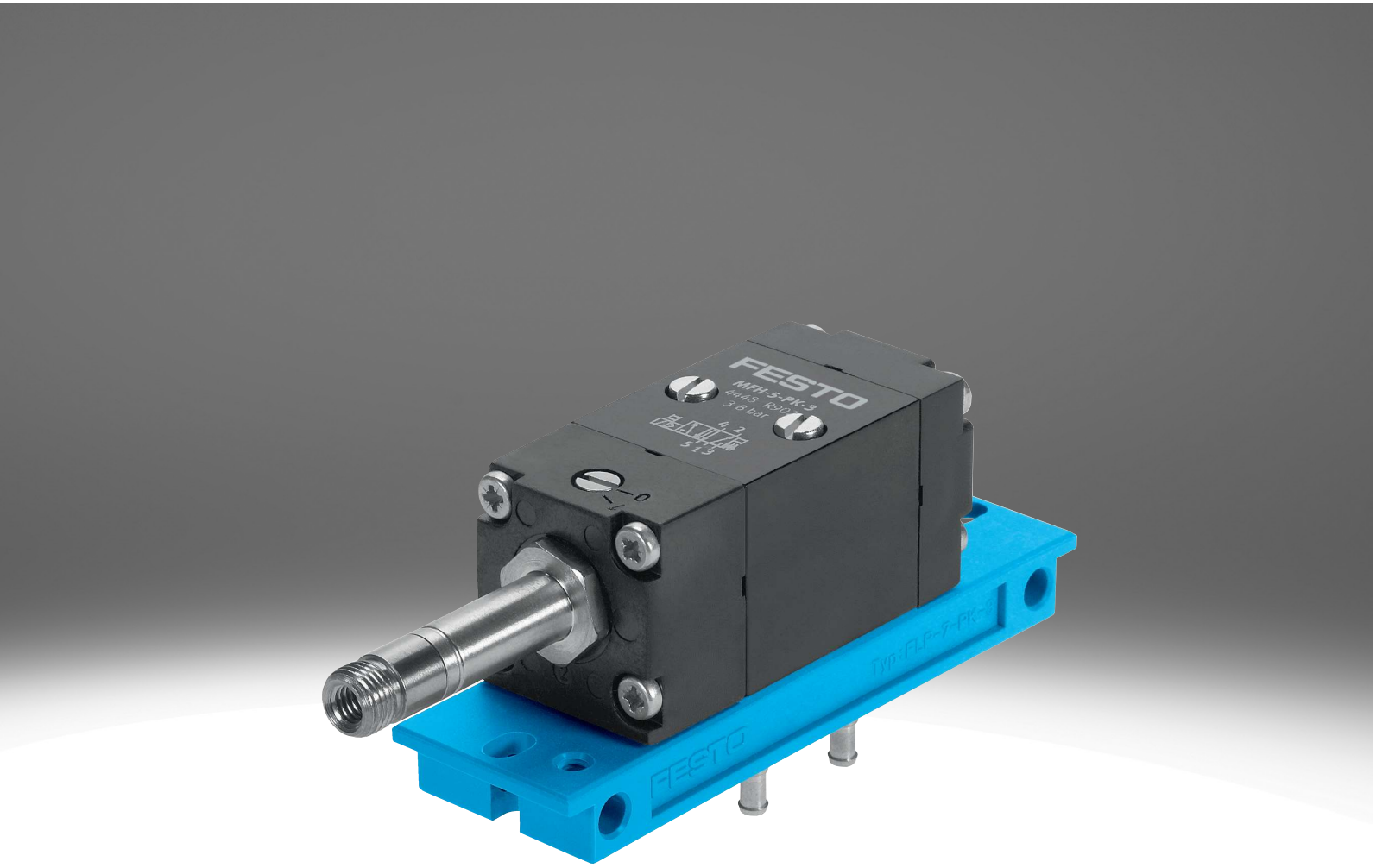
M5 compact system



Characteristics

At a glance

The M5 compact system is a complete system offering control components with all the functions required for pneumatic sequence control.

- It is based on the connecting plates 2n and the connections for barbed connectors for tubing NW 3.

