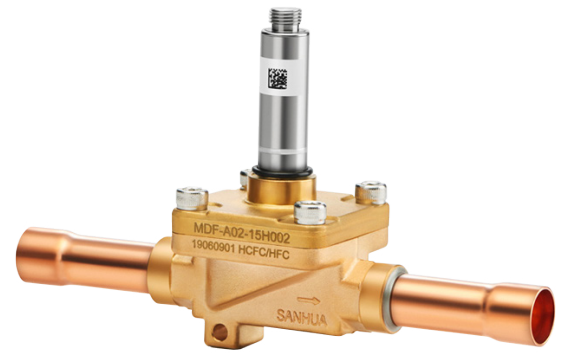


## MDF-A02 (NO) SERIES

# SOLENOID VALVE



**(Standard range:** for fluids GROUP 2 according to Directive 2014/68/EU or GROUP A1 according to ANSI-ASHRAE 34-2016).

MDF-A02 series solenoid valves are normally open (NO) pilot operated solenoid valves, mainly used in refrigerant control of various devices such as refrigerating and freezing systems, air conditioners and heat pumps.

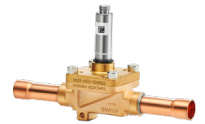
## FEATURES

- COILS: LOW ENERGY CONSUMPTION, RELIABLE
- GREAT VALVE OPENING PERFORMANCE, HIGH MOPD
- COILS ARE DOUBLE SEALED, WATERTIGHT AND SAFE

## GENERAL SPECIFICATIONS<sup>1)</sup>

- Applicable for all common HFC, HFO refrigerants such as: R134a, R404A, R407A/F, R407C, R410A, R448A, R449A, R450A, R452A, R513A, R507A
- Medium temperature: -30°C ~ +105°C
- Ambient temperature: -30°C ~ +55°C
- Relative humidity: 0 to 95%RH
- Installation position:
  - liquid, suction and discharge line
  - preferably coil upwards and flow direction corresponds to the arrow
- Declaration according to LVD and PED

## SOLENOID VALVE



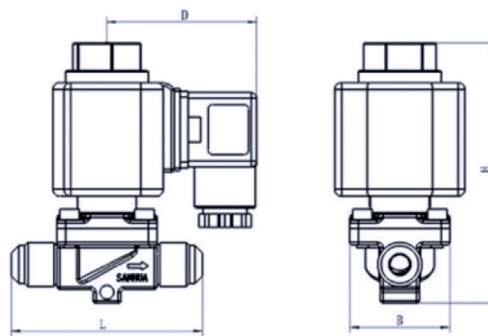
### TECHNICAL PARAMETERS OF VALVE BODY

Valve Body		Usable Coils	Normal position	Actuation	Kv [m <sup>3</sup> /h]	MOP [Mpa]	Max. OPD [Mpa]	Min. OPD <sup>4)</sup> [Mpa]
Solder	Flare							
MDF-A02-6H	MDF-A02-6L	AC/DC	NO <sup>1)</sup>	Pilot <sup>2)</sup>	0,8	4,5	2,8 <sup>3)</sup>	0,02
MDF-A02-10H	MDF-A02-10L				1,9			
MDF-A02-15H	MDF-A02-15L				2,3			
MDF-A02-20H					5			
MDF-A02-22H					6			

- Note:**
- 1) NO means: Normally open valve
  - 2) Membrane operated
  - 3) Max. OPD with liquid is 2,1 MPa, Max. OPD at 85% Ue
  - 4) Min. OPD: values referred to 100% of nominal flow

### DIMENSIONS

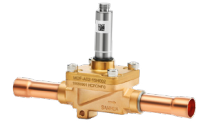
Valve Body - Thread Connection



Model Valve Body	Part Number <sup>1)2)</sup>	SAE Flare Connection [inch]	Kv [m <sup>3</sup> /h]	PED Category Group 2	Dimensions [mm]			
					L	B	D	H
MDF-A02-6L 002	10125012502	3/8	0,8	4.3	69	36	53	95
MDF-A02-6L 004	10125012602	1/2	0,8	4.3	75	36	53	95
MDF-A02-10L 002	10125012902	5/8	1,9	4.3	92	42	53	102,5
MDF-A02-10L 004	10125013002	1/2	1,9	4.3	84	42	53	102,5
MDF-A02-15L 002	10125013302	5/8	2,3	4.3	104	52	53	107,5
MDF-A02-15L 004	10125013402	7/8	2,3	4.3	119	52	53	107,5

