =	230V 50/60Hz (starting power 9VA, rating power 6VA)

Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001



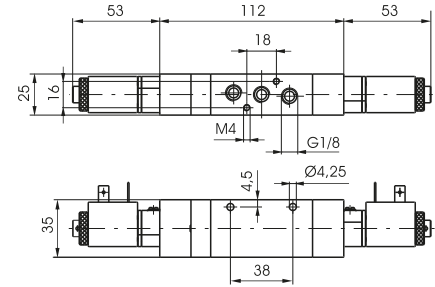
Weight 400 g
Minimum working pressure 3 bar

488.53.31.0.0.Ⓢ



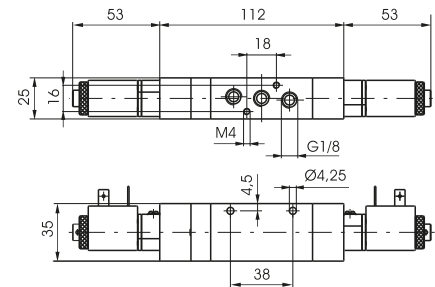
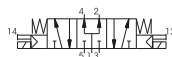
Weight 400 g
Minimum working pressure 3 bar

488.53.32.0.0.Ⓢ



Weight 400 g
Minimum working pressure 3 bar

488.53.33.0.0.Ⓢ



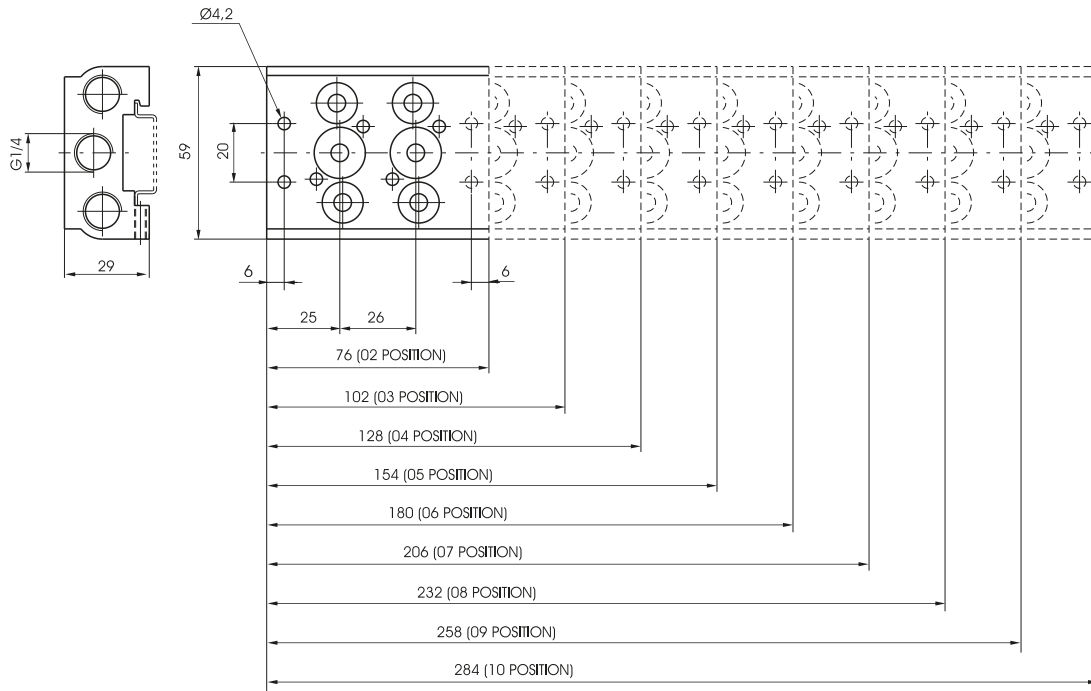
1
AIR DISTRIBUTION

Collectors

Coding: 488.P

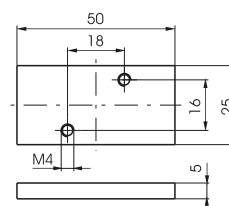


N. POSITIONS	
02	= 2 positions (220 g)
03	= 3 positions (290 g)
04	= 4 positions (360 g)
05	= 5 positions (430 g)
06	= 6 positions (500 g)
07	= 7 positions (570 g)
08	= 8 positions (640 g)
09	= 9 positions (710 g)
10	= 10 positions (780 g)



