

Series 400

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.

If 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.

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  (see Series 300).

The solenoid valves **G1/8" (488)**, are supplied complete with coil (see Series 300) so that the tension has to be added to the solenoid valve code:

M9 = coil 24 V D.C. (rating power 2 Watt)

M11 = coil 24 V D.C. (rating power 3.8 watt)

M56 = coil 24 V 50/60 Hz (rating power 9 VA)

M57 = coil 110 V 50/60 Hz (rating power 9 VA)

M58 = coil 230 V 50/60 Hz (rating power 9 VA)

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

Construction characteristics

Body	Aluminium
Spacers	Technopolymer (aluminium for G1")
Seals	NBR
	Polyurethane compound for oil free applications (G 1/8", G 1/4" and G 1/2")
Springs	Stainless steel or spring steel
Operators	Aluminium Technopolymer for spring bottom plate G 1/8", G1/4", G 1/2" and aluminium for G 1"
Spools	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 CASTROL MAGNA SW32.



Spool type valves and solenoid valves

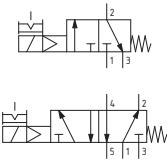
Series 400 - G1/8"

Solenoid - Spring

Coding: 468.1.0.1.M2

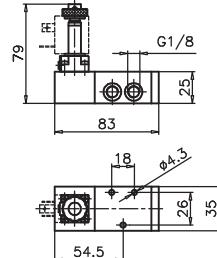
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

1	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



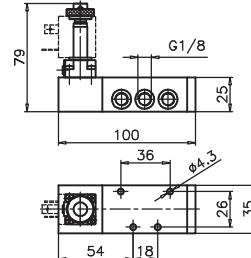
Weight 240 g
Minimum working pressure 2,5 bar

468.32.0.1.M2



Weight 240 g
Minimum working pressure 2,5 bar

468.52.0.1.M2

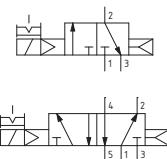


Solenoid - Differential

Coding: 468.1.0.12.M2

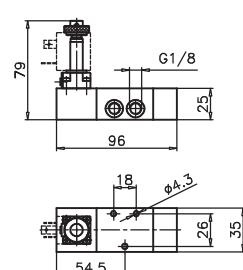
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

1	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



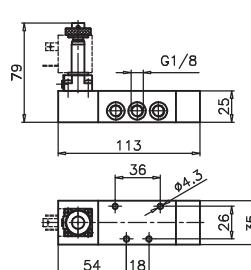
Weight 280 g
Minimum working pressure 2,5 bar

468.32.0.12.M2



Weight 320 g
Minimum working pressure 2,5 bar

468.52.0.12.M2

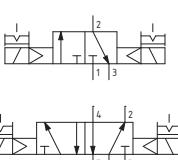


Solenoid - Solenoid

Coding: 468.1.0.0.M2

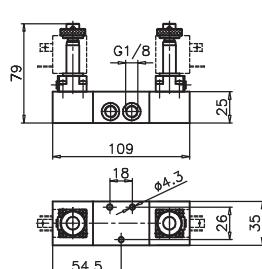
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

1	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



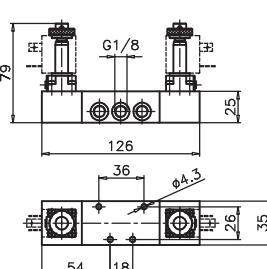
Weight 370 g
Minimum working pressure 2 bar

468.32.0.0.M2



Weight 410 g
Minimum working pressure 2 bar

468.52.0.0.M2



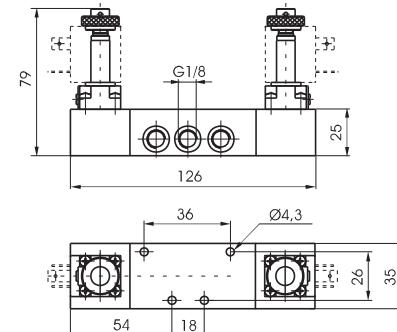
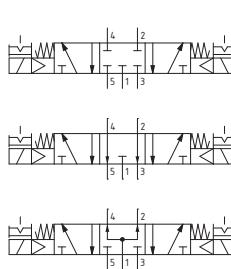
► Solenoid - Solenoid - 5/3

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 $\Delta p=1$ (NL/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"

F	FUNCTION
31	Closed centres
32	Open centres
33	Pressured centres



Weight 420 g
Minimum working pressure 3 bar

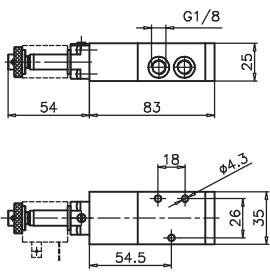
► Solenoid - Spring

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 $\Delta p=1$ (NL/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

T	TYPE
32	3 ways, 2 positions
52	5 ways, 2 positions

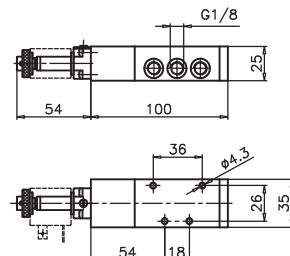
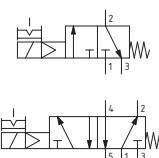


Weight 240 g
Minimum working pressure 2,5 bar

468/1.32.0.1.M2

Weight 280 g
Minimum working pressure 2,5 bar

468/1.52.0.1.M2



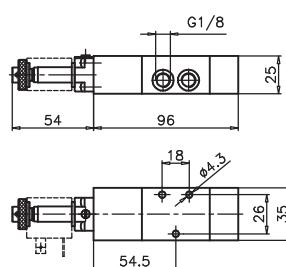
► Solenoid - Differential

Coding: 468/1.T.0.12.M2

Operational characteristics

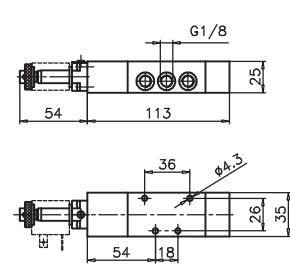
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

