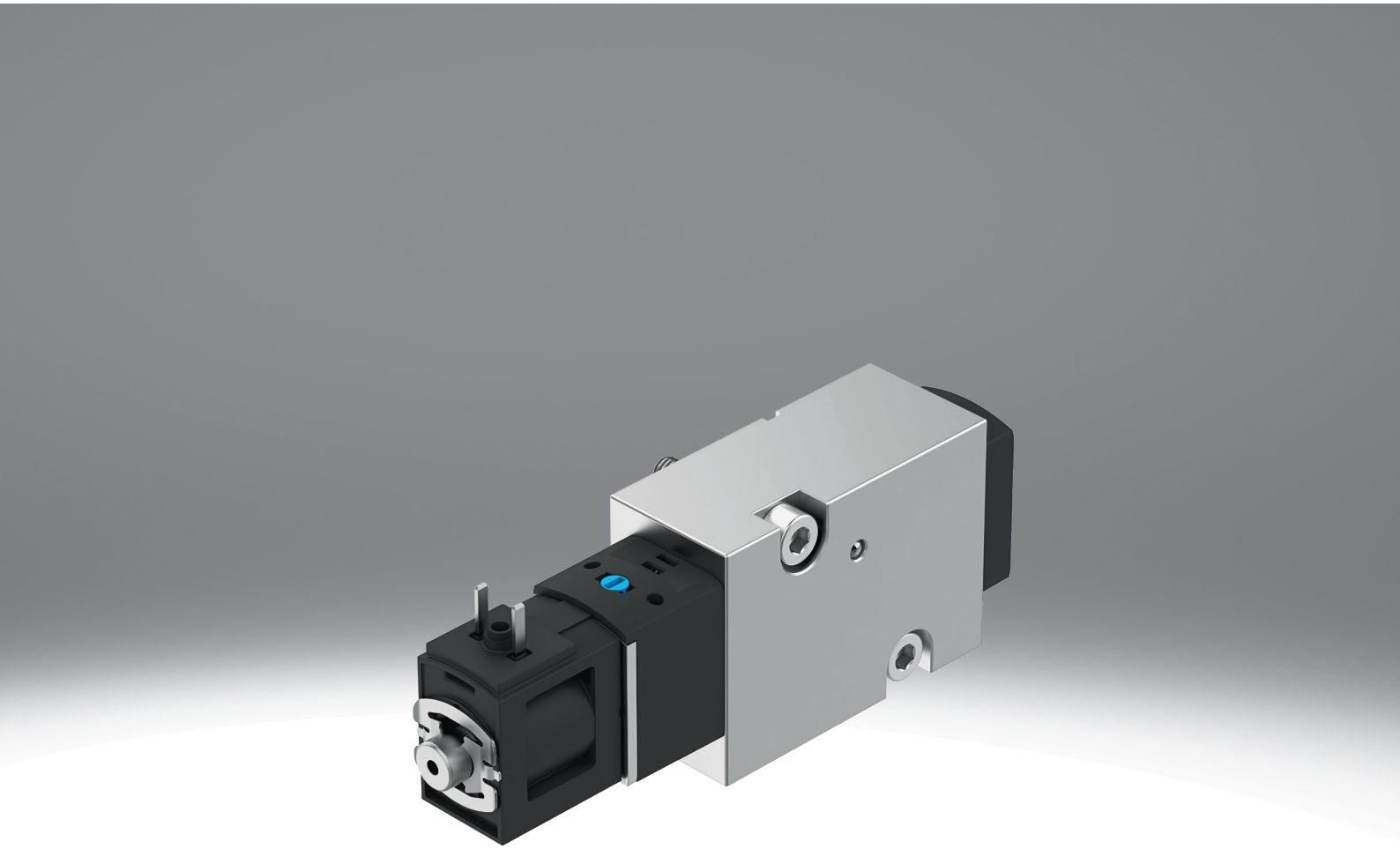
Solenoid valve VSNC-G1/8



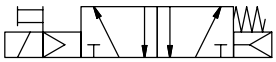
Characteristics

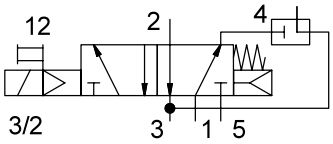
At a glance

The Namur valve VSNC is designed for the requirements of the process industry as well as industrial automation. It can be mounted on all G1/8 drives with NAMUR connection pattern to VDI/VDE 3845. This series is an extension of the VSNC product group with the piston spool design, which is smaller and cost-effective.
Function:
VSNC valves are pilot valves for single- and double-acting quarter turn and linear actuators with connection pattern to VDI/VDE 3845, such as DAPS, DFPD, DLP. With the appropriate accessories, such as a connection kit, they can also be mounted on actuators without a NAMUR interface, such as diaphragm actuators. A mechanical spring (single solenoid valves) ensures safe switching in the initial position in the event of a power failure. Working ports 2 and 4 are designed according to VDI/VDE 3845 NAMUR.

Additional function

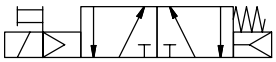
[_] None

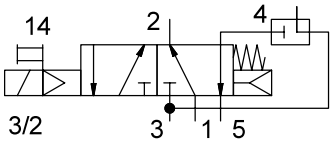




For each valve function (3/2- or 5/2-way valve) of the VSNC-G1/8 two basic positions can be selected in the de-energised state. In the “classic” basic position, the passage from 1 to 4 is pressurised, whereas port 2 is exhausted to 3 (VSNC-...-FK-...). The characteristic “WITHOUT” must be selected for the additional function in this case.
Note: Generally, the function of a 3/2-way valve includes an integrated exhaust return (spring chamber blanketing) and thus protects the spring chamber of the actuator from external influences.

