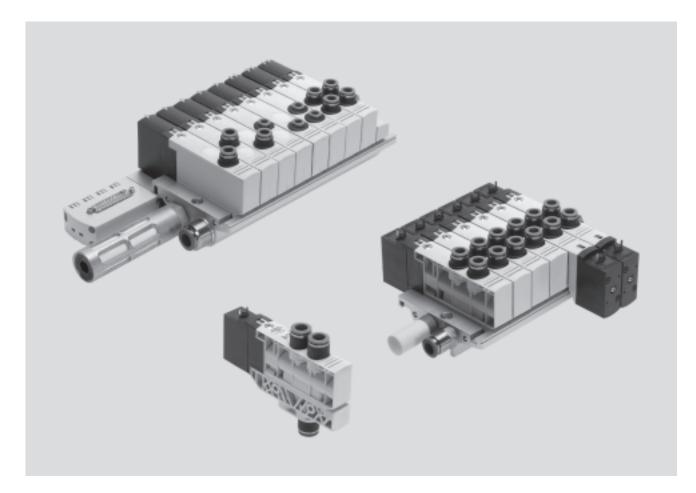


FESTO

Key features



Innovative

- Valve terminal for a wide range of pneumatic applications
- Standardised from the individual valve to the multi-pin plug
- Great flexibility during planning, assembly and operation
- Selectable valve functions; 3/2and 4/2-way function also suitable for vacuum applications
- Wide selection of optimally tailored accessories for flow rates from 200 to 1,000 l/min

Versatile

- Room for expansion with 2 ... 10 valve positions on one valve terminal
- Use of individual valves in combination with an individual sub-base
- Flexibility of the pneumatic working lines provides a practical solution to different requirements
- Two pressure zones (additional zones on request)
- High pressure range -0.9 ... 8 bar
- Extensive operating voltage range from 12 V DC to 230 V AC

Reliable

- Manual override
- Durable thanks to tried-and-tested piston spool valves
- Sturdy thanks to the polymer housing and metal manifold rail
- Fast troubleshooting thanks to an LED signal status display in the plug socket with cable or on the valve in the case of the design with multi-pin plug

Easy to mount

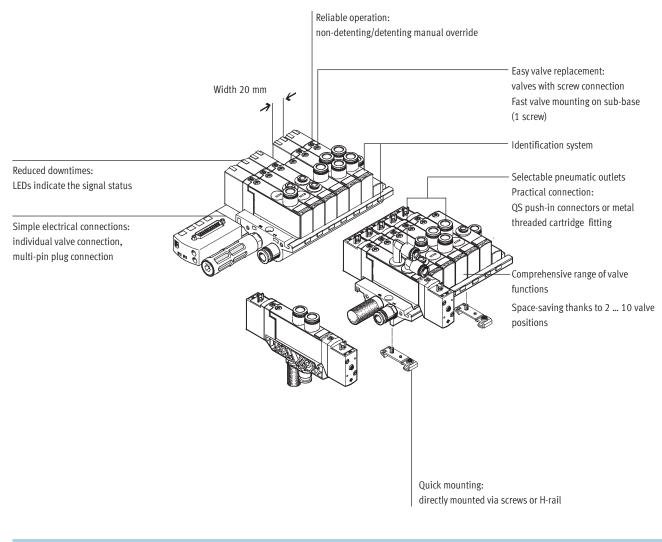
- Ready-to-install and tested unit
- Lower ordering, installation and commissioning costs
- Secure mounting on wall or H-rail

📲 - Note

Valve terminals are available for 4, 6, 8 and 10 valve positions in connection sizes $1\!\!/_2$ NPT and $1\!\!/_4$ NPT.

FESTO

Key features



Equipment options

- Valve functions
- 3/2-way valve, normally open
- 3/2-way valve, normally closed
- 4/2-way valve, single solenoid
- 4/2-way valve, double solenoid

Electrical connection options

Individual connection/individual valve connection

- 2 ... 10 valve positions with manifold rail
- 2 ... 20 solenoid coils
- Via plug socket with cable with either LED or illuminating seal

Valve terminal configurator

A valve terminal configurator is available to help you select a suitable valve terminal VTUB, which makes it much easier to order the right product. Valve terminals type 24 VTUB are ordered via an ident. code. All valve terminals are supplied fully assembled and individually tested. This reduces assembly and installation time to a minimum.

Download CAD data → www.festo.com

Multi-pin plug

• Sub-D

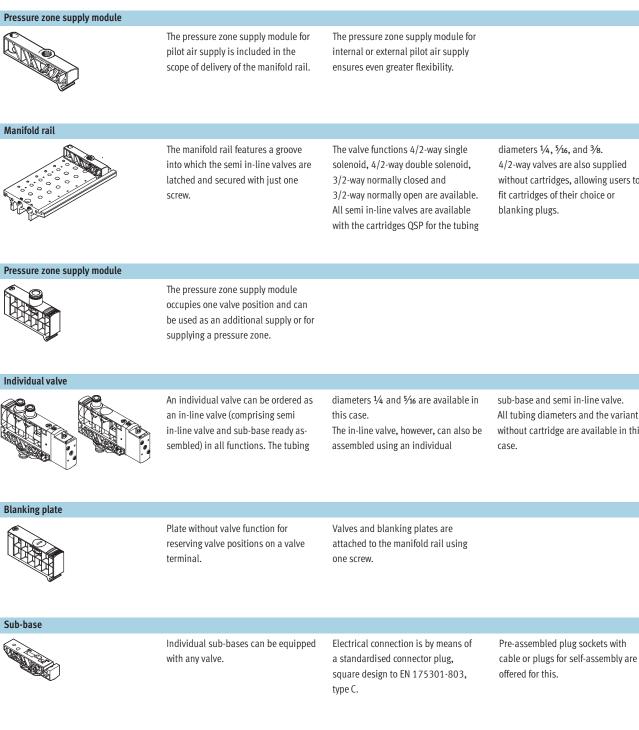
• 4 ... 10 valve positions/

max. 20 solenoid coils

- Ordering system for valve terminal type 24 VTUB • Individual electrical connection
- Electrical multi-pin plug connection
- → Internet: vtub

Key features

FESTO



diameters 1/4, 5/16, and 3/8. 4/2-way valves are also supplied without cartridges, allowing users to fit cartridges of their choice or





sub-base and semi in-line valve. All tubing diameters and the variant without cartridge are available in this

Subject to change - 2011/06

Key features – Pneumatic components

FESTO

Pneumatic connection		
Supply and exhaust		
The valves are supplied pneumatically via manifold rails or individual sub-bases.	The manifold rails contain common lines for compressed air supply, ex- haust and pilot exhaust for all valves.	The common lines can be connectedat the left (code L),at the right (code R) orat both ends (no code).
Pilot air supply		

In-line valves are available with internal and external pilot air supply. With semi in-line valves the mounting position of the insert in the sub-base determines whether the valves are actuated internally or externally.

Internal pilot air supply

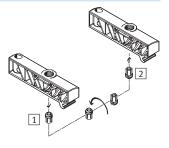
An internal pilot air supply can be selected if the supply pressure is between 2 and 8 bar. The pilot air supply is branched from duct 1 in the pressure zone supply module in this case.

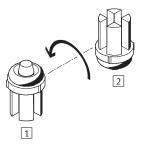
External pilot air supply

An external pilot air supply must be used if the supply pressure is between -0.9 and +2 bar. The pilot air supply is supplied via duct 12/14 of the pressure zone supply module in this case.

If the selector is installed as shown in position 1, it means that the pilot air supply will be branched internally from duct 1.

If the selector is turned 180° and installed as shown in position 2, it means that the valve manifold is set to external pilot air supply.





Solenoid valves VUVB/valve terminals type 24 VTUB, NPT Product range overview – Individual valves and manifold valves

FESTO

Function	Version	Туре	Nominal flow rate	Pneumatic connection	Operating voltage	Semi in-line	In-line valve	Pilot air su	pply	→ Page/ Internet	
			[l/min]		[V]	valve		Internal	External		
3/2-way valves	Single solenoid valve for individual connection and valve manifold										
		VUVBM32	500	QS-1/4	24 DC 110 AC	•	•		•	14	
			800	QS-5/16	-	-	•	-		-	
			1000	QS-3/8		-	-				
			1000	QX ¹⁾	24 DC 110 AC 230 AC	•	_	_	•	-	
					12 DC/24 AC						

Function	Version	Туре	Nominal flow rate	Pneumatic connection	Operating voltage	Semi in-line		Pilot air sı	ıpply	→ Page/ Internet		
			[l/min]		[V]	valve		Internal	External			
4/2-way valve:	s Single solenoi	d valve for individual	connection a	nd valve mani	fold							
		VUVBM42	500	QS-1/4	24 DC 110 AC	•	•	•	•	14		
			800	QS-5/16	-	•	•		•	1		
			1000	QS-3/8	-	•	_	_	•	1		
			1000	QX ¹⁾	24 DC					-		
					110 AC 230 AC	-	-	-	•			
					12 DC/24 AC							
	Double soleno	Double solenoid valve for individual connection and valve manifold										
		VUVBB42	500	QS-1/4	24 DC 110 AC	-	•	•	•	14		
			800	QS-5/16		•	•	•	•			
			1000	QS-3/8	-	-	-	_	•	1		
			1000	QX ¹⁾	24 DC 110 AC							
					230 AC 12 DC/24 AC		_	_	-			

1) Cartridge not included

·O· New

Solenoid valves VUVB/valve terminals type 24 VTUB, NPT Product range overview – Terminal valves

Function	Version		Nominal flow rate [l/min]	Pneumatic connection	Operating voltage [V]	Semi in-line valve	Pilot air supply External	→ Page/ Internet			
3/2-way valves	3/2-way valves Single solenoid valve for valve terminal with electrical multi-pin plug connection										
		VUVBM32	500	QS-1/4	24 DC	•	•	35			
	-		800	QS-5/16		•	•				
			1000	QS-3/8		•	•				
			1000	QX ¹⁾							

Function	Version	Туре	Nominal flow rate [l/min]	Pneumatic connection	Operating voltage [V]	Semi in-line valve	Pilot air supply External	→ Page/ Internet					
4/2-way valves	Single solenoid	Single solenoid valve for valve terminal with electrical multi-pin plug connection											
		VUVBM42	500	QS-1/4	24 DC		•	35					
			800	QS-5/16			•						
			1000	QS-3/8		•	•	-					
			1000	QX ¹⁾			•						
	Double solenoid valve for valve terminal with electrical multi-pin plug connection												
		VUVBB42	500	QS-1/4	24 DC	•	•	35					
	1		800	QS-5/16			•	-					
			1000	QS-3⁄8			•						
			1000	QX ¹⁾		•	•						

1) Cartridge not included

Solenoid valves VUVB/valve terminals type 24 VTUB, NPT Product range overview

Function	Version	Туре	Pneumatic	Valve p	ositions				Pilot air supply		→ Page/
			connection	2	4	6	8	10	Internal	External	Internet
Manifold rail	For valve mani	fold with individu	al electrical connec	tion							
		VABM	1/2 NPT	•	•	•	•	•	•	•	22
		VABM	1⁄4 NPT	•	•	•	•	•	•	•	23
	For valve termi	For valve terminal with electrical multi-pin plug connection									
		VABMM1	1⁄2 NPT	-							41

Function	Version	Туре	Pilot air supply	ot air supply						
			Internal	External	Internet					
Sub-base	Individual valve	dividual valve								
		VABS	•	•	24					

Function	Version	Туре	Pneumatic connection	Use	→ Page/ Internet
Pressure zone supply module		VABF	QS-3/8	For additional supply to the manifold rail	43

Function	Version	Туре	Use	→ Page/ Internet
Blanking plate		VABB	For covering vacant positions	44