- M5 components with 2n connecting plates
- Control cabinet installation
- Connection for barbed connector for plastic tubing NW 3

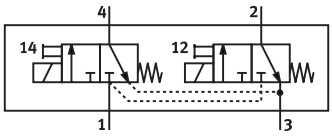
A maximum of 16 elements of the M5 compact system with 2N connecting plates can be mounted on the mounting frame. The frame length of 480 mm is designed for 19" housings according to DIN 41 488. The strips can be shortened to adjust to other installation conditions.
During mounting, the connecting or mounting plates of the elements are inserted into the guide slot of the profile strips. The plates are then clamped between the connecting components.

Datasheet

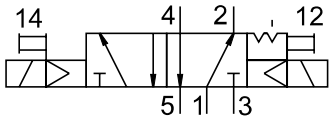
Technical data – Solenoid valves

Short type code	JMFH	MFH	VOVC
Valve function	5/2 double solenoid	5/2-way, monostable	2x3/2-way, monostable, closed
Pneumatic connection, port 1	PK-3		Sub-base
Pneumatic connection, port 2	PK-3		Sub-base
Pneumatic connection, port 3	PK-3		Sub-base
Pneumatic connection, port 4	PK-3		Sub-base
Pneumatic connection, port 5	PK-3		–
Nominal size	2.5 mm		0.65 mm
Standard nominal flow rate (standardised to DIN 1343)	105 l/min		–
Design	Poppet seat		Poppet valve with spring return
Type of mounting	Either:, On sub-base, On mounting frame, With through-hole		–
Mounting position	–		optional
Sealing principle	Soft		
Switching time off	–	22 ms	4.7 ms
Switching time on	–	10 ... 14 ms	5.2 ms
Switching time reversal	13 ms	–	
Operating pressure	2 ... 8 bar	1.5 ... 8 bar	0 ... 8 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]		Compressed air to ISO 8573-1:2010 [7:4:4]
Pilot 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)
Ambient temperature	0 ... 40°C	-5 ... 40°C	-5 ... 50°C
Media temperature	0 ... 60°C	-10 ... 60°C	-5 ... 50°C
Material housing	Aluminium, Anodised		PA-reinforced
Material sub-base	Aluminium, Anodised		–
Material seals	NBR		NBR, PU
Note on materials	RoHS-compliant		
LABS (PWIS) conformity	VDMA24364-B1/B2-L		VDMA24364-B2-L

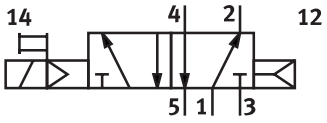
Function VOVC-BT-T32C-...



Function JMFH-5-PK-3

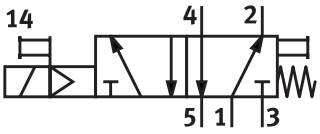


Function MFH-5-PK-3-L



Datasheet

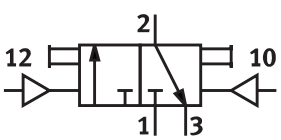
Function MFH-5-PK-3



Technical data – Pneumatic valves

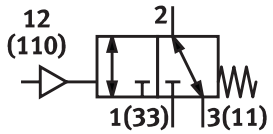
Short type code	J	JD	VL	VL/O
Valve function	3/2 double solenoid, 5/2 double solenoid	5/2-way, bistable, dominant	5/2-way, monostable	3/2 open, single solenoid
Pneumatic connection, port 1	PK-3			
Pneumatic connection, port 2	PK-3			–
Pneumatic connection, port 3	PK-3			–
Pneumatic connection, port 4	PK-3			
Pneumatic connection, port 5	PK-3			
Auxiliary pilot air port 12	PK-3		–	
Auxiliary pilot air port 14	PK-3		–	
Nominal size	2.5 mm			
Standard nominal flow rate (standardised to DIN 1343)	100 ... 105 l/min	105 l/min		100 l/min
Design	Piston gate valve, Poppet seat	Poppet seat		
Type of mounting	Either: On sub-base On mounting frame With through-hole			
Mounting position	–			
Switching time off	–		22 ms	50 ms
Switching time on	–		15 ms	12 ms
Switching time reversal	7 ... 9 ms	9 ms	–	
Switching time reversal (dominating)	–	25 ms	–	
Operating pressure	-0.9 ... 8 bar	1 ... 8 bar	1.5 ... 8 bar	0 ... 8 bar
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]			
Pilot medium	–			Compressed air to ISO 8573-1:2010 [7:-:-]
Note on operating and pilot medium	–			Lubricated operation possible (in which case lubricated operation will always be required)
Ambient temperature	-10 ... 60°C	0 ... 60°C	-10 ... 60°C	
Material housing	Polymer, Die-cast zinc			
Material sub-base	Brass, PPS reinforced			
Material seals	NBR			
Note on materials	RoHS-compliant			–
LABS (PWIS) conformity	VDMA24364-B1/B2-L, VDMA24364 zone III	VDMA24364-B1/B2-L		