[A] Connections swapped





Another possibility is the configuration VSNC-FKA-... where the basic position is pressurised from 1 to 2 and exhausted from 4 to 5 (connections swapped). This gives you the option of always leaving the valve orientation/valve mounting for your quarter turn actuator the same, but changing the quarter turn actuator’s direction of rotation.

Type code

001	Series	
VSNC	Solenoid valve VSNC	

002	Directional control valve type	
F	Flanged valve	

003	Design principle	
K	Piston spool with sealing ring	

004	Additional function	
	None	
A	Connections swapped	

005	Valve function	
M52	5/2-way valve, single solenoid/monostable	
M32C	3/2-way valve, normally closed	

006	Reset method for monostable/single solenoid valves	
R	Mixed, pneumatic/mechanical spring	

007	Manual override	
D	Non-detenting, detenting	

008	Pneumatic connection	
G18	G1/8	

009	Nominal operating voltage	
1	24 V DC	

010	Electrical connection	
C1	Plug pattern type C, to EN 175301-803	

011	Version	
S	Focused properties	

Datasheet

General technical data	
Valve function	3/2-way, closed, monostable, 5/2-way, monostable, Connections swapped
Construction width	25.5 mm
Design	Piston slide with sealing ring
Sealing principle	Soft
Type of actuation	Electric
Type of reset	Mechanical spring, Pneumatic spring
Type of piloting	Pilot actuated
Manual override	Detenting
Exhaust-air function	With flow control option
Breather connection	Not ducted
Pilot air supply	Internal
Type of mounting	With through-hole
Mounting position	optional
Standard nominal flow rate	400 l/min
Standard nominal flow rate, exhaust return 4->3	100 l/min
b value	0.3
C value	2.1 l/sbar
Pneumatic connection, port 1	G1/8
Pneumatic connection, port 2	NAMUR port pattern
Pneumatic connection, port 3	G1/8
Pneumatic connection, port 4	NAMUR port pattern
Pneumatic connection, port 5	G1/8
Conforms to standard	VDI/VDE 3845 (NAMUR)
Product weight	220 g

Operating and ambient conditions	
Valve function	3/2-way, closed, monostable, 5/2-way, monostable, Connections swapped
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure	2.5 ... 8 bar
Ambient temperature	-20 ... 50°C
Media temperature	-20 ... 50°C
Corrosion resistance class CRC [1)]	1 - Low corrosion stress
Degree of protection	IP65

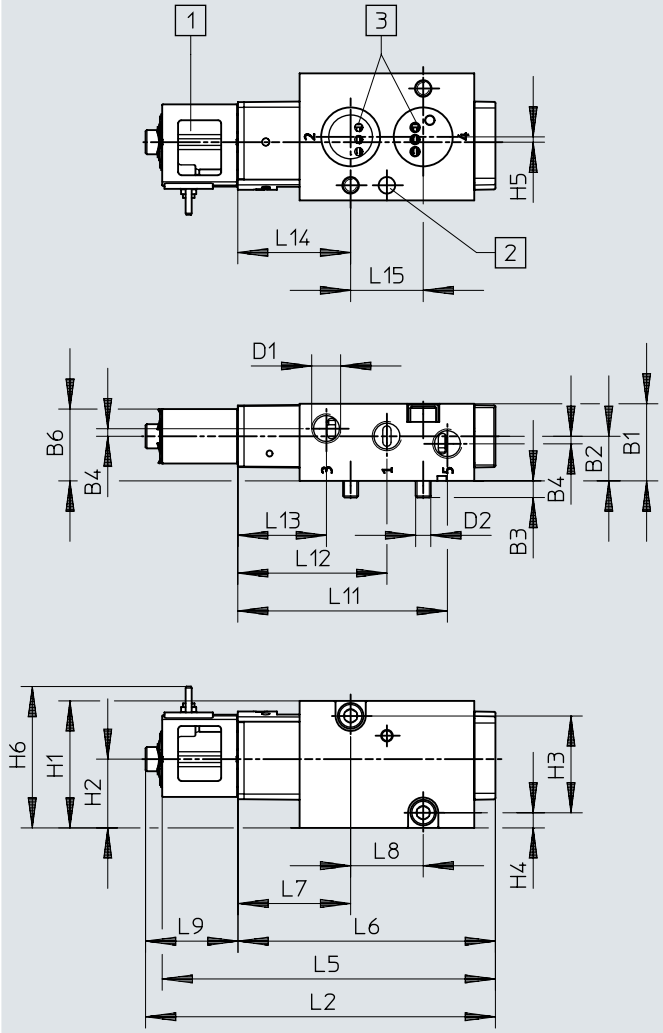
1) More information www.festo.com/x/topic/kbk

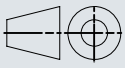
Electrical data	
Valve function	3/2-way, closed, monostable, 5/2-way, monostable, Connections swapped
Electrical connection	Type C
Characteristic coil data	24 V DC: 2.4 W
Duty cycle	100%
Switching time on	≤50 ms
Switching time off	≤50 ms