Function	Version	Туре	Use	→ Page/ Internet
Separator		VABD	For duct separation	44

Function	Version	Туре	Use	→ Page/ Internet
H-rail mounting kit		VAME	For mounting on the H-rail NRH-35-2000	49

Function	Version		→ Page/ Internet
Cartridge		QSP	48

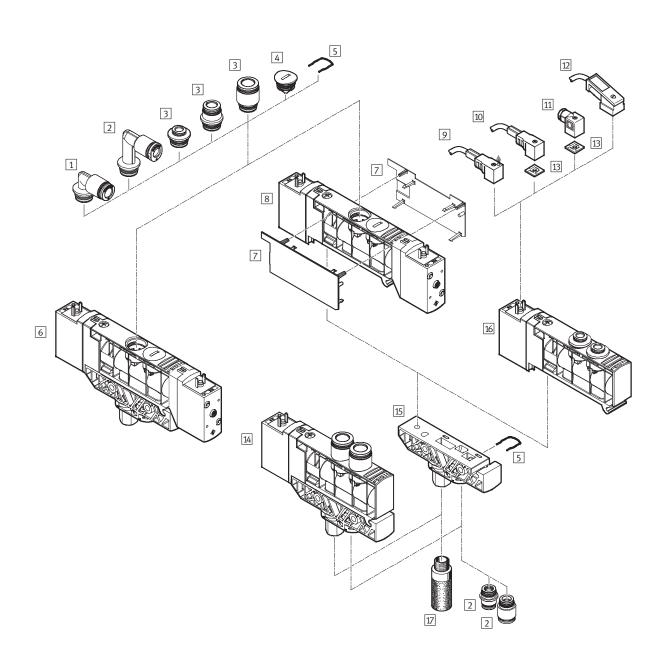
Overview - Solenoid valve VUVB Individual position with individual electrical connection

These peripherals are ordered via individual parts/accessories.

An individual valve can be ordered as an in-line valve or as a fully assembled semi in-line valve on a sub-base.

The in-line valve is available with 1/4NPT or 5/16NPT push-in connectors. The semi in-line valve on sub-base is

available with 1/4, 5/16 or 3/8NPT push-in connectors or as a variant without a cartridge.



Accessories		
	Brief description	→ Page/Internet
1 Cartridge	For connecting compressed air tubing with standard O.D.	48
QSPL		
2 Cartridge	For connecting compressed air tubing with standard O.D.	48
QSPLL		
3 Cartridge	For connecting compressed air tubing with standard O.D.	48
QSP		
4 Blanking plug	For sealing the pneumatic connections on the valve	49
QSPC18		
5 Retaining clip	For fitting cartridges and blanking plugs (included in the scope of delivery of cartridge QSP	-
	and blanking plug QSPC18)	
6 Double solenoid valve	In-line valve with adapter for NPT	20
7 Cover for valve housing	-	46
VAMC		
8 Double solenoid valve	Semi in-line valve	14
VUVB-SB		
9 Plug socket with cable with LED	For indicating the signal status	50
KMEB-1LED	for indicating the signal status	50
IO Plug socket with cable	Can be used up to 230 V	50
KMEB-1-230AC		50
II Plug socket		50
MSSD-EB		50
Plug socket with cable with LED	For indicating the signal status	50
KMEB-2-24		50
13 Illuminating seal	For indicating the signal status	50
MEB-LD		50
IA Single solenoid valve	In-line valve with adapter for NPT	20
VUVB-LM	III-tille valve with adapter for NFT	20
5 Sub-base	For individual valve with adapter for NPT	47
VABS-B6-P		47
	Semi in-line valve	20
6 Single solenoid valve VUVB-SM		20
	For future to sub-cost a sub-	1/0
7 Silencer	For fitting in exhaust ports	49
U		

Overview - Solenoid valve VUVB

Manifold assembly/valve terminal with individual electrical connections

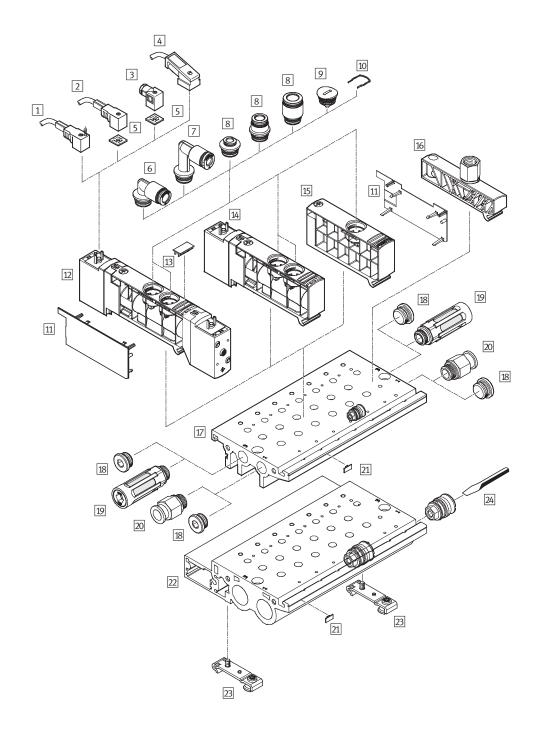
• "Individual connection" code: ET

Valve terminals with individual electrical connections are available in gradations from 2 to max. 10 valve positions.

Valve positions can either be fitted with a valve or a blanking plate for future expansions.

In total up to 20 solenoid valves can be actuated.

11





Acce	ssories		
		Brief description	→ Page/Internet
1	Plug socket with cable with LED	For indicating the signal status	50
	KMEB-1LED		
2	Plug socket with cable	Can be used up to 230 V	50
	KMEB-1-230AC		
3	Plug socket MSSD-EB	-	50
4	Plug socket with cable with LED KMEB-2-24	For indicating the signal status	50
5	Illuminating seal MEB-LD	For indicating the signal status	50
6	Cartridge QSPL	For connecting compressed air tubing with standard O.D.	48
7	Cartridge QSPLL	For connecting compressed air tubing with standard O.D.	48
8	Cartridge QSP	For connecting compressed air tubing with standard O.D.	48
9	Blanking plug QSPC18	For sealing the pneumatic connections on the valve	49
10	Retaining clip	For fitting cartridges and blanking plugs (included in the scope of delivery of the cartridge QSP and the blanking plug QSPC18)	
11	Cover for valve housing VAMC	-	46
12	Double solenoid valve VUVBB	-	20
13	Inscription label IBS-9x17	For identifying the valves	49
14	Single solenoid valve VUVBM	-	20
15	Blanking plate/pressure zone supply module VABF/VABB	Pressure zone supply module VABF: with cartridge Blanking plate VABB: for vacant position, with blanking plug	43/44
16	Pressure zone supply module	For pilot air supply with adapter for NPT (included in the scope of delivery of the manifold rail VABM)	-
17	Manifold rail VABM-B6-E-N14	Pneumatic connection 1/4 NPT, for connecting max. 10 valves	22
18	Blanking plug B	-	49
19	Silencer U	For fitting in exhaust ports	49
20	Push-in fitting QS	For connecting compressed air tubing with standard O.D.	48
21	Inscription label MH-BZ-80X	For identifying the manifold rail	49
22	Manifold rail VABM-B6-E-N12	Pneumatic connection 1/2 NPT, for connecting max. 10 valves	23
23	H-rail mounting kit VAME	For mounting on the H-rail NRH-35-2000	49
24	Separator for pressure zones VABD	For mounting in the manifold rail	44

Solenoid valves VUVB, NPT Type codes – Individual valves and manifold valves

Valve series WV/B Solenoid valve Constructional design			VUVB]- [L	 M32C	٦- ٢	A	Z	D	– T1	4	- Г	1	C1
WMB Solenoid valve Constructional design	Valve s	eries			<u> </u>									
Constructional design L In-line valve S Semi in-line valve S Semi in-line valve M32C 3/2-way valve, normally closed M32L 3/2-way valve, normally open M42 4/2-way valve, double solenoid B42 4/2-way valve, double solenoid B42 4/2-way valve, double solenoid A Pneumatic reset Pilot air supply - Internal Z External Manual verride D Non-detenting/detenting Pneumatic connection T516 for tubing 0.D. ½4 T516 for tubing 0.D. ½4 T518 for tubing 0.D. ½4 T514 for tubing 0.D. ½4 T514 for tubing 0.D. ½4 T514														
L In-line valve S Semi in-line valve Vave function M32C 3/2-way valve, normally closed M32U 3/2-way valve, normally closed M42 4/2-way valve, normally closed B42 4/2-way valve, double solenoid Reset method	1010													
Semi In-Line valve Valve function M32C 3/2-way valve, normally closed M32U 3/2-way valve, normally open M42 4/2-way valve, normally open M42 4/2-way valve, single solenoid B42 4/2-way valve, double solenoid B42 4/2-way valve, double solenoid A Pneumatic reset Pilot air supply - Internal Z External Manual override D Non-detenting/detenting Pneumatic connection T314 For tubing 0.D. 3/sa T316 For tubing 0.D. 3/sa T318 For tubing 0.D. 3/sa QW Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V Swi 12 V DC/24 V AC Electrication pattern to	Constru	ictional design												
Valve function Wayce function M32C 3/2-way valve, normally closed M32L 3/2-way valve, single solenoid M42 4/2-way valve, single solenoid B42 4/2-way valve, double solenoid B42 4/2-way valve, double solenoid Reset method	L	In-line valve												
M32C 3/2-way valve, normally closed M32U 3/2-way valve, normally open M42 4/2-way valve, single solenoid B42 4/2-way valve, double solenoid Reset method	S	Semi in-line valve												
M32U 3/2-way valve, normally open M42 4/2-way valve, single solenoid B42 4/2-way valve, double solenoid B42 4/2-way valve, double solenoid Reset method	Valve f	unction												
M32U 3/2-way valve, normally open M42 4/2-way valve, single solenoid B42 4/2-way valve, double solenoid B42 4/2-way valve, double solenoid Reset method	M32C	3/2-way valve, normally closed												
B42 4/2-way valve, double solenoid Reset method - None (double solenoid) A Pneumatic reset Pilot air supply - Internal Z External Manual override D Non-detenting/detenting Pneumatic connection Ti32 For tubing 0.D. ½2 Ti4 For tubing 0.D. ½2 Ti34 For tubing 0.D. ½3 Ti34 For tubing 0.D. ½4 Ti35 For tubing 0.D. ½4 Ti36 For tubing 0.D. ½4 Ti37 Tot tubing 0.D. ½4 Ti38 For tubing 0.D. ½4 Ti39 Tot tubing 0.D. ½4 Ti34 For tubing 0.D. ½6 Ti38 For tubing 0.D. ½4 Ti39 Tot tubing 0.D. ½4 Ti30 Tot tubing 0.D. ½6 Ti31 Tot tubing 0.D. ½6 Ti32 Zot Yubing 0.D. ½6 Ti33 Tot tubing 0.D. ½6 Ti34 For tubing 0.D. ½6 Ti35 Tot tubing 0.D. ½6 Ti36 Tot tubing 0.D. ½6 Ti37 Tot bing 0.D. ½6 Ti38 Tot tubing 0.D. ½6 Ti39 Tot tubing 0.D. ½6 Ti39 Tot tubing 0.D. ½6 Ti31 Tot tubing 0.D. ½6 Ti32 Tot tubing 0.D. ½6 Ti33 Tot tubing 0.D. ½6 Ti34 Tot tubing 0.D. ½6 Ti35 Tot tubing 0.D. ½6 Ti37 Tot tubing 0.D. ½6 Ti38 Tot tubing 0.D. ½6	M32U													
Reset method - None (double solenoid) A Pneumatic reset Pilot air supply - Internal Z External Manual override D Non-detenting/detenting Pneumatic connection T14 For tubing 0.0. ½a T38 For tubing 0.0. ½a T38 For tubing 0.0. ½a T38 For tubing 0.0. ¾a QX Without push-in connector V Vertourge 1 24 V DC 2A 110 V AC 3A 230V SW 12 V DC/24 V AC Electrical connection Electrical connection pattern to	M42	4/2-way valve, single solenoid												
- None (double solenoid) A Pneumatic reset Pilot air supply - Internal Z External Manual override D Non-detenting/detenting Pneumatic connection T532 For tubing 0.0. ½a T35 For tubing 0.0. ½a T36 For tubing 0.0. ½a T37 For tubing 0.0. ½a T38 For tubing 0.0. ½a QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection pattern to	B42	4/2-way valve, double solenoid												
A Pneumatic reset Pilot air supply - Internal Z External Manual override D Non-detenting/detenting Pneumatic connection T532 For tubing 0.D. 5/32 T14 For tubing 0.D. 5/32 T14 For tubing 0.D. 5/36 T38 For tubing 0.D. 5/36 T38 For tubing 0.D. 5/36 T38 For tubing 0.D. 3/8 QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V SW 12 V DC/24 V AC Electricat connection pattern to	Reset n	nethod												
A Pneumatic reset Pilot air supply - Internal Z External Manual override D Non-detenting/detenting Pneumatic connection T532 For tubing 0.D. 5/32 T14 For tubing 0.D. 5/32 T14 For tubing 0.D. 5/36 T38 For tubing 0.D. 5/36 T38 For tubing 0.D. 5/36 T38 For tubing 0.D. 3/8 QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V SW 12 V DC/24 V AC Electricat connection pattern to	-	None (double solenoid)						J						
- Internal Z External Manual override	A													
- Internal Z External Manual override														
Z External Manual override	Pilot ai	r supply												
Manual override D Non-detenting/detenting Pneumatic connection T532 For tubing 0.D. ½ T14 For tubing 0.D. ½ T516 For tubing 0.D. ½ T38 For tubing 0.D. ½ QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to														
D Non-detenting/detenting Pneumatic connection T532 For tubing 0.D. 5/32 T14 For tubing 0.D. 5/32 T1516 For tubing 0.D. 5/36 T38 For tubing 0.D. 3/36 QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electricat connection C1 Plug socket connection pattern to	Z	External												
Pneumatic connection T532 For tubing 0.D. \$/32 T14 For tubing 0.D. \$/36 T516 For tubing 0.D. \$/16 T38 For tubing 0.D. \$/16 T4 Value QX Without push-in connector Operating voltage 1 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	Manua	override												
T532For tubing 0.D. \$/32T14For tubing 0.D. \$/4T516For tubing 0.D. \$/4T38For tubing 0.D. \$/6T38For tubing 0.D. 3/8QXWithout push-in connectorOperating voltage124 V DC2A110 V AC3A230V5W12 V DC/24 V ACElectricat connectionConnectionC1Plug socket connection pattern to	D	Non-detenting/detenting								1				
T14 For tubing 0.D. ¼ T516 For tubing 0.D. ¾ T38 For tubing 0.D. ¾ QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection pattern to	Pneum	atic connection												
T516For tubing 0.D. ¾6T38For tubing 0.D. ¾8QXWithout push-in connectorOperating voltage124 V DC2A110 V AC3A230V5W12 V DC/24 V ACElectrical connectionC1Plug socket connection pattern to	T532	For tubing O.D. 5⁄32												
T38 For tubing 0.D. ¾ QX Without push-in connector Operating voltage Image: Connection 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	T14													
QX Without push-in connector Operating voltage 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	T516													
Operating voltage 1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to														
1 24 V DC 2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	QX	Without push-in connector												
2A 110 V AC 3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	Operati	ng voltage												
3A 230V 5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	1	24 V DC												I
5W 12 V DC/24 V AC Electrical connection C1 Plug socket connection pattern to	2A	110 V AC												
Electrical connection C1 Plug socket connection pattern to	3A	230V												
C1 Plug socket connection pattern to	5W	12 V DC/24 V AC												
	Electric	al connection												
	C1	Plug socket connection pattern to												

