Standard valves to ISO 15218

Product range overview

Function	Electrical connection		Voltage	Manual override	→ Page/Internet
Pilot valve to ISO 15218	**Plug**				
	Square plug, type C, to EN 175301-803	–	12 V DC	Non-detenting	2
				Non-detenting/detenting	2
			24 V DC	Non-detenting	2
				Non-detenting/detenting	2
			24 V AC	Non-detenting	2
				Non-detenting/detenting	2
		With protective earth conductor	110 V AC	Non-detenting	4
				Non-detenting/detenting	4
			230 V AC	Non-detenting	4
				Non-detenting/detenting	4
	Round plug M12, to IEC 61076-2-101	–	24 V DC	Non-detenting	6
				Non-detenting/detenting	6
	Square plug, type A, to EN 175301-803	–	24 V DC	Non-detenting/detenting	8
				–	8
			24 V DC/42 V AC	Non-detenting	8
			24 V DC/48 V AC	Non-detenting	8
			110 V AC	Non-detenting	8
				Non-detenting/detenting	8
			230 V AC	Non-detenting	8
				tastend/rastend	8

Standard valves to ISO 15218

Technical data – Valve with square plug, type C

Piloted standard valve with square plug
VSCS-B-M32-MD-WA-1C1
VSCS-B-M32-MH-WA-1C1
VSCS-B-M32-...-1AC1
VSCS-B-M32-...-5C1

- Valve actuator for electrically actuating basic valve bodies
- Pneumatic connection: to ISO 15218 (CNOMO)
- Electrical connection: to EN 175301-803, type C

General technical data		
Electrical connection		Square plug, type C (without protective earth conductor), to EN 175301-803
Valve function		3/2-way valve, closed, single solenoid
Sealing principle		Soft
Actuation type		Electric
Reset method		Mechanical spring
Type of control		Direct
Direction of flow		Non-reversible
Non-overlapping		No
Width	[mm]	15
Mounting position		Any
Mounting		On basic valve body or sub-base via screws (2x M3)
Standard nominal flow rate	[l/min]	18
Duty cycle	[%]	100
Operating pressure	[bar]	0 ... 10
Protection class to EN 60529		IP65 (in combination with plug socket)
Conforms to standard		ISO 15218

Coil characteristics				
Type		VSCS-...-5C1	VSCS-...-1C1	VSCS-...-1AC1
Operating voltage	[V AC]	–	–	24
	[V DC]	12	24	–
	[Hz]	–	–	50/60
Power	[W]	1.8	1.8	–
Pick-up power	[VA]	–	–	3.1
Holding power	[VA]	–	–	2.3
Switching time on/off	[ms]	6/6	6/6	6/6
Perm. voltage fluctuations	[%]	–15/+10	–15/+10	–15/+10

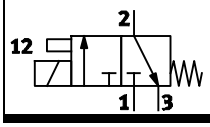
Materials	
Seals	NBR
Note on materials	RoHS-compliant

Standard valves to ISO 15218

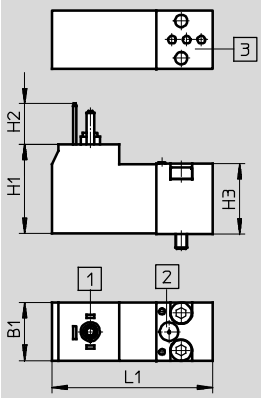
Technical data – Valve with square plug, type C

Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible (required during subsequent operation)
Ambient temperature	[°C]	–10 ... +50
Temperature of medium	[°C]	–10 ... +50
Corrosion resistance class CRC[1)]		2

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 functions	
Circuit symbol	Description
	3/2-way valve, single solenoid • Normally closed • Mechanical spring return

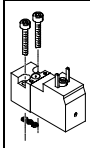
Dimensions Download CAD data ➔ **www.festo.com**