T	TYPE
32	3 ways, 2 positions
52	5 ways, 2 positions



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



Spool type valves and solenoid valves

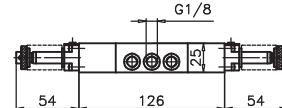
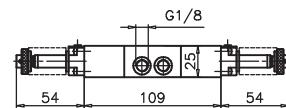
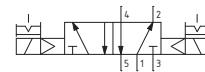
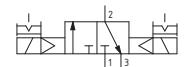
Series 400 - G1/8"

Solenoid - Solenoid

Coding: 468/1.T.0.0.M2

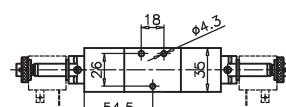
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NI/min)	540
Orifice size (mm)	6
Working ports size	G 1/8"

T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



Weight 370 g
Minimum working pressure 2 bar

468/1.32.0.0.M2



Weight 410 g
Minimum working pressure 2 bar

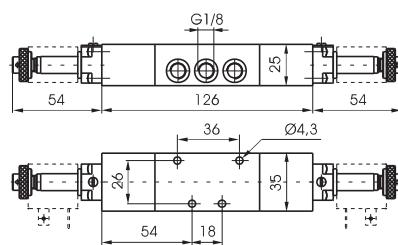
468/1.52.0.0.M2

Solenoid - Solenoid - 5/3

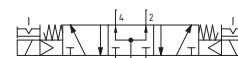
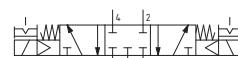
Coding: 468/1.53.F.0.0.M2

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)	410
Orifice size (mm)	6
Working ports size	G 1/8"

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



Weight 420 g
Minimum working pressure 3 bar



Solenoid - Spring

Coding: 488.T.0.1.V

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 $\Delta p = 1$ (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)

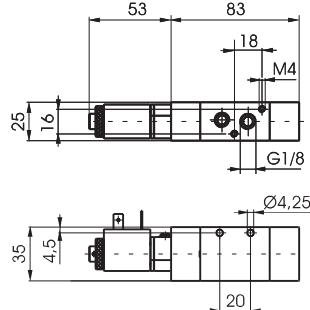
T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions

V	VOLTAGE
	M9 = 24 V D.C.
	M11 = 24 V D.C.
	M56 = 24 V 50/60 Hz
	M57 = 110 V 50/60 Hz



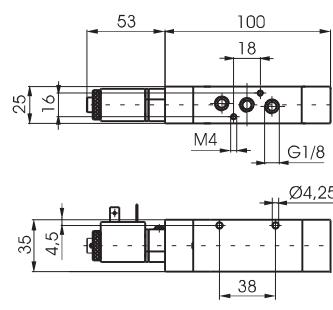
Weight 220 g
Minimum working pressure 2,5 bar

488.32.0.1.V



Weight 260 g
Minimum working pressure 2,5 bar

488.52.0.1.V



Solenoid - Differential

Coding: 488.T.0.12.V

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 $\Delta p = 1$ (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)

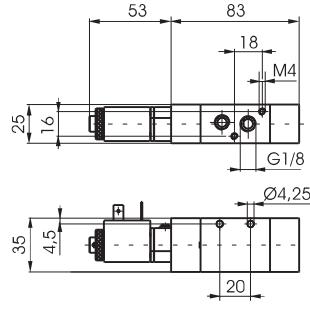
T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions

V	VOLTAGE
	M9 = 24 V D.C.
	M11 = 24 V D.C.
	M56 = 24 V 50/60 Hz
	M57 = 110 V 50/60 Hz



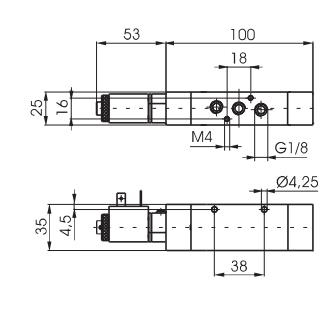
Weight 220 g
Minimum working pressure 2,5 bar

488.32.0.12.V



Weight 260 g
Minimum working pressure 2,5 bar

488.52.0.12.V



Solenoid - Solenoid

Coding: 488.T.0.0.V

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 $\Delta p = 1$ (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)

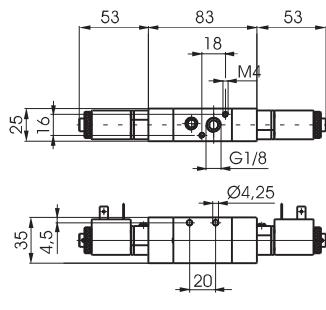
T	TYPE
	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions

V	VOLTAGE
	M9 = 24 V D.C.
	M11 = 24 V D.C.
	M56 = 24 V 50/60 Hz
	M57 = 110 V 50/60 Hz



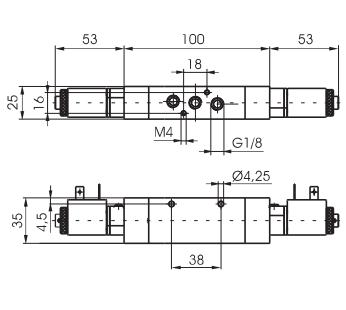
Weight 320 g
Minimum working pressure 2 bar