Closing plate

Coding: 488.00



Weight 25 g

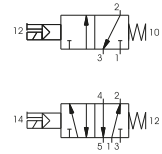
1 AIR DISTRIBUTION

Solenoid - Spring

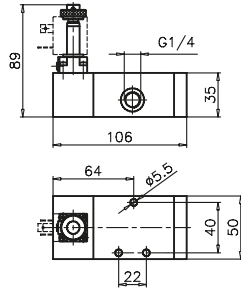
Coding: 464.1.0.1.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	
32	= 3 ways
52	= 5 ways



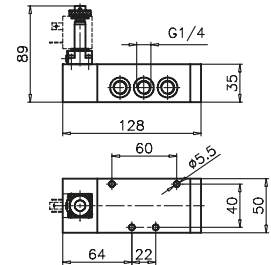
3 ways



Weight 530 g
Minimum working pressure 2,5 bar

464.32.0.1.M2

5 ways



Weight 625 g
Minimum working pressure 2,5 bar

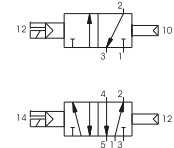
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Solenoid - Differential

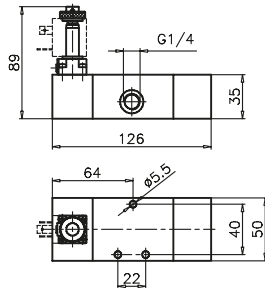
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Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	
32	= 3 ways
52	= 5 ways



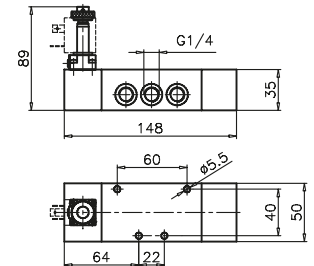
3 ways



Weight 650 g
Minimum working pressure 2,5 bar

464.32.0.12.M2

5 ways



Weight 740 g
Minimum working pressure 2,5 bar

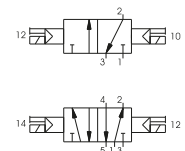
464.52.0.12.M2

Solenoid - Solenoid

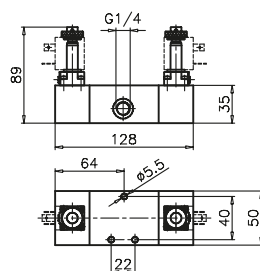
Coding: 464.1.0.0.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	
32	= 3 ways
52	= 5 ways



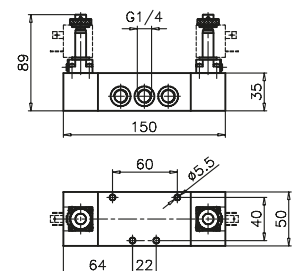
3 ways



Weight 730 g
Minimum working pressure 2 bar

464.32.0.0.M2

5 ways 2 connections



Weight 820 g
Minimum working pressure 2 bar

464.52.0.0.M2

Solenoid - Solenoid 5 ways 3 connections

Coding: 464.53.F.0.0.M2

Operational characteristics

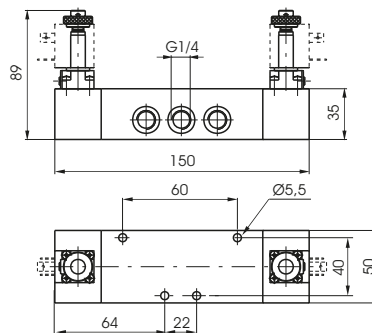
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	1280
Orifice size (mm)	8
Working ports size	G 1/4"

FUNCTION

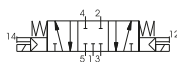
- F** 31 = Closed centres
- 32 = Open centres
- 33 = Pressured centres

1 AIR DISTRIBUTION

5 ways 3 connections



Weight 820 g
Minimum working pressure 3 bar

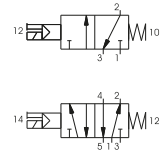


Solenoid - Spring

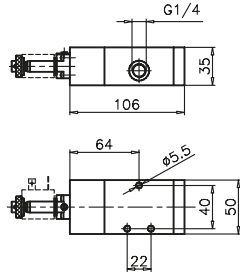
Coding: 464/1.1.0.1.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	
32	= 3 ways
52	= 5 ways