1 Connection dimensions and device plug to EN 175301-803, type C
2 Manual override
3 Pneumatic port pattern to ISO 15218

Type	B1	H1	H2	H3	L1
VSCS-...C1	15.2	23.2	10.5	18.2	41.9

Ordering data

Pilot valve to ISO 15218		Operating voltage	Manual override	Part No.	Type
	Square plug, type C, to EN 175301-803	12 V DC	Non-detenting	**546257**	**VSCS-B-M32-MH-WA-5C1**
			Non-detenting/detenting	**571062**	**VSCS-B-M32-MD-WA-5C1**
		24 V DC	Non-detenting	**546256**	**VSCS-B-M32-MH-WA-1C1**
			Non-detenting/detenting	**571061**	**VSCS-B-M32-MD-WA-1C1**
		24 V AC	Non-detenting	**546258**	**VSCS-B-M32-MH-WA-1AC1**
			Non-detenting/detenting	**571063**	**VSCS-B-M32-MD-WA-1AC1**

Standard valves to ISO 15218

Technical data – Valve with square plug, type C

Piloted standard valve with square plug
VSCS-B-M32-...-2AC1
VSCS-B-M32-...-3AC1

- Valve actuator for electrically actuating basic valve bodies
- Pneumatic connection: to ISO 15218 (CNOMO)
- Electrical connection: to EN 175301-803, type C
- With protective earth conductor

General technical data		
Electrical connection		Square plug, type C (with protective earth conductor), to EN 175301-803
Valve function		3/2-way valve, closed, single solenoid
Sealing principle		Soft
Actuation type		Electric
Reset method		Mechanical spring
Type of control		Direct
Direction of flow		Non-reversible
Non-overlapping		No
Width	[mm]	15
Mounting position		Any
Mounting		On basic valve body or sub-base via screws (2x M3)
Standard nominal flow rate	[l/min]	18
Duty cycle	[%]	100
Operating pressure	[bar]	0 ... 10
Protection class to EN 60529		IP65 (in combination with plug socket)
Conforms to standard		ISO 15218

Coil characteristics			
Type		MH ... 2AC1 MD ... 2AC1	MH ... 3AC1 MD ... 3AC1
Operating voltage	[V AC]	110	230
	[V DC]	–	–
	[Hz]	50/60	50/60
Power	[W]	–	–
Pick-up power	[VA]	2.9	2.9
Holding power	[VA]	2.1	2.1
Switching time on/off	[ms]	6/6	6/6
Perm. voltage fluctuations	[%]	–15/+10	–15/+10

Materials	
Seals	NBR
Note on materials	RoHS-compliant

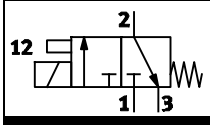
Standard valves to ISO 15218

Technical data – Valve with square plug, type C

Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible (required during subsequent operation)
Ambient temperature	[°C]	–10 ... +50
Temperature of medium	[°C]	–10 ... +50
Corrosion resistance class CRC[1)]		2
Degree of contamination		–
CE marking (see declaration of conformity)		In accordance with EU Low Voltage Directive

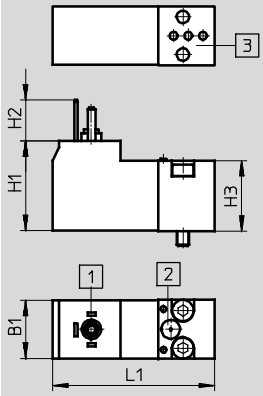
1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Valve functions

Circuit symbol	Description
	3/2-way valve, single solenoid • Normally closed • Mechanical spring return

Dimensions Download CAD data ➔ **www.festo.com**

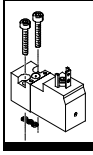
VSCS-B-M32-...C1



1 Connection dimensions and device plug to EN 175301-803, type C
2 Manual override
3 Pneumatic port pattern to ISO 15218

Type	B1	H1	H2	H3	L1
VSCS-B-M32-...C1	15.2	23.2	10.5	18.2	41.9

Ordering data

Pilot valve to ISO 15218		Operating voltage	Manual override	Part No.	Type
	Square plug, type C, to EN 175301-803, with protective earth conductor	110 V AC	Non-detenting	**546259**	**VSCS-B-M32-MH-WA-2AC1**
			Non-detenting/detenting	**571064**	**VSCS-B-M32-MD-WA-2AC1**
		230 V AC	Non-detenting	**546260**	**VSCS-B-M32-MH-WA-3AC1**
			Non-detenting/detenting	**571065**	**VSCS-B-M32-MD-WA-3AC1**