Voltage

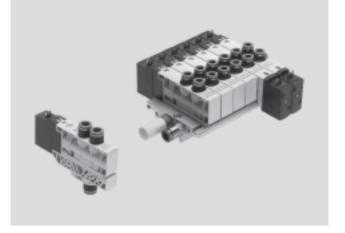
12,24 V DC 24,110 V AC

Pressure

-0.9 ... +8 bar

Temperature range

−5 ... +50 °C



General technical data					
Valve function			3/2-way, single solenoid	4/2-way, single solenoid	4/2-way, double solenoid
Design			Piston spool valve		
Sealing principle			Soft		
Actuation type			Electric		
Reset method			Pneumatic spring		ć
Type of control			Piloted		
Pilot air supply			Internal or external		
Direction of flow			Non-reversible		
Exhaust function			No flow control		
Manual override			Non-detenting, detenting		
Type of mounting			Via through-hole		
Mounting position			Any		
Nominal size		[mm]	7		
Standard nominal flow rate	qnN	[l/min]	200 (5⁄32NPT), 500 (1⁄4NPT),	, 800 (5⁄16NPT), 1000 (3⁄8NPT)	
Width		[mm]	20		
Product weight	In-line valve	[g]	170	170	240
	Semi in-line valve	[g]	150	150	220

Operating and environmental conditions		
Operating medium		Dried and filtered compressed air, lubricated or unlubricated, grade of filtration
		40 μm, vacuum
Operating pressure	[bar]	-0.9 +8
Operating pressure for valve terminal with internal pilot air	[bar]	28
supply		
Pilot pressure	[bar]	28
Ambient temperature	[°C]	-5 +50
Temperature of medium	[°C]	-5 +50
Corrosion resistance class CRC		11)
Note on materials		RoHS-compliant

1) Corrosion resistance class 1 according to Festo standard 940 070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

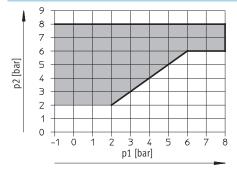
Note

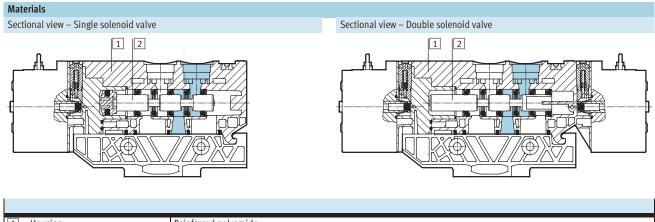
A filter must be installed upstream of valves operated in vacuum mode. This prevents any foreign matter in the intake air getting into the valve (e.g. when operating a suction cup).

Electrical data			
Electrical connection			Plug, square design to EN 175301-803, type C
Nominal operating voltage DC [V]		[V]	12, 24
	AC	[V]	24, 110, 230
Permissible voltage fluctuations		[%]	±10
Electrical power consumption	24 V DC	[W]	1.5
	110 V AC	[VA]	Pull: 3.1, hold: 2.2
Protection class to EN 60529			IP65 (in combination with plug socket)

Valve switching times [ms]			
Valve function	3/2-way, single solenoid	4/2-way, single solenoid	4/2-way, double solenoid
On	20	20	-
Off	20	20	-
Changeover	-	-	15

Pilot pressure p2 as a function of operating pressure p1

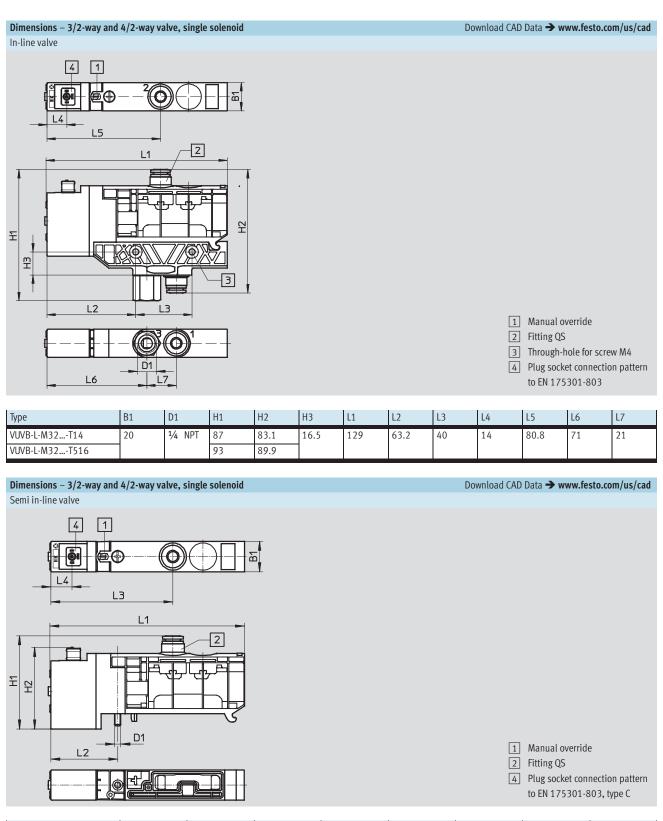




1 Housing
2 Piston spool
– Seals
 2 Piston spool

Solenoid valves VUVB, NPT

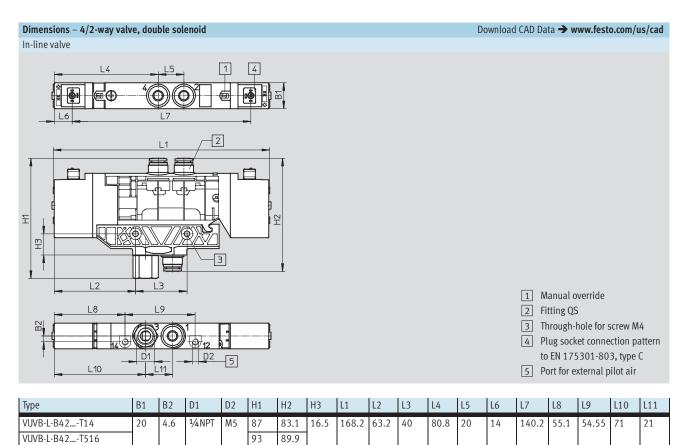
Technical data – Individual valves and manifold valves

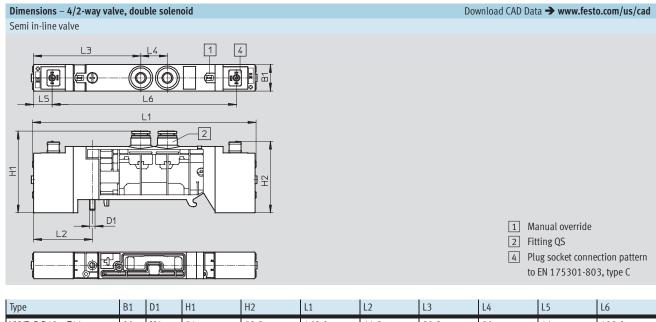


Туре	B1	D1	H1	H2	L1	L2	L3	L4
VUVB-S-M32T14	20	M4	54	53.9	129	44.3	80.8	14
VUVB-S-M32T516			61					
VUVB-S-M32T38			65					

Solenoid valves VUVB, NPT

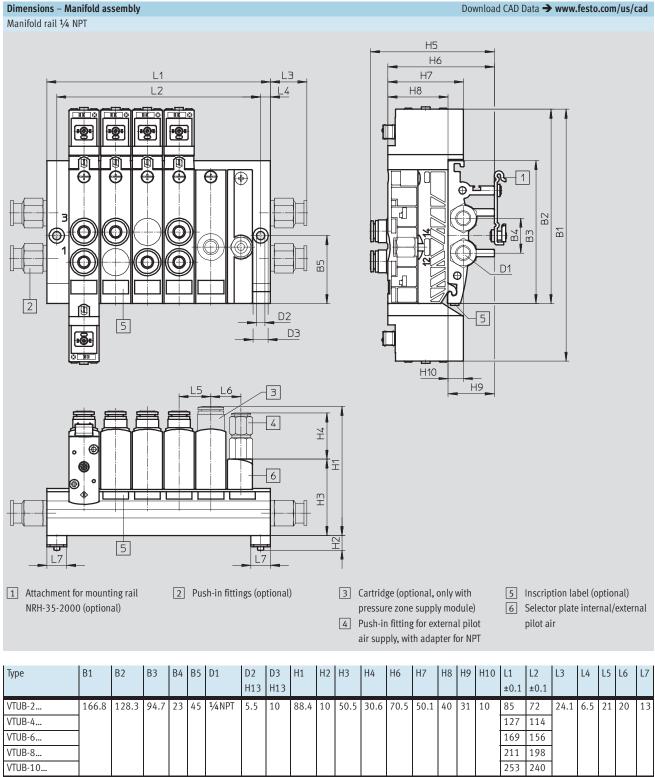
Technical data – Individual valves and manifold valves





