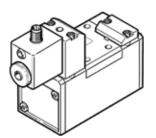
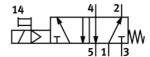
## solenoid valve MDH-5/2-D-1-FR-M12-C Part number: 533010

With M12 plug connection.





**FESTO** 

## **Data sheet**

EN 60068-2-6	Feature	Value
Width	Valve function	5/2 monostable
Standard nominal flow rate	Type of actuation	electrical
Operating pressure     3 10 bar       Design structure     Piston side       Type of reset     mechanical spring       Protection class     IP65       Nominal size     8 mm       Grid dimension     43 mm       Exhaust air function     throttleable       Sealing principle     soft       Assembly position     Any       Conforms to standard     ISO 5599-1       Manual override     Pushing       ISO code     152       Type of piloting     Piloted       Pilot air supply     Internal       Flow direction     non reversible       Overlap     Positive overlap       Switching time off     42 ms       Switching time on     20 ms       Duty cycle     100 %       Max. positive test pulse with logic 0     3,800 µs       Max. negative test pulse with logic 1     4,900 µs       Characteristic coil data     24 V DC: 2.7 W       Permissible voltage fluctuation     +/- 10 %       Operating medium     Compressed air in accordance with ISO8573-1:2010 [7:4:4]       Note on operating and pilot medium     Compressed air in accordance with FN 942017-4 and EN 60068-2-2       Transport application test with severity level 1 as per FN 942017-5 and EN 60068-2-28       Shock resistance     Transport application test with severit	Width	42 mm
Design structure Type of freset Type of freset Type of piloting Type of freset Type of piloting Type of pilo	Standard nominal flow rate	1,200 l/min
Type of reset Protection class Protecti	Operating pressure	3 10 bar
Protection class Nominal size 8 mm Grid dimension 43 mm Exhaust-air function throttleable Sealing principle soft Assembly position Conforms to standard ISO 5599-1 Manual override Pushing ISO code 152 Type of piloting Piloted Pilot air supply Internal Flow direction non reversible Overlap Switching time on Duty cycle 100 w Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 Characteristic coil data 24 V DC: 27 W Permissible voltage fluctuation Ty-10 w Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Uribration resistance Fino More Subsequently required for further operation) Vibration resistance Fino More Subsequently required for further operation) Vibration resistance Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 6008-2-27 PWIS conformity VDMA24364-B1/B2-L Medium temperature -1050 °C Sound pressure level Ambient temperature -1050 °C Forduct weight Electrical connection M12x1	Design structure	Piston slide
Nominal size 8 mm Grid dimension 43 mm Exhaust-air function throttleable Sealing principle soft Assembly position Any Conforms to standard ISO 5599-1 Manual override Pushing ISO code 152 Type of piloting Piloted Pilot air supply Internal Flow direction non reversible Overlap Positive overlap Switching time off 42 ms Switching time off 42 ms Switching time on 20 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,800 µs Max. negative test pulse with logic 1 4,900 µs Characteristic coil data 24 V DC: 2.7 W Permissible voltage fluctuation 4-/-10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test with severity level 1 as per FN 942017-5 and EN 60068-2-27 PWIS conformity VOMA24364-B1/B2-L Medium temperature 1-10 50 °C Sound pressure level An Mi2x1 Electrical connection M12x1	Type of reset	mechanical spring
Seling principle   Soft	Protection class	IP65
Exhaust-air function throttleable soft soft soft sassembly position Any Conforms to standard ISO 5599-1  Manual override Pushing ISO code 152 Type of piloting Piloted Piloted Internal	Nominal size	8 mm
Sealing principle Assembly position Any Conforms to standard Any BISO 5599-1 Manual override Pushing BISO code 152 Type of piloting Pilot air supply Internal Flow direction Nor reversible Overlap Positive overlap Switching time off 42 ms Switching time off Switching time off Switching time off 32 o ms Duty cycle 100 % Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 4, 900 µs Characteristic coil data 24 V DC: 2.7 W Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Ubricated operation possible (subsequently required for further operation) Vibration resistance Shock resistance Shock sest with severity level 1 as per FN 942017-5 and EN 60068-2-6 Shock resistance Shock sest with severity level 2 in accordance with FN 942017-5 and EN 60068-2-2 PWIS conformity VDMA24364-B1/B2-L Medium temperature -10 50 °C Sound pressure level Ambient temperature -10 50 °C Froduct weight -20 g Electrical connection M12x1	Grid dimension	43 mm
Assembly position  Conforms to standard  ISO 5599-1  Manual override  ISO code  152  Type of piloting  Piloted Pilot air supply Internal Flow direction  Overlap  Switching time off  Switching time on  Duty cycle  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data  24 V DC: 2.7 W  Permissible voltage fluctuation  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Uibriation resistance  Shock resistance  Shock resistance  Shock resistance  Shock sest with severity level 2 in accordance with FN 942017-5 and EN 60068-2-7  PWIS conformity  Mode on perature  1-10 50 °C  Sound pressure level And in the product weight A20 g  Electrical connection  M12x1	Exhaust-air function	throttleable