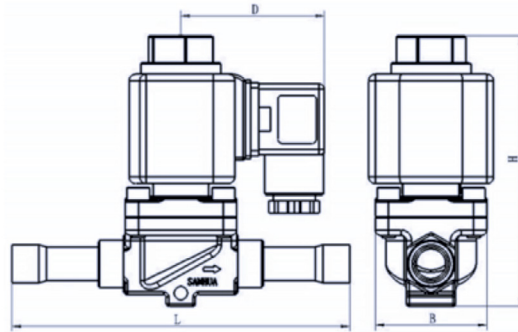
- Note:**
- 1) Extent of delivery: valve body without coil
  - 2) Available also as industrial package.

**SOLENOID VALVE**



**DIMENSIONS**

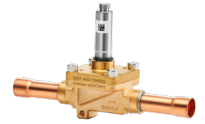
Valve Body - Solder Connection



Model Valve Body	Part Number <sup>1)2)</sup>	Solder Connection ODF		Kv [m <sup>3</sup> /h]	PED Category Fluid Group 2	Dimensions [mm]			
		[inch]	[mm]			L	B	D	H
MDF-A02-6H 002	10125001802	3/8		0,8	4.3	111	36	53	95
MDF-A02-6H 004	10125012302	1/2		0,8	4.3	127	36	53	95
MDF-A02-6H 006	10125009702		10	0,8	4.3	111	36	53	95
MDF-A02-6H 008	10125012402		12	0,8	4.3	127	36	53	95
MDF-A02-10H 002	10125012002	1/2		1,9	4.3	127	42	53	102,5
MDF-A02-10H 004	10125012702	5/8	16	1,9	4.3	160	42	53	102,5
MDF-A02-10H 006	10125012802		12	1,9	4.3	127	42	53	102,5
MDF-A02-15H 004	10125013102	7/8	22	2,3	4.3	176	52	53	107,5
MDF-A02-15H 006	10125013202	5/8	16	2,3	4.3	176	52	53	107,5
MDF-A02-20H 002	10125013502	7/8	22	5	4.3	191	60	53	124
MDF-A02-20H 004	10125013602	1-1/8		5	4.3	214	60	53	124
MDF-A02-20H 008	10125013702		28	5	4.3	214	60	53	124
MDF-A02-22H 002	10125013802	7/8	22	6	4.3	281	60	53	124
MDF-A02-22H 004	10125013902	1-3/8	35	6	I	281	60	53	124
MDF-A02-22H 008	10125014002	1-1/8		6	4.3	281	60	53	124
MDF-A02-22H 012	10125015202		28	6	4.3	281	60	53	124

**Note:** 1) Extent of delivery: valve body without coil  
 2) Available also as industrial package.

**SOLENOID VALVE**



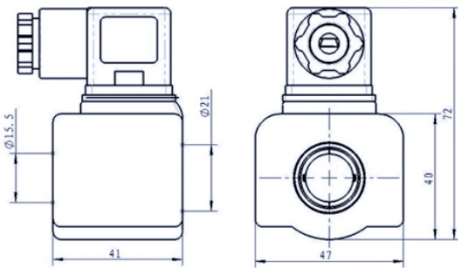
**TECHNICAL PARAMETERS OF COIL**

Model Coil	Part Number <sup>1)</sup>	Plug type <sup>2)</sup>	Supply	Rated Voltage [V]	Power [W]	Voltage Tolerance	Insulation Class	Protection Class (w/plug)	UL Approval
MQ-A02024-000001	10820004502	DIN Plug	AC	24	12,5 (50Hz) 10,5 (60Hz)	-15% +10%	F	IP67	NO
MQ-A0211A-000001	10820003702			110 to 120					NO
MQ-A0222G-000001	10820004102			220 to 240					NO
MQ-D02012-000001	10820006702		DC	12	10	±10%			NO
MQ-D02024-000001	10820006902			24					NO

