Air solenoid valve MHP1-M5H-3/2O-M3-TC Part number: 197031



Data sheet



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General operating condition

Actuation type Electrical Width 10 mm Standard nominal flow rate 10 l/min Pneumatic working port M3 Operating voltage 12V DC Operating pressure 0 MPa0.6 MPa Operating pressure 0 bar 6 bar Operating pressure 0 pail	Feature	Value
Width10 mmStandard nominal flow rate10 l/minPneumatic working portM3Operating voltage12V DCOperating pressure0 MPa 0.6 MPaOperating pressure0 bar 6 barOperating pressure0 psi 87 psiStructural designPopert valve with return springReset methodMechanical springDegree of protection1P40Certificationc UL us - Recognized (0L)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionSoftSandardNon-detentingType of controlDirectFlow directionDirectSymbol0091322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching frequency20 HzSwitching frequency10%Liebel voltage fuctuations4 msDuty cycle100%Electricia power consumption1 WCol characteristics+/ 10 %Cordictage periodipee fuctuations+/ 10 %Duty cycle10%Duty cycle10%Compressed air as per ISO 8573-1:2010[7:4:4]	Valve function	3/2, open, monostable
Standard nominal flow rate10 l/minPneumatic working portM3Operating yoltage12V DCOperating pressure0 MP a 0.6 MP aOperating pressure0 bit 6 barOperating pressure0 psi 87 psiOperating pressure0 psi 87 psiStructural designPoppet valve with return springReset methodMechanical springDegree of protection1P40Certificationc UL us - Recognized (0L)Certificationc UL us - Recognized (0L)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust alr functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow direction09991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching rime off4 msOn switching rime off10 %Coll characteristics12 V DC: 1.0 WPersensible loxbarding fluctuations4/- 10 %Operating presence10 %Coll characteristics4/- 10 %Operating mediumCompresed air as per ISO 8573-1:2010[7:4:4]	Actuation type	Electrical
Pneumatic working port M3 Operating voltage 12V DC Operating pressure 0 MPa 0.6 MPa Operating pressure 0 bar 6 bar Operating pressure 0 poi 87 poi Structural design Poppet valve with return spring Reset method Mechanical spring Degref of protection 1P40 Certificate issuing authority UL WH19482 Nominal width 0.7 mm Nominal width 0.7 mm Width dimension 10 mm Exhaust air function With flow control option Sealing principle Soft Mounting position Any Manual override Non-detenting Type of control Direct Flow direction ID Label Lap Underlap Note on forced dynamization Switching frequency at least once a week Max. switching frequency 20 Hz Switching time 4 ms On switching time 4 ms Operating requency 100% Switching frequency at least onc	Width	10 mm
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Operating pressure0 MPa 0.6 MPaOperating pressure0 bar 6 barOperating pressure0 psi 87 psiStructural designPoppet valve with return springReset methodMechanical springDegree of protectionIP40Certificationc UL us - Recognized (OL)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectIbow dividing frequency00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WColi characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/-10%Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Pneumatic working port	M3
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Operating pressure0 psi 87 psiStructural designPoppet valve with return springReset methodMechanical springDegree of protectionIP40Certificationc UL us - Recognized (OL)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequencySwitching frequency20 HzSwitching time off4 msOn switching time off4 msDuty cycle100%Electrical power consumption1 WColl characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Operating pressure	0 MPa 0.6 MPa
Structural designPoppet valve with return springReset methodMechanical springDegree of protectionIP40Certificationc UL us - Recognized (OL)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow direction IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msDuty cycle100%Electrical power consumption1 WColl characteristics12 V DC: 1.0 WPermissible voltage fluctuations4/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Operating pressure	0 bar 6 bar
Reset methodMechanical springDegree of protectionIP40Certificationc UL us - Recognized (OL)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Coperating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Operating pressure	0 psi 87 psi
Degree of protectionIP40Certificationc UL us - Recognized (OL)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumptionI WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Compressed air as per ISO 8573-1:2010 [7:4:4]	Structural design	Poppet valve with return spring
Certificationc UL us - Recognized (OL)Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching time off4 msOn switching time off4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Reset method	Mechanical spring
Certificate issuing authorityUL MH19482Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching time off4 msOn switching time4 msDuty cycle10%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Degree of protection	IP40
Nominal width0.7 mmWidth dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Certification	c UL us - Recognized (OL)
Width dimension10 mmExhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations×/-10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Certificate issuing authority	UL MH19482
Exhaust air functionWith flow control optionSealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectRow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/-10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Nominal width	0.7 mm
Sealing principleSoftMounting positionAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/-10%Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Width dimension	10 mm
Non-detentingManual overrideAnyManual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Exhaust air function	With flow control option
Manual overrideNon-detentingType of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Sealing principle	Soft
Type of controlDirectFlow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Mounting position	Any
Provide Flow directionNon-reversibleSymbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Manual override	Non-detenting
Symbol00991322Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010[7:4:4]	Type of control	Direct
Valve position IDLabelLapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Flow direction	Non-reversible
LapUnderlapNote on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Symbol	00991322
Note on forced dynamizationSwitching frequency at least once a weekMax. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Valve position ID	Label
Max. switching frequency20 HzSwitching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Lap	Underlap
Switching time off4 msOn switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Note on forced dynamization	Switching frequency at least once a week
On switching time4 msDuty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10%Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Max. switching frequency	20 Hz
Duty cycle100%Electrical power consumption1 WCoil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Switching time off	4 ms
Electrical power consumption 1 W Coil characteristics 12 V DC: 1.0 W Permissible voltage fluctuations +/- 10 % Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4]	On switching time	4 ms
Coil characteristics12 V DC: 1.0 WPermissible voltage fluctuations+/- 10 %Operating mediumCompressed air as per ISO 8573-1:2010 [7:4:4]	Duty cycle	100%
Permissible voltage fluctuations +/- 10 % Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4]	Electrical power consumption	1 W
Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4]	Coil characteristics	12 V DC: 1.0 W
	Permissible voltage fluctuations	+/- 10 %
Information on operating and pilot media Operation with oil lubrication possible (required for further use)	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)

Feature	Value
Vibration resistance	Transport application test with severity level 2 as per FN 942017-4 and EN 60068-2-6
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-B2-L
Storage temperature	-20 °C 60 °C
Temperature of medium	-5 °C 40 °C
Ambient temperature	-5 °C 40 °C
Product weight	10 g
Electrical connection	Plug
Type of mounting	On sub-base With through-hole
Pneumatic connection 11	Sub-base
Pneumatic connection 2	M3
Pneumatic connection 33	Sub-base
Note on materials	RoHS-compliant
Seals material	FPM HNBR NBR
Housing material	PA-reinforced PPS-reinforced