Materials	
Short type code	VSNC
Material housing	Wrought aluminium alloy
Material seals	NBR
Material screws	High-alloy stainless steel

Dimensions

Dimensions – 3/2 – 5/2-way valve Download CAD data ➔ www.festo.com





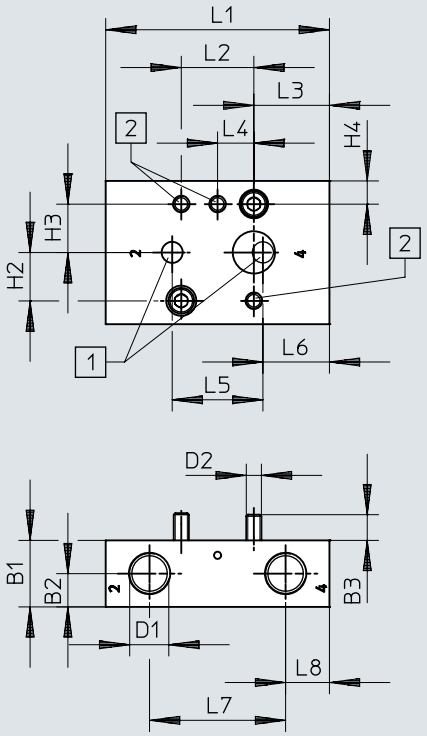
[1] Solenoid coil
[2] Ø 5x4 to DIN 913-M5x10-45h
[3] Working port 2 and 4, NAMUR connection pattern

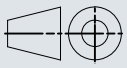
	B1	B2	B3	B4	B6	D1	D2	H1	H2	H3	H4	H5
VSNC-FK-M52-RD-G18-1C1-S	25,5	14,8	5,5	2,5	23,8	G1/8	M5	42	22,7	32	5	1,7
VSNC-FKA-M52-RD-G18-1C1-S												
VSNC-FK-M32C-RD-G18-1C1-S												
VSNC-FK-M32C-RD-G18-1C1-S												

	H6	L2	L5	L6	L7	L8	L9	L11	L12	L13	L14	L15
VSNC-FK-M52-RD-G18-1C1-S	46,8	115,7	110,2	85,2	37,4	24	30,5	69,4	49,4	29,4	37,4	24
VSNC-FKA-M52-RD-G18-1C1-S												
VSNC-FK-M32C-RD-G18-1C1-S												
VSNC-FK-M32C-RD-G18-1C1-S												

Dimensions

Dimensions – Connecting plate Download CAD data ➔ www.festo.com



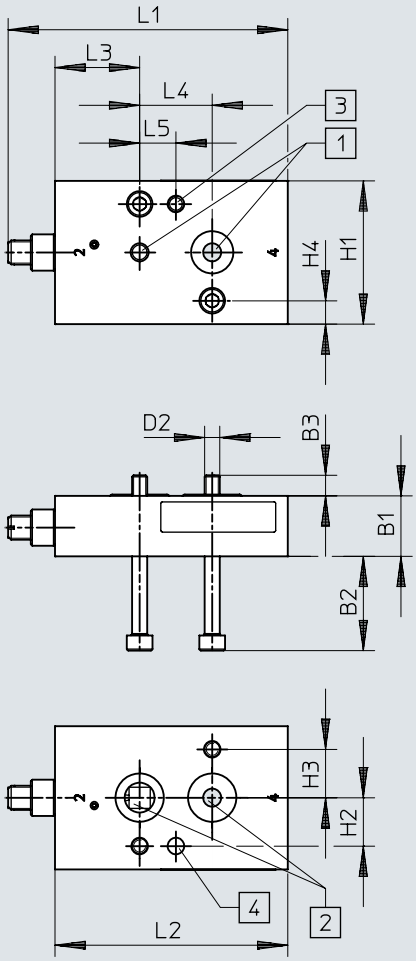


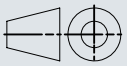
[1] Working port 2 and 4, NAMUR connection pattern
[2] Hole for M5 thread

	B1	B2	B3	D1	D2	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6	L7	L8
VABS-B14-T-FG14	22	11	8,5	G1/4	M5	47,4	16	16	7,7	74	24	25	12	30	22	45	14,5
VABS-B14-T- FN14				1/4 NPT													