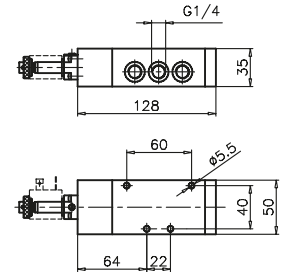
3 ways



Weight 530 g
Minimum working pressure 2,5 bar

464/1.32.0.1.M2

5 ways



Weight 625 g
Minimum working pressure 2,5 bar

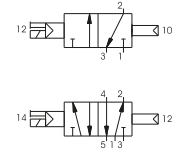
464/1.52.0.1.M2

Solenoid - Differential

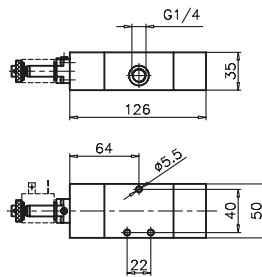
Coding: 464/1.1.0.12.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	
32	= 3 ways
52	= 5 ways



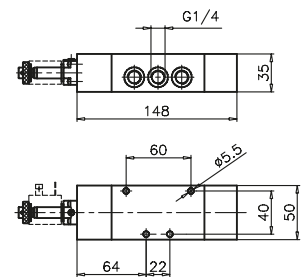
3 ways



Weight 650 g
Minimum working pressure 2,5 bar

464/1.32.0.12.M2

5 ways



Weight 740 g
Minimum working pressure 2,5 bar

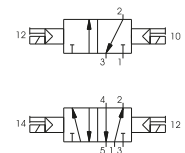
464/1.52.0.12.M2

Solenoid - Solenoid

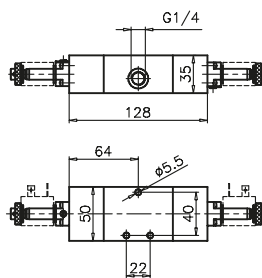
Coding: 464/1.1.0.0.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	
32	= 3 ways
52	= 5 ways



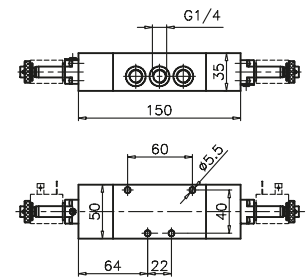
3 ways



Weight 730 g
Minimum working pressure 2 bar

464/1.32.0.0.M2

5 ways 2 connections



Weight 820 g
Minimum working pressure 2 bar

464/1.52.0.0.M2

1
AIR DISTRIBUTION



Solenoid - Solenoid 5 ways 3 connections

Coding: 464/1.53.Ⓢ.0.0.M2

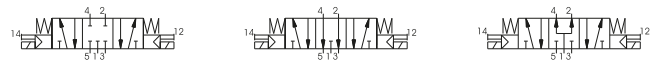
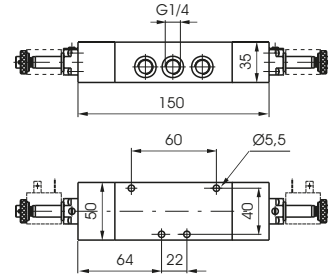
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	1280
Orifice size (mm)	8
Working ports size	G 1/4"

FUNCTION	
Ⓢ	31 = Closed centres
	32 = Open centres
	33 = Pressured centres



5 ways 3 connections



Weight 820 g
Minimum working pressure 3 bar

1 AIR DISTRIBUTION

Solenoid - Spring

Coding: 452.Ⓡ.0.1.M2

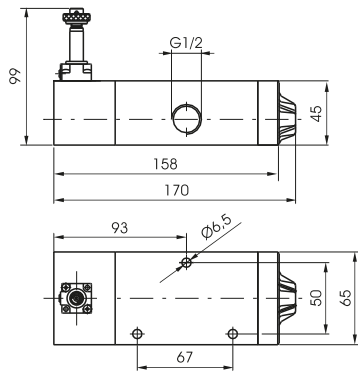
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
Ⓡ 32 = 3 ways	
52 = 5 ways	