Function J-3-PK-3

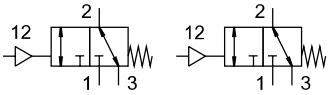


Datasheet

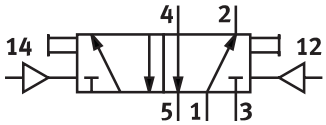
Function VL/O-3-PK-3



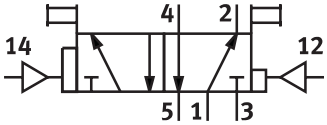
Function VL/O-3-PK-3X2



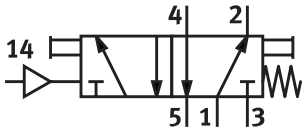
Function J-5-PK-3



Function JD-5-PK-3



Function VL-5-PK-3



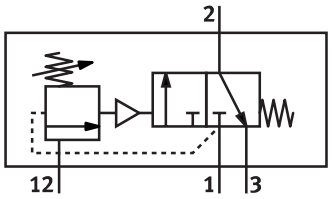
Datasheet

Technical data – Pressure sequence valves

Pneumatic connection, port 1	PK-3
Pneumatic connection, port 2	PK-3
Pneumatic connection, port 3	PK-3
Nominal size	2.5 mm
Standard nominal flow rate (standardised to DIN 1343)	100 l/min
Type of mounting	With through-hole
Operating pressure	0.18 ... 0.8 MPa
Operating pressure	1.8 ... 8 bar
Operating pressure	26.1 ... 116 psi
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)
Corrosion resistance class CRC [1)]	0 - No corrosion stress
Media temperature	-10 ... 60°C
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