Dimensions

Dimensions – Throttle plate VABF-...P1 Download CAD data ➔ www.festo.com



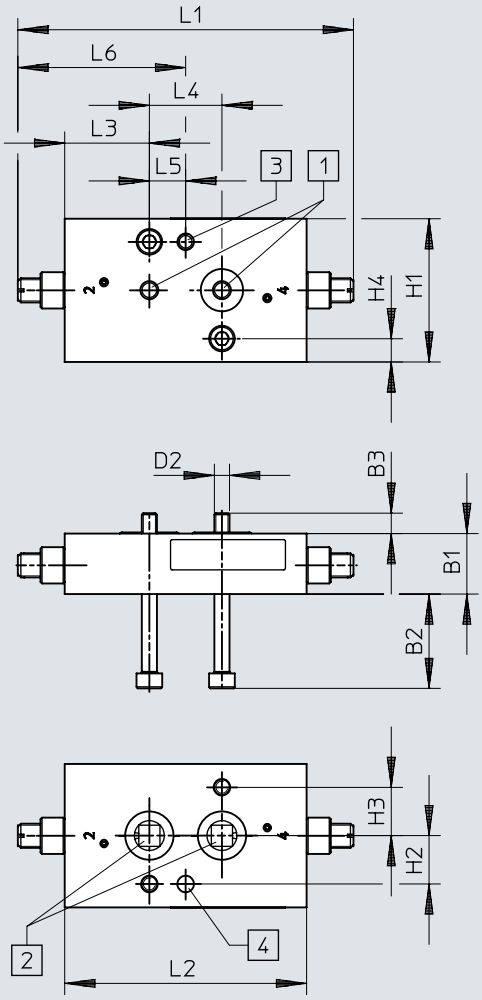


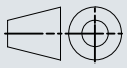
[1] Connection pattern 1/4 to "NAMUR"
[2] Connection pattern 1/4 to "NAMUR"
[3] Hole for M5 thread
[4] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

	B1	B2	B3	D2	H1	H2	H3	H4	L1		L2	L3	L4	L5
									min.	max.				
VABF-B14-F1B1P1-FF14	20	31,2	6,8	M5	47,4	16	16	7,7	86,5	92,5	77	28	24	12

Dimensions

Dimensions – Throttle plate VABF-...P2 Download CAD data ➔ www.festo.com



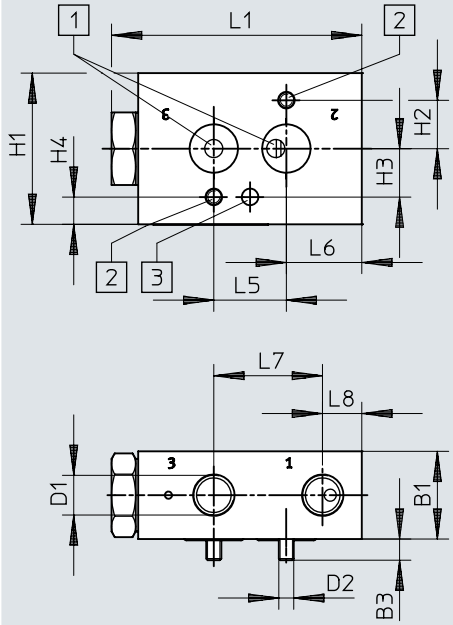


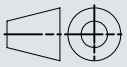
[1] Connection pattern 1/4 to "NAMUR"
[2] Connection pattern 1/4 to "NAMUR"
[3] Hole for M5 thread
[4] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

	B1	B2	B3	D2	H1	H2	H3	H4	L1		L2	L3	L4	L5	L6	
									min.	max.					min.	max.
VABF-B14-F1B1P2-FF14	20	31,2	6,8	M5	47,4	16	16	7,7	99	110	80	28	24	12	49,5	55,5

Dimensions

Dimensions – Exhaust plate Download CAD data ➔ www.festo.com



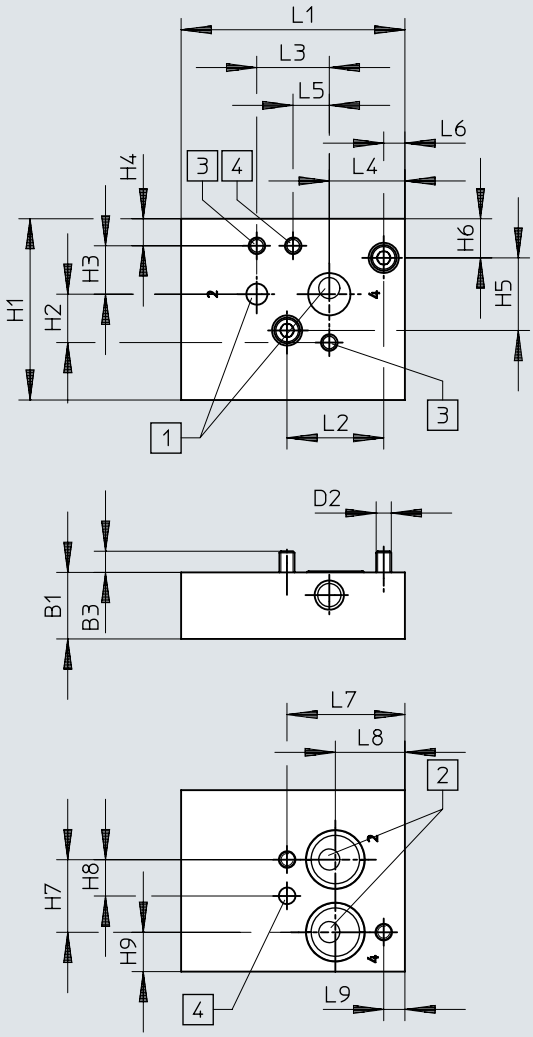


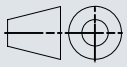
[1] Connection pattern 1/4 to "NAMUR"
[2] Hole for thread
[3] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

	B1	B3	D1	D2	H1	H2	H3	H4	L1	L5	L6	L7	L8
VABF-B14-M3-G14	29	7	G1/4	M5	50	16	16	9	82,8	24	25	36	13
VABF-B14-M3-N14			1/4 NPT										