488.32.0.0.V



Weight 360 g
Minimum working pressure 2 bar

488.52.0.0.V





Spool type valves and solenoid valves

Series 400 - G1/8"

1

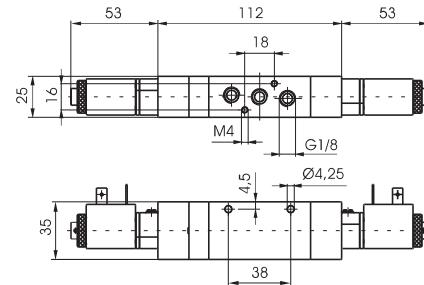
AIR DISTRIBUTION

Solenoid - Solenoid - 5/3

Coding: 488.53.F.0.0.V

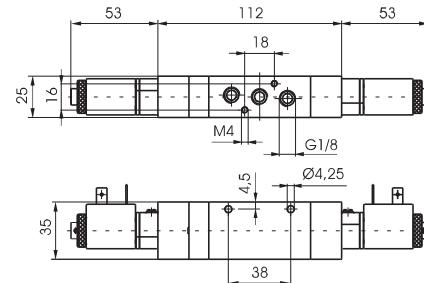
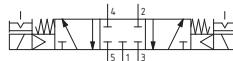
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	410
Orifice size (mm)	6
Working ports size	G 1/8"
Response time according to ISO 12238, activation 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)

F	FUNCTION	VOLTAGE	
		31 = Closed centres	32 = Open centres
	33 = Pressured centres	M9 = 24 VDC	
		M11 = 24 VDC	
		M56 = 24V 50/60Hz	
		M57 = 110V 50/60Hz	
		M58 = 230V 50/60Hz	



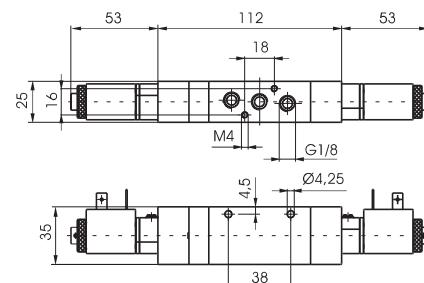
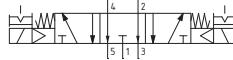
Weight 400 g
Minimum working pressure 3 bar

488.53.31.0.0.V



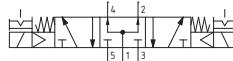
Weight 400 g
Minimum working pressure 3 bar

488.53.32.0.0.V



Weight 400 g
Minimum working pressure 3 bar

488.53.33.0.0.V



► Collectors

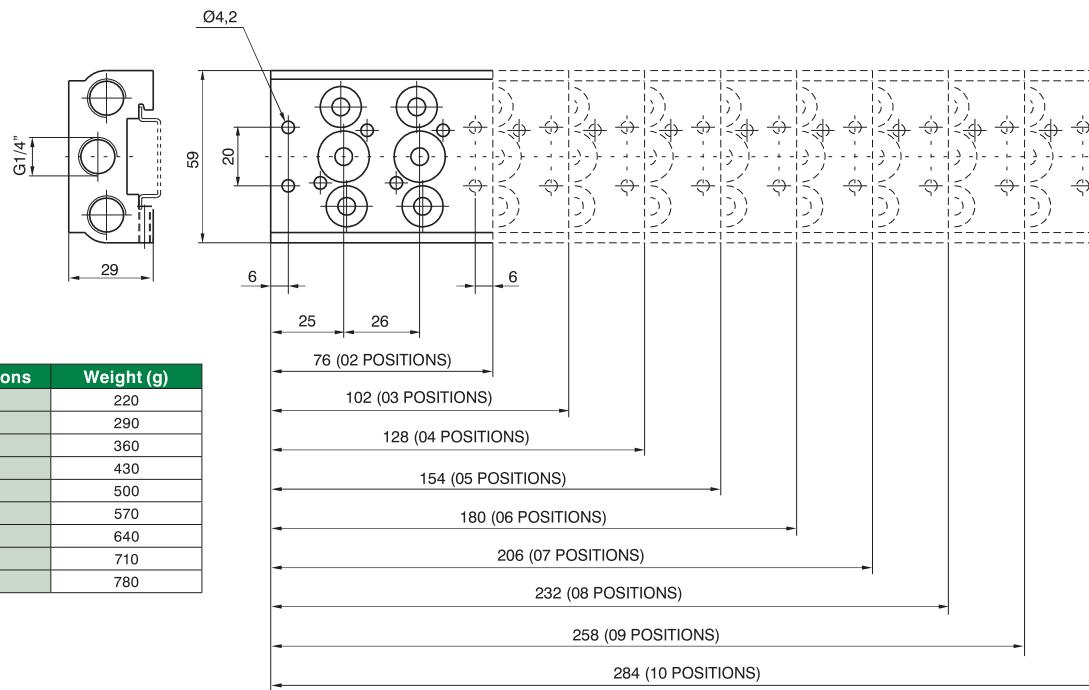


Coding: 488.N

N	NO. POSITIONS
02	2 positions
03	3 positions
04	4 positions
05	5 positions
06	6 positions
07	7 positions
08	8 positions
09	9 positions
10	10 positions

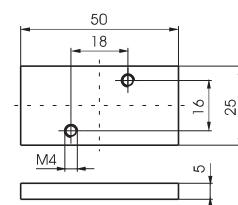
1

AIR DISTRIBUTION



► Closing plate

Coding: 488.00



Weight 25 g



Spool type valves and solenoid valves

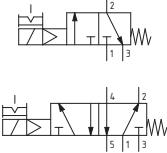
Series 400 - G1/4"