Туре	B1	D1	H1	H2	L1	L2	L3	L4	L5	L6
VUVB-S-B42T14	20	M4	54	53.9	168.2	44.3	80.8	20	14	138.8
VUVB-S-B42T516			61							
VUVB-S-B42T38			65							

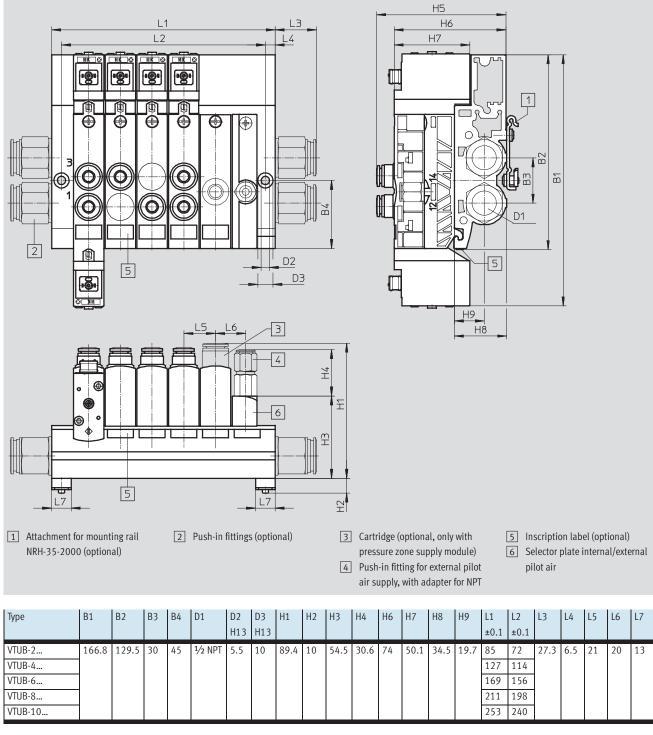
Dimensions – Manifold assembly



Туре	Н5
QSPK18-1/4-U-100	74.9
QSPK18-5/16-U-100	81.7
QSPK18-3/8-U-100	85.5

Dimensions – Manifold assembly

Manifold rail 1/2 NPT



Туре	H5
QSPK18-1/4-U-100	78.9
QSPK18-5/16-U-100	85.7
QSPK18-3/8-U-100	89.5

Download CAD Data → www.festo.com/us/cad

	-	

Ordering data – In-lir						
ircuit symbol	Code	Description	Voltage	Pneumatic connection	Part No.	Туре
/2-way valves, single	e solenoid					
2 ²	К	Normally closed,	24 V DC	QS-1/4	568280	VUVB-L-M32C-AD-T14-1C1
		internal pilot air supply,		QS-5/16	568281	VUVB-L-M32C-AD-T516-1C1
		pneumatic spring return	110 V AC	QS-1/4	568296	VUVB-L-M32C-AD-T14-2AC1
1 3				QS-5/16	568297	VUVB-L-M32C-AD-T516-2AC1
12 2	К	Normally closed,	24 V DC	QS-1/4	568288	VUVB-L-M32C-AZD-T14-1C1
		external pilot air supply,		QS-5/16	568289	VUVB-L-M32C-AZD-T516-1C1
14 1 3		pneumatic spring return	110 V AC	QS-1/4	568304	VUVB-L-M32C-AZD-T14-2AC1
				QS-5/16	568305	VUVB-L-M32C-AZD-T516-2AC1
10 ²	Ν	Normally open,	24 V DC	QS-1/4	568282	VUVB-L-M32U-AD-T14-1C1
		internal pilot air supply,		QS-5/16	568283	VUVB-L-M32U-AD-T516-1C1
1 3		pneumatic spring return	110 V AC	QS-1/4	568298	VUVB-L-M32U-AD-T14-2AC1
				QS-5/16	568299	VUVB-L-M32U-AD-T516-2AC1
2	Ν	Normally open,	24 V DC	QS-1/4	568290	VUVB-L-M32U-AZD-T14-1C1
		external pilot air supply,		QS-5/16	568291	VUVB-L-M32U-AZD-T516-1C1
		pneumatic spring return	110 V AC	QS-1/4	568306	VUVB-L-M32U-AZD-T14-2AC1
• 13				QS-5/16	568307	VUVB-L-M32U-AZD-T516-2AC1
	1			•	1	
2-way valves, single	e solenoid					
<u>4 4 1</u> 2	N	Normally open,	24 V DC	QS-1/4	568284	VUVB-L-M42-AD-T14-1C1
		internal pilot air supply,		QS-5/16	568285	VUVB-L-M42-AD-T516-1C1
		pneumatic spring return	110 V AC	QS-1/4	568300	VUVB-L-M42-AD-T14-2AC1
1 3				QS-5/16	568301	VUVB-L-M42-AD-T516-2AC1
6 4 1 12	Ν	Normally open,	24 V DC	QS-1/4	568292	VUVB-L-M42-AZD-T14-1C1
		external pilot air supply,		QS-5/16	568293	VUVB-L-M42-AZD-T516-1C1
		pneumatic spring return	110 V AC	QS-1/4	568308	VUVB-L-M42-AZD-T14-2AC1
14 1 3				QS-5/16	568309	VUVB-L-M42-AZD-T516-2AC1
	1				1	
2-way valves, doub	le solenoi	d				
	J	Normally open,	24 V DC	QS-1/4	568286	VUVB-L-B42-D-T14-1C1
		internal pilot air supply		QS-5/16	568287	VUVB-L-B42-D-T516-1C1
			110 V AC	QS-1/4	568302	VUVB-L-B42-D-T14-2AC1
1 3				QS-5/16	568303	VUVB-L-B42-D-T516-2AC1
<u> </u>	1	Normally open,	24 V DC	QS-1/4	568294	VUVB-L-B42-ZD-T14-1C1
		external pilot air supply		QS-5/16	568295	VUVB-L-B42-ZD-T516-1C1
			110 V AC	QS-1/4	568310	VUVB-L-B42-ZD-T14-2AC1
14 1 3 12				QS-5/16	568311	VUVB-L-B42-ZD-T516-2AC1
	I	1		4 5 / 10	500511	1010 L D42 LD 1910 ZACI

F	Ε	5	Т	

Ordering data – Semi	in-line va	lves for sub-base or manifold rail				
Circuit symbol	Code	Description	Voltage	Pneumatic connection	Part No.	Туре
3/2-way valves, single						.) -
-	K	Normally closed,	24 V DC	QS-1/4	568312	VUVB-S-M32C-AZD-T14-1C1
	K	external pilot air supply,	24 0 00	Q3 /4 OS-5/16	568313	VUVB-S-M32C-AZD-T14-1C1 VUVB-S-M32C-AZD-T516-1C1
		pneumatic spring return		QS-3/8	568314	VUVB-S-M32C-AZD-T310-1C1 VUVB-S-M32C-AZD-T38-1C1
14 1 3 12		preunatie spring return		Without push-in	573993	VUVB-S-M32C-AZD-QX-1C1
				connector	515775	
			110 V AC	QS-1/4	658324	VUVB-S-M32C-AZD-T14-2AC1
			110 176	QS-5/16	568325	VUVB-S-M32C-AZD-T516-2AC1
				QS-3/8	568326	VUVB-S-M32C-AZD-T38-2AC1
				Without push-in	573995	VUVB-S-M32C-AZD-QX-2AC1
				connector		•
			230 V AC	Without push-in	573997	VUVB-S-M32C-AZD-QX-3AC1
			12 V DC /	connector	573999	VUVB-S-M32C-AZD-QX-5WC1
			24 V AC			
10 ²	N	Normally open,	24 V DC	QS-1/4	568315	VUVB-S-M32U-AZD-T14-1C1
		external pilot air supply,		QS-5/16	568316	VUVB-S-M32U-AZD-T516-1C1
14 1 3 12		pneumatic spring return		QS-3/8	568317	VUVB-S-M32U-AZD-T38-1C1
				Without push-in	573994	VUVB-S-M32U-AZD-QX-1C1
				connector		
			110 V AC	QS-1/4	568327	VUVB-S-M32U-AZD-T14-2AC1
				QS-5/16	568328	VUVB-S-M32U-AZD-T516-2AC1
				QS-3/8	568604	VUVB-S-M32U-AZD-T38-2AC1
				Without push-in	573996	VUVB-S-M32U-AZD-QX-2AC1
				connector		
			230 V AC	Without push-in	573998	VUVB-S-M32U-AZD-QX-3AC1
			12 V DC /	connector	574000	VUVB-S-M32U-AZD-QX-5WC1
			24 V AC			
4/2-way valves, single		Newsells		00.1/	5(0240	
	Μ	Normally open,	24 V DC	QS-1/4	568318	VUVB-S-M42-AZD-T14-1C1
		external pilot air supply,		QS-5/16	568319	VUVB-S-M42-AZD-T516-1C1
141 15 112		pneumatic spring return	1101/06	QS-3/8	568320	VUVB-S-M42-AZD-T38-1C1
			110 V AC	QS-1/4	568605	VUVB-S-M42-AZD-T14-2AC1
				QS-5/16 QS-3/8	568606	VUVB-S-M42-AZD-T516-2AC1
			24 V DC		568607	VUVB-S-M42-AZD-T38-2AC1
			110 V AC	Without push-in connector	537534	VUVB-S-M42-AZD-QX-1C1 VUVB-S-M42-AZD-QX-2AC1
			230 V AC		537632 537636	VUVB-S-M42-AZD-QX-2AC1 VUVB-S-M42-AZD-QX-3AC1
			12 V DC/	-	537636	VUVB-S-M42-AZD-QX-5WC1
			12 V DC/ 24 V AC		545570	¥UYD-J-11142-ALD-QA-JWUI
		1	27 1 70	1	1	
4/2-way valves, double	e solenoio					
	J	Normally open,	24 V DC	QS-1/4	568321	VUVB-S-B42-ZD-T14-1C1
		external pilot air supply		QS-5/16	568322	VUVB-S-B42-ZD-T516-1C1
				QS-3/8	568323	VUVB-S-B42-ZD-T38-1C1
14 1 3 12			110 V AC	QS-1/4	568608	VUVB-S-B42-ZD-T14-2AC1
				QS-5/16	568609	VUVB-S-B42-ZD-T516-2AC1
				QS-3/8	568610	VUVB-S-B42-ZD-T38-2AC1
			24 V DC	Without push-in	537535	VUVB-S-B42-ZD-QX-1C1
			110 V AC	connector	537633	VUVB-S-B42-ZD-QX-2AC1
			230 V AC	-	537637	VUVB-S-B42-ZD-QX-3AC1
			12 V DC/	-	545377	VUVB-S-B42-ZD-QX-5WC1
			24 V AC			
		1		Į	1	

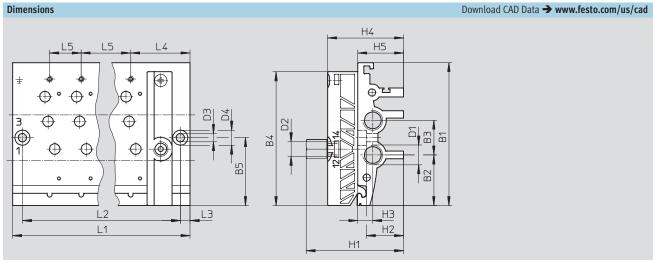
Solenoid valves VUVB, NPT Technical data – Manifold rail

Manifold rail 1/4 NPT VABM

Material: Wrought aluminium alloy



Dimensions



Note

The manifold rail is supplied with an adapter for NPT.