Dimensions

Dimensions – Mounting plate VABS-B14-90-FF14 Download CAD data ➔ www.festo.com





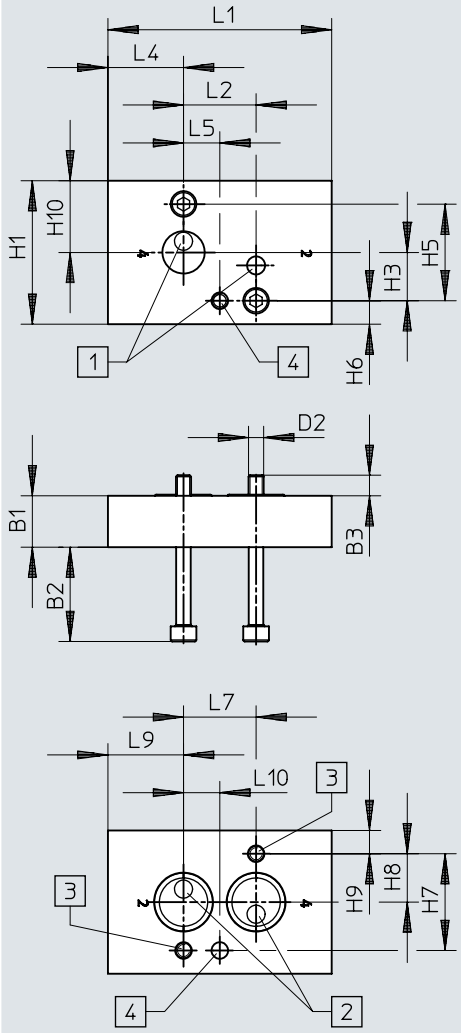
[1] Connection pattern 1/4 to “NAMUR”
[2] Connection pattern 1/4 to “NAMUR”
[3] Hole for M5 thread
[4] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

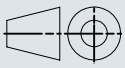
	B1	B3	D2	H1	H2	H3	H4	H5	H6	H7	H8
VABS-B14-90-FF14	22	7	M5	60	16	16	9	24	13	24	12

	H9	L1	L2	L3	L4	L5	L6	L7	L8	L9
VABS-B14-90-FF14	13	74	32	24	25	12	7	39	23	7

Dimensions

Dimensions – Mounting plate VABS-B14-180-FF14 Download CAD data ➔ www.festo.com



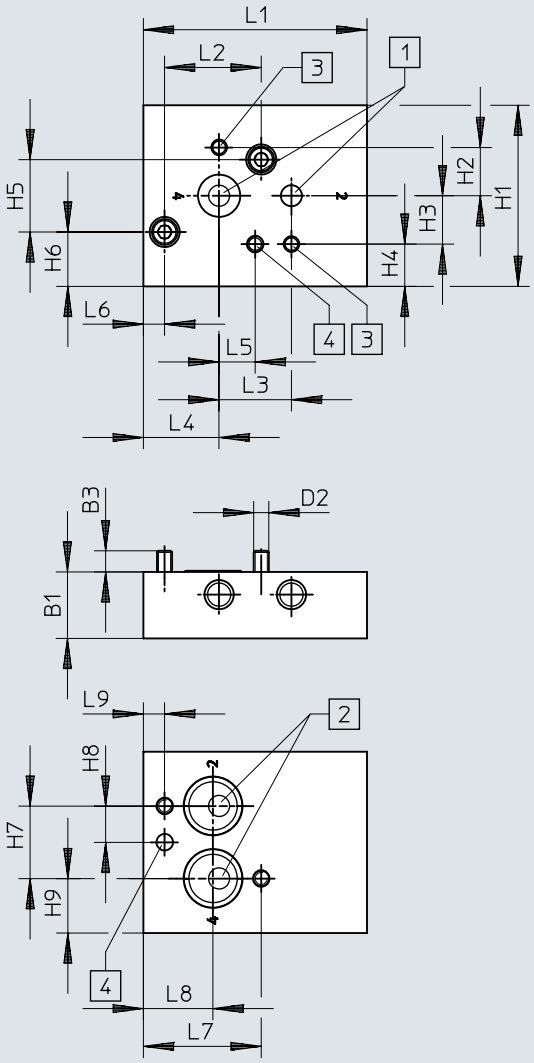


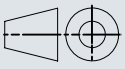
[1] Connection pattern 1/4 to “NAMUR”
[2] Connection pattern 1/4 to “NAMUR”
[3] Hole for M5 thread
[4] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

	B1	B2	B3	D2	H1	H3	H5	H6	H7	H8	H9	H10	L1	L2	L4	L5	L7	L9	L10
VABS-B14-180-FF14	17	31,2	6,8	M5	47,4	16	32	7,7	32	16	7,7	23,7	74	24	25	12	24	25	12

