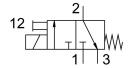
Air solenoid valve MHA2-MS1H-3/2G-2 Part number: 196119

HA2-M51H-3/2G-2







Data sheet

Actuation type Electrical	Feature	Value
Standard nominal flow rate 100 Jmin	Valve function	3/2, closed, monostable
Standard nominal flow rate Pneumatic working port Sub-base Operating pressure Operating pressure, reversible	Actuation type	Electrical
Peneumatic working port Deprating voltage 24V DC Operating pressure 0.09 MPa 0.8 MPa 0.09 bar 8 bar Structural design Pressure-relieved poppet valve Reset method Mechanical spring Degree of protection IP65 Certification RCM compliance mark cut us - Recognized (Ot.) KK C characters KC EMC EE marking (see declaration of conformity) As per EU EMC directive Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 Exhaust air function Seating principle Soft Mounting position Any Manual override Non-detenting Type of control Direct Flow direction Reversible with restrictions Symbol Lap Underlap Reverse polarity protection Bipolar Additional functions Operating pressure, reversible Operating pressure, reversible 1-13.05 psi 14.5 psi Max. switching frequency MAx. switching frequency Jose MAx. Jose MPA Operating pressure, reversible Operating pressure, reversible Jose Max. switching frequency Jose MAX. Jose MPA Degree on MPA And MPA And MPA And Jose MPA Jo	Width	10 mm
Operating voltage Operating pressure Operating pressure, reversible Operating pressure, operating pressure, operating pressure, operating pr	Standard nominal flow rate	100 l/min
Operating pressure Operating pressure, reversible Operating pressure,	Pneumatic working port	Sub-base
Operating pressure Operating pressure, reversible Operating pressure	Operating voltage	24V DC
Structural design Pressure-relieved poppet valve Reset method Mechanical spring Degree of protection IP65 Certification RCM compliance mark c UL us - Recognized (OL) KC characters KC Emarking (see declaration of conformity) As per EU EMC directive Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 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 O0991308 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible -0.9 MPa 0.1 MPa Operating pressure, reversible -0.9 psi 14.5 psi Max. switching frequency 330 Hz	Operating pressure	-0.09 MPa 0.8 MPa
Reset method Mechanical spring Degree of protection Degree of protection RCM compliance mark c UL us - Recognized (OL) KC characters KC EMC CE marking (see declaration of conformity) Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 Exhaust air function Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Direct 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 1 bar Operating pressure, reversible -0.99 MPa 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency MAX. Switching frequency MC CMC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC compliance mark CUL us - Recognized (OL) RC MC Compliance mark CUL us - Recognized (OL) RC MC Compliance RC MC Compliance RC MC COMP and Compliance RC MC Compliance RC LMC Comp	Operating pressure	-0.9 bar 8 bar
Degree of protection Certification RCM compliance mark c UL us - Recognized (OL) KC Characters KC EMC KC Emarking (see declaration of conformity) As per EU EMC directive Nominal width 2 mm Note on grid dimension Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 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 Lap Underlap Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible -0.99 MPa 0.1 MPa Operating pressure, reversible -0.99 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 330 Hz	Structural design	Pressure-relieved poppet valve
Certification RCM compliance mark c UL us - Recognized (OL) KC Characters KC EMC CE marking (see declaration of conformity) As per EU EMC directive Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 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 0991308 Lap Underlap 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 330 Hz	Reset method	Mechanical spring
C UL us - Recognized (OL) KC characters KC EMC EX marking (see declaration of conformity) Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 Exhaust air function Sealing principle Soft Mounting position Any Manual override Type of control Flow direction Symbol Lap Reversible with restrictions Symbol Lap Reverse polarity protection Additional functions Additional functions Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Max. switching frequency Max. switching frequency As per EU EMC As per EU EMC As per EU EMC directive As per EU EMC directive Minimum distance between the valves is 4 mm Minimum distance between the valves is	Degree of protection	IP65
Et marking (see declaration of conformity) Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 Exhaust air function Sealing principle Soft Mounting position Any Manual override Type of control Flow direction Symbol Lap Reversible with restrictions Symbol Additional functions Additional functions Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Amm Minimum distance Minimum distance between the valves is 4 mm Minimum distance between the valves is 4	Certification	