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

Function VD-3-PK-3



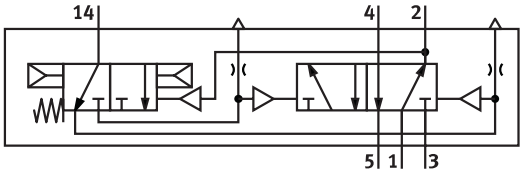
Technical data – Pressure amplifier

LABS (PWIS) conformity	VDMA24364-B2-L

Technical data – Binary reduction valve

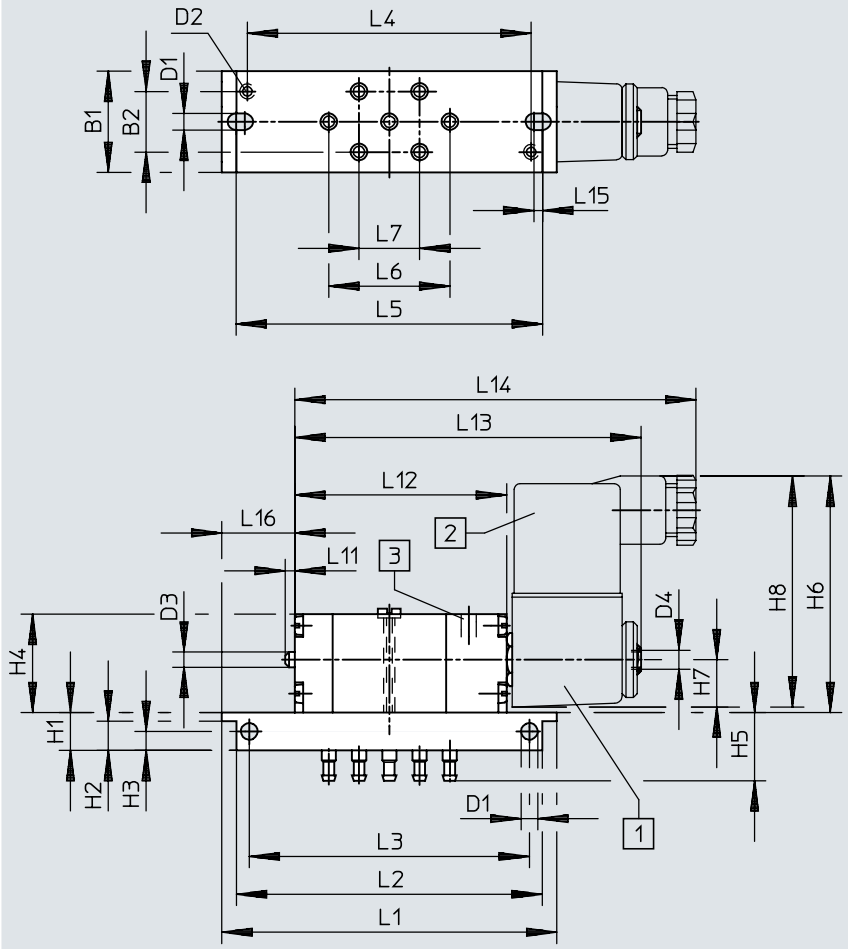
Operating pressure	3 ... 8 bar
LABS (PWIS) conformity	VDMA24364-B1/B2-L

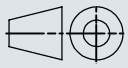
Function VLL-5-PK-3



Dimensions

Dimensions – MFH-5-PK-3(-L) Download CAD data www.festo.com





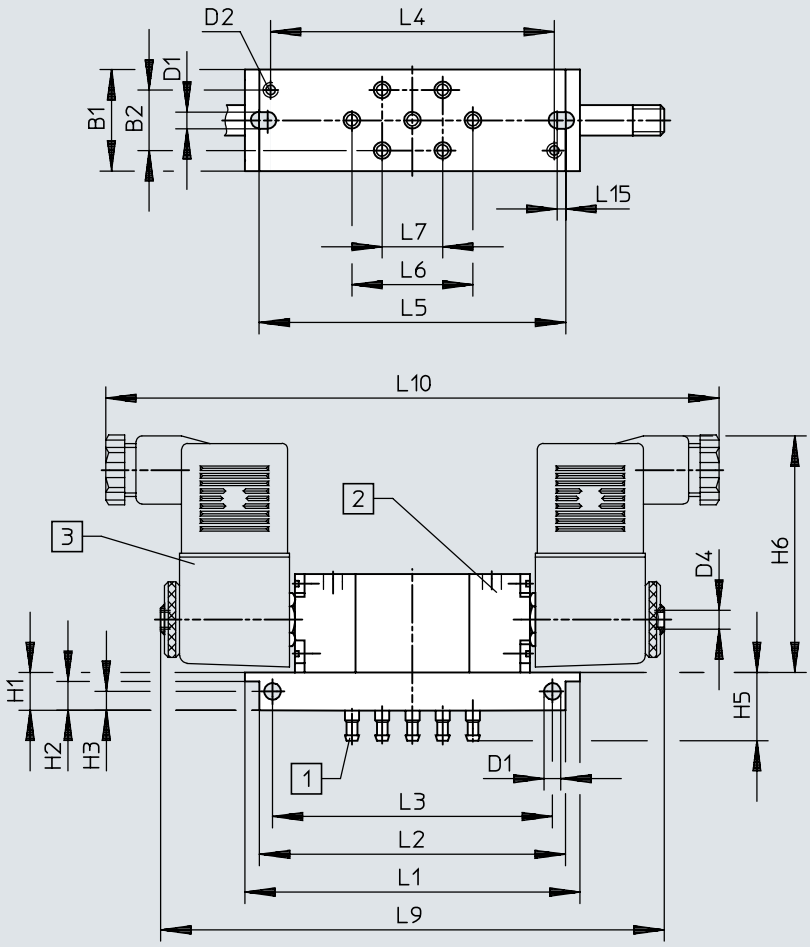
[1] Rotatable solenoid coil
[2] Plug can be repositioned by 180°
[3] Manual override