21	L1 ±0.1	L2 ±0.1	L3 ±0.1		L5 ±0.1	B1 ±0.1	B2 ±0.1	B3 ±0.1	B4	B5	D1	D2	-	D4 H13	H1		H3 ±0.2		H5 ±0.2
VABM-B6-E-N14-2	85	72	6.5	39.5	21	94.7	33.5	23	88.7	45	1⁄4 NPT	1⁄8NPT	5.5	10	64.7	24.8	10	50.5	30.5
VABM-B6-E-N14-4	127	114	1																
VABM-B6-E-N14-6	169	156	1																
VABM-B6-E-N14-8	211	198	1																
VABM-B6-E-N14-10	253	240																	

Ordering data			
Valve positions	CRC	Part No.	Туре
2	2 ¹⁾	568185	VABM-B6-E-N14-2
4	2 ¹⁾	568186	VABM-B6-E-N14-4
6	2 ¹⁾	568187	VABM-B6-E-N14-6
8	2 ¹⁾	568188	VABM-B6-E-N14-8
10	2 ¹⁾	568189	VABM-B6-E-N14-10

1) Corrosion resistance class 2 according to Festo standard 940 070 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

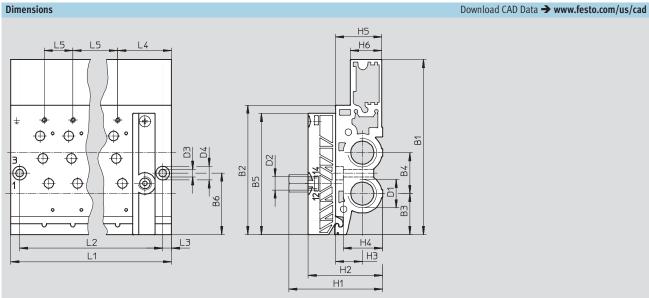
Solenoid valves VUVB, NPT Technical data – Manifold rail

Manifold rail 1/2 NPT VABM

Material: Wrought aluminium alloy



Dimensions



Note

The manifold rail is supplied with an adapter for NPT.

Туре	L1	L2	-		L5			-	B4	-	B6	D1	D2	D3	D4	H1	H2	-		H5	H6
	±0.1	±0.1	±0.1	±0.1	±0.1	±0.25	±0.2	±0.2	±0.2					H13	H13			±0.2		±0.2	
VABM-B6-E-N12-2	85	72	6.5	39.5	21	128.25	94.7	30	30	88.7	45	1/2	1⁄8	5.5	10	68.7	54.8	19.7	28.8	34	23
VABM-B6-E-N12-4	127	114										NPT	NPT								
VABM-B6-E-N12-6	169	156																			
VABM-B6-E-N12-8	211	198																			
VABM-B6-E-N12-10	253	240																			

Ordering data		
Valve positions	CRC	Part No. Type
2	21)	570725 VABM-B6-E-N12-2
4	21)	570726 VABM-B6-E-N12-4
6	21)	570727 VABM-B6-E-N12-6
8	21)	570728 VABM-B6-E-N12-8
10	21)	570729 VABM-B6-E-N12-10

1) Corrosion resistance class 2 according to Festo standard 940 070

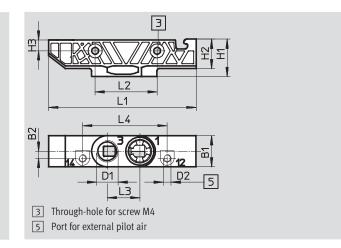
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Solenoid valves VUVB, NPT Technical data – Sub-base

Sub-base VABS

Material: Reinforced polyamide





Note

Sub-base has G-thread.

Adapter for NPT thread (9396) must be ordered separately.

➔ Page 48

Туре	D1	D2	B1	B2	H1		H3	L1	L2	L3	L4
VABS-B6-PB-Q	G1⁄4	M5	20	4.6	23.5	18.5	7	95	40	21	54.55

Ordering data						
Valve positions	Description	Compressed air	Weight	CRC	Part No.	Туре
		supply connection	[g]			
1	Internal pilot air	Cartridge	22	2 ¹⁾	537518	VABS-B6-PB-Q-B
	supply					
1	External pilot air	Cartridge	22	2 ¹⁾	537519	VABS-B6-PB-Q
	supply					

1) Corrosion resistance class 2 according to Festo standard 940 070 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Valve terminals type 24 VTUB, NPT Peripherals overview

Overview - Valve terminal type 24 VTUB

Valve terminal with electrical multi-pin plug connection

• 25-pin Sub-D multi-pin plug connection Code: SD

Valve terminals with electrical multipin plug connection are available in gradations from 2 to max. 10 valve positions.

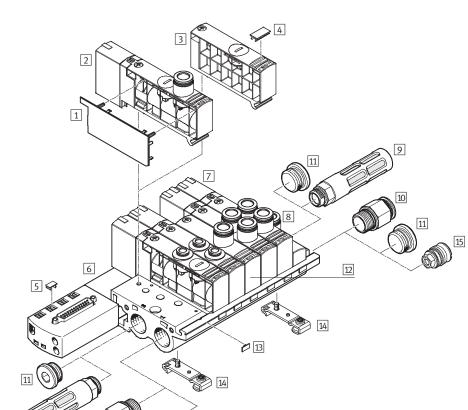
10

11

9

Each valve position can either be equipped with a valve or a blanking plate.

A maximum of 20 solenoid coils can be actuated via the electrical multipin plug connection.



Note

Valve terminals are available for 4, 6, 8 and 10 valve positions in connection size 1⁄2 NPT.

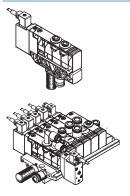
Valve terminals type 24 VTUB, NPT Peripherals overview

Acce	ssories		
		Brief description	→ Page/Internet
1	Cover for valve housing VAMC	-	45
2	Single solenoid valve VUVBM	-	34
3	Blanking plate VABB	Blanking plate VABB: for vacant position, with blanking plug	43
4	Inscription label IBS-9x17	For identifying the valves	48
5	Inscription label IBS-6x10	-	48
6	Manifold rail VABM-B6-E-NM1	With multi-pin plug connection, for connecting max. 16 valves	40
7	Double solenoid valve VUVBB	-	34
8	Pressure zone supply module	For pilot air supply (included in the scope of delivery of the manifold rail VABM)	-
9	Silencer U	For fitting in exhaust ports	48
10	Push-in fitting QS	For connecting compressed air tubing with standard O.D.	47
11	Blanking plug B	-	48
12	Pressure zone supply module VABF	Pressure zone supply module VABF: with cartridge	42
13	Inscription label MH-BZ-80X	For identifying the manifold rail	48
14	H-rail mounting kit VAME	For mounting on the H-rail NRH-35-2000	48
15	Separator for pressure zones VABD	For mounting in the manifold rail	43

Valve terminals type 24 VTUB, NPT

Key features

Individual connection



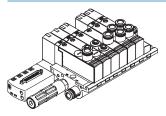
Connection is independent of the control technology used and is flexible thanks to pre-assembled cables. There are two different valve types; in-line valves and semi in-line valves for manifold rails or individual sub-bases. Between 2 ... 20 solenoid coils (divided between 2 ... 10 valve positions) can be selected with individual connection. Valves can be used on individual sub-bases for actuators further away from the valve terminal.

With an individual electrical connection, the plug is connected directly to the valve. A number of plug sockets/ plug sockets with cable can be selected for the valve terminal and for the individual sub-base: • KMEB-1-...-LED with signal status display

FESTO

- KMEB-1-230AC-... can be used up to 230 V AC
- MSSD-EB for self-assembly
- KMEB-2-24-... with signal status display
- Illuminating seal MEB-LD for signal status display

Multi-pin plug connection

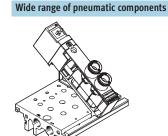


Control signals from the controller to the valve terminal are transmitted via a pre-assembled multi-core cable, which substantially reduces installation time. This valve terminal can be equipped with 4 ... 10 valves.

Versions

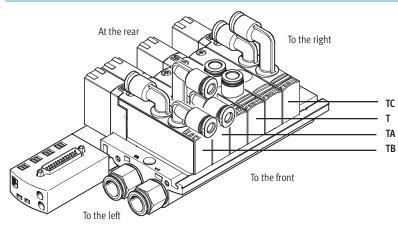
Sub-D connection

Double solenoid drive with multi-pin plug connection. The valve is equipped with an LED for signal status display.



- Using the same basic valves for both the individual valves and the valve manifold permits fast and flexible conversion and multiple use of parts.
- Flexible construction thanks to assembled and tested units or individual components as modules for individual configurations.
- Flow rates from 200 ... 1,000 l/min depending on the respective application through the selection of appropriate QS connections.

Connection to the valve



Connection positions on valve:

- T (on top, straight)
- TA (on top, angled outlet to the front)
- TB (on top, angled outlet to the front/rear)
- TC (on top, angled outlet to the rear)

Connection sizes for connection position T:

- Push-in connector 4 mm (code P4)
- Push-in connector 6 mm (code P6)
- Push-in connector 8 mm (code P8)
- Push-in connector 10 mm (code P10)

Connection sizes for connection position TB/TA/TC:

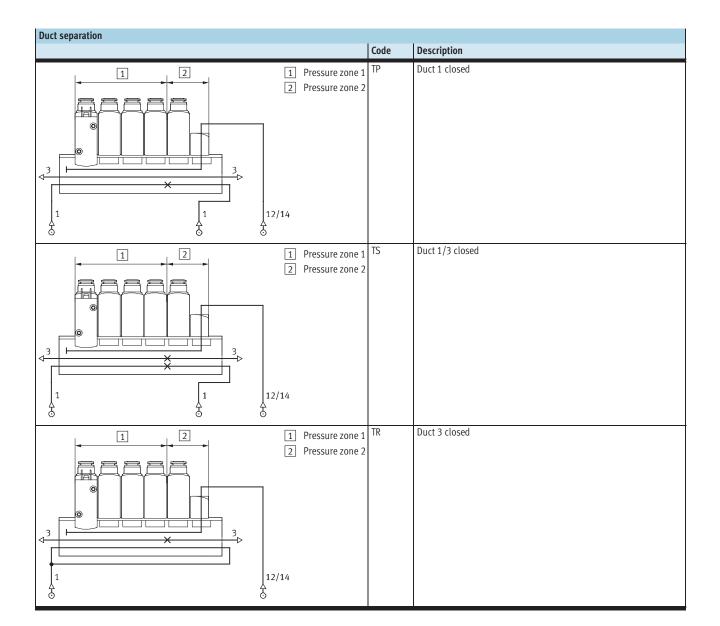
- Push-in connector 4 mm (code P4)
- Push-in connector 6 mm (code P6)
- Push-in connector 8 mm (code P8)

Valve terminals type 24 VTUB, NPT Key features – Pneumatic components

Instructions for using pressure zones

- Supply duct 1 (code TP)

- The valve terminal VTUB can be operated with 2 pressure zones, supplied either from the left or from the right. Pressure zones are created by means of separators that can be used in the following ducts:
- or
- Supply duct 1
- and exhaust duct 3 (code TS) or
- Exhaust duct 3 (code TR)

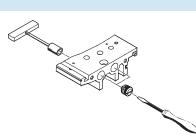


Separator VABD-B6

_ Note

The separator can also be fitted subsequently using a screwdriver/ socket spanner.