Solenoid - Spring

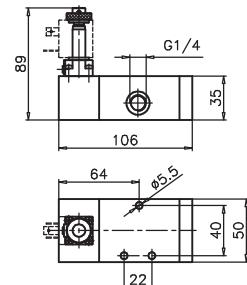
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

Coding: 464.T.0.1.M2

TYPE	32 = 3 ways, 2 positions	
	52 = 5 ways, 2 positions	



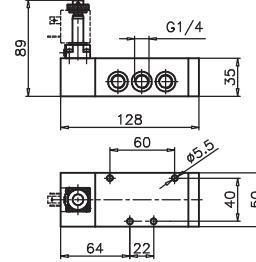
3/2 ways



Weight 530 g
Minimum working pressure 2,5 bar

464.32.0.1.M2

5/2 ways



Weight 625 g
Minimum working pressure 2,5 bar

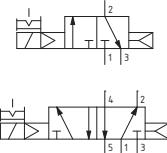
464.52.0.1.M2

Solenoid - Differential

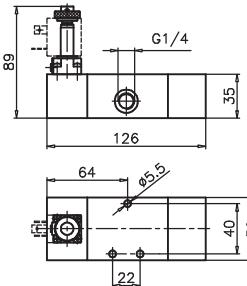
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

Coding: 464.T.0.12.M2

TYPE	32 = 3 ways, 2 positions	
	52 = 5 ways, 2 positions	



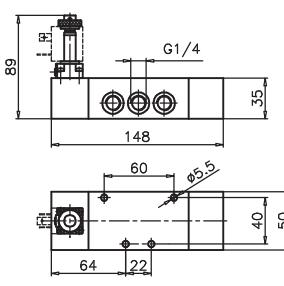
3/2 ways



Weight 650 g
Minimum working pressure 2,5 bar

464.32.0.12.M2

5/2 ways



Weight 740 g
Minimum working pressure 2,5 bar

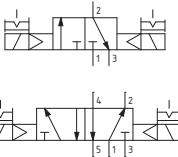
464.52.0.12.M2

Solenoid - Solenoid

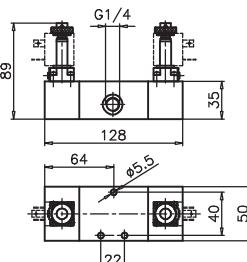
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p=1$ (NL/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

Coding: 464.T.0.0.M2

TYPE	32 = 3 ways, 2 positions	
	52 = 5 ways, 2 positions	



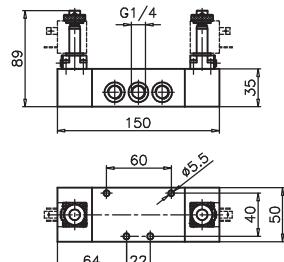
3/2 ways



Weight 730 g
Minimum working pressure 2 bar

464.32.0.0.M2

5/2 ways



Weight 820 g
Minimum working pressure 2 bar

464.52.0.0.M2

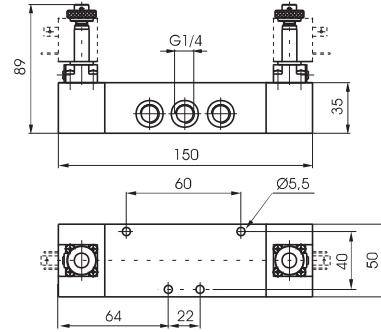
► Solenoid - Solenoid - 5/3

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 $\Delta p=1$ (NL/min)	1280
Orifice size (mm)	8
Working ports size	G 1/4"

F	FUNCTION
31	Closed centres
32	Open centres
33	Pressured centres



Weight 820 g
Minimum working pressure 3 bar





Spool type valves and solenoid valves

Series 400 - G1/4"

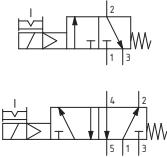
Solenoid - Spring

Coding: 464/1.T.0.1.M2

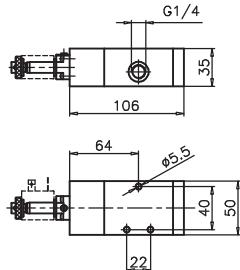
Operational characteristics

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 $\Delta p=1$ (NL/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



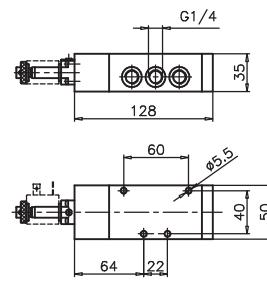
3/2 ways



Weight 530 g
Minimum working pressure 2,5 bar

464/1.32.0.1.M2

5/2 ways



Weight 625 g
Minimum working pressure 2,5 bar

464/1.52.0.1.M2

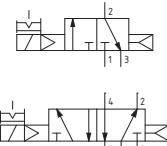
Solenoid - Differential

Coding: 464/1.T.0.12.M2

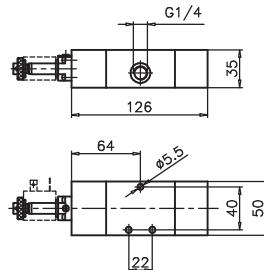
Operational characteristics

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 $\Delta p=1$ (NL/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



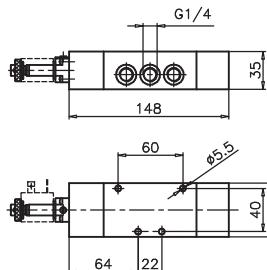
3/2 ways



Weight 650 g
Minimum working pressure 2,5 bar

464/1.32.0.12.M2

5/2 ways



Weight 740 g
Minimum working pressure 2,5 bar

464/1.52.0.12.M2

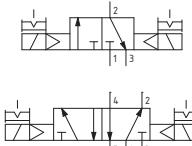
Solenoid - Solenoid

Coding: 464/1.T.0.0.M2

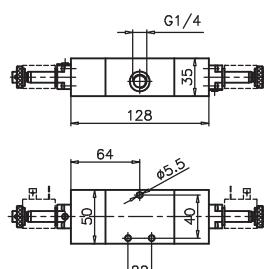
Operational characteristics

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 $\Delta p=1$ (NL/min)	1360
Orifice size (mm)	8
Working ports size	G 1/4"