Nominal width 2 mm Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code MH2 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 00991308 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 0.9 bar 1 bar Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency 330 Hz	KC characters	KC EMC
Width dimension 14 mm Note on grid dimension Minimum distance between the valves is 4 mm Type code Exhaust air function With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Flow direction Symbol Lap Reverse polarity protection Reverse polarity protection Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating frequency 330 Hz	CE marking (see declaration of conformity)	As per EU EMC directive
Minimum distance between the valves is 4 mm Type code MH2 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 O9991308 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating frequency Minimum distance between the valves is 4 mm MH2 With flow control option Soft MH2 With flow control option Soft MH2 With flow control option Soft Any Meanual override Soft Any With flow control option Soft Any With	Nominal width	2 mm
Type code 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 O0991308 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible Operating frequency 330 Hz	Width dimension	14 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 Operating pressure, reversible Op	Note on grid dimension	Minimum distance between the valves is 4 mm
Sealing principle Mounting position Any Manual override Non-detenting Type of control Flow direction Symbol Lap Reversible with restrictions Symbol Underlap Reverse polarity protection Additional functions Additional functions Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency 330 Hz	Type code	MH2
Mounting position Any Manual override Non-detenting Type of control Direct Flow direction Reversible with restrictions Symbol Lap Underlap Reverse polarity protection Additional functions Additional functions Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Any Non-detenting	Exhaust air function	With flow control option
Manual override Non-detenting Type of control Direct Reversible with restrictions Symbol 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 1.3.05 psi 14.5 psi Max. switching frequency Non-detenting Reverse Reverse Reversible with restrictions Operations Spark suppression Holding current reduction Protective circuit -0.09 MPa 0.1 MPa -0.9 bar 1 bar -13.05 psi 14.5 psi Max. switching frequency 330 Hz	Sealing principle	Soft
Type of control Flow direction Reversible with restrictions Symbol O0991308 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 Direct Reversible with restrictions Operations Operations Operations According to the suppression of	Mounting position	Any
Flow direction Reversible with restrictions Operating pressure, reversible 10.9 bar 1 bar Operating pressure, reversible 13.05 psi 14.5 psi Max. switching frequency Reversible with restrictions Reversible with restrictions Operating Operating Bipolar Spark suppression Holding current reduction Protective circuit Operating pressure, reversible 10.9 bar 1 bar 13.05 psi 14.5 psi Max. switching frequency 330 Hz	Manual override	Non-detenting
Symbol 00991308 Lap Underlap Reverse polarity protection Bipolar Additional functions Spark suppression Holding current reduction Protective circuit Operating pressure, reversible -0.09 MPa 0.1 MPa Operating pressure, reversible -0.9 bar 1 bar Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 330 Hz	Type of control	Direct
Lap 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 330 Hz	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 330 Hz	Symbol	00991308
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 330 Hz	Lap	Underlap
Holding current reduction Protective circuit Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible Operating pressure, reversible -0.9 bar 1 bar -13.05 psi 14.5 psi Max. switching frequency 330 Hz	Reverse polarity protection	Bipolar
Operating pressure, reversible Operating pressure, reversible -0.9 bar 1 bar -13.05 psi 14.5 psi Max. switching frequency 330 Hz	Additional functions	Holding current reduction
Operating pressure, reversible -13.05 psi 14.5 psi Max. switching frequency 330 Hz	Operating pressure, reversible	-0.09 MPa 0.1 MPa
Max. switching frequency 330 Hz	Operating pressure, reversible	-0.9 bar 1 bar
	Operating pressure, reversible	-13.05 psi 14.5 psi
Switching time off 2 ms	Max. switching frequency	330 Hz
	Switching time off	2 ms

Feature	Value
On switching time	1.7 ms
Tolerance for switching time off	+10 %/-30 %
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 1.25 W, high-current phase 5.0 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
Temperature of medium	-5 °C 40 °C
Ambient temperature	-5 °C 40 °C
Product weight	60 g
Electrical connection	2-pin Plug
Type of mounting	On sub-base
Pneumatic connection 1	Sub-base
Pneumatic connection 2	Sub-base
Pneumatic connection 3	Sub-base
Note on materials	Free of copper and PTFE RoHS-compliant
Seals material	HNBR NBR
Housing material	Die-cast zinc Coated
Material of screws	Steel Galvanized