Dimensions

Dimensions – Mounting plate VABS-B14-270-FF14 Download CAD data ➔ www.festo.com





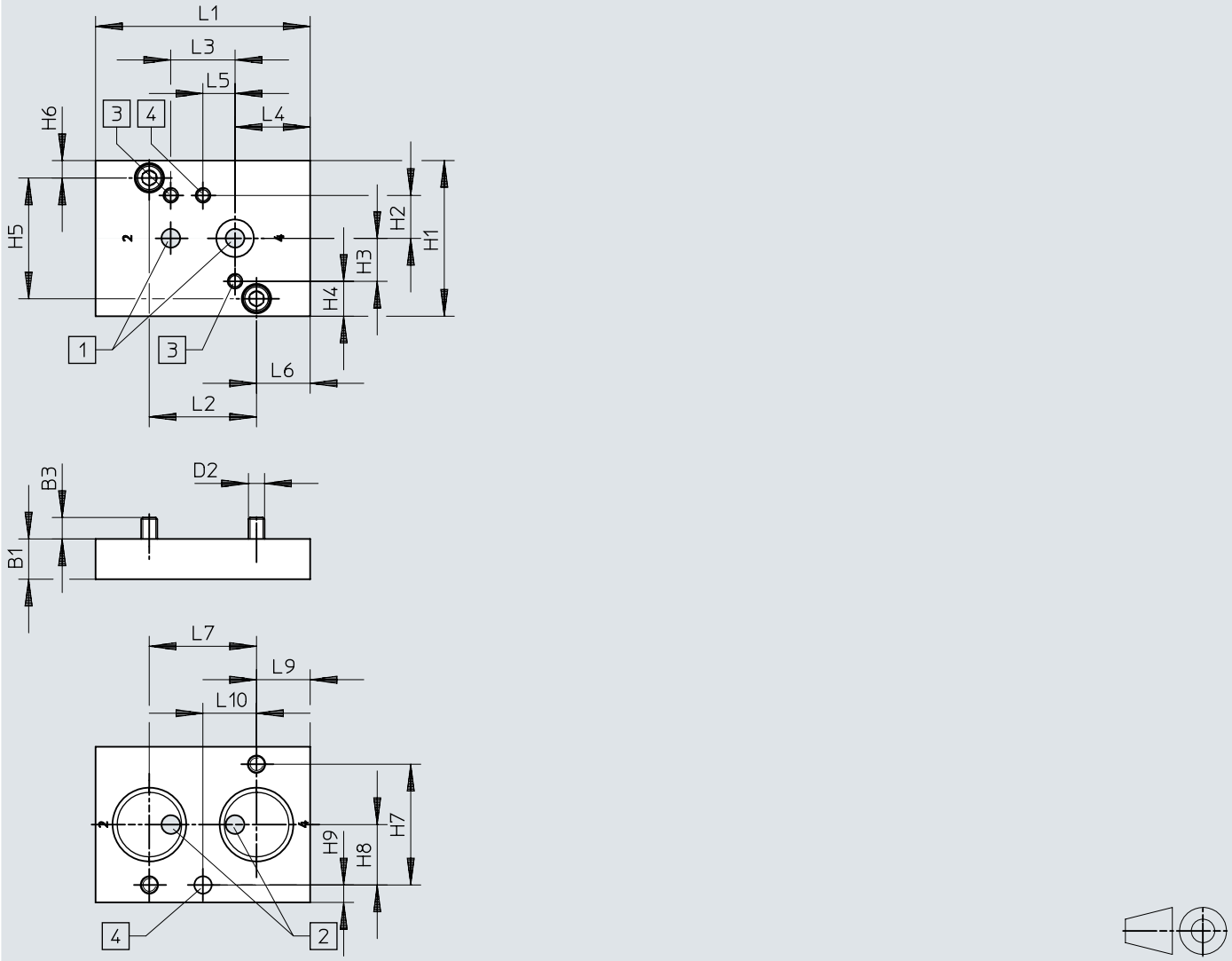
[1] Connection pattern 1/4 to "NAMUR"
[2] Connection pattern 1/4 to "NAMUR"
[3] Hole for M5 thread
[4] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

	B1	B3	D2	H1	H2	H3	H4	H5	H6	H7	H8
VABS-B14-270-FF14	22	7	M5	60	16	16	14	24	18	24	12

	H9	L1	L2	L3	L4	L5	L6	L7	L8	L9
VABS-B14-270-FF14	18	74	32	24	25	12	7	39	23	7

Dimensions

Dimensions – Mounting plate VABA-B14-FL12-FL14 Download CAD data ➔ www.festo.com



[1] Connection pattern 1/4 to “NAMUR”
[2] Connection pattern 1/2 to “NAMUR”
[3] Hole for M5 thread
[4] Drilled hole 5.5 mm Ø for threaded pin to DIN 913-M5x10-45H)