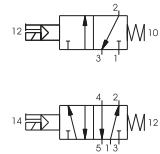
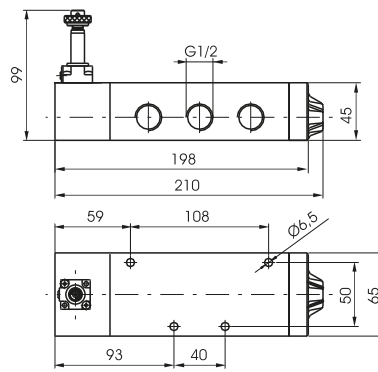
Weight 1152 g
Minimum working pressure 2,5 bar

452.32.0.1.M2



Weight 1422 g
Minimum working pressure 2,5 bar

452.52.0.1.M2



1
AIR DISTRIBUTION

Solenoid - Differential

Coding: 452.Ⓡ.0.12.M2

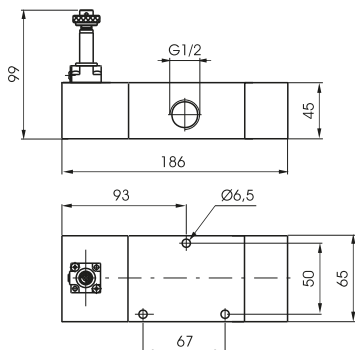
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
Ⓡ 32 = 3 ways	
52 = 5 ways	



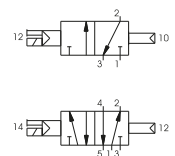
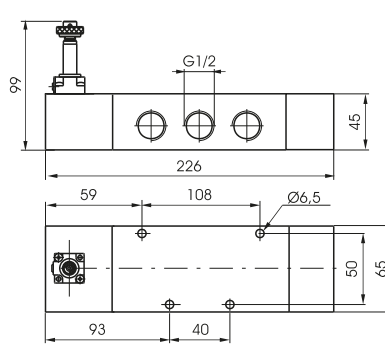
Weight 1422 g
Minimum working pressure 2,5 bar

452.32.0.12.M2



Weight 1692 g
Minimum working pressure 2 bar

452.52.0.12.M2





Solenoid - Solenoid

Coding: 452.0.0.M2

Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE
32 = 3 ways
52 = 5 ways

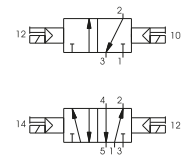
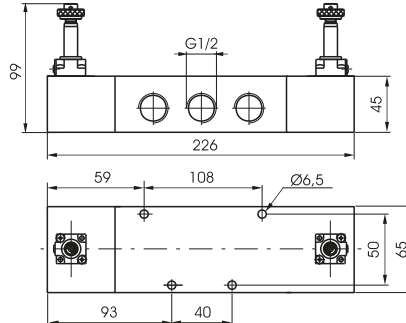
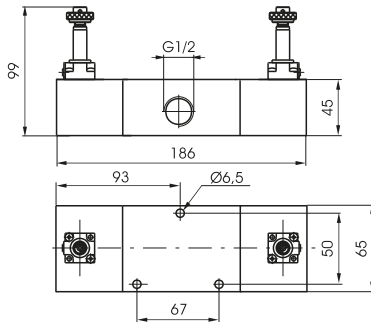


Weight 1474 g
Minimum working pressure 2 bar

452.32.0.0.M2

Weight 1744 g
Minimum working pressure 2 bar

452.52.0.0.M2



Solenoid - Solenoid 5 ways 3 connections

Coding: 452.53.0.0.M2

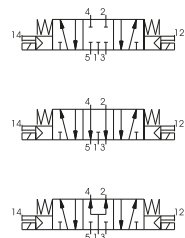
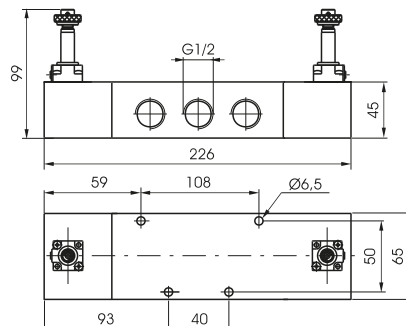
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