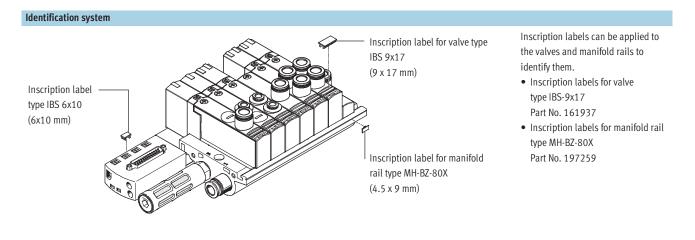




Valve terminals type 24 VTUB, NPT

Key features - Display and operation

FESTO



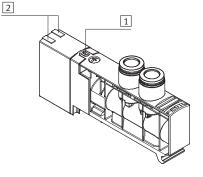
Display and operation

Each solenoid coil can be allocated an LED which indicates its signal status. Suitable plug sockets with cable can be found on page 49. On the multipin variant the LED is integrated in the valve. The manual override (MO) enables the valve to be activated without electronic control or power supply.

The valve is activated by pushing the manual override. The set switching status can be secured by rotating the manual override.



A manually actuated valve (manual override) cannot be reset electrically. Conversely, an electrically actuated valve cannot be reset using the mechanical manual override.

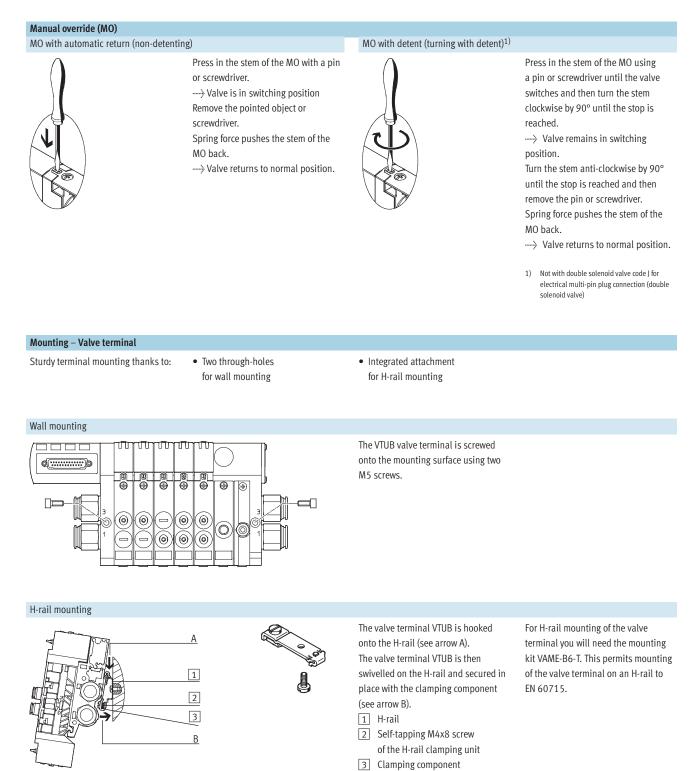


- 1 Optional manual override (pushing and detenting via turning using a screwdriver)
- 2 LED signal status display per solenoid coil

Valve terminals type 24 VTUB, NPT

Key features - Display and operation



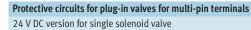


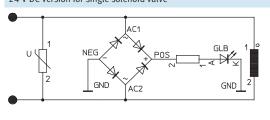
of the H-rail clamping unit

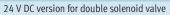
Subject to change – 2011/06

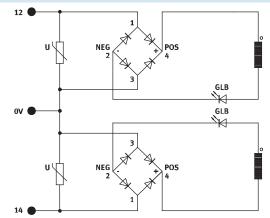
Valve terminals type 24 VTUB, NPT Key features – Electrical components

FESTO









Pin allocation – Sub-D plug						
	Connec	ting cable, 25-wire		Connect	ing cable, 15-wire	
	Pin	Address/coil	Wire colour ¹⁾	Pin	Address/coil	Wire colour ¹⁾
	1	0	WH	1	0	WH
+ 1	2	1	BN	2	1	BN
14+ + 2	3	2	GN	3	2	GN
15+	4	3	YE	4	3	YE
16+	5	4	GY	5	4	GY
+ 4	6	5	РК	6	5	РК
+ 5	7	6	BU	7	6	BU
19+	8	7	RD	8	7	RD
+ 7	9	8	BK	9	8	ВК
20+ + 8	10	9	VT	10	9	VT
21+	11	10	GY PK	11	10	GY PK
+ 9	12	11	RD BU	12	11	RD BU
+10	13	12	GN WH	13	-	-
+11	14	13	BN GN	14	-	-
24++12	15	14	YE WH	15	-	-
25+	16	15	BN YE	16	-	-
+13	17	16	GY WH	17	-	-
	18	17	BN GY	18	-	-
	19	18	WH PK	19	-	-
	20	19	BN PK	20	-	-
	21	20	BU WH	21	-	-
- - Note	22	21	BN BU	22	-	-
- 闄 - Note	23	22	RD WH	23	-	WH GN
The drawing shows the view on the pins	24	23	BN RD	24	-	BN GN
of the Sub-D plug.	25	0 V	BK WH	25	0 V	WH YE

1) To IEC 757

Valve terminals type 24 VTUB, NPT

Key features – Applications

Equipment

Operate system equipment with unlubricated compressed air if possible. Festo valves and cylinders are designed so that, if used as designated, they will not require additional lubrication and will still achieve a long service life.

The quality of compressed air downstream of the compressor must correspond to that of unlubricated compressed air. If possible, do not operate all of your system equipment with lubricated compressed air. The lubricators should, where possible, always be installed directly upstream of the actuator used. Incorrect additional oil and too high an oil content in the compressed air reduce the service life of the valve terminal.

Use Festo special oil OFSW-32 or the alternatives listed in the Festo catalogue (as specified in DIN 51524 HLP32; basic oil viscosity 32 CST at 40 °C).

Bio-oils

When using bio-oils (oils which are based on synthetic or native ester, e.g. rapeseed oil methyl ester), the maximum residual oil content of 0.1 mg/m^3 must not be exceeded (see ISO 8573-1 Class 2).

Mineral oils

When using mineral oils (e.g. HLP oils to DIN 51524, parts 1 to 3) or similar oils based on poly-alpha-olefins (PAO), the maximum residual oil content of 5 mg/m³ must not be exceeded (see ISO 8573-1 Class 4). A higher residual oil content irrespective of the compressor oil cannot be permitted, as the basic lubricant would be flushed out over time.

Valve terminals type 24 VTUB, NPT Type codes – Terminal valves

		VUVB	 S	- M	32C	 A	Z	D]- [T14]-[1	T1	L
Valve s	eries													
VUVB	Solenoid valve													
Constru	uctional design													
S	Semi in-line valve			J										
Valve f	unction													
M32C	3/2-way valve, normally closed													
M32U	3/2-way valve, normally open													
M42	4/2-way valve, single solenoid													
B42	4/2-way valve, double solenoid													
Reset r	nethod													
-	None (double solenoid)													
A	Pneumatic reset													
Pilot ai	r supply													
-	Internal]						
Z	External													
Manua	l override													
D	Non-detenting/detenting								1					
Pneum	atic connection													
T532	For tubing O.D. 5⁄32										1			
T14	For tubing O.D. 1⁄4													
T516	For tubing O.D. 5/16													
T38	For tubing O.D. 3/8													
QX	Without push-in connector													
Operat	ing voltage													
1	24 V DC												J	
Electric	al connection													
T1	Plug-in, connection for multi-pin plug	g												1
Signal	status display													
L	LED													

Valve terminals type 24 VTUB, NPT Technical data – Terminal valves

Voltage

24 V DC

Pressure

-0.9 ... +8 bar

Temperature range −5 ... +50 °C



General technical data					
Valve function			3/2-way, single solenoid	4/2-way, single solenoid	4/2-way, double solenoid
Design			Piston spool valve		
Sealing principle			Soft		
Actuation type			Electric		
Reset method			Pneumatic spring		-
Type of control			Piloted		
Pilot air supply			Internal or external		
Direction of flow			Non-reversible		
Exhaust function			No flow control		
Manual override			Non-detenting, detenting		Non-detenting
Type of mounting			Via through-hole		
Mounting position			Any		
Width		[mm]	20		
Nominal size		[mm]	7		
Pneumatic connections					
Supply port		1	1/2 NPT (sub-base)		
Exhaust port		3	1/2 NPT (sub-base)		
Working lines		2/4	5/32 NPT, 1/4 NPT, 5/16 NPT,	3/8 NPT	
External pilot air connection		12/14	1⁄8 NPT		
Standard nominal flow rate	qnN	[l/min]	200 (5/32 NPT) 500 (1/4 NF	PT), 800 (5⁄16 NPT), 1,000 (3⁄8	NPT)

Operating and environmental conditions Operating medium Dried and filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm, vacuum Operating pressure [bar] -0.9 ... +8 Operating pressure for valve terminal with internal pilot air [bar] 2 ... 8 supply Pilot pressure [bar] 2 ... 8 Ambient temperature [°C] -5 ... +50 Temperature of medium -5 ... +50 [°C] Storage temperature¹⁾ [°C] -20 ... +40 RoHS-compliant Note on materials

1) Long-term storage

Note

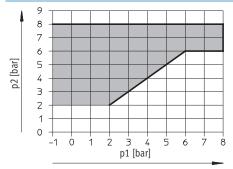
A filter must be installed upstream of valves operated in vacuum mode. This prevents any foreign matter in the intake air getting into the valve (e.g. when operating a suction cup).