	B1	B3	D2	H1	H2	H3	H4	H5	H6	H7	H8
VABA-B14-FL12-FL14	15	8	M6	58	16	16	13	45	6,5	45	22,5

	H9	L1	L2	L3	L4	L5	L6	L7	L9	L10
VABA-B14-FL12-FL14	6,5	80	40	24	28	12	20	40	20	20

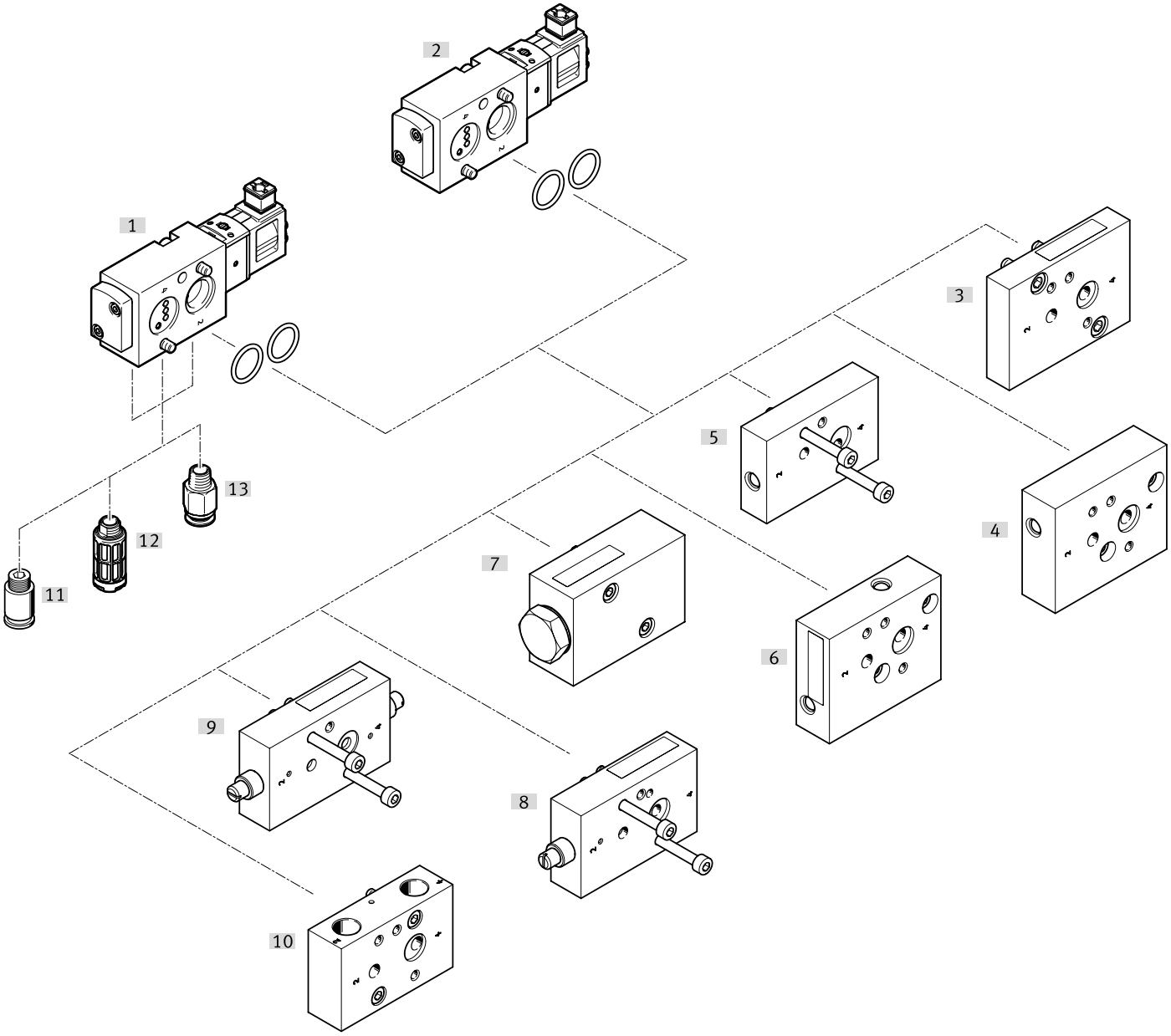
Ordering data

Ordering data

	Valve function	Construction width	Part no.	Type
	Connections swapped, 3/2-way, closed, monostable	25.5 mm	**8166612**	**VSNC-FKA-M32C-RD-G18-1C1-S**
	3/2-way, closed, monostable		**8166611**	**VSNC-FK-M32C-RD-G18-1C1-S**
	5/2-way, monostable, Connections swapped		**8128473**	**VSNC-FKA-M52-RD-G18-1C1-S**
	5/2-way, monostable		**8128472**	**VSNC-FK-M52-RD-G18-1C1-S**

Peripherals

Peripherals overview VSNC-...-G1/8



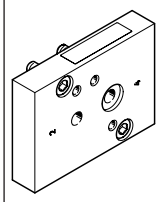
Accessories			→ Page/Internet
	Type/order code	Description	
[1]	Solenoid valves VSNC-...-M32C-...	3/2-way single solenoid valve, polymer cover, brass armature tube for actuating single-acting or double-acting drives	vsnc
[2]	Solenoid valves VSNC-...-M52-...	5/2-way single solenoid valve, polymer cover, brass armature tube for controlling double-acting drives	vsnc
[3]	Mounting plate VABA-B14-FL12-FL14	Mounting plate with Namur connection 1/2 and 1/4	17
[4]	Mounting plate VABS-B14-270-FF14	Namur connection can be turned 270°. It is also possible to mount a 1/4" NAMUR valve on a 1/2" actuator	17
[5]	Mounting plate VABS-B14-180-FF14	Namur connection can be turned 180°. It is also possible to mount a 1/4" NAMUR valve on a 1/2" actuator	17
[6]	Mounting plate VABS-B14-90-FF14	Namur connection can be rotated 90°. It is also possible to mount a 1/4" NAMUR valve on a 1/2" actuator	17
[7]	Exhaust plate VABF-B14-M3-...14	Exhausting a quarter turn actuator with Namur connection via a valve terminal or a normal in-line valve G 1/4 or 1/4 NPT	17
[8]	Throttle plate (single-acting) VABF-B14-F1B1P1-FF14	Flow control for single-acting semi-rotary drives	18
[9]	Throttle plate (double acting) VABF-B14-F1B1P2-FF14	Flow control for double-acting semi-rotary drives	18
[10]	Connector plate VABS-B14-T-F ... 14	With the sub-base the Namur valve can be used as an in-line valve with G1/4". And NPT1/4" thread	18