Standard valves to ISO 15218

Technical data – Valve with round plug, M12

Piloted standard valve with round plug
VSCS-B-M32 … R3

- Valve actuator for electrically actuating basic valve bodies
- Pneumatic connection: to ISO 15218 (CNOMO)
- Electrical connection: to IEC 61076-2-101/M12x1

General technical data		
Electrical connection		Round plug, M12x1, to IEC 61076-2-101
Valve function		3/2-way valve, closed, single solenoid
Sealing principle		Soft
Actuation type		Electric
Reset method		Mechanical spring
Type of control		Direct
Direction of flow		Non-reversible
Non-overlapping		No
Width	[mm]	15
Mounting position		Any
Mounting		On basic valve body or sub-base via screws (2x M3)
Standard nominal flow rate	[l/min]	18
Duty cycle	[%]	100
Operating pressure	[bar]	0 … 10
Protection class to EN 60529		IP65 (in combination with plug socket)
Conforms to standard		ISO 15218

Coil characteristics		
Operating voltage	[V DC]	24
Power	[W]	1.8
Switching time on/off	[ms]	6/6
Perm. voltage fluctuations	[%]	–15/+10

Materials	
Seals	NBR
Note on materials	RoHS-compliant

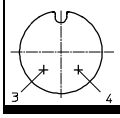
Standard valves to ISO 15218

Technical data – Valve with round plug, M12

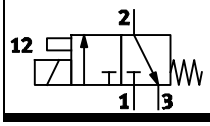
Operating and environmental conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium		Lubricated operation possible (required during subsequent operation)
Ambient temperature	[°C]	–10 … +50
Temperature of medium	[°C]	–10 … +50
Corrosion resistance class CRC[1)]		2

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.

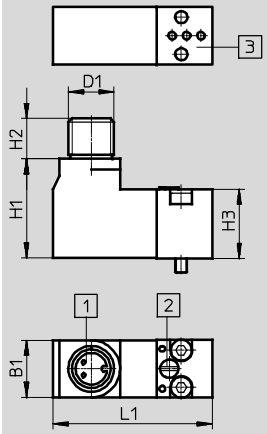
Pin allocation

M12x1, 2-pin	Pin	Description
	3	0 V
	4	U_B

Valve functions

Circuit symbol	Description
	3/2-way valve, single solenoid • Normally closed • Mechanical spring return

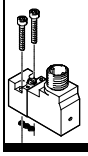
Dimensions Download CAD data ➔ **www.festo.com**



1 Connection dimensions and device plug, M12 plug
2 Manual override
3 Pneumatic port pattern to ISO 15218

Type	B1	D1	H1	H2	H3	L1
VSCS-...R3	15.2	M12	26.1	10.6	18.2	41.9

Ordering data

Pilot valve to ISO 15218		Operating voltage	Manual override	Part No.	Type
	Round plug M12, to IEC 61076-2-101	24 V DC	Non-detenting	**573214**	**VSCS-B-M32-MH-WA-1R3**
			Non-detenting/detenting	**573215**	**VSCS-B-M32-MD-WA-1R3**

Standard valves to ISO 15218

Technical data – Valve with square plug, type A

Pilot standard valve with square plug
MDH-3/2 ...
MD-3/2-24DC-PI-IA-EX

- Valve actuator for electrical actuation of basic valve bodies
- Pneumatic connection: to ISO 15218 (CNOMO)
- Electrical connection: to EN 175301-803, type A