TYPE	32 = 3 ways, 2 positions
	52 = 5 ways, 2 positions



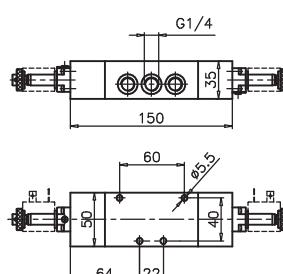
3/2 ways



Weight 730 g
Minimum working pressure 2 bar

464/1.32.0.0.M2

5/2 ways



Weight 820 g
Minimum working pressure 2 bar

464/1.52.0.0.M2

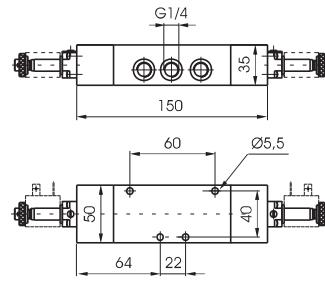
► Solenoid - Solenoid - 5/3

Coding: 464/1.53.F.0.0.M2

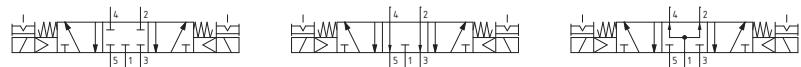
Operational characteristics

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 $\Delta p=1$ (NL/min)	1280
Orifice size (mm)	8
Working ports size	G 1/4"

F	FUNCTION
31	Closed centres
32	Open centres
33	Pressured centres



Weight 820 g
Minimum working pressure 3 bar





Spool type valves and solenoid valves

Series 400 - G1/2"

Solenoid - Spring

Coding: 452.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 $\Delta p=1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE
32 = 3 ways, 2 positions
52 = 5 ways, 2 positions



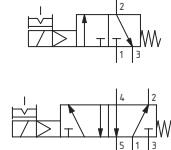
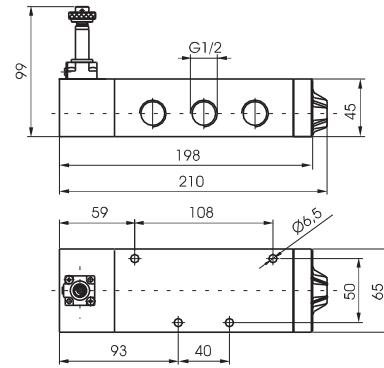
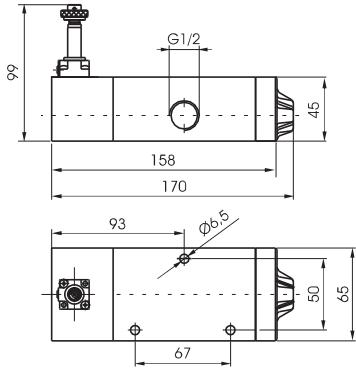
Weight 1152 g
Minimum working pressure 2,5 bar

452.32.0.1.M2



Weight 1422 g
Minimum working pressure 2,5 bar

452.52.0.1.M2



Solenoid - Differential

Coding: 452.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 $\Delta p=1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE
32 = 3 ways, 2 positions
52 = 5 ways, 2 positions



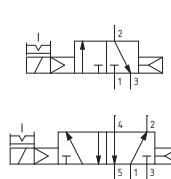
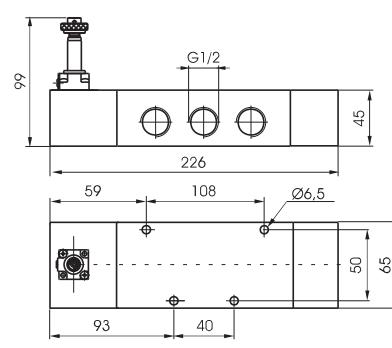
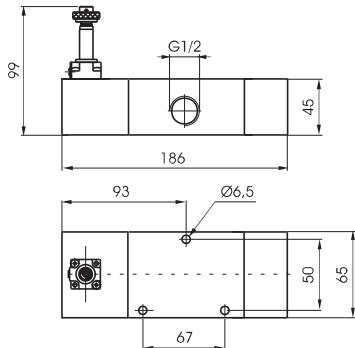
Weight 1422 g
Minimum working pressure 2,5 bar

452.32.0.12.M2



Weight 1692 g
Minimum working pressure 2 bar

452.52.0.12.M2



Coding: 452.T.0.0.M2

TYPE
T 32 = 3 ways, 2 positions
T 52 = 5 ways, 2 positions

Solenoid - Solenoid

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 $\Delta p = 1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"



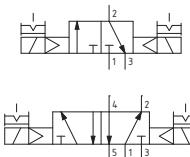
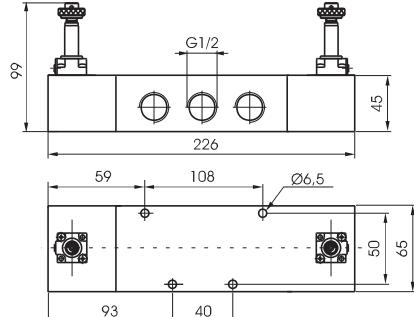
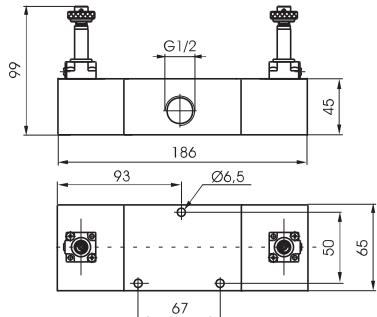
Weight 1474 g
Minimum working pressure 2 bar