FUNCTION
31 = Closed centres
32 = Open centres
33 = Pressured centres



Weight 1744 g
Minimum working pressure 3 bar



AIR DISTRIBUTION

1

Solenoid - Spring

Coding: 452/1.①.0.1.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
① 32 = 3 ways	
52 = 5 ways	



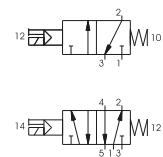
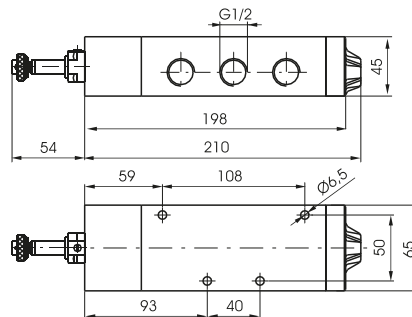
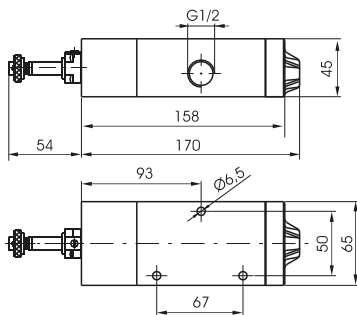
Weight 1330 g
Minimum working pressure 2,5 bar

452/1.32.0.1.M2



Weight 1600 g
Minimum working pressure 2,5 bar

452/1.52.0.1.M2



Solenoid - Differential

Coding: 452/1.①.0.12.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
① 32 = 3 ways	
52 = 5 ways	



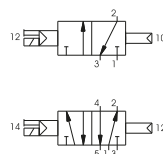
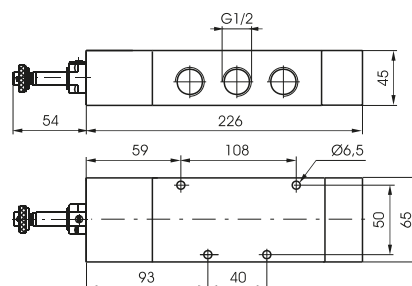
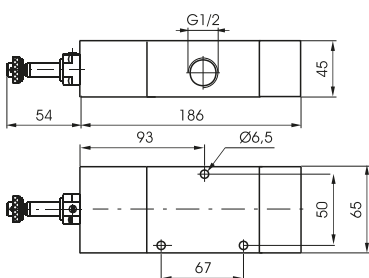
Weight 1600 g
Minimum working pressure 2,5 bar

452/1.32.0.12.M2



Weight 1870 g
Minimum working pressure 2 bar

452/1.52.0.12.M2



Solenoid - Solenoid

Coding: 452/1.0.0.M2

Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE
32 = 3 ways
52 = 5 ways

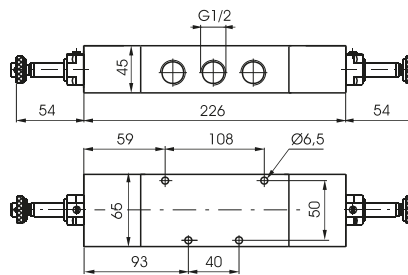
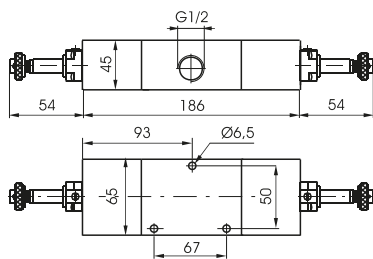


Weight 1830 g
Minimum working pressure 2 bar

452/1.32.0.0.M2

Weight 2100 g
Minimum working pressure 2 bar

452/1.52.0.0.M2



Solenoid - Solenoid 5 ways 3 connections

Coding: 452/1.53.0.0.M2

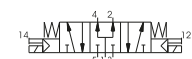
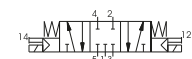
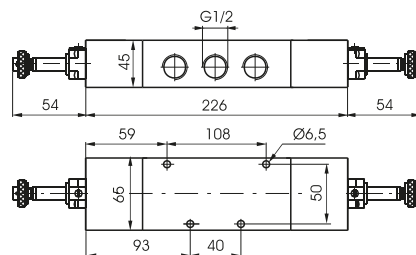
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