Conforms to standard  Manual override  Pushing  ISO code  152  Type of piloting  Piloted  Piloted  Plioted  Positive overlap  Positive overlap  Switching time on  20 ms  Duty cycle  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data  24 V DC: 2.7 W  Permissible voltage fluctuation  Operating medium  Note on operating and pilot medium  Vibration resistance  Transport application test with severity level 1 as per FN 942017-5 and EN 60068-2-7  PWIS conformity  VDMA24364-B1/B2-L  Medium temperature  50 CC  Product weight  420 G  Electrical connection  M12x1  Plasting  Pushing  Pushing  Pushing  Pushing  Pushing  Pushing  Pushing  Pushing  Pushing  Piloted  152  Pushing  Piloted  158  Pushing  Piloted  152  Pushing  Piloted  100  100  Pushing  Piloted  100  Pushing	Sealing principle	soft
Manual override    Pushing   152	Assembly position	Any
ISO code Type of piloting Piloted Pilot air supply Internal Flow direction Overlap Positive overlap Switching time off Switching time on Duty cycle Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 Characteristic coil data 24 V DC: 2.7 W Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Ubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test with severity level 1 as per FN 942017-5 and EN 60068-2-7 PWIS conformity VDMA24364-B1/B2-L Medium temperature Sound pressure level Ambient temperature -10 50 °C Sound pressure level Ambient temperature -10 50 °C Product weight 420 g Electrical connection M12x1	Conforms to standard	ISO 5599-1
Type of piloting Piloted Pilot air supply Internal Flow direction on reversible Overlap Positive overlap Switching time off Switching time on 20 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,800 µs Max. positive test pulse with logic 1 4,900 µs Characteristic coil data 24 V DC: 2.7 W Permissible voltage fluctuation 4/- 10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 PWIS conformity VDMA24364-81/B2-L Medium temperature -10 50 °C Sound pressure level 85 dB(A) Ambient temperature -10 50 °C Product weight 420 g Electrical connection M12x1	Manual override	Pushing
Pilot air supply Internal Flow direction Overlap Positive overlap Switching time off 42 ms Switching time on Duty cycle 100 % Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 Characteristic coil data Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Ubiracted operation possible (subsequently required for further operation) Vibration resistance Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6 Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27 PWIS conformity VDMA24364-B1/B2-L Medium temperature -10 50 °C Sound pressure level Ambient temperature -10 50 °C Product weight 420 g Electrical connection M12x1	ISO code	152
Flow direction non reversible  Overlap Positive overlap  Switching time off 42 ms  Switching time on 20 ms  Duty cycle 100 %  Max. positive test pulse with logic 0 3,800 µs  Max. negative test pulse with logic 1 4,900 µs  Characteristic coil data 24 V DC: 2.7 W  Permissible voltage fluctuation +/- 10 %  Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation)  Vibration resistance Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity VDMA24364-B1/B2-L  Medium temperature -10 50 °C  Sound pressure level 85 dB(A)  Ambient temperature -10 50 °C  Product weight 420 g  Electrical connection M12x1	Type of piloting	Piloted
Overlap       Positive overlap         Switching time off       42 ms         Switching time on       20 ms         Duty cycle       100 %         Max. positive test pulse with logic 0       3,800 μs         Max. negative test pulse with logic 1       4,900 μs         Characteristic coil data       24 V DC: 2.7 W         Permissible voltage fluctuation       +/- 10 %         Operating medium       Compressed air in accordance with ISO8573-1:2010 [7:4:4]         Note on operating and pilot medium       Lubricated operation possible (subsequently required for further operation)         Vibration resistance       Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6         Shock resistance       Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27         PWIS conformity       VDMA24364-B1/B2-L         Medium temperature       -10 50 °C         Sound pressure level       85 dB(A)         Ambient temperature       -10 50 °C         Product weight       420 g         Electrical connection       M12x1	Pilot air supply	Internal
Switching time off Switching time on 20 ms  Duty cycle 100 %  Max. positive test pulse with logic 0 3,800 µs  Max. negative test pulse with logic 1 4,900 µs  Characteristic coil data 24 V DC: 2.7 W  Permissible voltage fluctuation Operating medium Compressed air in accordance with IS08573-1:2010 [7:4:4]  Note on operating and pilot medium Ubricated operation possible (subsequently required for further operation)  Vibration resistance Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity VDMA24364-B1/B2-L Medium temperature -10 50 °C  Sound pressure level 85 dB(A)  Ambient temperature -10 50 °C  Product weight 420 g  Electrical connection	Flow direction	non reversible
Switching time on 20 ms  Duty cycle 100 %  Max. positive test pulse with logic 0 3,800 µs  Max. negative test pulse with logic 1 4,900 µs  Characteristic coil data 24 V DC: 2.7 W  Permissible voltage fluctuation +/-10 %  Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation)  Vibration resistance Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity VDMA24364-B1/B2-L  Medium temperature -10 50 °C  Sound pressure level 85 dB(A)  Ambient temperature -10 50 °C  Product weight 420 g  Electrical connection M12x1	Overlap	Positive overlap