452.32.0.0.M2



Weight 1744 g
Minimum working pressure 2 bar

452.52.0.0.M2



Solenoid - Solenoid - 5/3

Operational characteristics

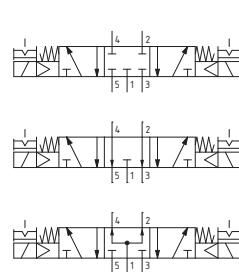
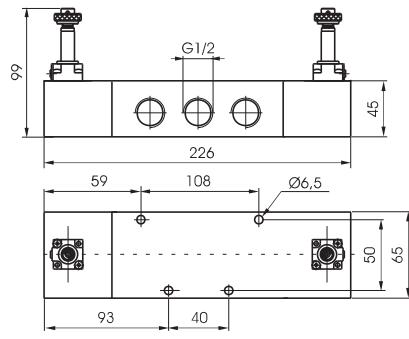
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Max. working pressure (bar)	10
Temperature °C	-5 ... +50
Flow rate at 6 bar with $\Delta p = 1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

Coding: 452.53.F.0.0.M2

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



Weight 1744 g
Minimum working pressure 3 bar



Solenoid - Spring
Coding: 452/1.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 $\Delta p=1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

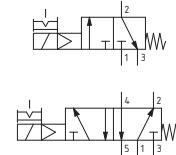
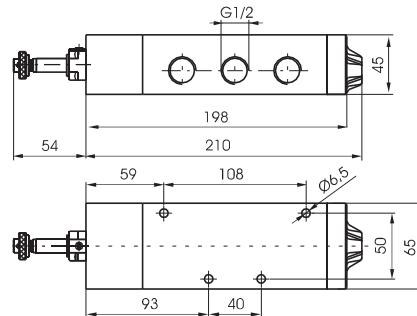
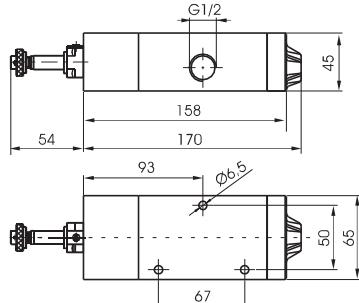
TYPE
32 = 3 ways, 2 positions
52 = 5 ways, 2 positions


 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.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 $\Delta p=1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

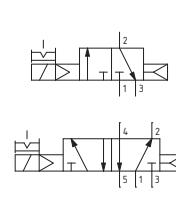
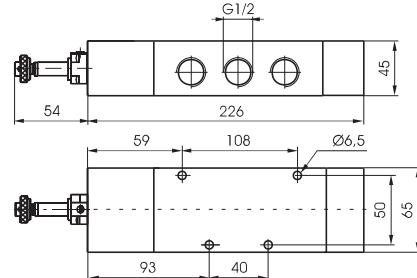
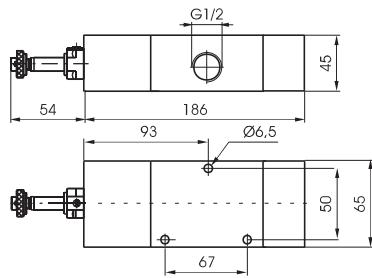
TYPE
32 = 3 ways, 2 positions
52 = 5 ways, 2 positions


 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.T.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 $\Delta p=1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

TYPE
T 32 = 3 ways, 2 positions
T 52 = 5 ways, 2 positions



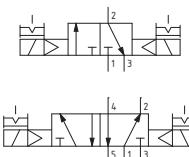
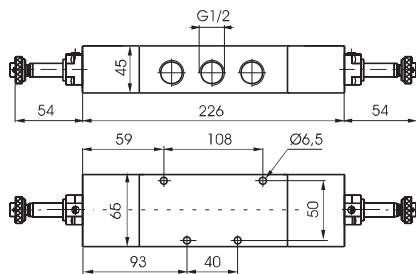
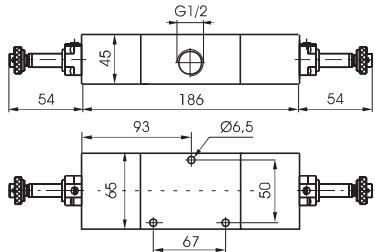
Weight 1830 g
Minimum working pressure 2 bar

452/1.32.0.0.M2



Weight 2100 g
Minimum working pressure 2 bar

452/1.52.0.0.M2



Solenoid - Solenoid - 5/3

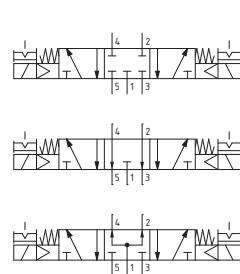
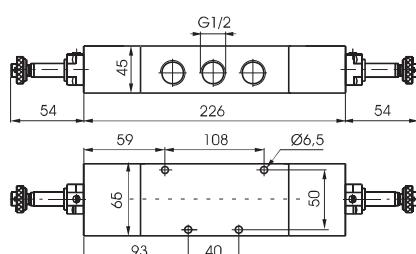
Coding: 452/1.53.F.0.0.M2

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 $\Delta p=1$ (NL/min)	3500
Orifice size (mm)	15
Working ports size	G 1/2"

