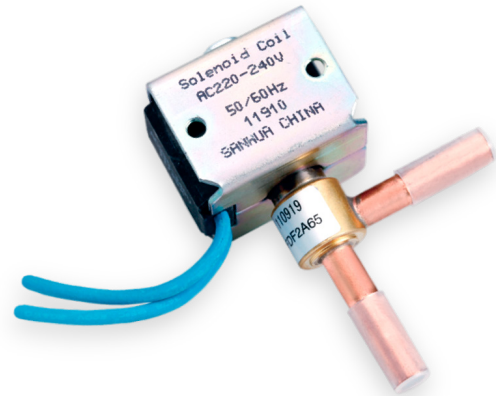


FDF (NC) SERIES

SOLENOID VALVE



FDF series solenoid valves are direct operated or 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

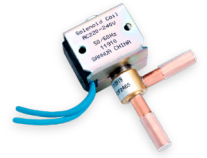
GENERAL SPECIFICATIONS

- Applicable for all common HCFC, HFC, HFO, HC refrigerants.
 - fluids GROUP 2 (according to Directive 2014/68/EU) or GROUP A1 (according to ANSI-ASHRAE 34-2016): R22, R134a, R404A, R410A, R507, R407C, R407A/F, R448A/R449A, R452A, R450A/R513A
 - fluids GROUP 1 (according to Directive 2014/68/EU) or GROUP A3/A2L (according to ANSI-ASHRAE 34-2016): R290, R1234yf, R1234ze(E), R32, R447A, R452B, R454B, R454C, R600a
- **For fluids GROUP 1 or GROUP A3/A2L ONLY with coil FQ-A05 22G-001022 which is certified according EN60335-2-24/40/89 for flammable refrigerants.**
 - Model FDF2A G01 (stainless steel) certified with FQ-A05 024-000709, FQ-A05 120-001098, FQ-A05 22G-001022 Coils.
- Medium temperature TS min./max.: -30°C / 120°C
- Ambient temperature min./max.: -30°C / +50°C
- Relative humidity: 0 to 95% RH
- Installation position:
 - Liquid, suction and discharge line
 - Coil upwards, coil axis $\pm 15^\circ$ tolerance versus vertical axis
 - Flow direction corresponds to the arrow
- Declarations/Certification/Approvals:
 - DoC acc. PED (2014/68/EU), LVD (2014/35/EU), RoHS (2011/65/EU), REACH, Pressure Equipment (Safety) Regulation 2016 (2016/1105), Electrical Equipment (Safety) Regulation 2016 (2016/1101); together with coil FQ-A05 22G-001022 (model FDF2A G01 additionally with FQ-A05 024-000709, FQ-A05 120-001098) certification acc. EN60335-2-24/40/89 for flammable refrigerants.

TECHNICAL PARAMETERS OF VALVE BODY

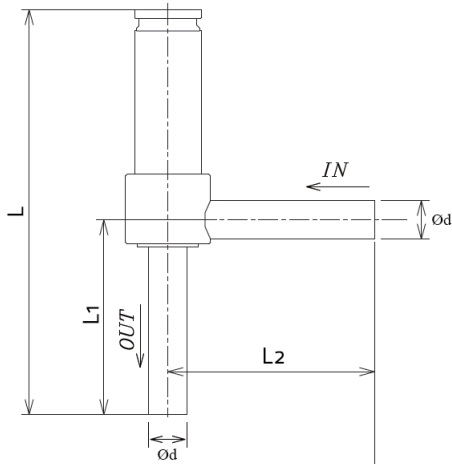
Model Valve Body	Product Number	Normal Position	Actuation	Ø Seat	Kv	MOP	Max. OPD	Min. OPD	Ød OD	Ød OD	Measurement [mm]		
				[mm]	[m ³ /h]	[MPa]	[MPa]	[MPa]			L	L1	L2
FDF2A G01 ¹⁾	10119001002	NC	Direct	1,9	0,08	4,5	3,4	0	6,35	1/4	66,6	33,3	33
FDF 2A 94	10120019802			6,35	1/4		66,5	32	34				
FDF 2.5A 08	10120021102		Pilot	2,5	0,21		2,1	0,01	6,35	1/4	84,6	37,5	38
FDF 3A 08	10120019302			2,7	0,26		3,4	0	7,94	5/16	81,4	34,5	35,7
FDF 4A 10	10120025302			4,0	0,30		2,8	0	6,35	1/4	81,2	35,3	37,8
FDF 6A 58	10120018702			5,8	0,56		3,4	0,01	7,94	5/16	81,6	34,5	35,7
FDF 11A 14	10120020402			11	2,40		2,8	0,02	12,7	1/2	117,5	62	62
FDF 13A08	10120026402			13	3,5		15,88	5/8	117,5	62	62		

Note: 1) New model with stainless steel body (lead free)

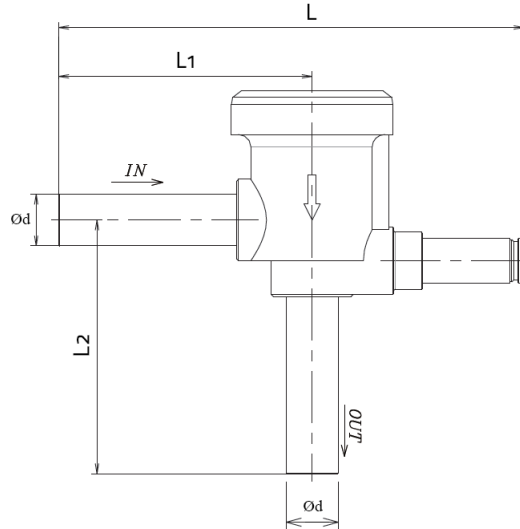


DIMENSIONS - VALVE BODY

FDf 2A ... FDf 6A



FDf 8A ... FDf 13A



TECNHICAL PARAMETERS OF COIL

Model Coil	Product Number	Rated Voltage [V]	Supply	Power ¹⁾ [W]	Freq. [Hz]	Voltage Tolerance	Insulation Class	Wiring type: flying leads [mm]
FQ-A05 024-000709 ²⁾	10800072302	24	AC	5 (50Hz) 4,5 (60Hz)	50/60	-15% +10%	B	1800±50
FQ-A05 120-001098 ²⁾	10800062002	110 to 120		800±30				
FQ-A05 22G-001022 ³⁾	10800057302	220 to 240		600±20				

- Note:** 1) FQ-A0522G power consumption based on 240V; FQ-A05120 power consumption based on 120V
 2) Coils FQ-A05 024-000709 and FQ-A05 120-001098 certified according EN60335-2-24/40/89 for flammable refrigerants (fluids GROUP 1 according to Directive 2014/68/EU or GROUP A3/A2L according to ANSI-ASHRAE 34-2016) only with model FDF2A G01
 3) Coil FQ-A05 22G-001022 certified according EN60335-2-24/40/89 for flammable refrigerants (fluids GROUP 1 according to Directive 2014/68/EU or GROUP A3/A2L according to ANSI-ASHRAE 34-2016) with all FDF models from above table.

DIMENSIONS - COIL

