



SMF 1/4" SERIE VALVES

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PNEUMATIC EQUIPMENTS

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PRODUCTS

SMF SERIE ...



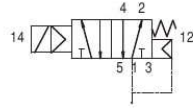
2* 3/2 N.C. - 1/4" Double Solenoid Valve

SMF SERIE
AIR PILOT VALVES

SMF SERIE
SOLENOID VALVES

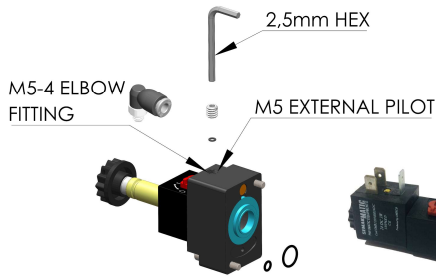
COILS & EX. COILS
SOCKETS

5/2 – 1/4" SINGLE SOLENOID (spring return / external pilot)



For external pilot application,

- 1) Unscrew the setskur
- 2) Take the o-ring out
- 3) Screw M5 threaded fitting
- 4) Disassemble the head of valve
- 5) Adapt the special shaped o-ring by closing the air pilot supply
- 6) Assemble the valve head

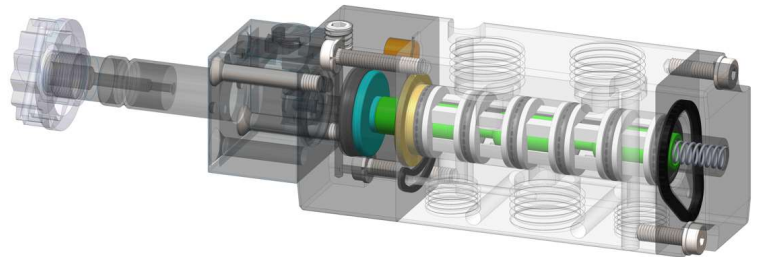


- ❑ Flow rate is 600 NI / min. at 6 bar
- ❑ External pilot is available for all the solenoid serie with M5 thread
- ❑ Pneumatic connection ports 1.2.4. .. 1/4" .. 3.5 1/8"
- ❑ Body AL. 6000 natural anodized
- ❑ Covers AL. 6000 black colored anodized
- ❑ Min. working pressure is 1,5 bar
- ❑ 3 cycle / sec. reachable max. life time with suitable Ø dia. and stroke
- ❑ Suitable for vacuum and low pressure application with external pilot

ORDERING CODES for a VALVE

- 5/2 – 1/4" SINGLE SOLENOID : SMF5214TB00M00
 5/2 – 1/4" SINGLE SOLENOID external pilot : SMF5214TBDPM00

INTERNAL VIEW



Fluid : Compressed filtered air with or without lubrication

If lubrication used at ones must be continious .

Pressure range : min.1,5 bar max. 10 bar spring return with internal air pilot

Temperature range : - 10 ° C / + 60 ° C

Version : 5/2 - 1/4" spring return / external pilot

Materials

Covers : AL. 6000 black colored anodized

spool : AL. 6000 natural anodized 0,4 µm

Seals : NBR

Body : AL. 6000 natural anodized

Nominal Orifice : 5 mm

Mounting : In any position

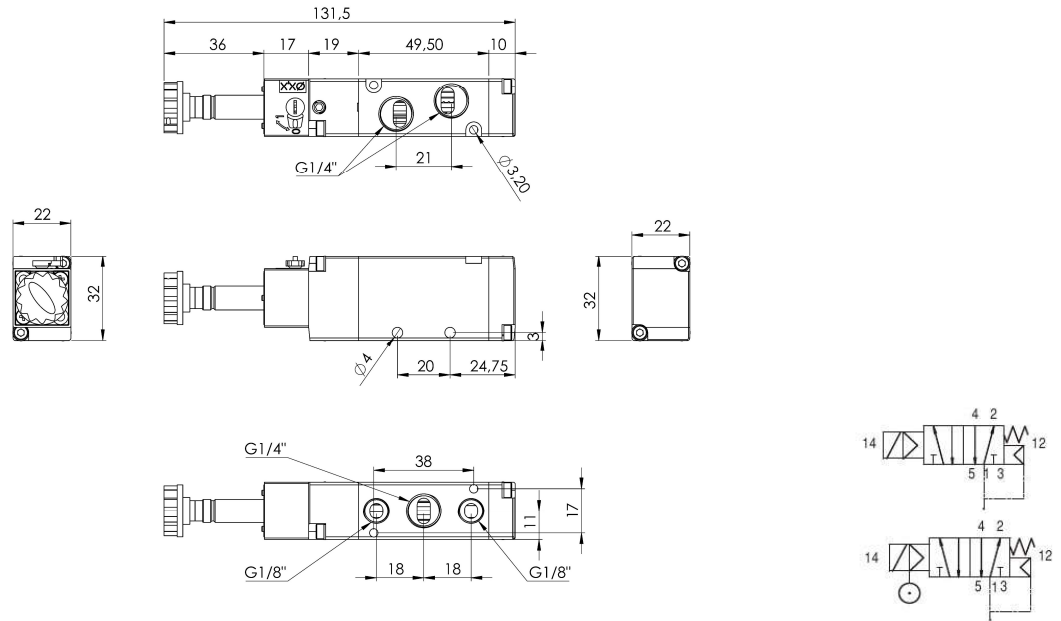
Flow rate : 600 NI/ min. at 6 bar Δp 1 bar

Life time : 3 cycle / sec. with suitable cylinder / 50 mio. cycle life time under proper condition