Duty cycle100 %Max. positive test pulse with logic 03,800 μsMax. negative test pulse with logic 14,900 μsCharacteristic coil data24 V DC: 2.7 WPermissible voltage fluctuation+/- 10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6Shock resistanceShock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27PWIS conformityVDMA24364-B1/B2-LMedium temperature-10 50 °CSound pressure level85 dB(A)Ambient temperature-10 50 °CProduct weight420 gElectrical connectionM12x1	Switching time off	42 ms
Max. positive test pulse with logic 03,800 μsMax. negative test pulse with logic 14,900 μsCharacteristic coil data24 V DC: 2.7 WPermissible voltage fluctuation+/- 10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6Shock resistanceShock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27PWIS conformityVDMA24364-B1/B2-LMedium temperature-10 50 °CSound pressure level85 dB(A)Ambient temperature-10 50 °CProduct weight420 gElectrical connectionM12x1	Switching time on	20 ms
Max. negative test pulse with logic 14,900 μsCharacteristic coil data24 V DC: 2.7 WPermissible voltage fluctuation+/- 10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6Shock resistanceShock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27PWIS conformityVDMA24364-B1/B2-LMedium temperature-10 50 °CSound pressure level85 dB(A)Ambient temperature-10 50 °CProduct weight420 gElectrical connectionM12x1	Duty cycle	100 %
Characteristic coil data  24 V DC: 2.7 W  Permissible voltage fluctuation  4/- 10 %  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Vibration resistance  Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance  Shock sesistance  Shock sesistance  Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity  VDMA24364-B1/B2-L  Medium temperature  -10 50 °C  Sound pressure level  85 dB(A)  Ambient temperature  -10 50 °C  Product weight  Electrical connection  M12x1	Max. positive test pulse with logic 0	3,800 μs
Permissible voltage fluctuation +/- 10 %  Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation)  Vibration resistance Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity VDMA24364-B1/B2-L  Medium temperature -10 50 °C  Sound pressure level 85 dB(A)  Ambient temperature -10 50 °C  Product weight 420 g  Electrical connection M12x1	Max. negative test pulse with logic 1	4,900 µs
Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance  Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity  VDMA24364-B1/B2-L  Medium temperature  -10 50 °C  Sound pressure level  85 dB(A)  Ambient temperature  -10 50 °C  Product weight  420 g  Electrical connection  M12x1	Characteristic coil data	24 V DC: 2.7 W
Note on operating and pilot medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance  Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity  VDMA24364-B1/B2-L  Medium temperature  -10 50 °C  Sound pressure level  85 dB(A)  Ambient temperature  -10 50 °C  Product weight  420 g  Electrical connection  M12x1	Permissible voltage fluctuation	+/- 10 %
operation)  Vibration resistance  Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6  Shock resistance  Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity  VDMA24364-B1/B2-L  Medium temperature  -10 50 °C  Sound pressure level  85 dB(A)  Ambient temperature  -10 50 °C  Product weight  420 g  Electrical connection  M12x1	Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
EN 60068-2-6  Shock resistance  Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27  PWIS conformity  VDMA24364-B1/B2-L  Medium temperature  -10 50 °C  Sound pressure level  85 dB(A)  Ambient temperature  -10 50 °C  Product weight  420 g  Electrical connection  M12x1	Note on operating and pilot medium	
60068-2-27         PWIS conformity       VDMA24364-B1/B2-L         Medium temperature       -10 50 °C         Sound pressure level       85 dB(A)         Ambient temperature       -10 50 °C         Product weight       420 g         Electrical connection       M12x1	Vibration resistance	Transport application test with severity level 1 as per FN 942017-4 and EN 60068-2-6
Medium temperature-10 50 °CSound pressure level85 dB(A)Ambient temperature-10 50 °CProduct weight420 gElectrical connectionM12x1	Shock resistance	Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27
Medium temperature-10 50 °CSound pressure level85 dB(A)Ambient temperature-10 50 °CProduct weight420 gElectrical connectionM12x1	PWIS conformity	VDMA24364-B1/B2-L
Sound pressure level 85 dB(A)  Ambient temperature -10 50 °C  Product weight 420 g  Electrical connection M12x1	•	
Ambient temperature -10 50 °C  Product weight 420 g  Electrical connection M12x1		
Product weight 420 g Electrical connection M12x1	•	
Electrical connection M12x1	<u>'</u>	
	<u> </u>	
with through hole	0-76-	
Pneumatic connection, port 1 Connection plate size 1 as per ISO 5599-1	Pneumatic connection, port 1	<u> </u>
Pneumatic connection, port 2 Connection plate size 1 as per ISO 5599-1	• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·



Feature	Value
Pneumatic connection, port 3	Connection plate size 1 as per ISO 5599-1
Pneumatic connection, port 4	Connection plate size 1 as per ISO 5599-1
Pneumatic connection, port 5	Connection plate size 1 as per ISO 5599-1
Material seals	HNBR
	NBR
Material housing	Aluminium die cast