FUNCTION
31 = Closed centres
32 = Open centres
33 = Pressured centres



Weight 2100 g
Minimum working pressure 3 bar



AIR DISTRIBUTION

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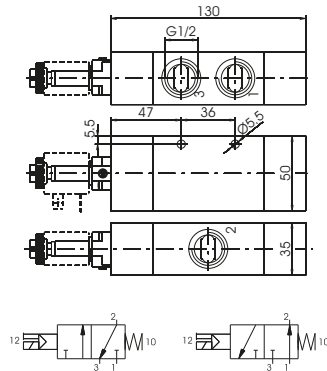
Solenoid - Spring

Coding: 412/2.1.0.1.F.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
T	32 = 3 ways 52 = 5 ways
FUNCTION (only for 3 ways)	
F	C = Normally Closed A = Normally Open

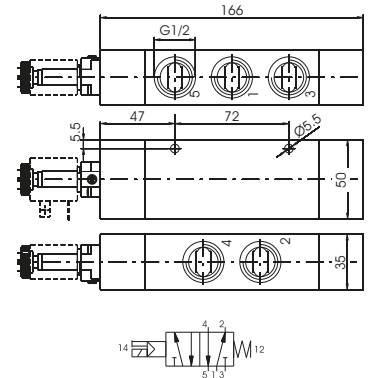
3 ways



Weight 578 g
Minimum working pressure 2,5 bar
412/2.32.0.1.F.M2



5 ways



Weight 700 g
Minimum working pressure 2,5 bar
412/2.52.0.1.F.M2



1
AIR DISTRIBUTION

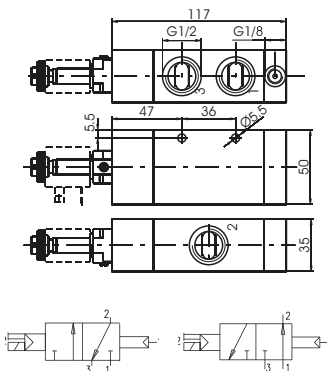
Solenoid - Differential external

Coding: 412/2.1.0.12.F.M2

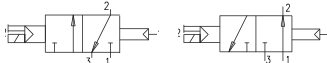
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
T	32 = 3 ways 52 = 5 ways
FUNCTION (only for 3 ways)	
F	C = Normally Closed A = Normally Open

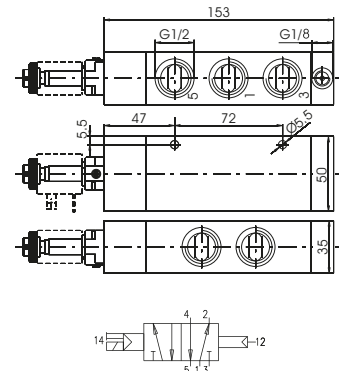
3 ways



Weight 522 g
Minimum working pressure 2,5 bar
412/2.32.0.12.F.M2



5 ways



Weight 644 g
Minimum working pressure 2,5 bar
412/2.52.0.12.F.M2



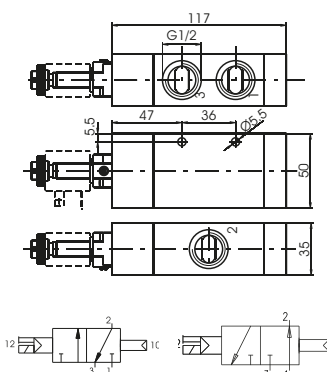
Pneumatic - Differential self aligned

Coding: 412/2.1.0.12/1.F.M2

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE	
T	32 = 3 ways 52 = 5 ways
FUNCTION (only for 3 ways)	
F	C = Normally Closed A = Normally Open

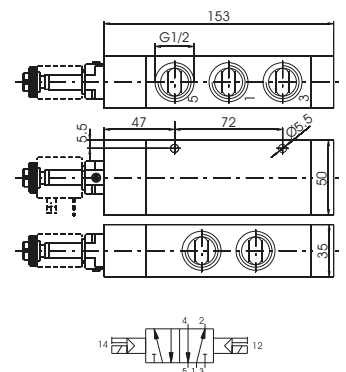
3 ways



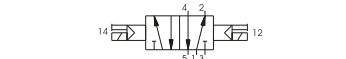
Weight 526 g
Minimum working pressure 2,5 bar
412/2.32.0.12/1.F.M2