General technical data				
Type		MDH ...	MDH ... PI	MD ... EX
Electrical connection		Square plug, type A, to EN 175301-803		
Valve function		3/2-way valve, single solenoid, closed		
Sealing principle		Soft-sealing		
Actuation type		Electric		
Reset method		Mechanical spring		
Design		Poppet valve		
Type of control		Direct		
Direction of flow		Non-reversible		
Non-overlapping		No		
Switching position display		No		
Width	[mm]	30		
Mounting position		Any		
Mounting		Screwed to basic valve body or connecting plate		
Manual override		Non-detenting	Detenting, non-detenting	–
Standard nominal flow rate	[l/min]	50	20	13
Duty cycle	[%]	100		
Operating pressure	[bar]	1 ... 16	0.5 ... 10	1 ... 8
Protection class to EN 60529		IP65 (in combination with plug socket)		
		–	NEMA 4 (not Part No. 546021)	–
Conforms to standard		ISO 15218		
Weight	[g]	140		

Coil characteristics					
Type		MDH-3/2-24VDC/42VAC	MDH-3/2-24DC	MDH-3/2-110VAC	MDH-3/2-230VAC
Operating voltage	[V AC]	42	48	110	230
	[V DC]	24	24	–	–
	[Hz]	50/60	50/60	50/60	50/60
Power	[W]	8.4	6	–	–
Pick-up power	[VA]	11.5	14.5	12	12
Holding power	[VA]	8.5	9.9	8	8
Switching time on/off	[ms]	11/9	11/9	11/9	11/9
Perm. voltage fluctuations	[%]	–10/+10	–10/+10	–10/+10	–10/+10
Perm. frequency fluctuations	[%]	–10/+10	–	–10/+10	–10/+10

Coil characteristics				
Type		MDH-3/2-24DC-PI	MDH-3/2-110AC-PI	MDH-3/2-230AC-PI
Operating voltage	[V AC]	–	110	230
	[V DC]	24	–	–
	[Hz]	–	50/60	50/60
Power	[W]	2.1	–	–
Pick-up power	[VA]	–	6.6	6.6
Holding power	[VA]	–	4	4
Switching time on/off	[ms]	12/8	12/8	12/8
Perm. voltage fluctuations	[%]	–15/+10	–15/+10	–15/+10
Perm. frequency fluctuations	[%]	–	–10/+10	–10/+10

Coil characteristics		
Type		MD-3/2-24DC-PI-IA-EX
Operating voltage	[V DC]	24
Switching time on/off	[ms]	9/50
Required current consumption	[mA]	27
Max. input power Pi	[W]	1.6
Max. input voltage Ui	[V]	28
Max. input current Ii	[mA]	115
Pneumatic connection 3		Ducted, M5

ATEX		
Type		MD-3/2-24DC-PI-IA-EX
ATEX category for gas		II 2G
Explosion ignition protection type for gas		Ex ia IIC T6 X
ATEX category for dust		II 2D
Explosion ignition protection type for dust		Ex tD A21 IP65 T80°C X
Explosion-proof temperature	[°C]	–20 <= Ta <= +50
ATEX certification		PTB 09 ATEX 2043
CE marking (see declaration of conformity)		To EU Explosion Protection Directive (ATEX)

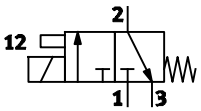
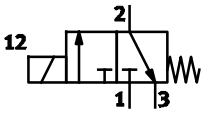
Standard valves to ISO 15218

Technical data – Valve with square plug, type C

Operating and environmental conditions					
Type	MDH-3/2-24DC MDH-3/2-24VDC/42VAC	MDH-3/2-110VAC MDH-3/2-230VAC	MDH-3/2-110AC-PI MDH-3/2-230AC-PI	MDH-3/2-24DC-PI	MD-3/2-24DC-PI-IA-EX
Operating medium	Compressed air according to ISO 8573-1:2010 [7:4:4]				
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)				
Ambient temperature [°C]	–10 … +50	–15 … +50	–20 … +60	–20 … +60	–
Temperature of medium [°C]	–15 … +80	–15 … +80	–20 … +60	–20 … +60	–20 … +70
Corrosion resistance class CRC[1)]	2				
CE marking (see declaration of conformity)	–	To EU Low Voltage Directive	To EU Low Voltage Directive	–	To EU Explosion Protection Directive (ATEX)

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.