**Note:** 1) Extent of delivery: coil body, fastening screw for the coil body, plug for electrical connection incl. Gaskets and fastening screws  
 2) Outer cable diameter: 7,1 to 9,7mm and cable core 0,75 to 2,5mm<sup>2</sup>

**DIMENSIONS - COILS**

MQ-A02 (Coils with DIN Plug):

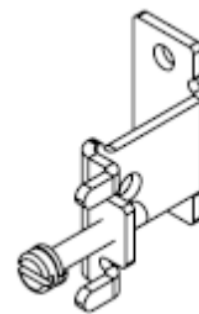


**ACCESSORIES**

Bracket

Model <sup>1)</sup>	Part Number	Applicable Valve Models	
		Solder	Flare
MDF-A03-033001	20125000902	MDF-A02-6H	MDF-A02-6L
		MDF-A02-10H	MDF-A02-10L
		MDF-A02-15H	MDF-A02-15L

**Note:** 1) Extent of delivery: bracket and screw

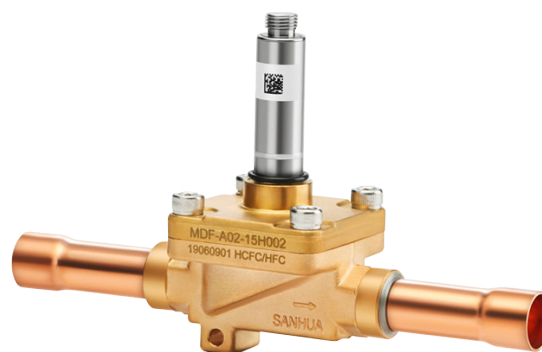


## MDF-A02 (NO) SERIES

# SOLENOID VALVE

**(GreenTech range:** for fluids GROUP 1 according to Directive 2014/68/EU or GROUP A3/A2L according to ANSI-ASHRAE 34-2016)

MDF-A02 series solenoid valves are normally open (NO) pilot operated solenoid valves, mainly used in refrigerant control of various devices such as refrigerating and freezing systems, air conditioners and heat pumps.



## FEATURES

- COILS: LOW ENERGY CONSUMPTION, RELIABLE
- GREAT VALVE OPENING PERFORMANCE, HIGH MOPD
- COILS ARE DOUBLE SEALED, WATERTIGHT AND SAFE

## GENERAL SPECIFICATIONS<sup>1)</sup>

- Applicable for all common HFC/HFO/HC refrigerants such as: R290, R1234yf, R1234ze(E), R32<sup>2)</sup>, R454B, R454C
- Medium temperature: -30°C ~ +105°C
- Ambient temperature: -30°C ~ +55°C
- Relative humidity: 0 to 95%RH
- Installation position:
  - liquid, suction and discharge line
  - preferably coil upwards and flow direction corresponds to the arrow
- Declaration according to LVD and PED

**Note:** 1) MDF series is not suitable for "oil free" systems; customized models for such application are available on request  
2) With R32 only respecting MOP 45 bar

**SOLENOID VALVE**

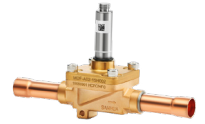


**TECHNICAL PARAMETERS OF VALVE BODY**

Valve Body Solder	Usable Coils	Normal position	Actuation	Kv [m <sup>3</sup> /h]	MOP [Mpa]	Max. OPD [Mpa]	Min. OPD <sup>4)</sup> [Mpa]
MDF-A02-6H	AC/DC	NO <sup>1)</sup>	Pilot <sup>2)</sup>	0,8	4,5	2,8 <sup>3)</sup>	0,02
MDF-A02-10H				1,9			
MDF-A02-15H				2,3			
MDF-A02-20H				5			
MDF-A02-22H				6			

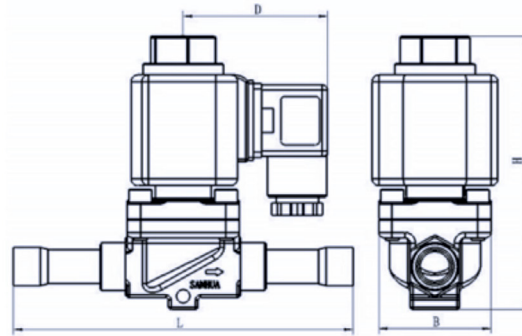
- Note:**
- 1) NO means: Normally open valve
  - 2) Membrane operated
  - 3) Max. OPD with liquid is 2,1 MPa, Max. OPD at 85% Ue
  - 4) Min. OPD: values referred to 100% of nominal flow