Vacuum & low pressure app. : Suitable with external pilot

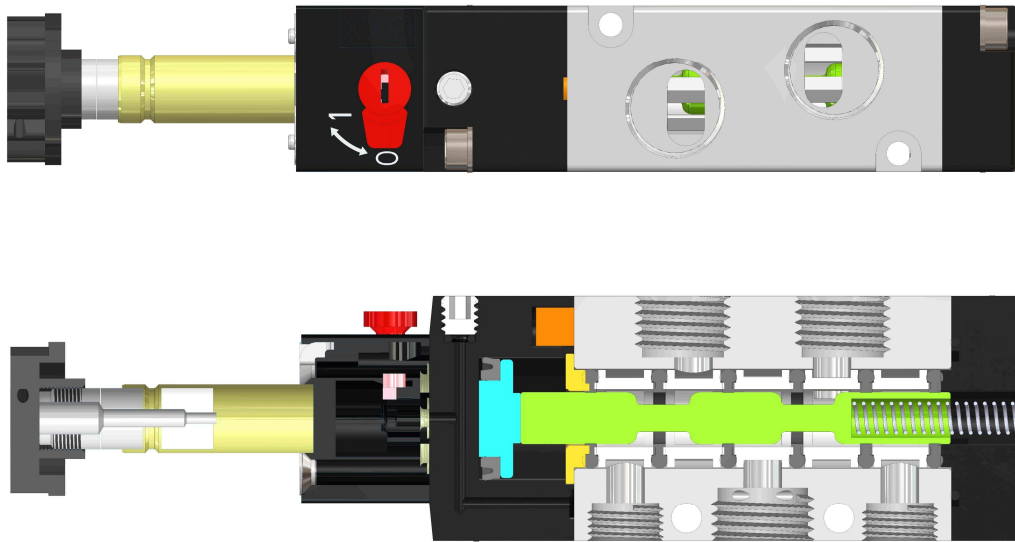
DRAWING

(5/2 spring return) (external pilot)



SOLID IMAGE

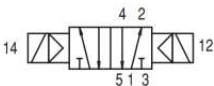
(5/2 single solenoid)



ACCESSORIES & SPARE PARTS

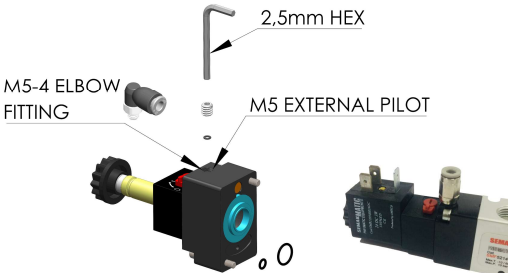
COILS & SOCKETS
(page 14)6 * spool o-ring
2 * valve piston gasketO- RING KIT
Cod. SMV18019 mm BRASS
TUBE & NUCLEUS
Cod. SMV18029 mm BRASS
TUBE & NUCLEUS
Cod. SMV3218TBP3MNK

5/2 – 1/4" DOUBLE SOLENOID (bistable / external pilot)



For external pilot application,

- 1) Unscrew the setskur
- 2) Take the o-ring out
- 3) Screw M5 threaded fitting
- 4) Disassemble the head of valve
- 5) Adapt the special shaped o-ring by closing the air pilot supply
- 6) Assemble the valve head

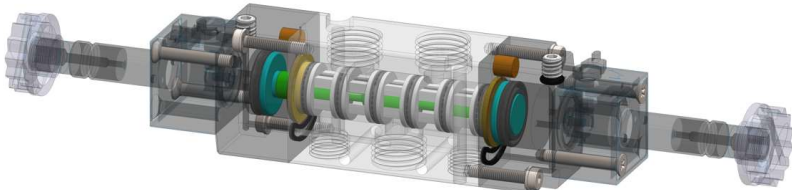


- ❑ Flow rate is 600 NI / min. at 6 bar
- ❑ External pilot is available for all the solenoid serie with M5 thread
- ❑ Pneumatic connection ports 1.2.4. .. 1/4" .. 3.5 1/8"
- ❑ Body AL. 6000 natural anodized
- ❑ Covers AL. 6000 black colored anodized
- ❑ Min. working pressure is 1 bar
- ❑ 4 cycle / sec. reachable max. life time with suitable Ø dia. and stroke
- ❑ Suitable for vacuum and low pressure application with external pilot

ORDERING CODES for a VALVE

- 5/2 – 1/4" BISTABLE : SMF5214CB00M00
- 5/2 – 1/4" BISTABLE external pilot : SMF5214TBDPM00

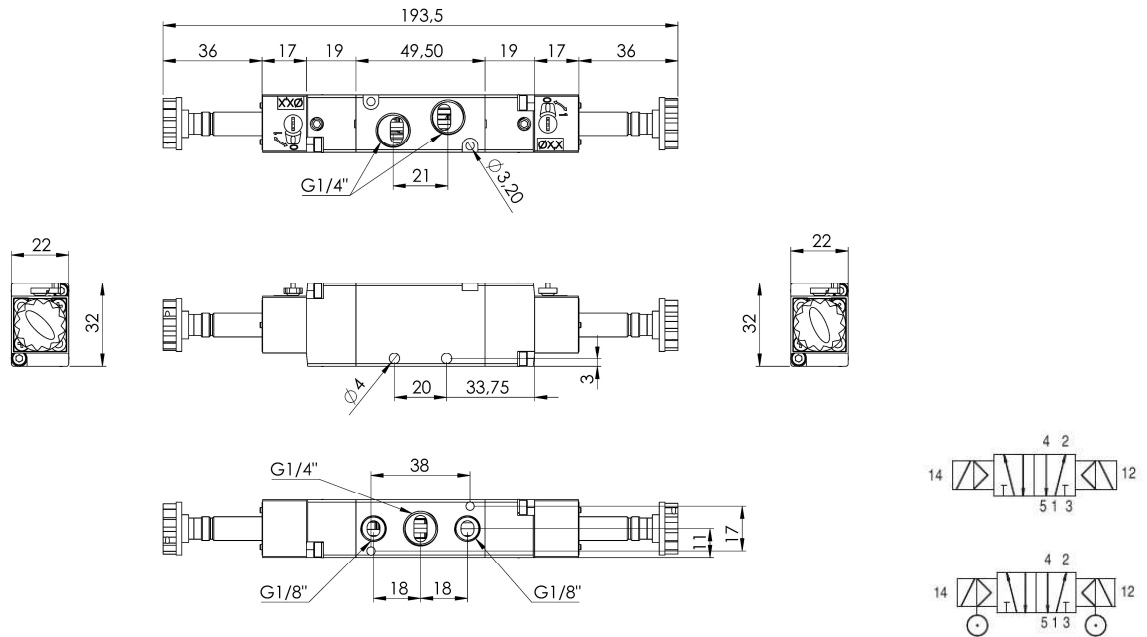
INTERNAL VIEW



Fluid	: Compressed filtered air with or without lubrication
	If lubrication used at ones must be continious .
Pressure range	: min.1 bar max. 10 bar
Temperature range	: - 10 ° C / + 60 ° C
Version	: 5/2 - 1/4" double solenoid bistable / external pilot
Materials	
Covers	: AL. 6000 black colored anodized
spool	: AL. 6000 natural anodized 0,4 µm
Seals	: NBR
Body	: AL. 6000 natural anodized
Nominal Orifice	: 5 mm
Mounting	: In any position
Flow rate	: 600 NI/ min. at 6 bar Δp 1 bar
Life time	: 4 cycle / sec. with suitable cylinder / 50 mio. cycle life time under proper condition
Vacuum & low pressure app.	: Suitable with external pilot