Materials			
Type	MDH …	MDH … PI	MD … EX
Seals	FPM	HNBR	HNBR, VMQ
Note on materials	RoHS-compliant		

Valve functions	
Circuit symbol	Description
	MDH-3/2-... 3/2-way valve, single solenoid • Normally closed • Mechanical spring return
	MD-3/2 … EX 3/2-way valve, single solenoid, ATEX • Normally closed • Mechanical spring return

Dimensions

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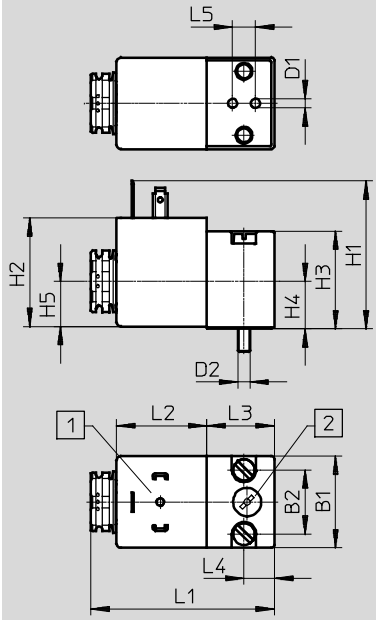
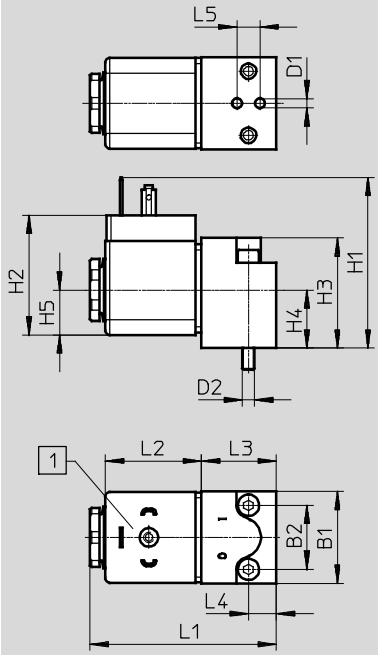
MDH-3/2 ...



1 Connection dimensions and device plug to EN 175301-803, type A
2 Manual override

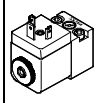
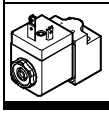
MD-3/2 ... EX



1 Connection dimensions and device plug to EN 175301-803, type A

Type	B1 +0.15 −0.5	B2 +0.15 −0.5	D1 +0.25 −0.2	D2	H1	H2 +0.2 −0.4	H3 +0.4 −0.1	H4	H5 ±0.2	L1	L2 +0.3	L3	L4	L5
MDH-3/2 ... PI	30	21	3	M4	48.4	35.5	32	15.5	14.7	60.2	29.5	22	10	7.5
MDH-3/2 ...										60.7 +1.0 −0.5				
MD-3/2 ... EX	30	21	2.9	M4	55.9	39.2	36	19	14.7	61	31.5	24.5	9.2	7.5

Ordering data

Pilot valve to ISO 15218		Operating voltage	Manual override	Part No.	Type
	Square plug, type A, to EN 175301-803	24 V DC	Non-detenting/detenting	**546019**	**MDH-3/2-24DC-PI**
		24 V DC/42 V AC	Non-detenting	**119603**	**MDH-3/2-24VDC/42VAC**
		24 V DC/48 V AC	Non-detenting	**119600**	**MDH-3/2-24DC**
		110 V AC	Non-detenting	**119601**	**MDH-3/2-110VAC**
			Non-detenting/detenting	**546020**	**MDH-3/2-110AC-PI**
		230 V AC	Non-detenting	**119602**	**MDH-3/2-230VAC**
			Non-detenting/detenting	**546021**	**MDH-3/2-230AC-PI**
	Square plug, type A, to EN 175301-803	24 V DC	–	**546022**	**MD-3/2-24DC-PI-IA-EX**