5 ways



Weight 648 g
Minimum working pressure 2,5 bar
412/2.52.0.12/1.F.M2



Solenoid - Solenoid

Coding: 412/2.Ⓡ.0.0.M2

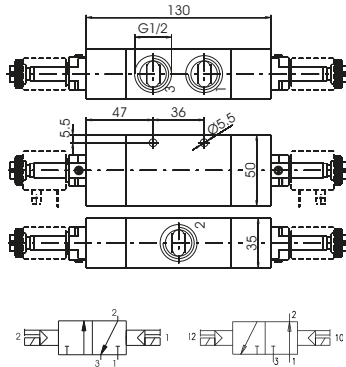
Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE
Ⓡ = 3 ways
Ⓜ = 5 ways

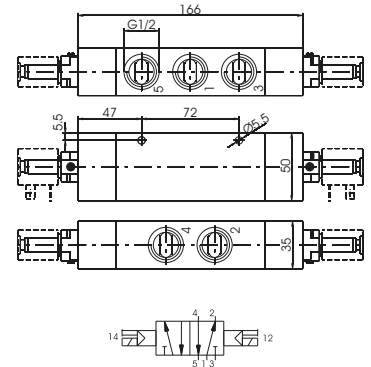
AIR DISTRIBUTION

3 ways



Weight 612 g
Minimum working pressure 2 bar
412/2.32.0.0.M2

5 ways 2 connections



Weight 732 g
Minimum working pressure 2 bar
412/2.52.0.0.M2

Solenoid - Solenoid 5 ways 3 connections

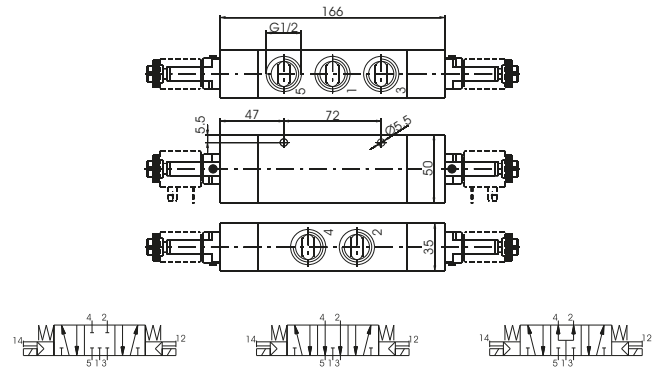
Coding: 412/2.53.Ⓡ.0.0.M2

Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (Nl/min)	3300
Orifice size (mm)	15
Working ports size	G 1/2"

FUNCTION
Ⓡ = Closed centres
Ⓜ = Open centres
Ⓢ = Pressured centres

5 ways 3 connections



Weight 794 g
Minimum working pressure 3 bar

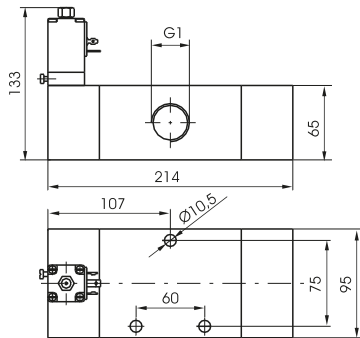
Solenoid - Spring

Coding: 411. **T**.0.1. **S**

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	6500
Orifice size (mm)	20
Working ports size	G 1"

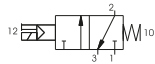
T	TYPE 32 = 3 ways 52 = 5 ways
S	SOLENOID SEE SOLENOID VALVES "S" TYPE, SERIES 300