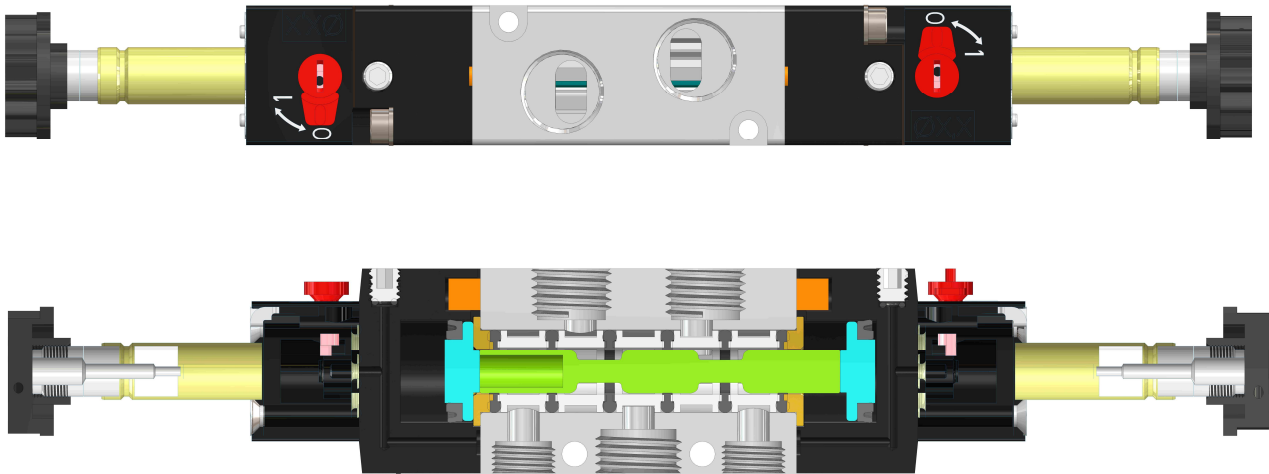
DRAWING

(5/2 bistable) (external pilot)



SOLID IMAGE

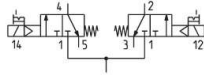
(5/2 bistable solenoid)



ACCESSORIES & SPARE PARTS

COILS & SOCKETS
(page 16)6 * spool o-ring
2 * valve piston gasketO- RING KIT
Cod. SMF1801B9 mm BRASS
TUBE & NUCLEUS
Cod. SMV18029 mm BRASS
TUBE & NUCLEUS
Cod. SMV3218TBP3MNK

2 * 3/2 n.c. – 1/4"



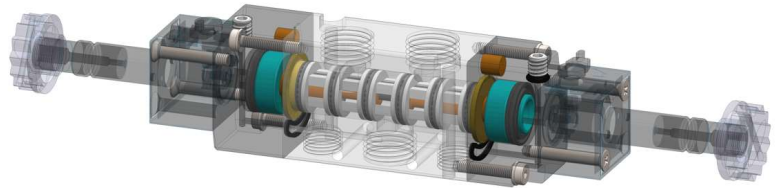
- ❑ Flow rate is 400 NI / min. at 6 bar
- ❑ External pilot is available for all the solenoid serie with M5 thread
- ❑ Pneumatic connection ports 1.2.4. .. 1/4" .. 3.5 1/8"
- ❑ Body AL. 6000 natural anodized
- ❑ Covers AL. 6000 black colored anodized
- ❑ Min. working pressure is 2,5 bar
- ❑ 3 cycle / sec. reachable max. life time with suitable Ø dia. and stroke
- ❑ Suitable for vacuum and low pressure application with external pilot

