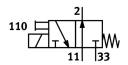
Air solenoid valve MHE3-MS1H-3/20-1/8-K Part number: 525169

FESTO





General operating condition

Data sheet

Actuation type Electrical Width 14 mm Standard nominal flow rate 200 I/min Pneumatic working port Operating pressure Operating pressure Operating pressure Operating pressure Operating syltage Operating pressure Operating pressure, reversible	Feature	Value
Width 14 mm Standard nominal flow rate 200 l/min Pneumatic working port 61/8 Operating yoltage 24V DC Operating pressure -0.09 MPa 0.8 MPa Operating pressure 9.9 bar 8 bar Structural design Pressure-relieved poppet valve Reset method Mechanical spring Degree of protection IP65 Certification RCM compliance mark cUL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU BMC directive As per EU BMC directive As per EU BMC directive As per EU RMS directive UKCA marking (see declaration of conformity) To UK RoHS instructions for EMC To UK RoHS instructions Nominal width 3 mm Width dimension 19 mm Note on grid dimension Minimum distance between the valves is 5 mm Exhaust air function With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Direct Flow direction Reversible with restrictions Sparks suppression Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible -0.99 MPa 1 bar Operating pressure, reversible -0.99 ms 1 MPa Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Valve function	3/2, open, monostable
Standard nominal flow rate 200 l/min 61/8 Pneumatic working port G1/8 Operating pressure	Actuation type	Electrical
Pneumatic working port Operating voltage Operating pressure Operating pressure, reversible	Width	14 mm
Operating voltage 24V DC Operating pressure -0.09 MPa 0.8 MPa Operating pressure -0.99 bar 8 bar Structural design	Standard nominal flow rate	200 l/min
Operating pressure Operating pressure, reversible Operating pressure, versible Operating pressure, versible Operating pressure, versible Operating pr	Pneumatic working port	G1/8
Operating pressure Operating pressure, reversible Operat	Operating voltage	24V DC
Structural design Reset method Mechanical spring Degree of protection IP65 Certification Reset method Reset EU ROH directive As per EU ROHS directive As per EU ROHS directive Reset EU ROHS instructions Nominal width Reset air functions Resident air function Reset air function Reset air function Soft Mounting position Any Manual override Non-detenting Reversible with restrictions Symbol Direct Reversible with restrictions Reverse polarity protection Repersible with restrictions Repersion Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible 1-3.05 psi 14.5 psi Max. switching frequency Reset EU ROM directive Reset EU ROM Reset EU R	Operating pressure	-0.09 MPa 0.8 MPa
Reset method Mechanical spring Degree of protection Certification Certification RCM compliance mark cult us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU ROHS directive UKCA marking (see declaration of conformity) To UK instructions for EMC TO UK ROHS instructions Nominal width 3 mm Width dimension 19 mm Note on grid dimension Minimum distance between the valves is 5 mm Exhaust air function With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Direct Flow direction Reversible with restrictions Symbol 00991322 Lap Underlap Reverse polarity protection Additional functions Bipolar Additional functions Operating pressure, reversible -0.09 MPa 0.1 MPa Operating pressure, reversible -0.99 bar 1 bar Operating pressure, reversible -0.99 bar 1 14.5 psi Max. switching frequency 280 Hz	Operating pressure	-0.9 bar 8 bar
Degree of protection Certification Certification CE marking (see declaration of conformity) As per EU EMC directive As per EU RoHS directive As per EU RoHS directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK ROHS instructions Nominal width 3 mm With dimension 19 mm Note on grid dimension With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Reversible with restrictions Symbol Lap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Max. switching frequency Max. switching frequency Revense Dalary Additions (1.5 psi 14.5 psi Max. switching frequency 280 Hz	Structural design	Pressure-relieved poppet valve
RCM compliance mark c UL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU ROHS directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK ROHS instructions Nominal width 3 mm With dimension 19 mm Note on grid dimension With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Reversible with restrictions Symbol Lap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible -0.99 MPa 0.1 MPa Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency Reversel As per EU Rod Countrol As per EU ROH Citevitive As per EU ROH Citevities As per EU ROH Citeviti	Reset method	Mechanical spring
c UL us - Recognized (OL) CE marking (see declaration of conformity) As per EU EMC directive As per EU RNC directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK ROHS instructions Nominal width 3 mm Width dimension 19 mm Note on grid dimension Minimum distance between the valves is 5 mm Exhaust air function Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Direct Flow direction Reversible with restrictions Symbol O0991322 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency 280 Hz	Degree of protection	IP65
As per EU RoHS directive UKCA marking (see declaration of conformity) To UK instructions for EMC To UK ROHS instructions Nominal width 3 mm Width dimension Note on grid dimension Minimum distance between the valves is 5 mm Exhaust air function Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Reversible with restrictions Symbol Lap Reverse polarity protection Additional functions Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency 280 Hz	Certification	· · · · · · · · · · · · · · · · · · ·