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



Weight 2100 g
Minimum working pressure 3 bar





Spool type valves and solenoid valves

Series 400 - G1/2" - Compact

Solenoid - Spring

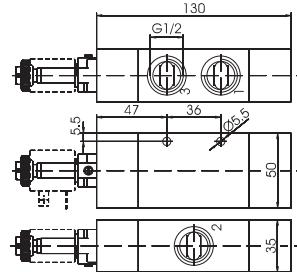
Coding: 412/2.1.0.1.F

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 $\Delta p = 1$ (NL/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

T	TYPE
	32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
F	FUNCTION
	C.M2 = 3/2 ways Normally Closed A.M2 = 3/2 ways Normally Open
	M2 = 5/2 ways

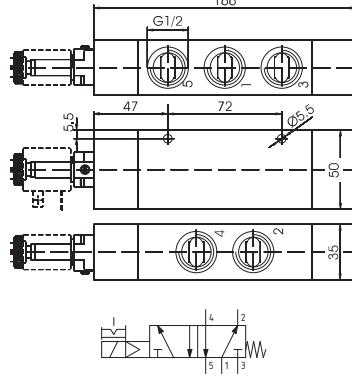
3/2 ways



Weight 578 g
Minimum working pressure 2,5 bar

412/2.32.0.1.C.M2
412/2.32.0.1.A.M2

5/2 ways



Weight 700 g
Minimum working pressure 2,5 bar

412/2.52.0.1.M2

Solenoid - Differential

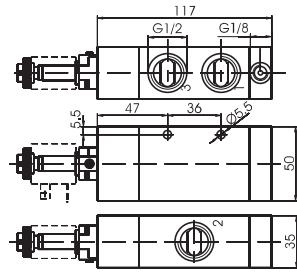
Coding: 412/2.1.0.12.F

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 $\Delta p = 1$ (NL/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

T	TYPE
	32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
F	FUNCTION
	C.M2 = 3/2 ways Normally Closed A.M2 = 3/2 ways Normally Open
	M2 = 5/2 ways

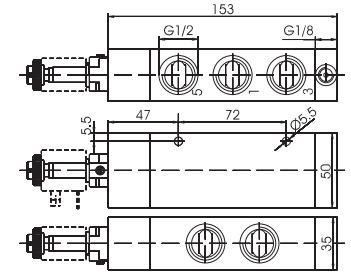
3/2 ways



Weight 522 g
Minimum working pressure 2,5 bar

412/2.32.0.12.C.M2
412/2.32.0.12.A.M2

5/2 ways



Weight 644 g
Minimum working pressure 2,5 bar

412/2.52.0.12.M2

Solenoid - Differential (Self feeding)

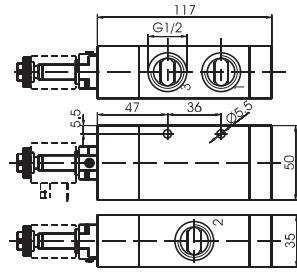
Coding: 412/2.1.0.12.F

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 $\Delta p = 1$ (NL/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

T	TYPE
	32 = 3 ways, 2 positions 52 = 5 ways, 2 positions
F	FUNCTION
	C.M2 = 3/2 ways Normally Closed A.M2 = 3/2 ways Normally Open
	M2 = 5/2 ways

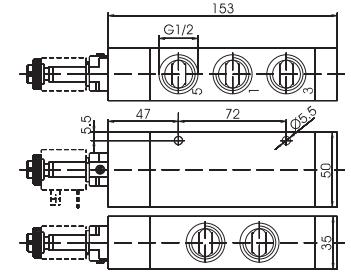
3/2 ways



Weight 526 g
Minimum working pressure 2,5 bar

412/2.32.0.12.1.C.M2
412/2.32.0.12.1.A.M2

5/2 ways



Weight 648 g
Minimum working pressure 2,5 bar

412/2.52.0.12.1.M2

Solenoid - Solenoid

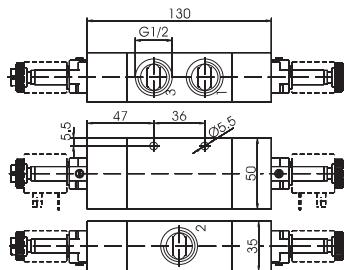
Coding: 412/2.1.0.0.M2

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 $\Delta p=1$ (NL/min)	3600
Orifice size (mm)	15
Working ports size	G 1/2"

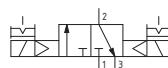
T	TYPE
32	= 3 ways, 2 positions
52	= 5 ways, 2 positions

3/2 ways

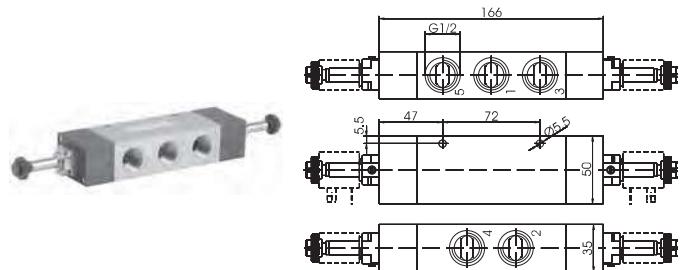


Weight 612 g
Minimum working pressure 2 bar

412/2.32.0.0.M2



5/2 ways



Weight 732 g
Minimum working pressure 2 bar

412/2.52.0.0.M2



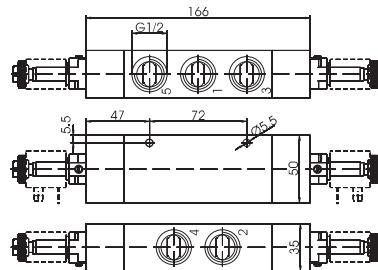
Solenoid - Solenoid - 5/3

Coding: 412/2.53.F.0.0.M2

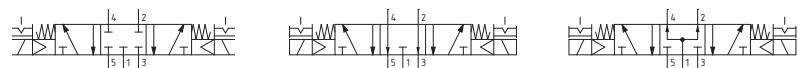
Operational characteristics

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 $\Delta p=1$ (NL/min)	3300
Orifice size (mm)	15
Working ports size	G 1/2"