ORDERING CODES for a VALVE

2 * 3/2 N.C. – 1/4" DOUBLE SOLENOID

: SMF3214C802MKNK

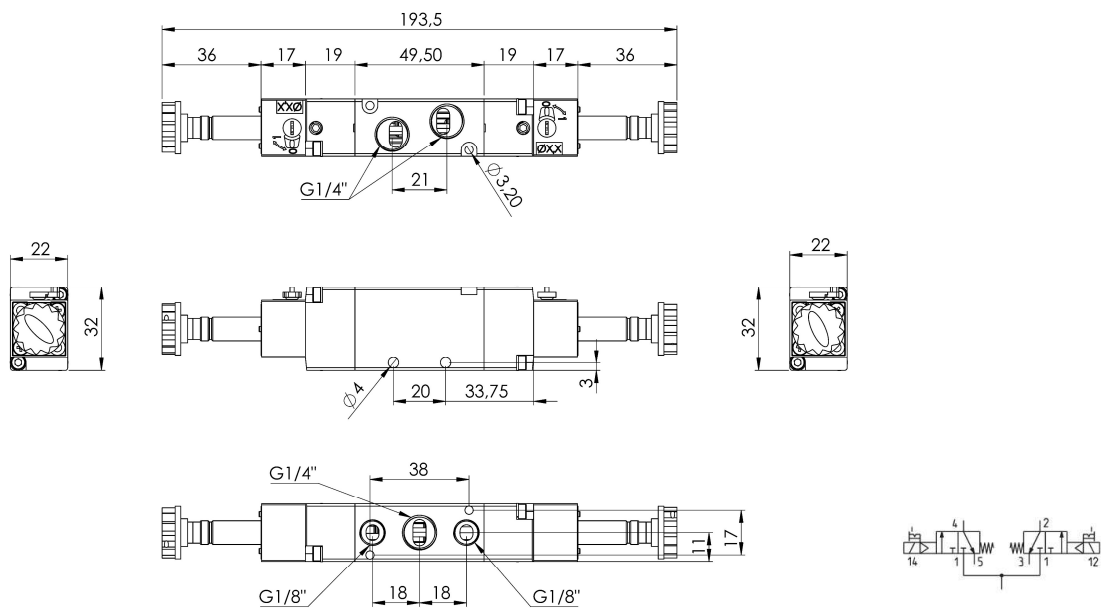
INTERNAL VIEW



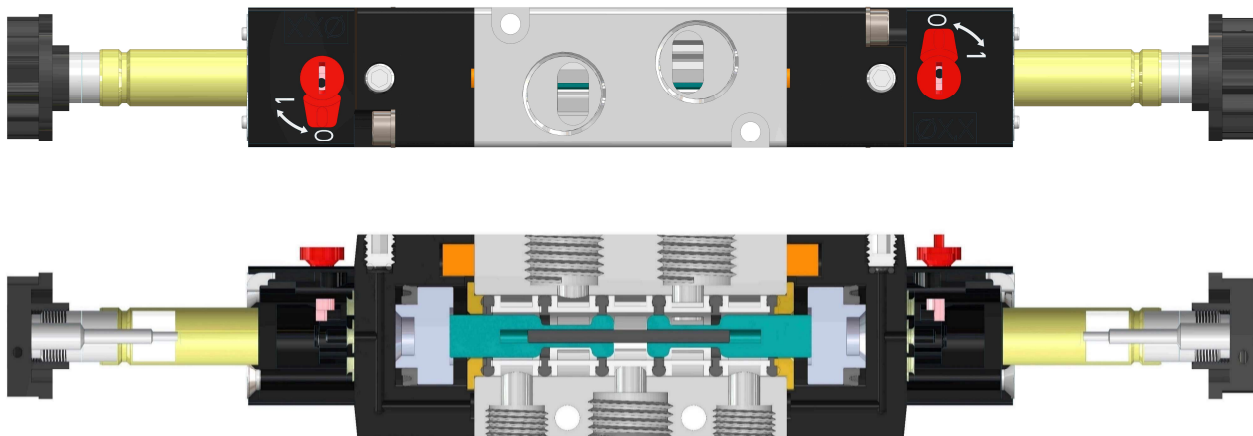
Fluid	:	Compressed filtered air with or without lubrication
		If lubrication used at ones must be continuous .
Pressure range	:	min.2,5 bar max. 10 bar
Temperature range	:	- 10 ° C / + 60 ° C
Version	:	2 * 3/2 n.c. - 1/4" double solenoid air pilot return
Materials		
Covers	:	AL. 6000 black colored anodized
spool	:	AL. 6000 natural anodized 0,4 µm
Seals	:	NBR
Body	:	AL. 6000 natural anodized
Nominal Orifice	:	5 mm
Mounting	:	In any position
Flow rate	:	400 NI/ min. at 6 bar Δp 1 bar
Life time	:	3 cycle / sec. with suitable actuator / 50 mio. cycle life time under proper condition
Vacuum & low pressure app.	:	Not suitable , externa pilot application is not possible

DRAWING

(2 * 3/2 N.C. double solenoid)



SOLID IMAGE



ACCESSORIES & SPARE PARTS



COILS & SOCKETS
(page 16)



6 * spool o-ring
2 * valve piston gasket

O- RING KIT
Cod. SMV1801

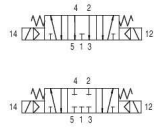


9 mm BRASS
TUBE & NUCLEUS
Cod. SMV1802



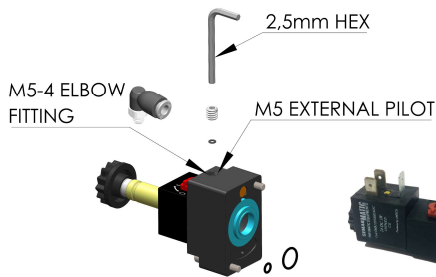
9 mm BRASS
TUBE & NUCLEUS
Cod. SMV3218TBP3MNK

5/2 – 1/4" SINGLE SOLENOID (spring return / external pilot)



For external pilot application,

- 1) Unscrew the setskur
- 2) Take the o-ring out
- 3) Screw M5 threaded fitting
- 4) Disassemble the head of valve
- 5) Adapt the special shaped o-ring by closing the air pilot supply
- 6) Assemble the valve head

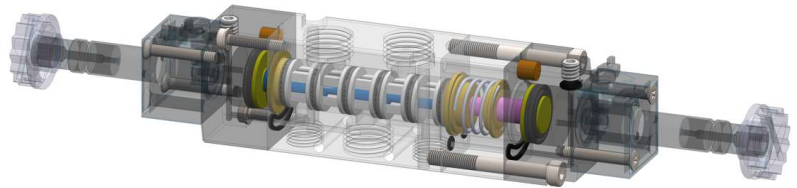


- ❑ Flow rate is 400 NI / min. at 6 bar
- ❑ External pilot is available for all the solenoid serie with M5 thread
- ❑ Pneumatic connection ports 1.2.4. .. 1/4" .. 3.5 1/8"
- ❑ Body AL. 6000 natural anodized
- ❑ Covers AL. 6000 black colored anodized
- ❑ Min. working pressure is 3 bar
- ❑ 3 cycle / sec. reachable max. life time .
- ❑ Suitable for vacuum and low pressure application with external pilot

ORDERING CODES for a VALVE

5/3 – 1/4" C.C. DOUBLE SOLENOID	: SMF5314CB00MKM
5/3 – 1/4" C.C. EXTERNAL PILOT	: SMF5314CBDPMKM
5/3 – 1/4" O.C. DOUBLE SOLENOID	: SMF5314CB00MAM
5/3 – 1/4" O.C. EXTERNAL PILOT	: SMF5314CBDPMAM

INTERNAL VIEW



Fluid : Compressed filtered air with or without lubrication

If lubrication used at ones must be continious .