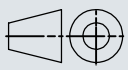
	B1	B2	D1 ø	D2	D3 ø	D4	H1	H2	H3	H4	H5	H6	H7	H8
MFH	26,8	16	4,4	M4	4	M5	10	7,7	5	26	18,5	62,5	12,5	61

	L1	L2	L3	L4	L5	L6	L7	L11	L12	L13	L14	L15	L16
MFH	88,5	80,8	74	75	81	32	16	2,5	56	~90	~106	2,3	19

Dimensions

Dimensions – JMFH-5-PK-3 Download CAD data www.festo.com





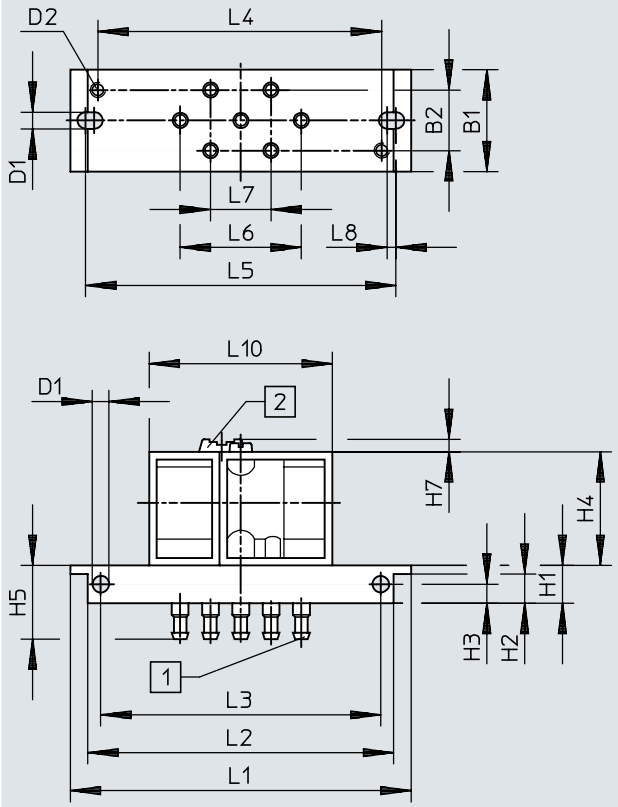
[1] Barbed connector PK-3 for plastic tubing
[2] Manual override
[3] Rotatable solenoid coil

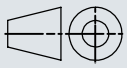
	B1	B2	D1 ⌀	D2	D4	H1	H2	H3	H5	H6
JMFH	26,8	16	4,4	M4	M5	10	7,7	5	18,5	62,5