Valve terminals type 24 VTUB, NPT Technical data – Terminal valves

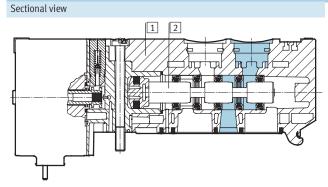
Electrical data							
Valve function		3/2-way, single solenoid	4/2-way, single solenoid	4/2-way, double solenoid			
Electrical connection		Socket for multi-pin plug					
Nominal operating voltage [V DC] 24							
Permissible voltage fluctuations		±10%					
Electrical power consumption	[W]	1.5	1.5	3.3 (following a current			
				reduction 0.1)			
Protection class to EN 60529		IP65					

Valve switching times [ms]			
Valve function	3/2-way, single solenoid	4/2-way, single solenoid	4/2-way, double solenoid
On	20	20	-
Off	20	20	-
Changeover	-	-	20

Pilot pressure p2 as a function of operating pressure p1



Materials – Valves



H

0

争

o

Single solenoid



Double solenoid

0

(€

1	Housing	Reinforced polyamide
2	Piston spool	Wrought aluminium alloy
-	Seals	Nitrile rubber, hydrogenated nitrile rubber, fluoro elastomer

Materials	
Manifold rail with multi-pin plug	Wrought aluminium alloy
Pressure zone supply module	Reinforced polyamide
Blanking plate for vacant position	Reinforced polyamide

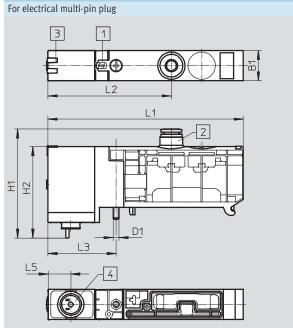
Valve terminals type 24 VTUB, NPT Technical data – Terminal valves

FESTO

Download CAD Data -> www.festo.com/us/cad

Product weight		
Approx. weight	[g]	
Manifold rail with multi-pin plug		
4 valve positions		700
6 valve positions		925
• 8 valve positions		1160
• 10 valve positions		1390
Pressure zone supply module		30
Valves		
• Single solenoid (code K, N, M)		150
• Double solenoid (code J)		220
Blanking plate for vacant position		25

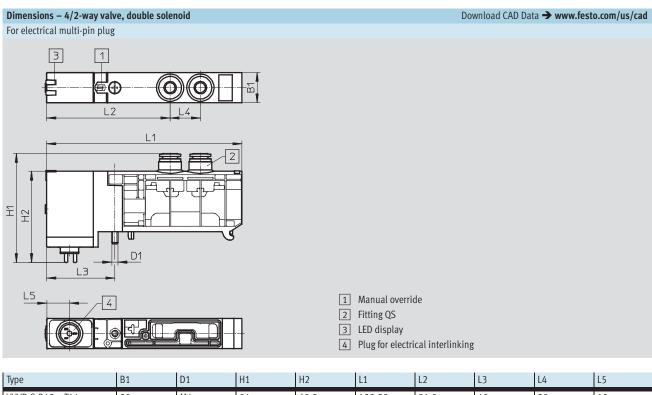
Dimensions - 3/2-way and 4/2-way valve, single solenoid



itti-pin piug								
1								
	\square		'n					
L2	_ _							
		2						
						1 2 3 4	Manual overrid Fitting QS LED display Plug for electric	
	B1	D1	H1	H2	L1	L2	L3	L5
	20	M (5.4	(0.2	128.05		45	15

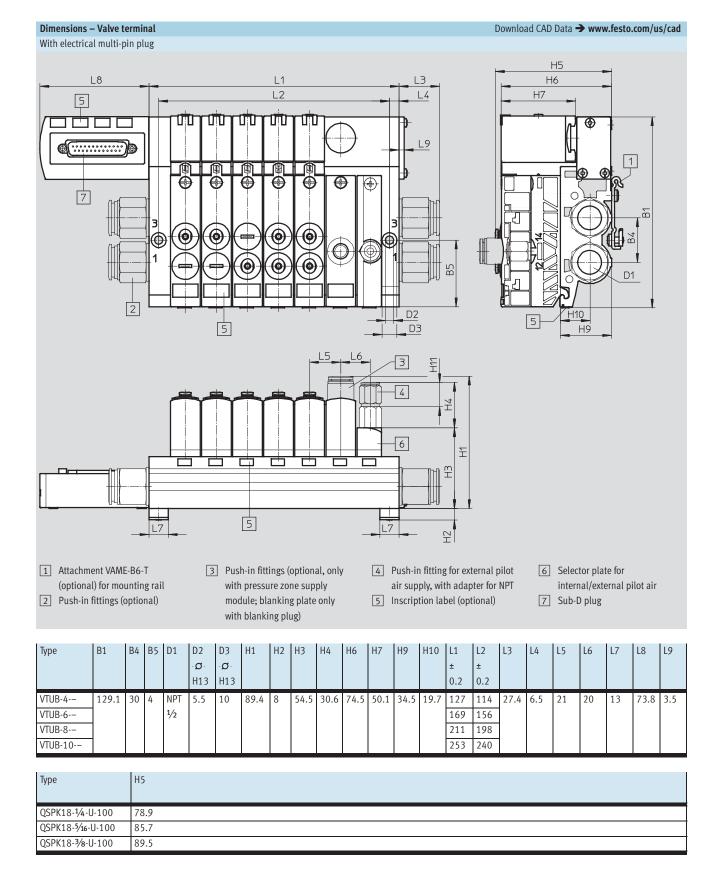
Туре	B1	D1	H1	H2	L1	L2	L3	L5
VUVB-S-M32T14	20	M4	54	60.3	128.95	81.5	45	15
VUVB-S-M32T516			61					
VUVB-S-M32T38			65					

Valve terminals type 24 VTUB, NPT Technical data – Terminal valves



Туре	B1	D1	H1	H2	L1	L2	L3	L4	L5
VUVB-S-B42T14	20	M4	54	60.3	128.95	81.5	45	20	15
VUVB-S-B42T516			61						
VUVB-S-B42T38			65						

Valve terminals type 24 VTUB, NPT Technical data – Terminal valves



Valve terminals type 24 VTUB, NPT Technical data – Terminal valves

Ordering data – Va Circuit symbol	Code	Description	Voltage	Pneumatic connection	Part No.	Tuno
-	Code	Description	vollage	Pheumatic connection	Part NO.	Туре
3/2-way valves		-			-	
12 2	К	Normally closed,	24 V DC	QS-1/4	568611	VUVB-S-M32C-AZD-T14-1T1L
		external pilot air supply,		QS-5/16	568612	VUVB-S-M32C-AZD-T516-1T1L
14 1 3 12		pneumatic spring return		QS-3/8	568613	VUVB-S-M32C-AZD-T38-1T1L
				Without push-in	574001	VUVB-S-M32C-AZD-QX-1T1L
				connector		
10 ²	Ν	Normally open,	24 V DC	QS-1/4	568614	VUVB-S-M32U-AZD-T14-1T1L
		external pilot air supply,		QS-5/16	568615	VUVB-S-M32U-AZD-T516-1T1L
14 1 3 12		pneumatic spring return		QS-3/8	568616	VUVB-S-M32U-AZD-T38-1T1L
				Without push-in	574002	VUVB-S-M32U-AZD-QX-1T1L
				connector		
		·	•			
4/2-way valves, sin	gle solenoio	d				
14 ⁴ ²	М	External pilot air supply,	24 V DC	QS-1/4	568617	VUVB-S-M42-AZD-T14-1T1L
		pneumatic spring return		QS-5/16	568618	VUVB-S-M42-AZD-T516-1T1L
14 1 3 12				QS-3/8	568619	VUVB-S-M42-AZD-T38-1T1L
14 1 5 12				Without push-in	537640	VUVB-S-M42-AZD-QX-1T1L
				connector		
			·	·	•	
4/2-way valves, dou	ıble soleno	id				
14 ⁴ ² 12	J	External pilot air supply	24 V DC	QS-1/4	568620	VUVB-S-B42-ZD-T14-1T1L
$\frac{1}{2}$,			QS-5/16	568621	VUVB-S-B42-ZD-T516-1T1L
14 1 3 12	1			QS-3/8	568622	VUVB-S-B42-ZD-T38-1T1L
14 1 5 12				Without push-in	537641	VUVB-S-B42-ZD-QX-1T1L
	1			connector		

Valve terminals type 24 VTUB, NPT Technical data – Manifold rail

Manifold rail with electrical multi-pin plug VABM-...-M1

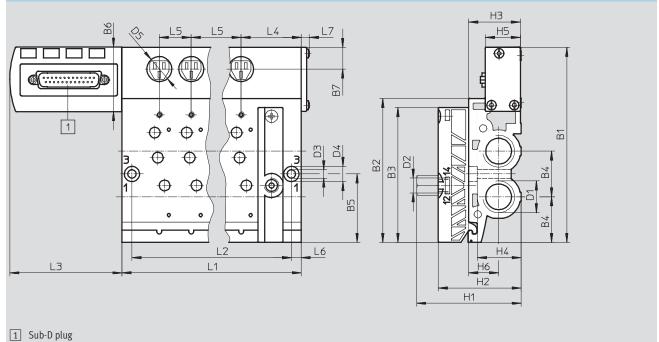
Material: Wrought aluminium alloy

Dimensions



Download CAD Data → www.festo.com/us/cad

FESTO



Note

The manifold rail is supplied with an adapter for NPT.

Туре	B1	B2	B3	B4 ± 0.2	B5	B6	Β7	D1	D2	٠ø٠	D4 • ø • H13	D5 - g -	H1	H2	H3	H4	H5	H6 ±0.2
VABM-B6-E-N12-4-M1	128.3	94.7	88.7	30	45	42.2	14.3	1⁄2NPT	1⁄8NPT	5.5	10	16.4	68.7	54.5	34	28.8	23	19.7
VABM-B6-E-N12-6-M1																		
VABM-B6-E-N12-8-M1																		
VABM-B6-E-N12-10-M1	1																	

Туре	L1	L2	L3	L4	L5	L6	L7
				±0.1	±0.1	±0.1	
VABM-B6-E-N12-4-M1	127	114	73.8	39.5	21	6.5	5.4
VABM-B6-E-N12-6-M1	169	156					
VABM-B6-E-N12-8-M1	211	198					
VABM-B6-E-N12-10-M1	253	240					

Valve terminals type 24 VTUB, NPT Technical data – Manifold rail

Ordering data		
CRC	Part No.	Туре
21)	568181	VABM-B6-E-N12-4-M1
21)	568182	VABM-B6-E-N12-6-M1
21)	568183	VABM-B6-E-N12-8-M1
2 ¹⁾	568184	VABM-B6-E-N12-10-M1

Corrosion resistance class 2 according to Festo standard 940 070
 Components subject to medium corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

FESTO

Accessories

Cover for valve housing VAMC

Material: Polyamide



Ordering data	
CRC	Part No. Type
2 ¹⁾	537512 VAMC-B6-C

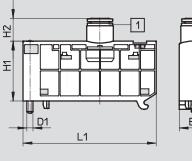
1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pressure zone supply module VABF

Material: Reinforced polyamide





B1

1 QSPK18-3/8-U

Туре	D1	B1	H1	H2	L1
VABF-B6	M4	20	40	15	88.5

Ordering data				
		CRC	Part No.	Туре
For individual electrical connection	With cartridge QSPK18-3/8-U	2 ¹⁾	568624	VABF-B6-P1A5-T38
For multi-pin plug connection	With cartridge QSPK18-3/8-U and cover	2 ¹⁾	568623	VABF-B6-P1A9-T38
	cap for multi-pin plug connection			

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

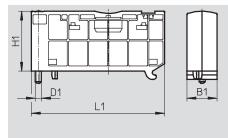
FESTO

Accessories

Blanking plate VABB

Material: Reinforced polyamide

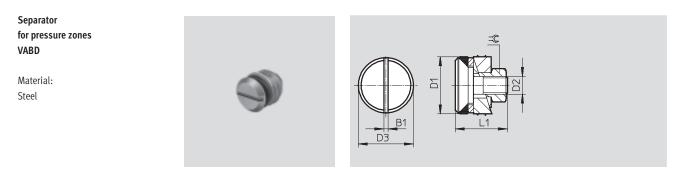




Туре	B1	D1	H1	L1
VABB-B-6-E	20	M4	40	88.5

Ordering data				
		CRC	Part No.	Туре
For individual electrical connection	-	2 ¹⁾	537513	VABB-B6-E
For multi-pin plug connection	With cover cap for multi-pin plug	2 ¹⁾	537623	VABB-B6-ET
	connection			

1) Corrosion resistance class 2 according to Festo standard 940 070 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.