Pressure range : min.3 bar max. 10 bar

Temperature range : - 10 ° C / + 60 ° C

Version : 5/3 - 1/4" double solenoid C.C. / O.C. – External Pilot

Materials

Covers	: AL. 6000 black colored anodized
spool	: AL. 6000 natural anodized 0,4 µm
Seals	: NBR
Body	: AL. 6000 natural anodized

Nominal Orifice : 5 mm

Mounting : In any position

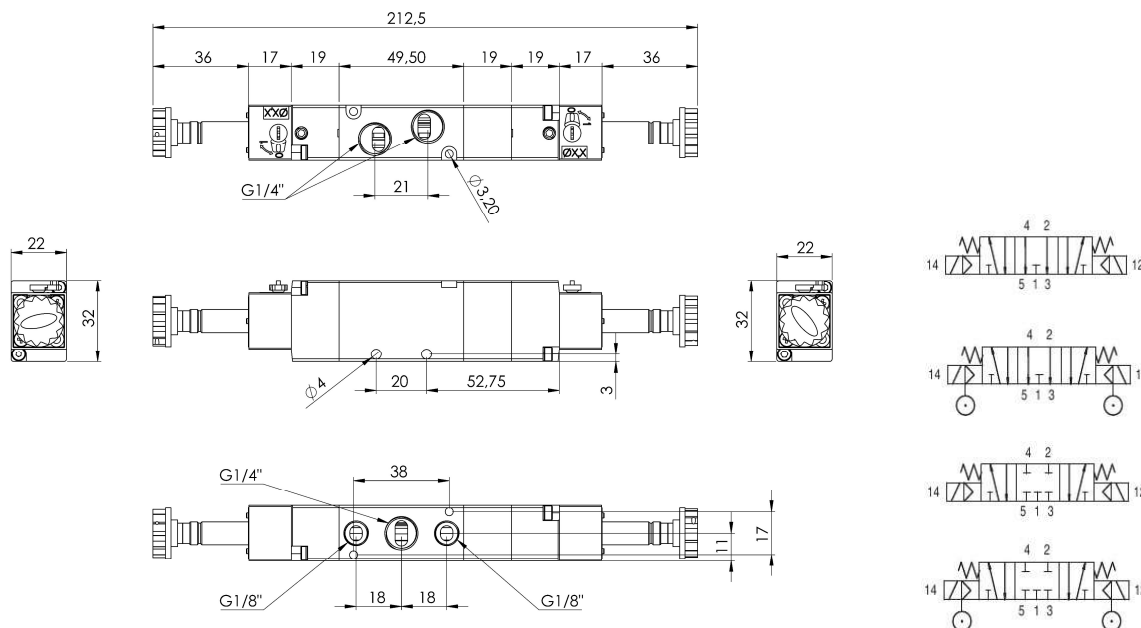
Flow rate : 400 NI/ min. at 6 bar Δp 1 bar

Life time : 3 cycle / sec. with suitable actuator / 50 mio. cycle life time under proper condition

Vacuum & low pressure app. : Suitable only with external pilot version

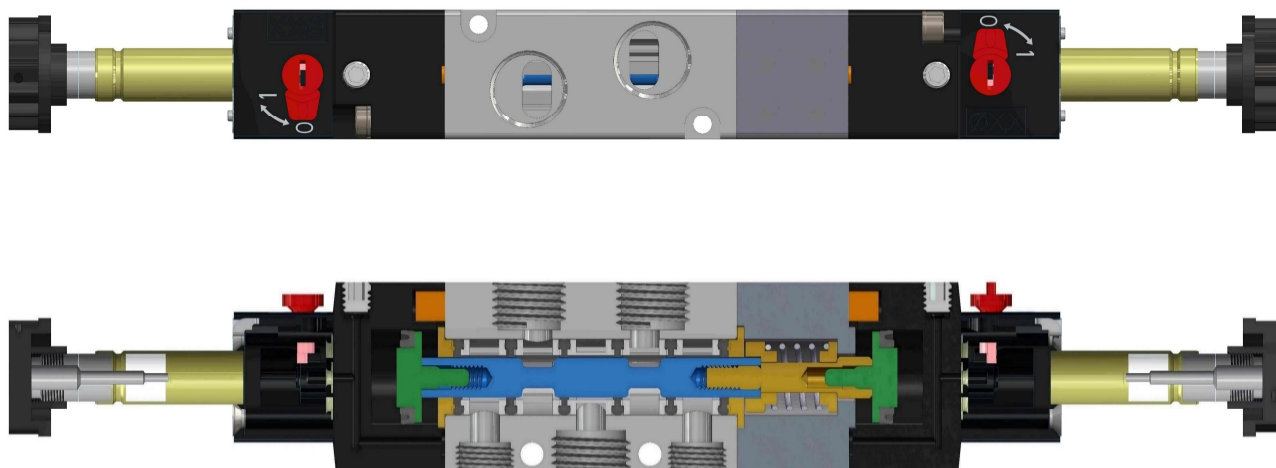
DRAWING

(5/3 C.C .. O.C. .. external pilot)



SOLID IMAGE

(5/3 C.C. DOUBLE SOLENOID)



ACCESSORIES & SPARE PARTS

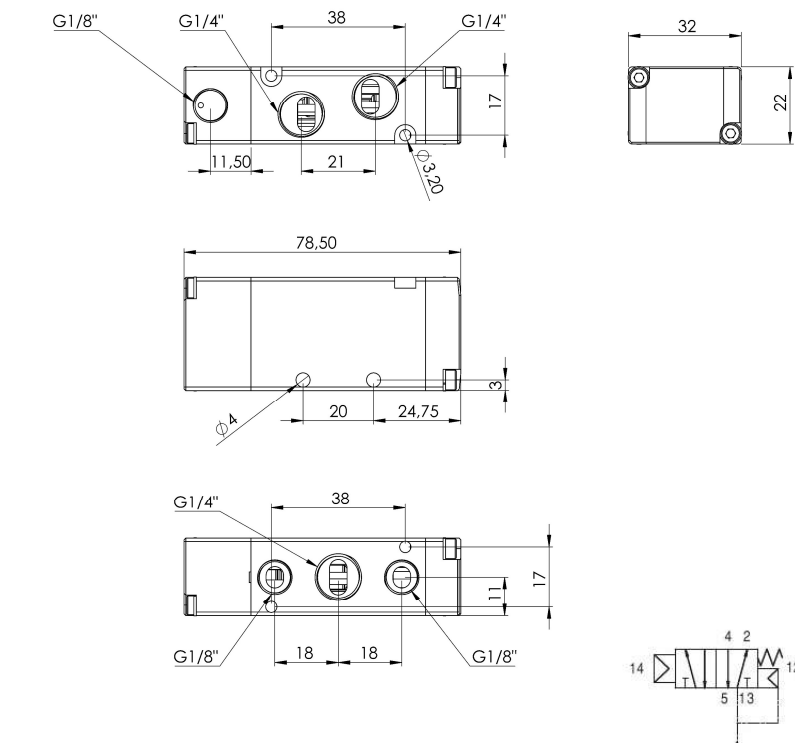
COILS & SOCKETS
(page 16)6 * spool o-ring
2 * valve piston gasketO- RING KIT
Cod. SMV18019 mm BRASS
TUBE & NUCLEUS
Cod. SMV18029 mm BRASS
TUBE & NUCLEUS
Cod. SMV3218TBP3MNK