	L1	L2	L3	L4	L5	L6	L7	L9	L10	L15
JMFH	88,5	80,8	74	75	81	32	16	133	162	2,3

Dimensions

Dimensions – J-3-PK-3 Download CAD data www.festo.com



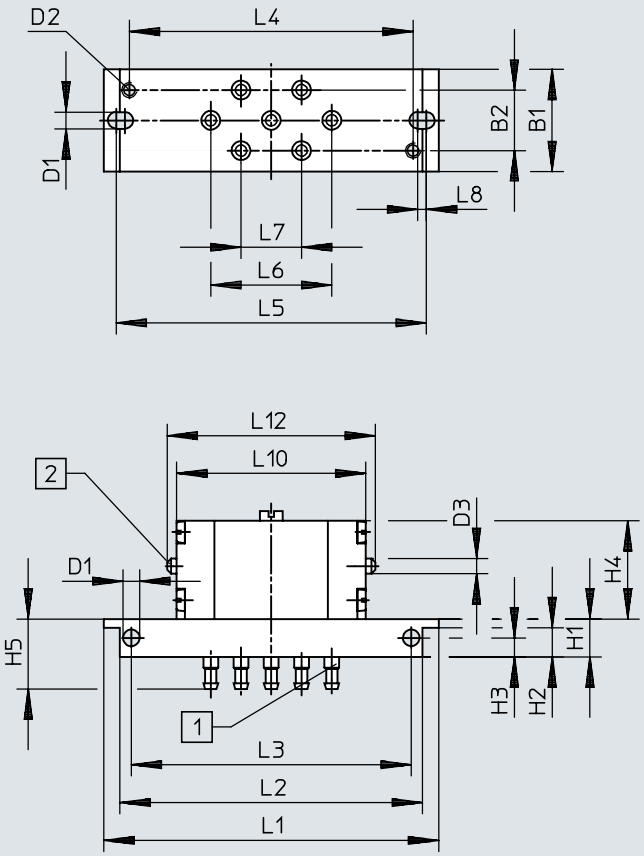


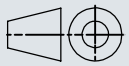
[1] Barbed connector PK-3 for plastic tubing
[2] Manual override

	B1	B2	D1 ø	D2	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6	L7	L8	L10
J-3	27	16	4,4	M4	10	7,7	5	30	18,5	88,5	80,8	74	75	81	32	16	2,3	48,4

Dimensions

Dimensions – VL-5-PK-3, J-5-PK-3, JD-5-PK-3 Download CAD data www.festo.com





[1] Barbed connector PK-3 for plastic tubing
[2] Manual override

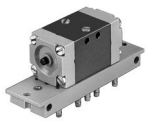
	B1	B2	D1 ø	D2	D3 ø	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5	L6	L7	L8	L10	L12
VL-5	27	16	4,4	M4	4	10	7,7	5	26	18,5	88,5	80,8	74	75	81	32	16	2,3	50	55
J-5																				
JD-5																				

Ordering data

Ordering data – Solenoid valves

	Valve function	Pneumatic connection, port 1	Operating pressure	Product weight	Part no.	Type
	2x3/2-way, monostable, closed	Sub-base	0 ... 8 bar	30 g	**565450**	**VOVC-BT-T32C-MT-F-1T1**
					565449	**VOVC-BT-T32C-MH-F-1T1**
	5/2 double solenoid	PK-3	2 ... 8 bar	380 g	**4447**	**JMFH-5-PK-3**
	5/2-way, monostable		1.5 ... 8 bar	270 g	**11546**	**MFH-5-PK-3-L**
			3 ... 8 bar		**4448**	**MFH-5-PK-3**

Ordering data – Pneumatic valves

	Valve function	Pneumatic connection, port 1	Operating pressure	Product weight	Part no.	Type
	3/2 double solenoid	PK-3	-0.9 ... 8 bar	75 g	**10772**	**J-3-PK-3**
	3/2 open, single solenoid		0 ... 8 bar	110 g	**4233**	**VL/O-3-PK-3**
				180 g	**4245**	**VL/O-3-PK-3X2**
	5/2 double solenoid		1 ... 8 bar	130 g	**4503**	**J-5-PK-3**
	5/2-way, bistable, dominant				**4901**	**JD-5-PK-3**
	5/2-way, monostable		1.5 ... 8 bar		**4504**	**VL-5-PK-3**

Ordering data – Pressure sequence valves

	Pneumatic connection, port 1	Nominal size	Operating pressure	Product weight	Part no.	Type
	PK-3	2.5 mm	1.8 ... 8 bar	220 g	**9270**	**VD-3-PK-3**

Ordering information – Pressure amplifier

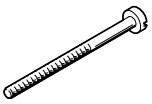
	Short type code	Part no.	Type
	VL	**7098**	**VL-3-4-H-20**

Ordering information – Binary reduction valve

	Short type code	Part no.	Type
	VLL	**4606**	**VLL-5-PK-3**

Accessories

Socket head screws

	Based on standard	LABS (PWIS) conformity	Part no.	Type
	DIN 84	VDMA24364-C1-L	**208938**	**DIN 84-M6X12-4.8**
			200568	**DIN 84-M6X18-4.8**