3 ways

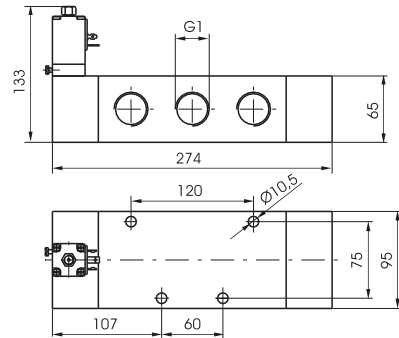


Weight 3400 g
Minimum working pressure 2,5 bar

411.32.0.1. **S**

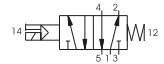


5 ways



Weight 4300 g
Minimum working pressure 2,5 bar

411.52.0.1. **S**



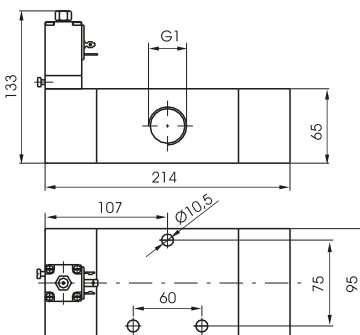
Solenoid - Differential

Coding: 411. **T**.0.12. **S**

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	6500
Orifice size (mm)	20
Working ports size	G 1"

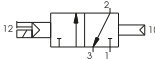
T	TYPE 32 = 3 ways 52 = 5 ways
S	SOLENOID SEE SOLENOID VALVES "S" TYPE, SERIES 300

3 ways

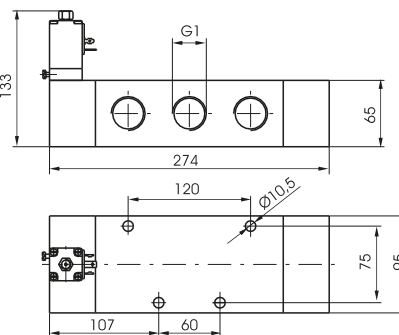


Weight 3400 g
Minimum working pressure 2,5 bar

411.32.0.12. **S**

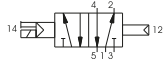


5 ways



Weight 4300 g
Minimum working pressure 2,5 bar

411.52.0.12. **S**



1
AIR DISTRIBUTION

Solenoid - Solenoid

Coding: 411.1.0.0.S

Operational characteristics

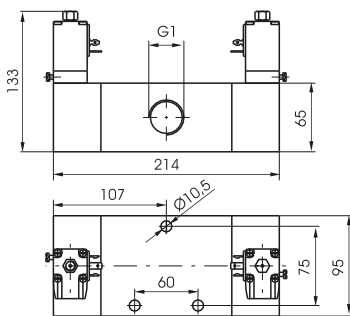
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	6500
Orifice size (mm)	20
Working ports size	G1"

TYPE	
1	32 = 3 ways
	52 = 5 ways
SOLENOID	
S	SEE SOLENOID VALVES "S" TYPE, SERIES 300

AIR DISTRIBUTION

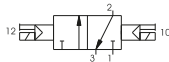
1

3 ways

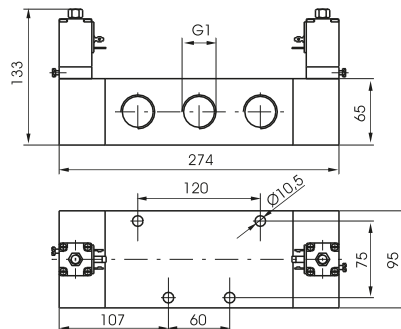


Weight 3700 g
Minimum working pressure 2 bar

411.32.0.0.S

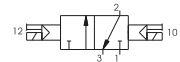


5 ways 2 connections



Weight 4600 g
Minimum working pressure 2 bar

411.52.0.0.S



Solenoid - Solenoid 5 ways 3 connections

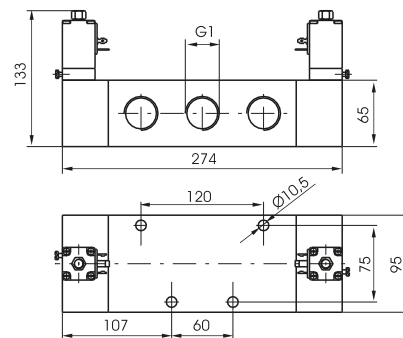
Coding: 411.53.F.0.0.S

Operational characteristics

Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max working pressure (bar)	10
Temperature °C	-5 ÷ +50
Flow rate at 6 bar with Δp=1 (NI/min)	6500
Orifice size (mm)	20
Working ports size	G1"

FUNCTION	
F	31 = Closed centres
	32 = Open centres
	33 = Pressured centres
SOLENOID	
S	SEE SOLENOID VALVES "S" TYPE, SERIES 300

5 ways 3 connections



Weight 4700 g
Minimum working pressure 3 bar