5/2 – 1/4" PILOT / SPRING



- * Flow rate is 600 NI / min. at 6 bar .
- * Max working pressure is 10 bar .
- * Aluminium body.
- * Minimum working pressure is 1,5 bar
- * 1/8" pilot port
- * Suitable for non oily applications
- * Spool with spring return air pilot supported

DRAWINGS



ORDERING CODE for a VALVE

5/2 – 1/4" PILOT / SPRING : SMF5214HY00M00

* For spare part and bases see page 13 .

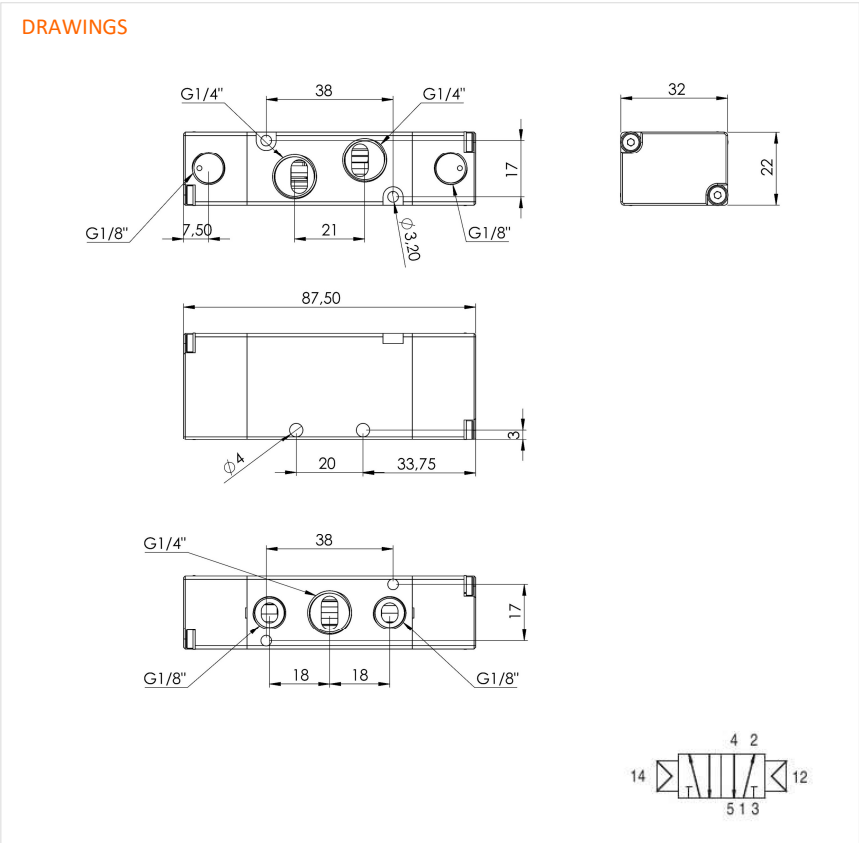
Fluid	: Compressed filtered air with or without lubrication
	If lubrication used at ones must be continious .
Pressure range	: min.1,5 bar - max. 10 bar
Temperature range	: - 10 ° C / + 60 ° C
Version	: 5/2 - 1/4" PILOT / SPRING
Materials	
Covers	: AL. 6000 serie black colored anodized
spool	: AL. 6000 serie natural anodized 4 µm
Seals	: NBR
Body	: AL. 6000 serie natural anodized
Orifice	: 5 mm
Mounting	: In any position
Flow rate	: 600 NI/ min at 6 bar
Cycle per min.	: 3 cycle / sec (depends upon the signal inlet and outlet)
Vacuum	: Suitable

5/2 – 1/4" PILOT / PILOT



- * Flow rate is 600 NI / min. at 6 bar .
- * Max working pressure is 10 bar .
- * Aluminium body.
- * Minimum working pressure is 1 bar
- * 1/8" pilot port
- * Suitable for non oily applications

DRAWINGS



ORDERING CODE for a VALVE

5/2 – 1/4" PILOT / PILOT : SMF5214HH00M00

* For spare part and bases see page 13.