**SOLENOID VALVE**



**DIMENSIONS**

Valve Body - Solder Connection



Model Valve Body	Part Number <sup>1)2)</sup>	Solder Connection ODF		Kv [m <sup>3</sup> /h]	PED Category Fluid Group 1	Dimensions [mm]			
		[inch]	[mm]			L	B	D	H
MDF-A02-6H 002	10125001802	3/8		0,8	4.3	111	36	53	95
MDF-A02-6H 004	10125012302	1/2		0,8	4.3	127	36	53	95
MDF-A02-6H 006	10125009702		10	0,8	4.3	111	36	53	95
MDF-A02-6H 008	10125012402		12	0,8	4.3	127	36	53	95
MDF-A02-10H 002	10125012002	1/2		1,9	4.3	127	42	53	102,5
MDF-A02-10H 004	10125012702	5/8	16	1,9	4.3	160	42	53	102,5
MDF-A02-10H 006	10125012802		12	1,9	4.3	127	42	53	102,5
MDF-A02-15H 004	10125013102	7/8	22	2,3	4.3	176	52	53	107,5
MDF-A02-15H 006	10125013202	5/8	16	2,3	4.3	176	52	53	107,5
MDF-A02-20H 002	10125013502	7/8	22	5	4.3	191	60	53	124
MDF-A02-20H 004	10125013602	1-1/8		5	4.3	214	60	53	124
MDF-A02-20H 008	10125013702		28	5	4.3	214	60	53	124
MDF-A02-22H 002	10125013802	7/8	22	6	4.3	281	60	53	124
MDF-A02-22H 008	10125014002	1-1/8		6	4.3	281	60	53	124
MDF-A02-22H 012	10125015202		28	6	4.3	281	60	53	124

**Note:** 1) Extent of delivery: valve body without coil  
 2) Available also as industrial package. Contact Sanhua for more details.

**SOLENOID VALVE**



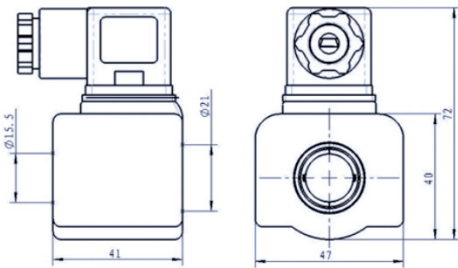
**TECHNICAL PARAMETERS OF COIL**

Model Coil	Part Number <sup>1)</sup>	Plug type <sup>2)</sup>	Supply	Rated Voltage [V]	Power [W]	Voltage Tolerance	Insulation Class	Protection Class (w/plug)	UL Approval
MQ-A02024-000001	10820004502	DIN Plug	AC	24	12,5 (50Hz) 10,5 (60Hz)	-15% +10%	F	IP67	NO
MQ-A0211A-000001	10820003702			110 to 120					NO
MQ-A0222G-000001	10820004102			220 to 240					NO
MQ-D02012-000001	10820006702		DC	12	10	±10%			NO
MQ-D02024-000001	10820006902			24					NO

**Note:** 1) Extent of delivery: coil body, fastening screw for the coil body, plug for electrical connection incl. Gaskets and fastening screws  
 2) Outer cable diameter: 7,1 to 9,7mm and cable core 0,75 to 2,5mm<sup>2</sup>

**DIMENSIONS - COILS**

*MQ-A02 (Coils with DIN Plug):*



**ACCESSORIES**

*Bracket*

Model <sup>1)</sup>	Part Number	Applicable Valve Models	
		Solder	Flare
MDF-A03-033001	20125000902	MDF-A02-6H	MDF-A02-6L
		MDF-A02-10H	MDF-A02-10L
		MDF-A02-15H	MDF-A02-15L

**Note:** 1) Extent of delivery: bracket and screw