Туре	B1	~	D2 Ø	D3	L1	⊃=
VABD-B6-14-P-C	1.6	11.7	M4	11.3	13.9	7
VABD-B6-12-P-C	1.4	19	M6	18.3	17.3	10

Ordering data			
Manifold rail	CRC	Part No.	Туре
1⁄4 NPT	2 ¹⁾	537515	VABD-B6-14-P-C
1⁄2 NPT	2 ¹⁾	537516	VABD-B6-12-P-C

1) Corrosion resistance class 2 according to Festo standard 940 070

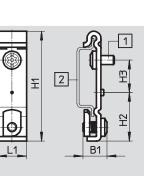
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Accessories

H-rail mounting kit VAME

Material: Steel





 Self-tapping screw (4x9)
 H-rail NRH-35-2000

 Type
 B1
 H1
 H2
 H3
 L1

 VAME-B6-T
 10.7
 49.1
 21.7
 14.5
 13

Ordering data		
CRC	Part No. Typ	e
21)	537514 VA	ME-B6-T

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data								
	Code	Valve function	Pneumatic connection	Part No.	Туре			
Blanking plate for vac	Blanking plate for vacant position							
	L	For individual electrical connection	-	537513	VABB-B6-E			
	L	For multi-pin plug connection with cover cap for electrical multi-pin plug connection	-	537623	VABB-B6-ET			
Pressure zone supply	module							
	S	Additional supply for individual electrical connection	QS-3/8	568623	VABF-B6-P1A5-Q38			
	S	Additional supply for multi-pin plug connection with cover cap for electrical multi-pin plug connection	QS-3⁄8	568624	VABF-B6-P1A9-Q38			
			Without push-in connector	537532	VABF-B6-P1A5-QX			
Cover plate for valve h	ousing	1	1	1				
	C	Valve design with cover	_	537512	VAMC-B6-C			
A CONTRACTOR								

FESTO

.

Ordering data						
	Code	Description	Valve positions	Compressed air supply connection	Part No.	Туре
Sub-base for indivi	dual valve					
	-	Internal pilot air supply	1 Cartridge		537518	VABS-B6-PB-Q-B
	-	External pilot air supply	1	Cartridge	537519	VABS-B6-PB-Q
Adapter for individu	ıal sub-bas	e				
	-	For thread ¼ NPT	1	1⁄4 NPT	9396	AD-G¼-¼NPT-I
Manifold rail for inc	dividual ele	ctrical connection				
	-		2	1⁄4 NPT	568185	VABM-B6-E-N14-2
	2		4		568186	VABM-B6-E-N14-4
			6		568187	VABM-B6-E-N14-6
			8		568188	VABM-B6-E-N14-8
Ψ			10		568189	VABM-B6-E-N14-10
	-		2	1⁄2 NPT	570725	VABM-B6-E-N12-2
	2		4		570726	VABM-B6-E-N12-4
			6		570727	VABM-B6-E-N12-6
			8		570728	VABM-B6-E-N12-8
			10	-	570729	VABM-B6-E-N12-10
Manifold rail for va	lve terminal	l with multi-pin plug connection				
	-		4	1⁄2 NPT	568181	VABM-B6-E-N12-4-M1
			6	1	568182	VABM-B6-E-N12-6-M1
			8	1	568183	VABM-B6-E-N12-8-M1
			10	_	568184	VABM-B6-E-N12-10-M1
Separator						
	TP, TS,	For duct separation	-	1⁄4 NPT	537515	VABD-B6-14-P-C
SP .	TR		-	1⁄2 NPT	537516	VABD-B6-12-P-C

Ordering data						
	Code	Description	Tubing O.D.	Packaging unit	Part No.	Туре
Cartridge with push-ir	n connect	or				
9	-	Straight	5/32	10 pieces	132171	QSPK18-5⁄32-U
	-		1/4	10 pieces	132172	QSPK18-1⁄4-U
C	-		5⁄16	10 pieces	132173	QSPK18-5⁄16-U
	-		3⁄8	10 pieces	132174	QSPK18-3⁄8-U
	-	L-shape	5/32	10 pieces	132175	QSPLK18-5/32-U
	-		1/4	10 pieces	132176	QSPLK18-¼-U
~	-		5⁄16	10 pieces	132177	QSPLK18-5⁄16-U
	-	Extra-long L-shape	5/32	10 pieces	132178	QSPLLK18-5/32-U
	-	-	1/4	10 pieces	132179	QSPLLK18-¼-U
	-		5/16	10 pieces	132180	QSPLLK18-5/16-U
Push-in fitting				·	T(echnical data → Internet: quick star
	-	Connection 1/4 NPT	3⁄8	1 piece	533278	QB-1⁄4-3⁄8-U
S A	-	1	1/2	1 piece	567771	QB-1/4-1/2-U
	-	Connection 1/2 NPT	3⁄8	1 piece	533283	QB-1⁄2-3⁄8-U
	-	7	1/2	1 piece	533284	QB-1/2-1/2-U
	-	Connection 1/8 NPT	1/4	1 piece	533273	QB-1/8-1/4-U

Ordering data					
	Code	Description	Packaging unit	Part No.	Туре
Blanking plug					
Ø	-	Connection \varnothing 18 mm	10 pieces	537533	QSPC18
	-	For thread 1/4 NPT	10 pieces	174165	B-1/4-NPT
OM U	-	For thread 1/2 NPT	10 pieces	31785	B-1/2-NPT
	•	-			
Adapter					
	-	For thread 1/8 NPT	1 piece	9395	AD-G ¹ /8- ¹ /8NPT-I
Silencer					Technical data → Internet: u
	-	For thread 1/4 NPT	1 piece	12639	U-1/4-B-NPT
	-	For thread 1⁄4 NPT	1 piece	12741	U-½-B-NPT
Inscription label					
	-	Scope of delivery 24 labels in frame		161937	IBS-9x17
	-	Scope of delivery 80 labels in frame		197259	MH-BZ-80X
-	-	Scope of delivery 64 labels in frame		18576	IBS-6x10
H-rail mounting ki					
	Н	Attachment of the manifold rails to H-rails to	1 piece	537514	VAME-B6-T
		EN 60715-TH35			
N N					

Ordering data						
-	Code	Description	Voltage	Cable length	Part No.	Туре
			[V]	[m]		
Plug socket			4			Technical data → Internet: mssd-eb
	-	With screw terminals,	Up to 250 AC	-	151687	MSSD-EB
		for self-assembly	-			
	C		Up to 250 AC	-	539712	MSSD-EB-M12
~	-	With insulation displacement connection,	Up to 250 AC	-	192745	MSSD-EB-S-M14
		for self-assembly				
			1		1	
Plug socket with cabl	e for indiv	vidual electrical connection				Technical data 🗲 Internet: kmeb
	-	Switching status display via LED	24 DC	2.5	151688	KMEB-1-24-2,5-LED
AN INCOMENT		Polyvinyl chloride	24 DC	5	151689	KMEB-1-24-5-LED
		Polyvinyl chloride	Up to 240 AC	2.5	151690	KMEB-1-230AC-2,5
ò			Up to 240 AC	5	151691	KMEB-1-230AC-5
	C1	Switching status display via LED, polyurethane	24 DC	2.5	174844	KMEB-2-24-2,5-LED
DS-CP	C2	Switching status display via LED, polyurethane	24 DC	5	174845	KMEB-2-24-5-LED
	C1	Polyurethane	Up to 230 AC	2.5	174846	KMEB-2-230AC-2,5
\checkmark	C2		Up to 230 AC	5	174847	KMEB-2-230AC-5
	-	Switching status display via LED	24 DC	2.5	547268	KMEB-3-24-2,5-LED
10 All		Polyvinyl chloride	24 DC	5	547269	KMEB-3-24-5-LED
		Polyvinyl chloride	24 DC	2.5	547270	KMEB-3-24-2,5
<u>ه</u>			24 DC	5	547271	KMEB-3-24-5
Connecting cable for	multi-pin			+		
1	, –	Sub-D, 25-pin, up to 20 coils	24 DC	2.5	530046	KMP6-25P-20-2,5
	-	Polyvinyl chloride	24 DC	5	530047	KMP6-25P-20-5
	-		24 DC	10	530048	KMP6-25P-20-10
	-	Sub-D, 25-pin, up to 12 coils	24 DC	2.5	530049	KMP6-25P-12-2,5
	-	Polyvinyl chloride	24 DC	5	530050	KMP6-25P-12-5
	-		24 DC	10	530051	KMP6-25P-12-10
Composition and the form		where the IDC C				
Connecting cable for			24.00	2.5	520222	
	M1	Sub-D, 25-pin, up to 12 coils	24 DC 24 DC	2.5 5	538222	NEBV-S1G25-K-2,5-N-LE15 NEBV-S1G25-K-5-N-LE15
	M2 M3	Polyvinyl chloride	24 DC 24 DC	10	538223 538224	NEBV-S1G25-K-5-N-LE15 NEBV-S1G25-K-10-N-LE15
	M3 M1	Sub-D, 25-pin, up to 24 coils	24 DC 24 DC	2.5	538224	NEBV-S1G25-K-2,5-N-LE25
	M1 M2	Polyvinyl chloride	24 DC 24 DC	5	538225	NEBV-S1G25-K-2,5-N-LE25 NEBV-S1G25-K-5-N-LE25
	M2 M3		24 DC 24 DC	10	538227	NEBV-S1G25-K-10-N-LE25
	mJ		27.00	1.0	550227	NEST 51029 N-10-N-LL29
Illuminating seal						
	-	For indicating the signal status	12 24 DC	-	151717	MEB-LD-12-24DC

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components Complete custom engineered solutions



Custom Control Cabinets Comprehensive engineering support and on-site services



Complete Systems Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical Electromechanical actuators, motors, controllers & drives



Pneumatics Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.





© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



FSC Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

Festo Regional Contact Center

5300 Explorer Drive Mississauga, Ontario L4W 5G4 Canada

USA Customers:

For ordering assistance, Call: 1.800.99.FESTO (1.800.993.3786) Fax: 1.800.96.FESTO (1.800.963.3786) Email: customer.service@us.festo.com For technical support, Call: 1.866.GO.FESTO (1.866.463.3786) Fax: 1.800.96.FESTO (1.800.963.3786)

Email: product.support@us.festo.com Canadian Customers:

 Call:
 1.877.GO.FESTO (1.877.463.3786)
 Fax:
 1.877.FX.FESTO (1.877.393.3786)

 Email:
 festo.canada@ca.festo.com
 Fax:
 festo.canada@ca.festo.com

USA Headquarters

Festo Corporation 395 Moreland Road P.O. Box 18023 Hauppauge, NY 11788, USA www.festo.com/us

USA Sales Offices

Appleton North 922 Tower View Drive, Suite N Greenville, WI 54942, USA

Boston 120 Presidential Way, Suite 330 Woburn, MA 01801, USA

Chicago 1441 East Business Center Drive Mt. Prospect, IL 60056, USA Dallas

1825 Lakeway Drive, Suite 600 Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center 2601 Cambridge Court, Suite 320 Auburn Hills, MI 48326, USA

New York 395 Moreland Road Hauppauge, NY 11788, USA Silicon Valley

4935 Southfront Road, Suite F Livermore, CA 94550, USA

Central USA

Festo Corporation 1441 East Business Center Drive Mt. Prospect, IL 60056, USA Phone: 1.847.759.2600 Fax: 1.847.768.9480



United States



USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788 Phone: 1.631.435.0800; Fax: 1.631.435.8026; Email: info@festo-usa.com www.festo.com/us

Canada



Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4 Phone: 1.905.624.9000; Fax: 1.905.624.9001; Email: festo.canada@ca.festo.com www.festo.ca

Mexico



Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquinahuac, 54020 Tlalnepantla, Edo. de México Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65; Email: Festo.mexico@mx.festo.com www.festo.com/mx

 Western USA

 Festo Corporation

 4935 Southfront Road,

 Suite F

 Livermore, CA 94550, USA

 Phone: 1.925.371.1099

 Fax:
 1.925.245.1286



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com