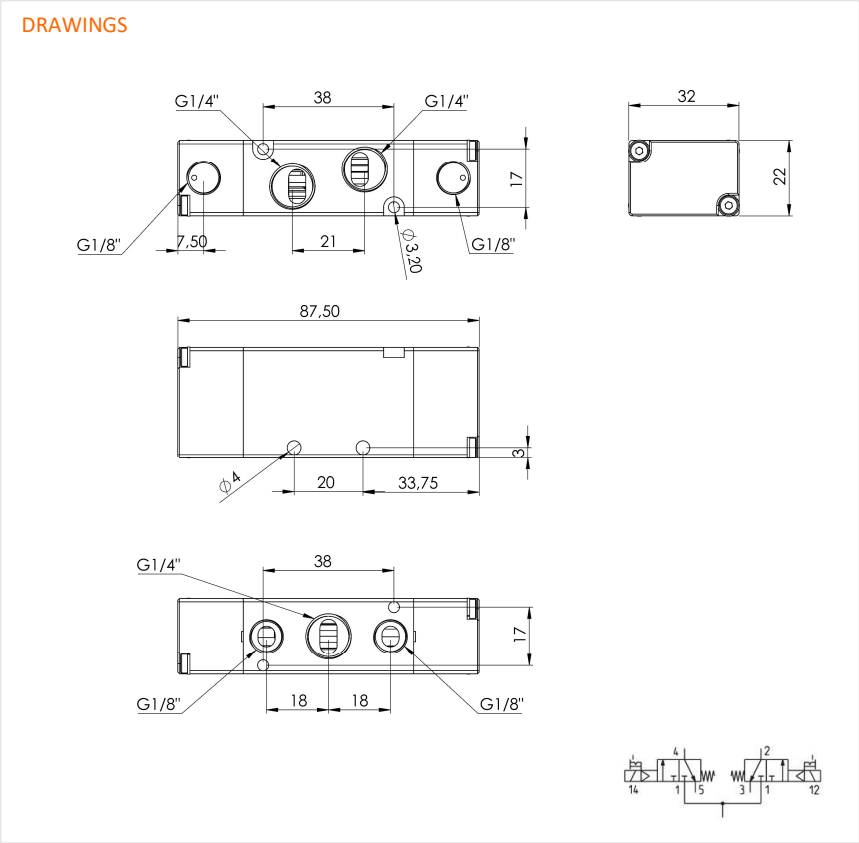
Fluid	: Compressed filtered air with or without lubrication
	If lubrication used at ones must be continious .
Pressure range	: min.1 bar - max. 10 bar
Temperature range	: - 10 ° C / + 60 ° C
Version	: 5/2 - 1/4" PILOT / PILOT
Materials	
Covers	: AL. 6000 serie black colored anodized
spool	: AL. 6000 serie natural anodized 4 µm
Seals	: NBR
Body	: AL. 6000 serie natural anodized
Orifice	: 5 mm
Mounting	: In any position
Flow rate	: 600 NI/ min at 6 bar
Cycle per min.	: 4 cycle / sec. (depends upon the signal inlet and outlet)
Vacuum	: Suitable

2 * 3/2 – 1/4" PILOT / PILOT



- * Flow rate is 400 NI / min. at 6 bar .
- * Max working pressure is 10 bar .
- * Aluminium body.
- * Minimum working pressure is 2,5 bar
- * 1/8" pilot port
- * Suitable for non oily applications
- * Spool with air spring return

DRAWINGS



ORDERING CODE for a VALVE

2 * 3/2 N.C. – 1/4" PILOT / PILOT

: SMF3214HH02MNK

* For spare part and bases see page 13.

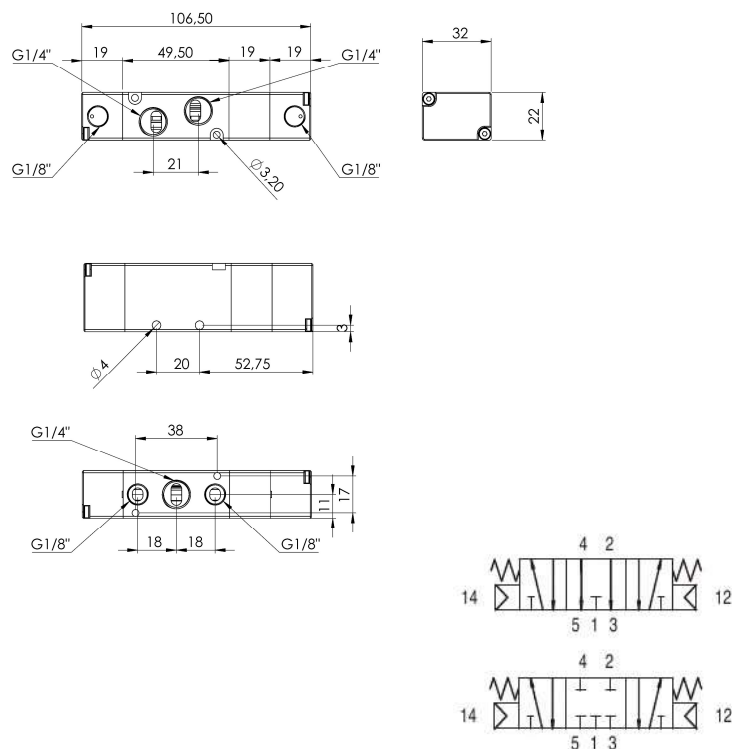
Fluid	: Compressed filtered air with or without lubrication
	If lubrication used at ones must be continious .
Pressure range	: min. 2,5 bar - max. 10 bar
Temperature range	: - 10 ° C / + 60 ° C
Version	: 2 * 3/2 - 1/4" PILOT / PILOT
Materials	
Covers	: AL. 6000 serie black colored anodized
spool	: AL. 6000 serie natural anodized 4 µm
Seals	: NBR
Body	: AL. 6000 serie natural anodized
Orifice	: 5 mm
Mounting	: In any position
Flow rate	: 400 NI/ min at 6 bar
Cycle per min.	: 3 cycle / min (depends upon the signal inlet and outlet)
Vacuum	: Not possible

5/3 – 1/4" DOUBLE PILOT C.C / O.C.



- * Flow rate is 400 NI / min. at 6 bar .
- * Max working pressure is 10 bar .
- * Aluminium body.
- * Minimum working pressure is 3 bar
- * 1/8" pilot port
- * Suitable for non oily applications
- * Spool with integrated spring return

DRAWINGS



ORDERING CODE for a VALVE

5/3 – 1/4" DOUBLE PILOT C.C.

: SMF5314HH00MKM

5/3 – 1/4" DOUBLE PILOT O.C.

: SMF5314HH00MAM

* For spare part and bases see page 13.

Fluid : Compressed filtered air with or without lubrication

If lubrication used at ones must be continious .

Pressure range : min.3 bar - max. 10 bar

Temperature range : - 10 ° C / + 60 ° C

Version : 5/3 - 1/4" DOUBLE PILOT C.C. / O.C.

