

Standard valves to ISO 15218

Product range overview

FESTO

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	24 V DC	Non-detenting/detenting	4
			12 V DC/24 V AC	Non-detenting/detenting	4
			110 V AC	Non-detenting	4
				Non-detenting/detenting	4
				Non-detenting/detenting	4
			230 V AC	Non-detenting	4
				Non-detenting/detenting	4
				Non-detenting/detenting	4
		–	24 V DC	Non-detenting	6
				Non-detenting/detenting	6
	Round plug M12, to IEC 61076-2-101	–	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
	Square plug, type A, to EN 175301-803	–		tastend/rastend	8

Standard valves to ISO 15218

Technical data – Valve with square plug, type C

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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

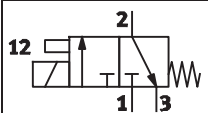
Standard valves to ISO 15218

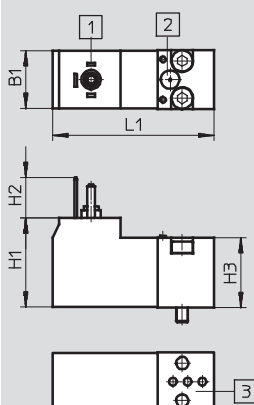
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Technical data – Valve with square plug, type C

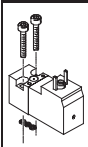
Operating and environmental conditions		
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)	
Ambient temperature	[°C]	–10 ... +50
Temperature of medium	[°C]	–10 ... +50
Corrosion resistance class 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 <ul style="list-style-type: none"> • Normally closed • Mechanical spring return

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

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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

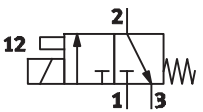
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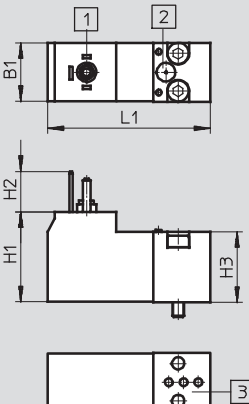
Technical data – Valve with square plug, type C

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

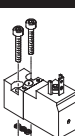
1) Corrosion resistance class 2 according to Festo standard 940 070

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 <ul style="list-style-type: none"> • Normally closed • Mechanical spring return

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

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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

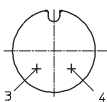
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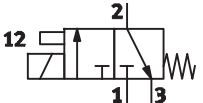
Technical data – Valve with round plug, M12

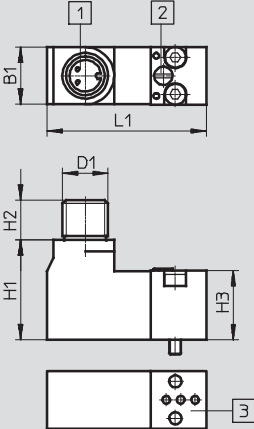
Operating and environmental conditions	
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Lubricated operation possible (required during subsequent operation)
Ambient temperature [°C]	–10 ... +50
Temperature of medium [°C]	–10 ... +50
Corrosion resistance class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

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

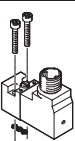
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pin allocation		
M12x1, 2-pin	Pin	Description
	3	0 V
	4	U _B

Valve functions	
Circuit symbol	Description
	3/2-way valve, single solenoid <ul style="list-style-type: none"> • Normally closed • Mechanical spring return

Dimensions		Download CAD Data → www.festo.com/us/cad
	<ul style="list-style-type: none"> 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

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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		

Standard valves to ISO 15218

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Technical data – Valve with square plug, type C

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 P _i	[W]	1.6
Max. input voltage U _i	[V]	28
Max. input current I _i	[mA]	115
Pneumatic connection 3		Ducted, M5

ATEX	
Type	
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	–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

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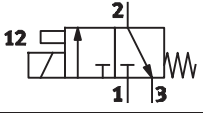

Technical data – Valve with square plug, type C

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 <ul style="list-style-type: none"> • Normally closed • Mechanical spring return
	MD-3/2 ... EX 3/2-way valve, single solenoid, ATEX <ul style="list-style-type: none"> • Normally closed • Mechanical spring return

Standard valves to ISO 15218

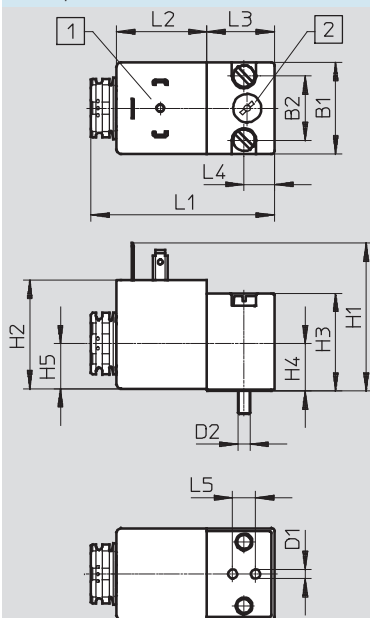
Technical data – Valve with square plug, type C

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Dimensions

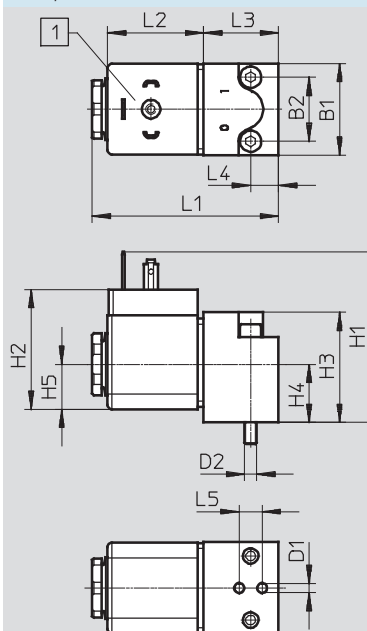
Download CAD Data → www.festo.com/us/cad

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

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