Peripherals

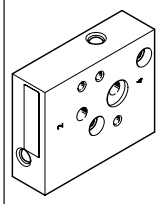
Accessories			→ Page/Internet
	Type/order code	Description	
[11]	Push-in fitting QS	For connecting tubing with standard O.D.	18
[12]	Silencer	-	19
[13]	Cover cap	Exhaust protection IP65. The spring chamber of the actuator is protected against the ingress of aggressive ambient air and water by the one-way flow control system	19

Accessories

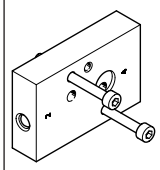
Mounting plate VABA-B14-FL12-FL14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8098889**	**VABA-B14-FL12-FL14**

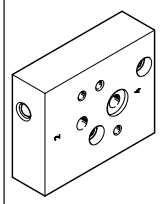
Mounting plate VABS-B14-270-FF14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8098891**	**VABS-B14-270-FF14**

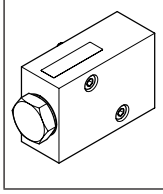
Mounting plate VABS-B14-180-FF14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8099347**	**VABS-B14-180-FF14**

Mounting plate VABS-B14-90-FF14

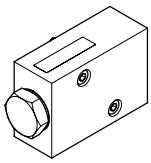
	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8098888**	**VABS-B14-90-FF14**

Exhaust plate VABF-B14-M3-...14

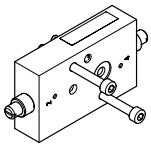
	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8099627**	**VABF-B14-M3-N14**

Accessories

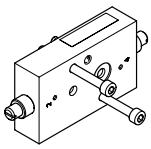
Exhaust plate VABF-B14-M3-...14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8099350**	**VABF-B14-M3-G14**

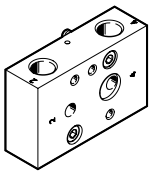
Throttle plate (single-acting) VABF-B14-F1B1P1-FF14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8098885**	**VABF-B14-F1B1P1-FF14**

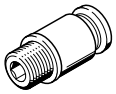
Throttle plate (double acting) VABF-B14-F1B1P2-FF14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8098887**	**VABF-B14-F1B1P2-FF14**

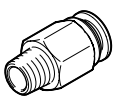
Connector plate VABS-B14-T-F ... 14

	Type of mounting	Operating pressure	Corrosion resistance class CRC	Part no.	Type
	With through-hole	1.5 ... 10 bar	2 - Moderate corrosion stress	**8099628**	**VABS-B14-T-FN14**
				8098884	**VABS-B14-T-FG14**

Push-in fitting QS

	Pneumatic connection, port 1	Pneumatic connection, port 2	Part no.	Type
	Male thread G1/8	For tubing outside diameter of 4 mm	★ **186106**	**QS-G1/8-4-I**
			★ **186095**	**QS-G1/8-4**
		For tubing outside diameter of 6 mm	★ **186107**	**QS-G1/8-6-I**
			★ **186096**	**QS-G1/8-6**
		For tubing outside diameter of 8 mm	★ **186109**	**QS-G1/8-8-I**
			★ **186098**	**QS-G1/8-8**
		For tubing outside diameter of 10 mm	★ **132999**	**QS-G1/8-10-I**

Push-in fitting NPQE

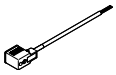
	Pneumatic connection, port 1	Pneumatic connection, port 2	Part no.	Type
	Male thread R1/8	For tubing outside diameter of 4 mm	**8112913**	**NPQE-D-R18-Q4-P10**

Accessories

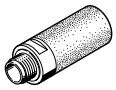
Push-in fitting NPQE

	Pneumatic connection, port 1	Pneumatic connection, port 2	Part no.	Type
	Male thread R1/8	For tubing outside diameter of 6 mm	**8112914**	**NPQE-D-R18-Q6-P10**
		For tubing outside diameter of 8 mm	**8112915**	**NPQE-D-R18-Q8-P10**
		For tubing outside diameter of 10 mm	**8112916**	**NPQE-D-R18-Q10-P10**
		For tubing outer diameter of 12 mm	**8112917**	**NPQE-D-R18-Q12-P10**

Connecting cable NEBV

	Cable structure	Nominal operating voltage DC	Cable length	Product weight	Part no.	Type
	2 x 0.75 mm²	24 V	2.5 m	120 g	**8032623**	**NEBV-C1SW2L-P-K-2.5-N-LE2-S9**
			5 m	230 g	**8032626**	**NEBV-C1SW2L-P-K-5-N-LE2-S9**
			10 m	440 g	**8032627**	**NEBV-C1SW2L-P-K-10-N-LE2-S9**
	3 x 0.5 mm²		2.5 m	125 g	**8032628**	**NEBV-C1SW3-K-2.5-N-LE3-S9**
			5 m	235 g	**8032629**	**NEBV-C1SW3-K-5-N-LE3-S9**

Silencer

	Pneumatic connection	Part no.	Type
	G1/8	★ **1206622**	**AMTE-M-H-G18**
		★ **2307**	**U-1/8**
		534222	**U-1/8-50**
		★ **1205860**	**AMTE-M-LH-G18**
		3670	**U-1/8-I**
		6841	**U-1/8-B**
		★ **161419**	**UC-1/8**

Cover cap

	Material cover cap	Part no.	Type
	POM	**8049538**	**VAMC-B10-20-CH2-S**