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



Weight 794 g
Minimum working pressure 3 bar





Spool type valves and solenoid valves

Series 400 - G1"

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 $\Delta p=1$ (NL/min)	6500
Orifice size (mm)	20
Working ports size	G 1"

TYPE

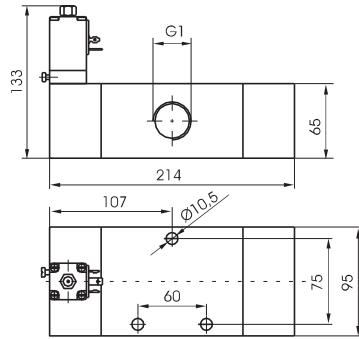
32 = 3 ways, 2 positions

52 = 5 ways, 2 positions

SOLENOID

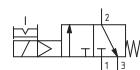
SEE SOLENOID VALVES "S" TYPE,
SERIES 300

3/2 ways

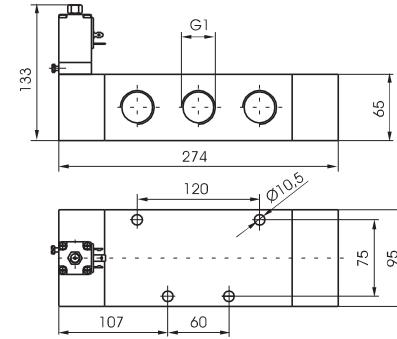


Weight 3400 g
Minimum working pressure 2,5 bar

411.32.0.1.S

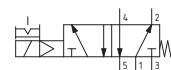


5/2 ways



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 $\Delta p=1$ (NL/min)	6500
Orifice size (mm)	20
Working ports size	G 1"

TYPE

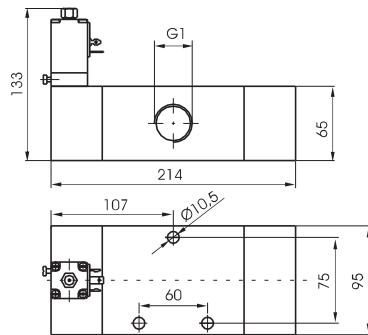
32 = 3 ways, 2 positions

52 = 5 ways, 2 positions

SOLENOID

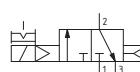
SEE SOLENOID VALVES "S" TYPE,
SERIES 300

3/2 ways

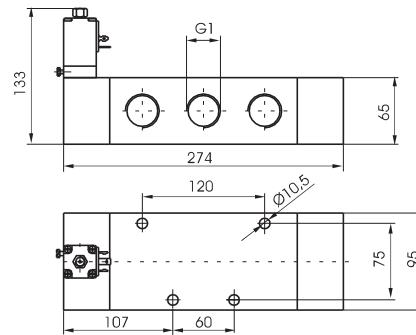


Weight 3400 g
Minimum working pressure 2,5 bar

411.32.0.12.S

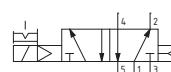


5/2 ways



Weight 4300 g
Minimum working pressure 2,5 bar

411.52.0.12.S



Solenoid - Solenoid

Coding: 411.T.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 $\Delta p=1$ (NL/min)	6500
Orifice size (mm)	20
Working ports size	G 1"

TYPE

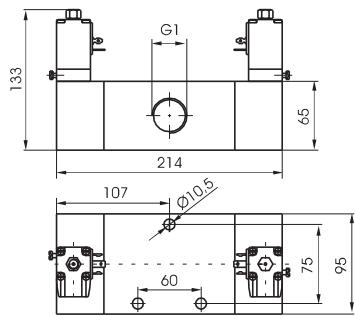
T 32 = 3 ways, 2 positions

52 = 5 ways, 2 positions

SOLENOID

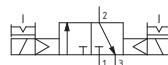
S SEE SOLENOID VALVES "S" TYPE,
SERIES 300

3/2 ways

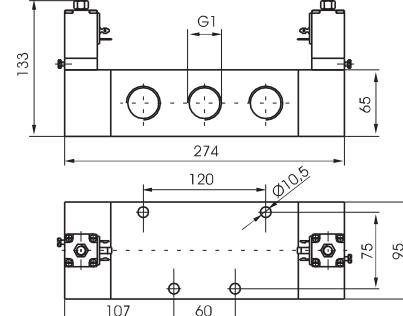


Weight 3700 g
Minimum working pressure 2 bar

411.32.0.0.S

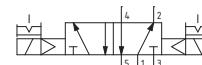


5/2 ways



Weight 4600 g
Minimum working pressure 2 bar

411.52.0.0.S



Solenoid - Solenoid - 5/3

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 $\Delta p=1$ (NL/min)	6500
Orifice size (mm)	20
Working ports size	G 1"

FUNCTION

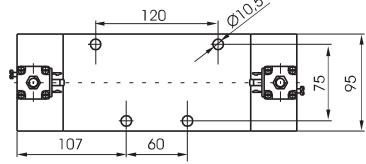
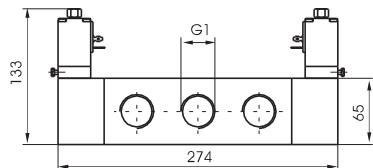
F 31 = Closed centres

32 = Open centres

33 = Pressured centres

SOLENOID

S SEE SOLENOID VALVES "S" TYPE,
SERIES 300



Weight 4700 g
Minimum working pressure 3 bar