To UK RoHS instructions Nominal width 3 mm Width dimension 19 mm Note on grid dimension Exhaust air function With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Reversible with restrictions Symbol 00991322 Lap Underlap Reverse polarity protection Additional functions Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 0.09 MPa 0.1 MPa Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency 280 Hz	CE marking (see declaration of conformity)	· ·
Width dimension 19 mm Note on grid dimension Exhaust air function Sealing principle Soft Mounting position Any Manual override Type of control Flow direction Symbol Lap Reverse polarity protection Additional functions Direct Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Max. switching frequency Minimum distance between the valves is 5 mm Minimum distance hetwes is 5 mm	UKCA marking (see declaration of conformity)	
Note on grid dimension Exhaust air function Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Symbol Lap Reverse polarity protection Additional functions Additional functions Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Manual oscillations Minimum distance between the valves is 5 mm Minimum distance is 5 mm Minimum distance is 4 made is 4 mm Non-detenting	Nominal width	3 mm
Exhaust air function Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Symbol Lap Reversible with restrictions Symbol Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency With flow control option Soft Any May Non-detenting Non-detenting Non-detenting Non-detenting Spersible with restrictions Operations Seversible with restrictions Spersible with restrictions Spersible with restrictions Spersible with restrictions Operations Operations Operations Spark suppression Holding current reduction Protective circuit Operating pressure, reversible -0.09 MPa 0.1 MPa -0.9 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency	Width dimension	19 mm
Sealing principle Mounting position Any Manual override Non-detenting Type of control Flow direction Reversible with restrictions Symbol Oo991322 Lap Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Soft Any Any Any Any Any Any Any Both Comparison Any Non-detenting Bipolar Comparison Comparison Comparison Comparison Any Non-detenting Non-detenting Reversible with restrictions Oo991322 Underlap Bipolar Comparison	Note on grid dimension	Minimum distance between the valves is 5 mm
Mounting position Manual override Non-detenting Type of control Flow direction Symbol Lap Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Any Any Any Any Any Any Any	Exhaust air function	With flow control option
Manual override Type of control Direct Flow direction Reversible with restrictions Symbol O0991322 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressu	Sealing principle	Soft
Type of control Flow direction Reversible with restrictions Symbol 00991322 Lap Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible -0.9 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Mounting position	Any
Flow direction Reversible with restrictions O0991322 Lap Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Reversible with restrictions Operations Operations Protective circuit Operating pressure, reversible -0.9 bar 1 bar -13.05 psi 14.5 psi Max. switching frequency	Manual override	Non-detenting
Symbol Lap Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Operating prequency	Type of control	Direct
Lap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Max. switching frequency	Flow direction	Reversible with restrictions
Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible -0.9 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Symbol	00991322
Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible -0.9 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Lap	Underlap
Holding current reduction Protective circuit Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Reverse polarity protection	Bipolar
Operating pressure, reversible -0.9 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Additional functions	Holding current reduction
Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 280 Hz	Operating pressure, reversible	-0.09 MPa 0.1 MPa
Max. switching frequency 280 Hz	Operating pressure, reversible	-0.9 bar 1 bar
	Operating pressure, reversible	-13.05 psi 14.5 psi
Switching time off 2.8 ms	Max. switching frequency	280 Hz
	Switching time off	2.8 ms

Feature	Value
On switching time	2.3 ms
Tolerance for switching time off	+10 %/-50 %
Tolerance for ON switching time	+10%/-30%
Switching time variation at 1 Hz and above	0.2 ms
Duty cycle	100%
Coil characteristics	24 V DC: low-current phase 1.6 W, high-current phase 6.5 W
Permissible voltage fluctuations	+/- 10 %
Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4]
Information on operating and pilot media	Operation with oil lubrication possible (required for further use)
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6
Restricted ambient and media temperature	Depending on the switching frequency (see diagram)
Shock resistance	Shock test with severity level 2 as per FN 942017-5 and EN 60068-2-27
Corrosion resistance class (CRC)	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L
Cleanroom class	Class 6 according to ISO 14644-1
Temperature of medium	-5 °C 60 °C
Ambient temperature	-5 °C 60 °C
Product weight	120 g
Electrical connection	Cable
Cable length	2.5 m
Type of mounting	With through-hole
Pneumatic connection 11	G1/8
Pneumatic connection 2	G1/8
Pneumatic connection 33	G1/8
Note on materials	RoHS-compliant
Seals material	HNBR NBR
Housing material	Die-cast metal, coated
Material of cable sheath	PUR
Material of screws	Steel, galvanized