Materials

Covers : AL. 6000 serie black colored anodized

spool : AL. 6000 serie natural anodized 4 µm

Seals : NBR

Body : AL. 6000 serie ntural anodized

Orifice : 5 mm

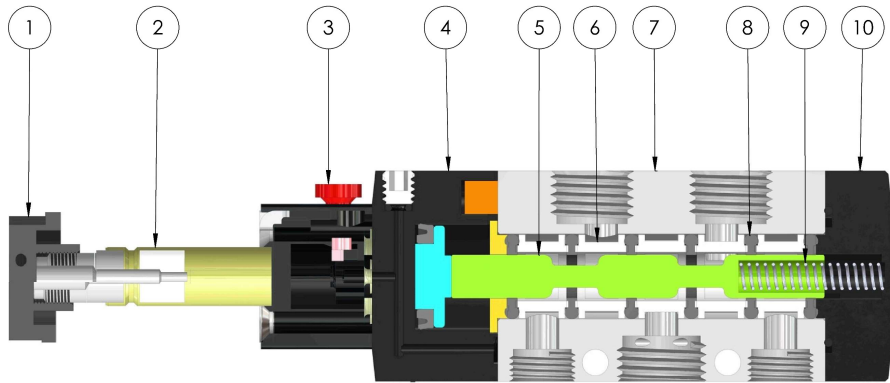
Mounting : In any position

Flow rate : 400 NI/ min at 6 bar

Cycle per min. : 2 cycle / sec. (from port 2 or port 4 to neutral position)

Vacuum : Suitable

INTERNAL PARTS OF SEMAKMATIC SMF SERIE SOLENOID VALVE



1	NUT	PLASTIC MATERIAL
2	ARMATURE	BRASS - STAINLESS STEEL SPECIALLY
3	MANUEL OVERRİDE	PLASTIC MATERIAL
4	HEAD	AL 6000 SERIES BLACK COLORED ANODIZED
5	SPOOL	HARD ALUMINIUM ANODIZED
6	DISTANCERS	FORTRON 1140 L4
7	BODY	AL 6000 NATUREL ANODIZED
8	SEALS	HYDROGENATED NITRILE BUTADIENE RUBBER (HNBR)
9	SPRING	STAINLESS STEEL
10	BACK COVER	AL 6000 SERIES BLACK COLORED ANODIZED

SPARE PARTS of THE SMF 1/4" VALVES (O – RING kit)



O- RING KIT
Cod. SMF1401

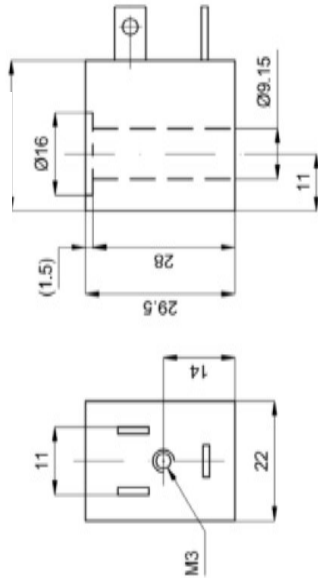


O- RING KIT
Cod. SMF1401B

Cod.	Description
SMFPL02	2 Position
SMFPL03	3 Position
SMFPL04	4 Position
SMFPL05	5 Position
SMFPL06	6 Position
SMFPL07	7 Position
SMFPL08	8 Position
SMFPL09	9 Position
SMFPL10	10 Position



COILS

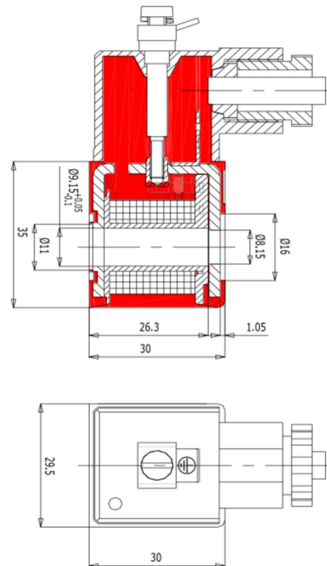


	For DC	For AC
Voltage tolerance	+ / - 10 %	+ / - 10 %
Electrical Consumption	3W	4.2 VA
Frequency	-	50 / 60 Hz.
Voltages	24	24 - 110 - 220
Duty cycle	% 100 ED	
Temperature range	- 15 °C / + 50 °C	
Coil size	22 mm wide / suitable for 9 mm brass tube	
Terminal / Class	DIN 43650 B / F Class	

ORDERING CODES

SMB220900024DC	for 24 V DC
SMB220900024AC	for 24 V AC
SMB220900220AC	for 220 V AC
SMB220900110AC	for 110 V AC

EXPROOF COILS

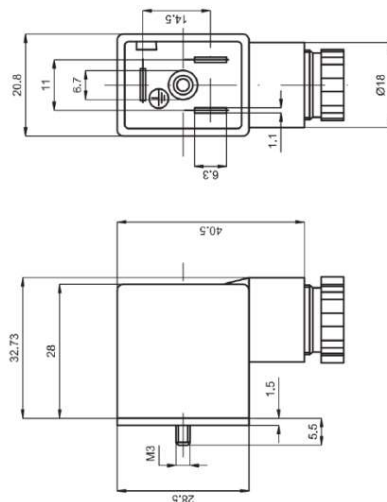


	For DC	For AC
Voltage tolerance	+ / - 10 %	
Electrical Consumption	3W	3.2 VA
Frequenzy	-	50 / 60 Hz.
Voltage	24	220
Duty cycle	% 100 ED	
Temperature range	- 15 °C / + 50 ° C	
Coil size	30 mm wide / suitable for 9 mm brass tube	
Conformity	94 / 9 / EC (group 2)	
Cable length	3 Meter	
Certificate	ATEX II2 GD Eexm II T5	

ORDERING CODES

SMB3009EX024DC	for 24 V DC
SMB3009EX022AC	for 220 V AC

SOCKETS



	Standart	24 v /220 v ac
Color	Black	transparent
Led color	-	Red
Protection	-	only with 24 v
Temperature range	- 15 °C / + 50 ° C	
Socket size	22 mm wide	
Terminal	DIN 43650 B	

ORDERING CODES

SMBS22LED220AC	for 22 mm 220 v ac led
SMBS22LED24V00	for 22 mm 24 v ac dc led
SMBS2200000000	for 22 mm standart socket

SMG SERIE VALVES



SMG SERIE AIR PILOT VALVES



MULTIPIN VALVE TERMINAL



MULTIPIN VALVE TERMINAL



FOR MORE INFORMATION PLEASE ASK THE DETAILED CATALOGUE
sematik@sematik.com

SMF 1/4"



SEMATİK

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OCAK 2025 - JAN. 2025